



Cajalco Commerce Center (PPT220050)

AIR QUALITY IMPACT ANALYSIS

COUNTY OF RIVERSIDE

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LIST OF ABBREVIATED TERMS

%	Percent
°F	Degrees Fahrenheit
(1)	Reference
µg/m ³	Microgram per Cubic Meter
<i>1992 CO Plan</i>	<i>1992 Federal Attainment Plan for Carbon Monoxide</i>
<i>1993 CEQA Handbook</i>	<i>SCAQMD's CEQA Air Quality Handbook (1993)</i>
<i>2016-2040 RTP/SCS</i>	<i>2016-2040 Regional Transportation Plan/Sustainable Communities Strategy</i>
AB 2595	California Clean Air Act
AQIA	Air Quality Impact Analysis
AQMP	Air Quality Management Plan
BACT	Best Available Control Technology
BC	Black Carbon
<i>Brief</i>	<i>Brief of Amicus Curiae by the SCAQMD in the Friant Ranch Case</i>
C ₂ Cl ₄	Perchloroethylene
C ₄ H ₆	1,3-butadiene
C ₆ H ₆	Benzene
C ₂ H ₃ Cl	Vinyl Chloride
C ₂ H ₄ O	Acetaldehyde
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
<i>CEQA Guidelines</i>	<i>2023 CEQA Statute and Guidelines</i>
CH ₂ O	Formaldehyde
CO	Carbon Monoxide
COH	Coefficient of Haze
COHb	Carboxyhemoglobin

County	County of Riverside
Cr(VI)	Chromium
CTP	Clean Truck Program
DPM	Diesel Particulate Matter
DRRP	Diesel Risk Reduction Plan
EC	Elemental Carbon
EIR	Environmental Impact Report
EMFAC	Emissions FACTor Model
EPA	Environmental Protection Agency
ETW	Equivalent Test Weight
EV	Electric Vehicle
GHG	Greenhouse Gas
GVWR	Gross Vehicle Weight Rating
H ₂ S	Hydrogen Sulfide
HDT	Heavy-Duty Trucks
HHDT	Heavy-Heavy-Duty Trucks
HI	Hazard Index
hp	Horsepower
HPLV	High-Pressure-Low-Volume
lbs	Pounds
lbs/day	Pounds Per Day
LDA	Light Duty Auto
LDT1/LDT2	Light-Duty Trucks
LHDT1/LHDT2	Light-Heavy-Duty Trucks
LST	Localized Significance Threshold
<i>LST Methodology</i>	<i>Final Localized Significance Threshold Methodology</i>
MATES	Multiple Air Toxics Exposure Study
MCY	Motorcycles
MDV	Medium-Duty Vehicles
MHDT	Medium-Heavy-Duty Trucks
MICR	Maximum Individual Cancer Risk
MM	Mitigation Measures
mph	Miles Per Hour
MWELO	California Department of Water Resources' Model Water Efficient
N ₂	Nitrogen
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards

NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
O ₂	Oxygen
O ₃	Ozone
O ₂ Deficiency	Chronic Hypoxemia
OBD-II	On-Board Diagnostic
ODC	Ozone Depleting Compounds
Pb	Lead
PM	Particulate Matter
PM ₁₀	Particulate Matter 10 microns in diameter or less
PM _{2.5}	Particulate Matter 2.5 microns in diameter or less
POLA	Port of Los Angeles
POLB	Port of Long Beach
ppm	Parts Per Million
Project	Cajalco Commerce Center
RECLAIM	Regional Clean Air Incentives Market
RFG-2	Reformulated Gasoline Regulation
ROG	Reactive Organic Gases
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
sf	Square Feet
SIPs	State Implementation Plans
SO ₂	Sulfur Dioxide
SO ₄	Sulfates
SO _x	Sulfur Oxides
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
Title 24	California Building Code
TITLE I	Non-Attainment Provisions
TITLE II	Mobile Sources Provisions
UFP	Ultrafine Particles
URBEMIS	URBan EMISsions
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
vph	Vehicles Per Hour

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Cajalco Commerce Center Air Quality Impact Analysis* (AQIA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the *CEQA Guidelines* (CEQA Guidelines) (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures (MM) described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	<i>Less Than Significant</i>	<i>n/a</i>
Localized Construction Emissions	3.7	<i>Less Than Significant</i>	<i>n/a</i>
Regional Operational Emissions	3.5	<i>Potentially Significant</i>	<i>Significant and Unavoidable</i>
Localized Operational Emissions	3.7	<i>Less Than Significant</i>	<i>n/a</i>
CO “Hot Spot” Analysis	3.9	<i>Less Than Significant</i>	<i>n/a</i>
Air Quality Management Plan	3.10	<i>Potentially Significant</i>	<i>Significant and Unavoidable</i>
Sensitive Receptors	3.12	<i>Less Than Significant</i>	<i>n/a</i>
Odors	3.13	<i>Less Than Significant</i>	<i>n/a</i>
Cumulative Impacts	3.14	<i>Potentially Significant</i>	<i>Significant and Unavoidable</i>

ES.2 REGULATORY REQUIREMENTS

There are numerous requirements that development projects must comply with by law, and that were put in place by federal, State, and local regulatory agencies for the improvement of air quality.

Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or

other forms of property, or can cause excessive soiling on any other parcel shall conform to the requirements of the SCAQMD.

SCAQMD RULES

SCAQMD Rules that are currently applicable during construction activity for this Project are described below.

SCAQMD RULE 402

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any such persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Odor Emissions. All uses shall be operated in a manner such that no offensive odor is perceptible at or beyond the property line of that use.

SCAQMD RULE 403

This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent and reduce fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities.

The contractor shall adhere to the following applicable measures of Rule 403 including, but not limited to:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- All access points to the Project site shall have track out devices installed.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are limited to 15 mph or less

Dust Control, Operations. Any operation or activity that might cause the emission of any smoke, fly ash, dust, fumes, vapors, gases, or other forms of air pollution, which can cause damage to human health, vegetation, or other forms of property, or can cause excessive soiling on any other parcel, shall conform to the requirements of the SCAQMD.

SCAQMD RULE 1113

This rule serves to limit the VOC content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects.

SCAQMD RULE 1301

This rule is intended to provide that pre-construction review requirements to ensure that new or relocated facilities do not interfere with progress in attainment of the National Ambient Air Quality Standards (NAAQS), while future economic growth within the SCAQMD is not unnecessarily restricted. The specific air quality goal is to achieve no net increases from new or modified permitted sources of nonattainment air contaminants or their precursors. Rule 1301 also limits emission increases of ammonia, and Ozone Depleting Compounds (ODCs) from new, modified or relocated facilities by requiring the use of Best Available Control Technology (BACT).

SCAQMD RULE 1401

A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any 1 hour that is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States (U.S.) Bureau of Mines.

SCAQMD RULE 2305

The SCAQMD adopted Rule 2305, the Warehouse Indirect Source Rule, on May 7, 2021. Owners and operators associated with warehouses 100,000 square feet (sf) or larger are required to directly reduce nitrogen oxides (NO_x) and particulate matter emissions, or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities. The rule imposes a “Warehouse Points Compliance Obligation” (WPCO) on warehouse operators. Operators satisfy the WPCO by accumulating “Warehouse Actions and Investments to Reduce Emissions Points” (WAIRE Points) in a given 12-month period. WAIRE Points are awarded by implementing measures to reduce emissions listed on the WAIRE Menu, or by implementing a custom WAIRE Plan approved by the SCAQMD.

Although the Project would comply with Rule 2305, it should be noted that there is no way to quantify these reductions in the California Emissions Estimator Model (CalEEMod). The two most pertinent regulatory requirements that could be modeled, are Rule 403 (Fugitive Dust) (2) and Rule 1113 (Architectural Coatings) (3). Credit for Rule 403 and Rule 1113 have been taken in the analysis.

ES.3 PROJECT MITIGATION MEASURES

ES.3.1 CONSTRUCTION-SOURCE MMs

Unmitigated Project construction-source emissions would not exceed SCAQMD regional thresholds, thus implementation of construction mitigation measures is not required.

ES.3.2 OPERATIONAL-SOURCE MMs

Unmitigated Project operational-source NO_x emissions would exceed applicable SCAQMD regional significance thresholds. The predominance of the Project's operational-source emissions are generated by passenger cars and trucks accessing the Project. Neither the Project Applicant nor the City have regulatory authority to control tailpipe emissions, and no feasible MMs beyond the measures identified herein exist that would reduce Project operational-source NO_x emissions to levels that are less-than-significant. Project operational-source NO_x emissions impacts are therefore considered significant and unavoidable.

The following measures (MM AQ-1 through MM AQ-7) are designed to reduce Project operational-source NO_x emissions. There is no way to meaningfully quantify these reductions in CalEEMod, and therefore no numeric emissions credit has been taken in the analysis. As such, even with application of MM AQ-1 through MM AQ-7, Project operational-source emissions impacts are considered significant and unavoidable.

MM AQ-1

To facilitate the possible future installation of infrastructure that would charge the batteries that power the motors of electric-powered trucks, the following shall be installed. 1) At shell building permit, an electrical room(s) and/or exterior area(s) of the site shall be designated where future electrical panels would be located for the purpose of supplying power to on-site charging facilities for electric powered trucks. Conduit shall be installed from this designated area where the panel would be located to the onsite location where the charging facilities would be located and where electric-powered trucks would park and connect to charging facilities to charge the batteries that power the motors of the electric-powered trucks. 2) At issuance of a building permit for Tenant Improvements, if the tenant is served by electric trucks, the electrical panel and charging units shall be installed, and the electrical wiring connections shall be made from the electrical panel to the charging units.

MM AQ-2

Install passenger car EV charging stations and designated carpool parking stalls per the provisions of the California Green Building Standards Code and require that each building be constructed with an adequately sized electrical panel(s) and conduit to accommodate future EV charging stations at a minimum of 5 percent of the passenger car parking spaces.

MM AQ-3

As a condition of certificates of occupancy, all on-site outdoor cargo handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) shall be required to be powered by electricity, compressed natural gas, or gasoline and all indoor cargo handling equipment shall be required to be powered by electricity.

MM AQ-4

In order to promote alternative fuels, and help support “clean” truck fleets, the developer/successor-in-interest shall provide building occupants with information related to SCAQMD’s Carl Moyer Program, or other such programs that promote truck retrofits or “clean” vehicles and information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. Tenants shall be notified about the availability of: 1) alternatively fueled cargo handling equipment; 2) grant programs for diesel-fueled vehicle engine retrofit and/or replacement; 3) designated truck parking locations in the project vicinity; 4) access to alternative fueling stations proximate to the site that supply compressed natural gas; and 5) the United States Environmental Protection Agency’s SmartWay program.

MM AQ-5

Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas of the warehouse portion of the Project that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than five (5) minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; and 3) telephone numbers of the building facilities manager and the CARB to report violations. Prior to the issuance of an occupancy permit, the City shall conduct a site inspection to ensure that the signs are in place.

MM AQ-6

Once constructed, the project proponent shall ensure that all building tenants shall utilize electric equipment for landscape maintenance to the extent feasible, through requirements in the lease agreements.

MM AQ-7

All future operations shall adhere to the applicable policies:

1. Warehouse/distribution facilities greater than 250,000 square feet shall be designed to provide adequate on-site parking for commercial trucks and passenger vehicles and on-site queuing for trucks that is away from sensitive receptors. The general queuing and spill-over of trucks onto surrounding public streets shall be prevented. Commercial trucks shall not be parked in the public road right-of-way or nearby residential areas.
2. Truck driveways shall generally be placed, on streets that do not have fronting sensitive receptors.
3. Sites shall clearly mark entry and exit points for trucks and service vehicles.
4. Sites shall be densely screened with landscaping along all bordering streets and adjacent sensitive receptors, with trees spaced no further apart than 25 feet on center. Fifty percent of the landscape screening shall include a minimum of 36- inch box trees. Facility operators will be responsible to establish a long-term maintenance mechanism to assure that the landscaping remains in place and functional in accordance with the approved landscaping plan.

5. Facility operators shall maintain records of their fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks (“MHDT”) and Heavy-Heavy Duty Trucks (“HHD”) accessing the site use year CARB 2010 or newer engines. The records should be maintained on-site and be made available for inspection by the lead agency.
6. Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than five minutes; and 3) telephone numbers of the building facilities manager and CARB to report violations.
7. Facility operators shall train their managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
8. Signs should be posted in the appropriate locations and/or handouts should be provided that show the locations of nearest food options, fueling, truck maintenance services, and other similar convenience services.
9. Each Facility shall designate a Compliance Officer responsible for implementing the measures described herein and/or in the project conditions of approval and mitigation measures. Contact information shall be provided to the City and updated annually, and signs shall be posted in visible locations providing the contact information for the Compliance Officer to the surrounding community. The Compliance Officer also shall coordinate with CARB and SCAQMD to obtain the latest information about regional air quality concentrations, health risks, and trucking regulations.
10. Signs shall be posted in the appropriate locations heavy truck drivers to park and perform any maintenance of trucks in designated on-site areas and not within the surrounding community or on public streets.
11. All future warehouse/distribution facilities generally shall be designed so that truck bays and loading docks are a minimum of 300 feet, measured from the property line of the sensitive receptor to the nearest dock door using a direct straight-line method. This distance may be reduced if the site design includes berms or other similar features to appropriately shield and buffer the sensitive receptors from the active truck operations areas. Other setbacks appropriate to the site’s zoning classification shall be incorporated in the design.
12. Facility operators for sites that exceed 250 employees shall establish a rideshare program, in accordance with AQMD rule 2202, with the intent of discouraging single-occupancy vehicle trips and promote alternate modes of transportation, such as carpooling and transit where feasible.

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1 INTRODUCTION

This report presents the results of the AQIA prepared by Urban Crossroads, Inc., for the proposed Cajalco Commerce Center (Project). The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the SCAQMD.

1.1 SITE LOCATION

The proposed project is located south of Caljalco Road between Decker Road and Seaton Avenue in the County of Riverside as shown on Exhibit 1-A.

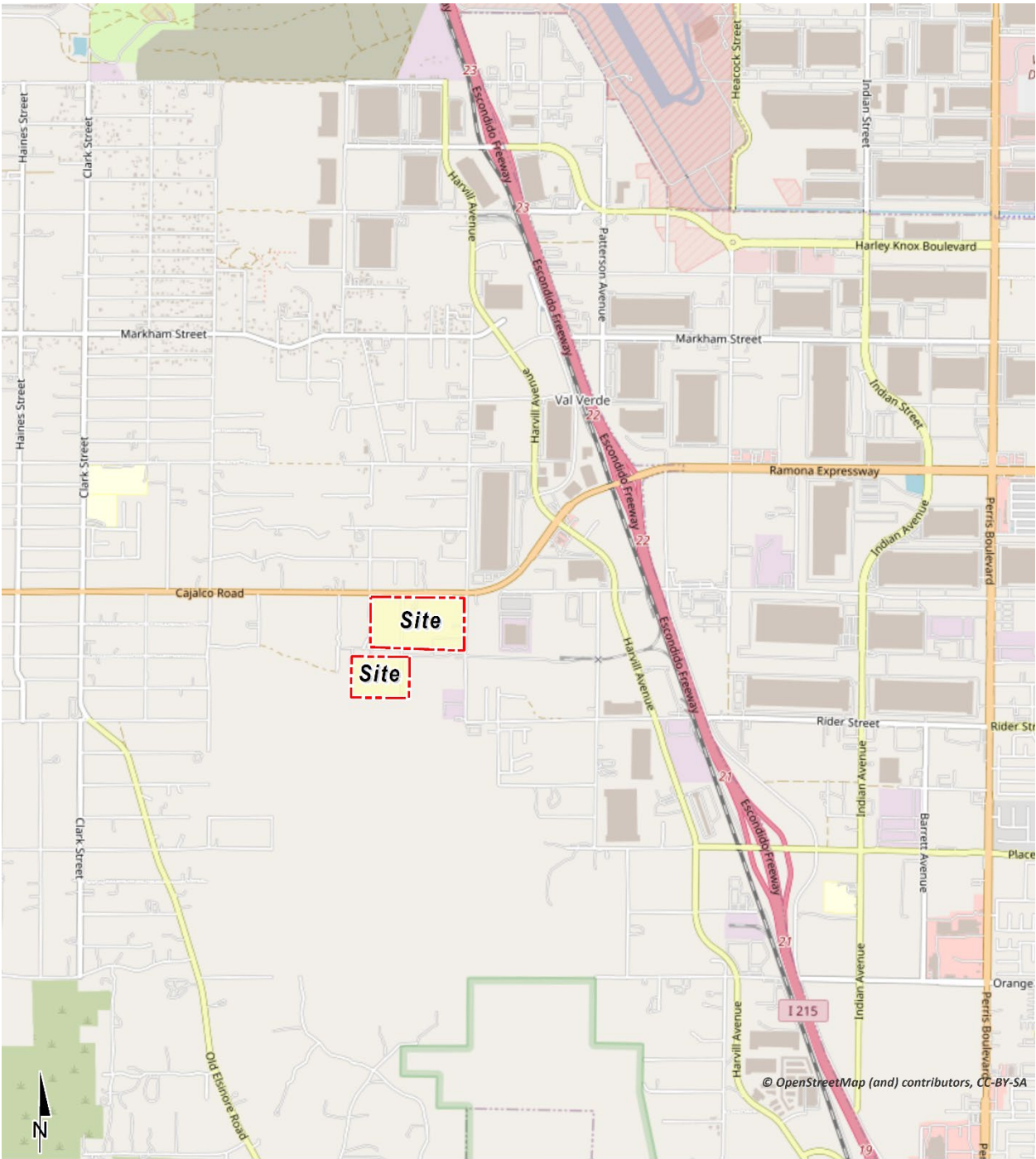
1.2 PROJECT DESCRIPTION

The Project Applicant proposes the Project to consist of the development of a 1,003,510 square foot warehouse building and an active park of up to 14.94 acres. The total Project site is 57.6 acres on APNs 317-080-003 through -008, -013 through -014, -019 through -023, -027 through -029 and 317-090-002 through -008. For purposes of analysis, the warehouse building has been evaluated assuming 852,984 square feet (or 85% of the overall building square footage) of high-cube fulfillment warehouse use and 150,526 square feet of high-cube cold storage warehouse use (remaining 15% of the overall building square footage). A preliminary site plan for the proposed Project is shown on Exhibit 1-B.

Construction is expected to commence in September 2024 and would last through December 2025 and will include demolition, site preparation, grading, crushing/blasting, building construction, paving, and architectural coating. To support the Project development, there will be grading, trenching, and paving for off-site improvements associated with roadway construction and utility installation for the Project. It is expected that these off-site improvements will be constructed within the existing public right-of-way (ROW) on Decker Road, Seaton Avenue, Cajalco Road and Rider Street.

The General Plan and MVAP designate the Project site for “Commercial Retail (CR)” land uses with Rural Community – Very Low-Density Residential (VLDR) uses. The General Plan states that the Commercial Retail land use designation is intended for local and regional serving retail and service uses at an allowable Floor Area Ratio (FAR) of 0.20-0.35 (4). The Rural Community – Very Low-Density Residential (VLDR) land use designation is intended for single-family detached residences on large parcels of 1 to 2 acres with limited agriculture and animal keeping. Implementation of the Project will require an amendment to the General Plan Land Use designation and Zoning designation of the Project Site.

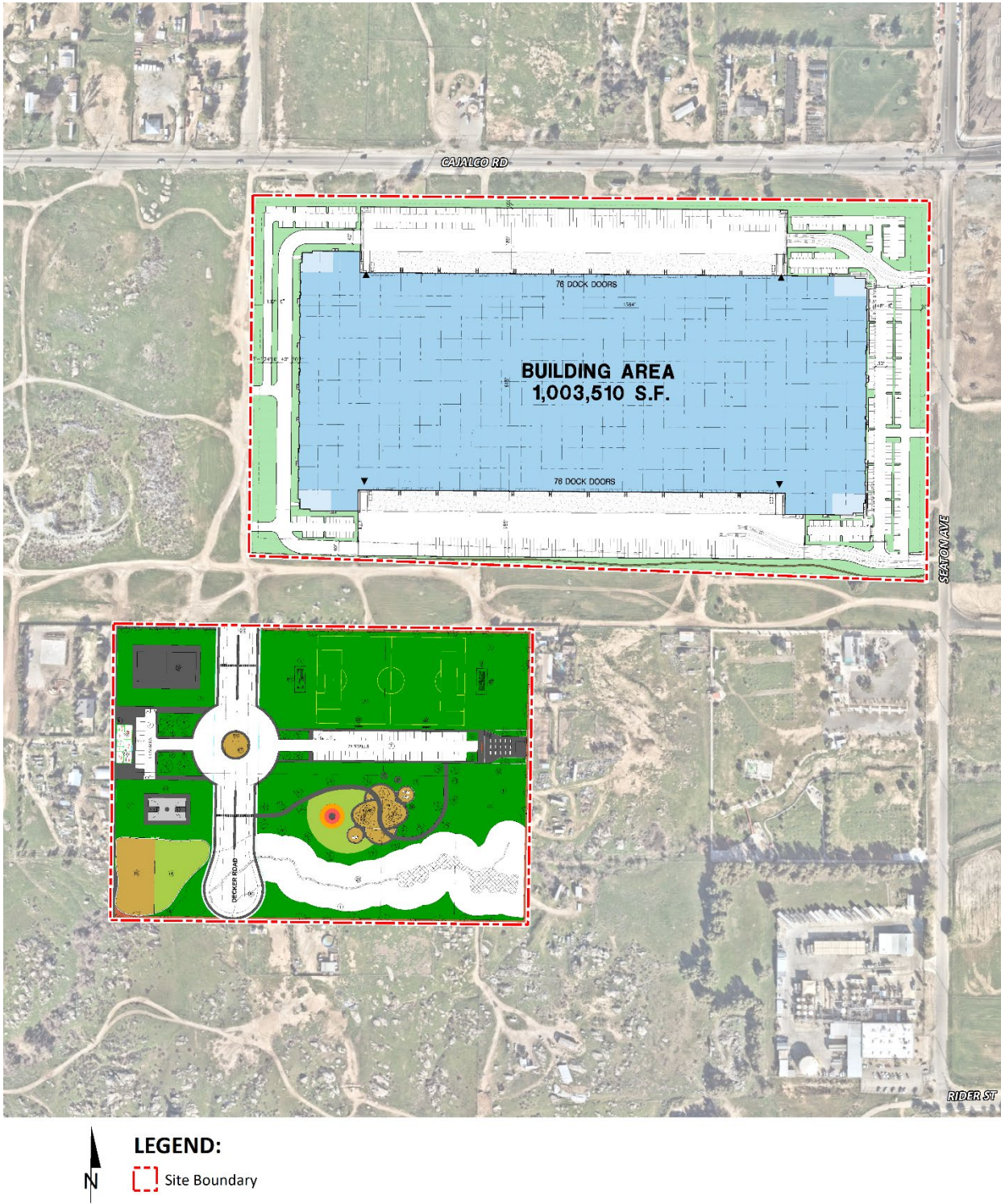
EXHIBIT 1-A: LOCATION MAP



LEGEND:

 Site Boundary

EXHIBIT 1-B: SITE PLAN



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2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (5). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As previously stated, the Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the San Diego Air Basin to the south.

2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s degrees Fahrenheit (°F). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO₂) to sulfates (SO₄) is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71% along the coast and 59% inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90% of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year, there are approximately 10 hours of possible sunshine, and on the longest day of the year, there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed “Santa Anas” each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the “Catalina Eddy,” a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as nitrogen oxides (NO_x) and carbon monoxide (CO) from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

Wind patterns across the south coastal region are characterized by westerly and southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Winds are characteristically light although the speed is somewhat greater during the dry summer months than during the rainy winter season.

2.4 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (6):

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
CO	CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone (O ₃), motor vehicles operating at slow speeds are the primary source of CO in the SCAB. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming equipment and residential heating.	Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen (O ₂) supply to the heart. Inhaled CO has no direct toxic effect on the lungs but exerts its effect on tissues by interfering with O ₂ transport and competing with O ₂ to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for O ₂ supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (O ₂ deficiency) as seen at high altitudes.
SO ₂	SO ₂ is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant	Coal or oil burning power plants and industries,	A few minutes of exposure to low levels of SO ₂ can result in airway constriction in some

Criteria Pollutant	Description	Sources	Health Effects
	mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO ₂ oxidizes in the atmosphere, it forms SO ₄ . Collectively, these pollutants are referred to as sulfur oxides (SO _x).	refineries, diesel engines	asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO₂. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO₂. Animal studies suggest that despite SO₂ being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO₂ levels. In these studies, efforts to separate the effects of SO₂ from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.
NO _x	NO _x consist of nitric oxide (NO), nitrogen dioxide (NO ₂) and nitrous oxide (N ₂ O) and are formed when nitrogen (N ₂) combines with O ₂ . Their lifespan in the atmosphere ranges from	Any source that burns fuel such as automobiles, trucks, heavy construction equipment, farming	Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is

Criteria Pollutant	Description	Sources	Health Effects
	one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. NO_x is typically created during combustion processes and are major contributors to smog formation and acid deposition. NO₂ is a criteria air pollutant and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO₂ is the most abundant in the atmosphere. As ambient concentrations of NO₂ are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO₂ than those indicated by regional monitoring station.	equipment and residential heating.	associated with long-term exposure to NO₂ at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO₂ in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups. In animals, exposure to levels of NO₂ considerably higher than ambient concentrations result in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of O₃ exposure increases when animals are exposed to a combination of O₃ and NO₂.
O ₃	O₃ is a highly reactive and unstable gas that is formed when VOCs and NO_x, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O₃ concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	Formed when reactive organic gases (ROG) and NO_x react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O₃ effects. Short-term exposure (lasting for a few hours) to O₃ at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased

Criteria Pollutant	Description	Sources	Health Effects
		storage and pesticides.	susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O₃ levels are associated with increased school absences. In recent years, a correlation between elevated ambient O₃ levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and live in communities with high O₃ levels. O₃ exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes O₃ may be more toxic than exposure to O₃ alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.
Particulate Matter	PM ₁₀ : A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be	Sources of PM₁₀ include road dust, windblown dust and construction. Also formed from other pollutants (acid rain, NO_x, SO_x, organics). Incomplete combustion of any fuel. PM_{2.5} comes from	A consistent correlation between elevated ambient fine particulate matter (PM ₁₀ and PM _{2.5}) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In

Criteria Pollutant	Description	Sources	Health Effects
	deposited, resulting in adverse health effects. Additionally, it should be noted that PM₁₀ is considered a criteria air pollutant. PM_{2.5}: A similar air pollutant to PM₁₀ consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include SO₄ formed from SO₂ release from power plants and industrial facilities and nitrates that are formed from NO_x release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. PM_{2.5} is a criteria air pollutant.	fuel combustion in motor vehicles, equipment, and industrial sources, residential and agricultural burning. Also formed from reaction of other pollutants (acid rain, NO_x, SO_x, organics).	recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in lifespan, and an increased mortality from lung cancer. Daily fluctuations in PM_{2.5} concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter. The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM₁₀ and PM_{2.5}.
VOC	VOCs are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form O₃ to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the	Organic chemicals are widely used as ingredients in household products. Paints, varnishes, and wax all contain organic solvents, as do many cleaning, disinfecting, cosmetic, degreasing and hobby products. Fuels are made up of organic chemicals. All of these products can release organic	Breathing VOCs can irritate the eyes, nose, and throat, can cause difficulty breathing and nausea, and can damage the central nervous system as well as other organs. Some VOCs can cause cancer. Not all VOCs have all these health effects, though many have several.

Criteria Pollutant	Description	Sources	Health Effects
	solvents used in paints. Exceptions to the VOC designation include CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O ₃ , which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	compounds while you are using them, and, to some degree, when they are stored.	
ROG	Similar to VOC, ROG are also precursors in forming O ₃ and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO _x react in the presence of sunlight. ROG are a criteria pollutant since they are a precursor to O ₃ , which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly Pb smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or Pb acid battery manufacturing. As such, the Project is not anticipated to	Metal smelters, resource recovery, leaded gasoline, deterioration of Pb paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure. Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be

Criteria Pollutant	Description	Sources	Health Effects
	generate a quantifiable amount of Pb emissions.		stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (7).	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.5 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (8).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by CARB on May ,4 2016 and are presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O₃, CO (except 8-hour Lake Tahoe), SO₂ (1 and 24 hour), NO₂, PM₁₀, and PM_{2.5} are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the SCAQMD meets the standards set by the EPA or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted by CARB. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (9).

TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards						
Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM10) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM2.5) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

See footnotes on next page ...

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TABLE 2-2: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu\text{g}/\text{m}^3$ is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 $\mu\text{g}/\text{m}^3$ to 12.0 $\mu\text{g}/\text{m}^3$. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 $\mu\text{g}/\text{m}^3$, as was the annual secondary standard of 15 $\mu\text{g}/\text{m}^3$. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 $\mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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2.6 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O₃, particulate matter (PM₁₀ and PM_{2.5}), NO₂, and SO₂ which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district (10). On December 28, 2021, CARB posted the proposed 2021 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SCAB (11). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB

Criteria Pollutant	State Designation	Federal Designation
O ₃ – 1-hour standard	Nonattainment	--
O ₃ – 8-hour standard	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO ₂	Attainment	Unclassifiable/Attainment
SO ₂	Attainment	Unclassifiable/Attainment
Pb ¹	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the SCAB

-- = The national 1-hour O₃ standard was revoked effective June 15, 2005.

2.7 LOCAL AIR QUALITY

The SCAQMD has designated general forecast areas and air monitoring areas (referred to as Source Receptor Areas [SRA]) throughout the district in order to provide Southern California residents about the air quality conditions. The Project site is located within the Perris Valley area (SRA 24). The Perris Valley monitoring station is located approximately 3.69 miles southeast of the Project site and reports air quality statistics for O₃ (2020-2021) and PM₁₀ (2020). As the Perris Valley monitoring station does not provide data for O₃ (2022), CO, NO₂, PM_{2.5} or PM₁₀ (2021-2022), the next nearest monitoring stations will be utilized. Data for O₃ (2022), CO, NO₂, and PM₁₀ (2021-2022) was obtained from the Lake Elsinore Area monitoring station, located in SRA 25, approximately 11.56 miles southwest of the Project site. The nearest station for PM_{2.5} data was obtained from the Metropolitan Riverside County 1 monitoring station which is located approximately 14.14 miles northwest of the Project site in SRA 23. It should be noted that data from Lake Elsinore Area and Metropolitan Riverside County 1 monitoring stations were utilized in lieu of the Perris Valley monitoring station only in instances where data was not available.

¹ The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

The most recent three (3) years of data available is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O₃, CO, NO₂, PM₁₀, and PM_{2.5} for 2020 through 2022 was obtained from the SCAQMD Air Quality Data Tables (12). Additionally, data for SO₂ has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO₂ concentrations.

TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2020-2022

Pollutant	Standard	Year		
		2020	2021	2022
O ₃				
Maximum Federal 1-Hour Concentration (ppm)		0.125	0.117	0.121
Maximum Federal 8-Hour Concentration (ppm)		0.106	0.094	0.091
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	34	25	17
Number of Days Exceeding State/Federal 8-Hour Standard	> 0.070 ppm	74	60	37
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	0.9	0.9	0.9
Maximum Federal 8-Hour Concentration	> 20 ppm	0.7	0.8	0.6
NO ₂				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.044	0.044	0.037
Annual Federal Standard Design Value		0.007	0.007	0.007
PM ₁₀				
Maximum Federal 24-Hour Concentration (µg/m ³)	> 150 µg/m ³	77	89	91
Annual Federal Arithmetic Mean (µg/m ³)		35.9	21.4	19.8
Number of Days Exceeding Federal 24-Hour Standard	> 150 µg/m ³	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 µg/m ³	6	4	1
PM _{2.5}				
Maximum Federal 24-Hour Concentration (µg/m ³)	> 35 µg/m ³	41.00	82.1	38.5
Annual Federal Arithmetic Mean (µg/m ³)	> 12 µg/m ³	12.63	12.58	10.80
Number of Days Exceeding Federal 24-Hour Standard	> 35 µg/m ³	4	10	1

ppm = Parts Per Million

µg/m³ = Microgram per Cubic Meter

Source: Data for O₃, CO, NO₂, PM₁₀, and PM_{2.5} was obtained from SCAQMD Air Quality Data Tables.

2.8 REGULATORY BACKGROUND

2.8.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for O₃, CO, NO_x, SO₂, PM₁₀, and Pb (13). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other

than California. Automobiles sold in California must meet the stricter emission requirements of CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (14). The CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (15) (16). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3 , NO_2 , SO_2 , PM_{10} , CO , $PM_{2.5}$, and Pb . The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 2-3 (previously presented) provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_x . NO_x is a collective term that includes all forms of NO_x which are emitted as byproducts of the combustion process.

2.8.2 CALIFORNIA REGULATIONS

CARB

CARB, which became part of CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for SO_4 , visibility, hydrogen sulfide (H_2S), and vinyl chloride (C_2H_3Cl). However, at this time, H_2S and C_2H_3Cl are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (17) (13).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare Air Quality Management Plans (AQMP) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a 5% or more annual reduction in emissions or 15% or more in a period of three years for ROG_s, NO_x, CO and PM₁₀. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than 5% per year under certain circumstances.

TITLE 24 ENERGY EFFICIENCY STANDARDS AND CALIFORNIA GREEN BUILDING STANDARDS

California Code of Regulations (CCR) Title 24 Part 6: The California Energy Code was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on August 1, 2009, and is administered by the California Building Standards Commission.

CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2022 California Green Building Code Standards that became effective on January 1, 2023. The CEC anticipates that the 2022 energy code will provide \$1.5 billion in consumer benefits and reduce GHG emissions by 10 million metric tons (18). The Project would be required to comply with the applicable standards in place at the time plan check submittals are made. These require, among other items (19):

NONRESIDENTIAL MANDATORY MEASURES

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5% of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).

- Designated parking for clean air vehicles. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- EV charging stations. New construction shall facilitate the future installation of EV supply equipment. The compliance requires empty raceways for future conduit and documentation that the electrical system has adequate capacity for the future load. The number of spaces to be provided for is contained in Table 5.106. 5.3.3 (5.106.5.3). Additionally, Table 5.106.5.4.1 specifies requirements for the installation of raceway conduit and panel power requirements for medium- and heavy-duty EV supply equipment for warehouses, grocery stores, and retail stores.
- Outdoor light pollution reduction. Outdoor lighting systems shall be designed to meet the backlight, uplight and glare ratings per Table 5.106.8 (5.106.8).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100% of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reuse or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
 - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
 - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
 - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
 - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

- Outdoor potable water uses in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 sf or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gallons per day (GPD) (5.303.1.1 and 5.303.1.2).
- Outdoor water uses in rehabilitated landscape projects equal or greater than 2,500 sf. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 sf requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 sf and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

2.8.3 AQMP

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMP to meet the state and federal ambient air quality standards (20). AQMPs are updated regularly to ensure an effective reduction in emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.10.

2.9 REGIONAL AIR QUALITY IMPROVEMENT

The Project is within the jurisdiction of the SCAQMD. In 1976, California adopted the Lewis Air Quality Management Act which created SCAQMD from a voluntary association of air pollution control districts in Los Angeles, Orange, Riverside, and San Bernardino counties. The geographic area of which SCAQMD consists of is known as the SCAB. SCAQMD develops comprehensive plans and regulatory programs for the region to attain federal standards by dates specified in federal law. The agency is also responsible for meeting state standards by the earliest date achievable, using reasonably available control measures.

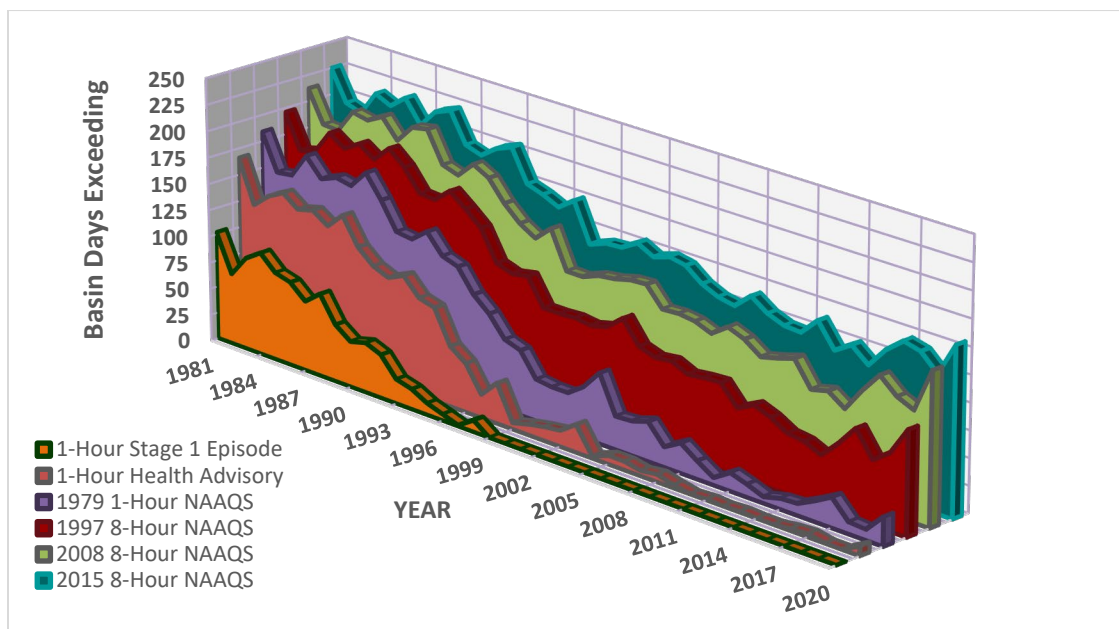
SCAQMD rule development through the 1970s and 1980s resulted in dramatic improvement in SCAB air quality. Nearly all control programs developed through the early 1990s relied on (i) the development and application of cleaner technology; (ii) add-on emission controls, and (iii) uniform CEQA review throughout the SCAB. Industrial emission sources have been significantly reduced by this approach and vehicular emissions have been reduced by technologies implemented at the state level by CARB.

As discussed above, the SCAQMD is the lead agency charged with regulating air quality emission reductions for the entire SCAB. SCAQMD created AQMPs which represent a regional blueprint for achieving healthful air on behalf of the 16 million residents of the SCAB. The 2012 AQMP states, "the remarkable historical improvement in air quality since the 1970's is the direct result

of Southern California’s comprehensive, multiyear strategy of reducing air pollution from all sources as outlined in its AQMPs,” (21).

Emissions of O_3 , NO_x , VOC, and CO have been decreasing in the SCAB since 1975 and are projected to continue to decrease through 2020 (22). These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles traveled (VMT) in the SCAB continue to increase, NO_x and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_x emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy. O_3 contour maps show that the number of days exceeding the 8-hour NAAQS has generally decreased between 1980 and 2020. For 2020, there was an overall decrease in exceedance days compared with the 1980 period. However, as shown on Table 2-5, O_3 levels have increased in the past three years due to higher temperatures and stagnant weather conditions. Notwithstanding, O_3 levels in the SCAB have decreased substantially over the last 30 years with the current maximum measured concentrations being approximately one-third of concentrations within the late 70’s (23).

TABLE 2-5: SCAB O_3 TREND



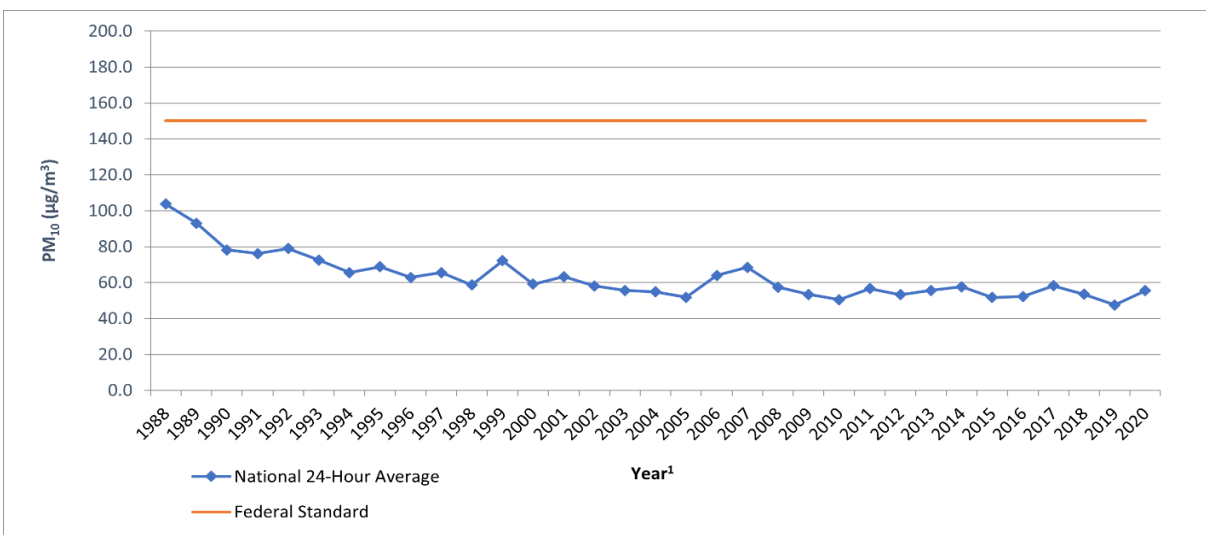
Source: 2020 SCAQMD, Historical O_3 Air Quality Trends (1976-2020)

The overall trends of PM_{10} and $PM_{2.5}$ levels in the air (not emissions) show an overall improvement since 1975. Direct emissions of PM_{10} have remained somewhat constant in the SCAB and direct emissions of $PM_{2.5}$ have decreased slightly since 1975. Area wide sources (fugitive dust from roads, dust from construction, and other sources) contribute the greatest amount of direct particulate matter emissions.

As with other pollutants, the most recent PM_{10} statistics show an overall improvement as illustrated in Tables 2-6 and 2-7. During the period for which data are available, the 24-hour

national annual average concentration for PM₁₀ decreased by approximately 46%, from 103.7 microgram per cubic meter (µg/m³) in 1988 to 55.5 µg/m³ in 2020 (24). Although the values are below the federal standard, it should be noted that there are days within the year where the concentrations would exceed the threshold. The 24-hour state annual average for emissions for PM₁₀, have decreased by approximately 64%, from 93.9 µg/m³ in 1989 to 33.9 µg/m³ in 2020 (24). Although data in the late 1990's show some variability, this is probably due to the advances in meteorological science rather than a change in emissions. Similar to the ambient concentrations, the calculated number of days above the 24-hour PM₁₀ standards has also shown an overall drop.

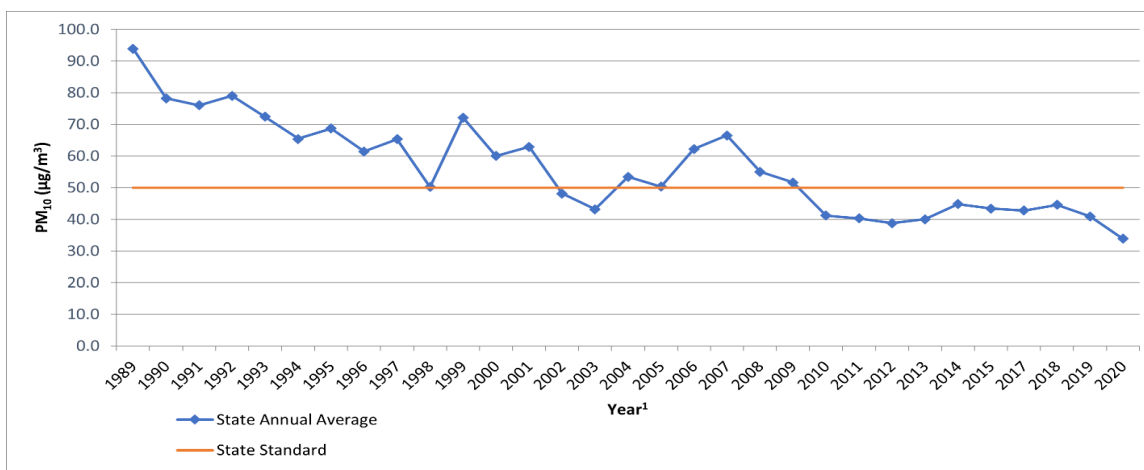
TABLE 2-6: SCAB AVERAGE 24-HOUR CONCENTRATION PM₁₀ TREND (BASED ON FEDERAL STANDARD)¹



Source: 2020 CARB, iADAM: Top Four Summary: PM₁₀ 24-Hour Averages (1988-2020)

¹ Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

TABLE 2-7: SCAB ANNUAL AVERAGE CONCENTRATION PM₁₀ TREND (BASED ON STATE STANDARD)¹

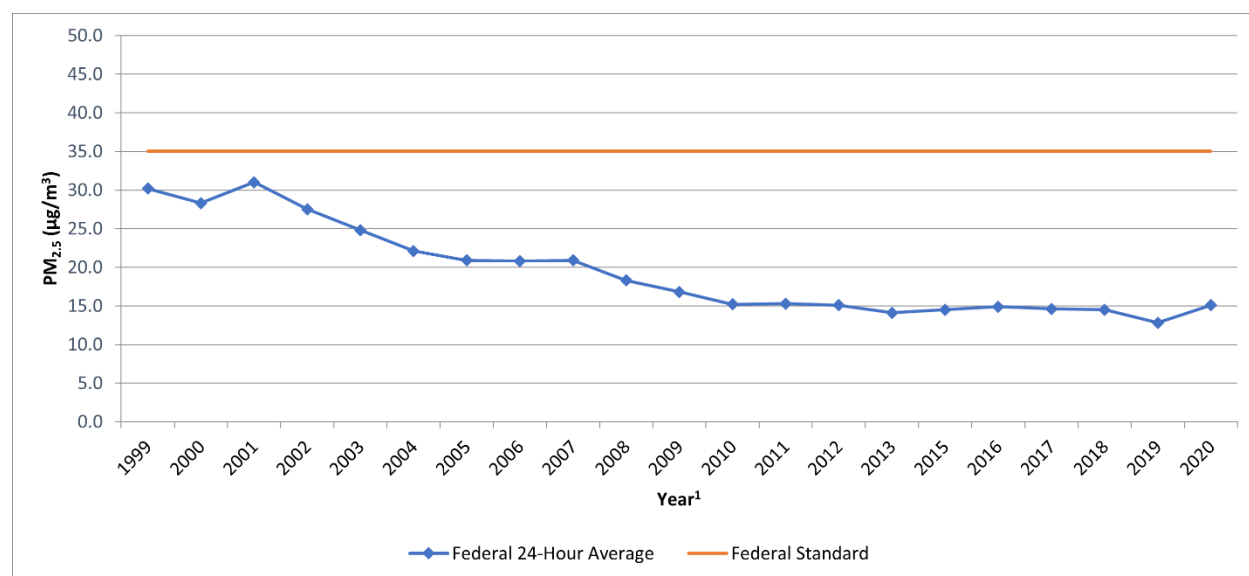


Source: 2020 CARB, iADAM: Top Four Summary: PM₁₀ 24-Hour Averages (1988-2020)

¹ Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

Tables 2-8 and 2-9 shows the most recent 24-hour average $PM_{2.5}$ concentrations in the SCAB from 1999 through 2020. Overall, the national and state annual average concentrations have decreased by almost 50% and 31% respectively (24). It should be noted that the SCAB is currently designated as nonattainment for the state and federal $PM_{2.5}$ standards.

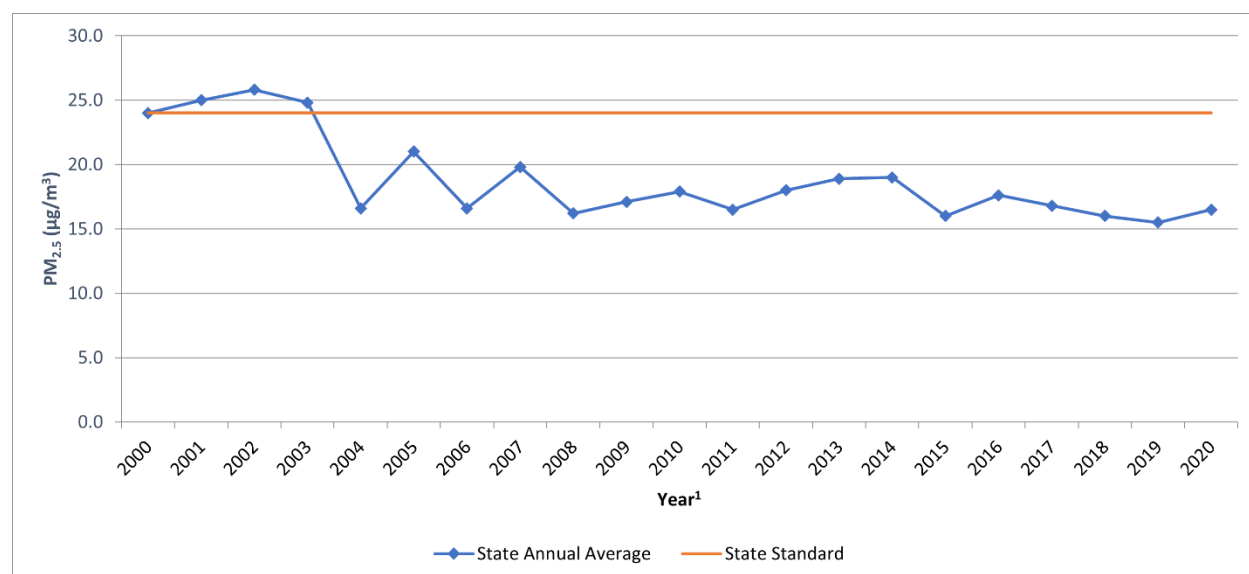
TABLE 2-8: SCAB 24-HOUR AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON FEDERAL STANDARD)¹



Source: 2020 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (1999-2020)

¹ Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

TABLE 2-9: SCAB ANNUAL AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON STATE STANDARD)¹



Source: 2020 CARB, iADAM: Top Four Summary: $PM_{2.5}$ 24-Hour Averages (1999-2020)

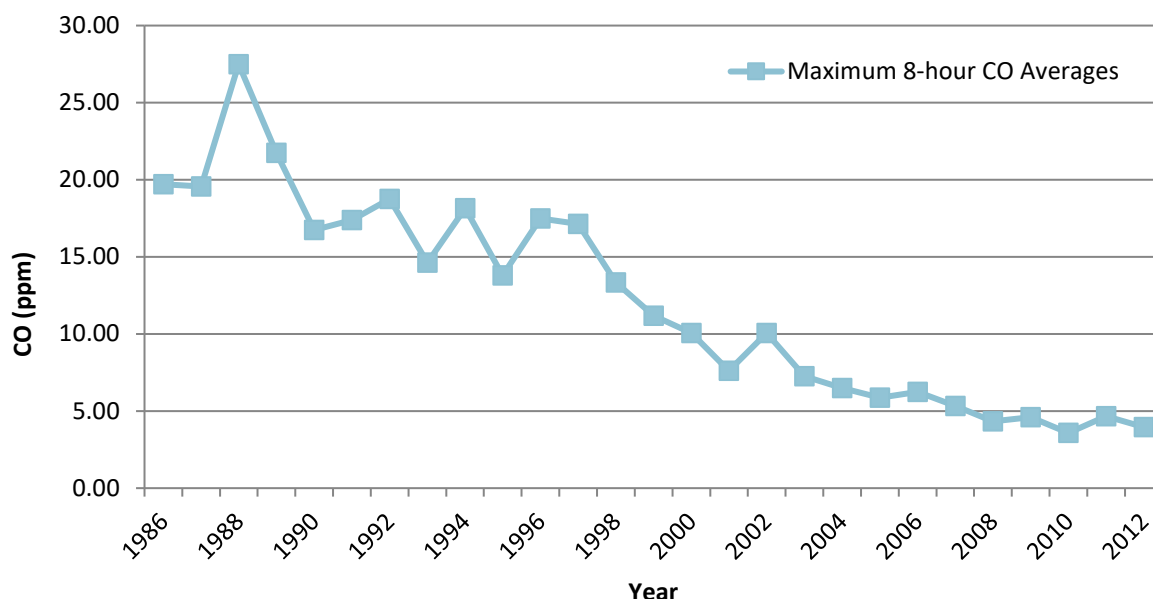
¹ Some years have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

While the 2012 AQMP PM₁₀ attainment demonstration and the 2015 associated supplemental SIP submission indicated that attainment of the 24-hour standard was predicted to occur by the end of 2015, it could not anticipate the effect of the ongoing drought on the measured PM_{2.5}.

The 2006 to 2010 base period used for the 2012 attainment demonstration had near-normal rainfall. While the trend of PM_{2.5}-equivalent emission reductions continued through 2015, the severe drought conditions contributed to the PM_{2.5} increases observed after 2012. As a result of the disrupted progress toward attainment of the federal 24-hour PM_{2.5} standard, SCAQMD submitted a request and the EPA approved, in January 2016, a “bump up” to the nonattainment classification from “moderate” to “serious,” with a new attainment deadline as soon as practicable, but not beyond December 31, 2019. As of March 14, 2019, the EPA approved portions of a SIP revision submitted by California to address CAA requirements for the 2006 24-hour PM_{2.5} NAAQS in the Los Angeles-SCAB Serious PM_{2.5} nonattainment area. The EPA also approved 2017 and 2019 motor vehicle emissions budgets for transportation conformity purposes and inter-pollutant trading ratios for use in transportation conformity analyses (25).

In December 2022, the SCAQMD released the Final 2022 AQMP. The 2022 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (26). Similar to the 2016 AQMP, the 2022 AQMP incorporates scientific and technological information and planning assumptions, including the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS) and updated emission inventory methodologies for various source categories (27).

The most recent CO concentrations in the SCAB are shown in Table 2-10 (24). CO concentrations in the SCAB have decreased markedly — a total decrease of more about 80% in the peak 8-hour concentration from 1986 to 2012. It should be noted 2012 is the most recent year where 8-hour CO averages and related statistics are available in the SCAB. The number of exceedance days has also declined. The entire SCAB is now designated as attainment for both the state and national CO standards. Ongoing reductions from motor vehicle control programs should continue the downward trend in ambient CO concentrations.

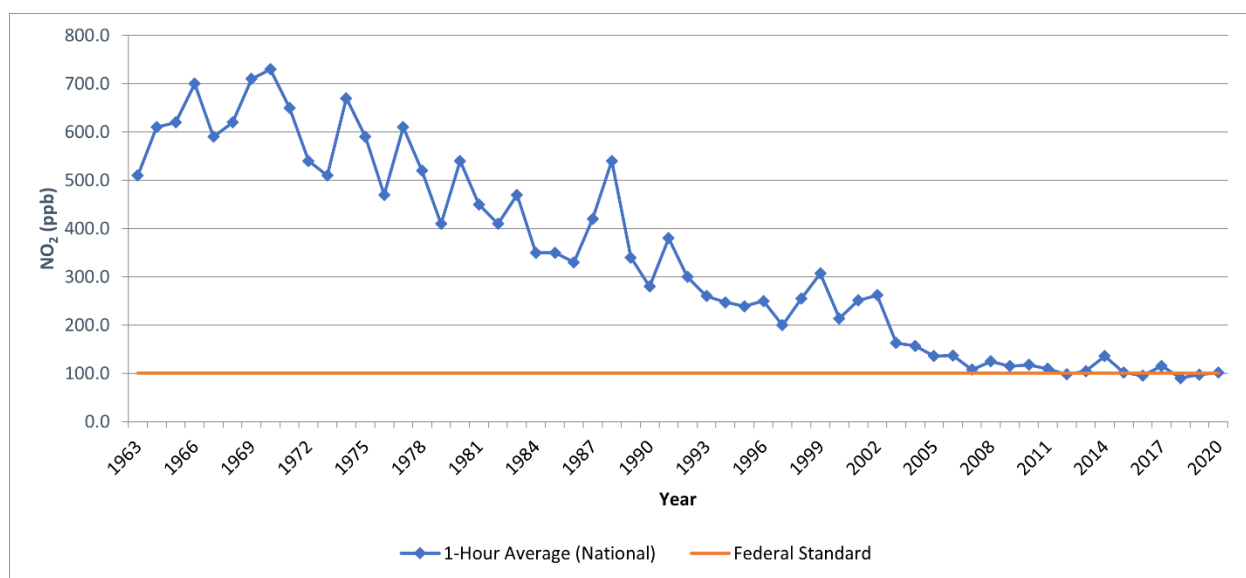
TABLE 2-10: SCAB 8-HOUR AVERAGE CONCENTRATION CO TREND¹

Source: 2020 CARB, iADAM: Top Four Summary: CO 8-Hour Averages (1986-2012)

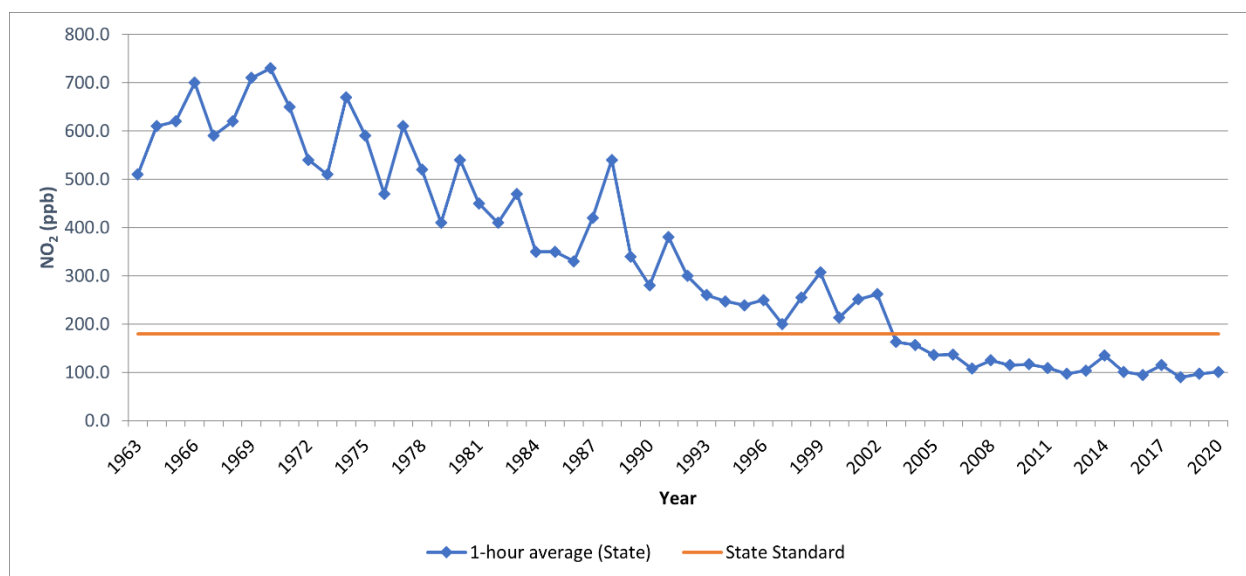
¹ The most recent year where 8-hour concentration data is available is 2012.

Part of the control process of the SCAQMD's duty to greatly improve the air quality in the SCAB is the uniform CEQA review procedures required by SCAQMD's *CEQA Air Quality Handbook (1993)* (1993 CEQA Handbook) (28). The single threshold of significance used to assess Project direct and cumulative impacts has in fact "worked" as evidenced by the track record of the air quality in the SCAB dramatically improving over the course of the past decades. As stated by the SCAQMD, the District's thresholds of significance are based on factual and scientific data and are therefore appropriate thresholds of significance to use for this Project.

The most recent NO₂ data for the SCAB is shown in Tables 2-11 and 2-12 (24). Over the last 50 years, NO₂ values have decreased significantly; the peak 1-hour national and state averages for 2020 is approximately 80% lower than what it was during 1963. The SCAB attained the State 1-hour NO₂ standard in 1994, bringing the entire state into attainment. A new state annual average standard of 0.030 ppm was adopted by CARB in February 2007 (29). The new standard is just barely exceeded in the SCAQMD. NO₂ is formed from NO_x emissions, which also contribute to O₃. As a result, the majority of the future emission control measures would be implemented as part of the overall O₃ control strategy. Many of these control measures would target mobile sources, which account for more than three-quarters of California's NO_x emissions. These measures are expected to bring the SCAQMD into attainment of the state annual average standard.

TABLE 2-11: SCAB 1-HOUR AVERAGE CONCENTRATION NO₂ TREND (BASED ON FEDERAL STANDARD)

Source: 2020 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1963-2020)

TABLE 2-12: SCAB 1-HOUR AVERAGE CONCENTRATION NO₂ TREND (BASED ON STATE STANDARD)

Source: 2020 CARB, iADAM: Top Four Summary: CO 1-Hour Averages (1963-2020)

2.9.1 TOXIC AIR CONTAMINANTS (TAC) TRENDS

In 1984, as a result of public concern for exposure to airborne carcinogens, CARB adopted regulations to reduce the amount of TAC emissions resulting from mobile and area sources, such as cars, trucks, stationary sources, and consumer products. According to the *Ambient and Emission Trends of Toxic Air Contaminants in California* journal article (30) which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for

the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (between 1990 and 2012). The seven TACs studied include those that are derived from mobile sources: diesel particulate matter (DPM), benzene (C_6H_6), and 1,3-butadiene (C_4H_6); those that are derived from stationary sources: perchloroethylene (C_2Cl_4) and hexavalent chromium ($Cr(VI)$); and those derived from photochemical reactions of emitted VOCs: formaldehyde (CH_2O) and acetaldehyde (C_2H_4O)². The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

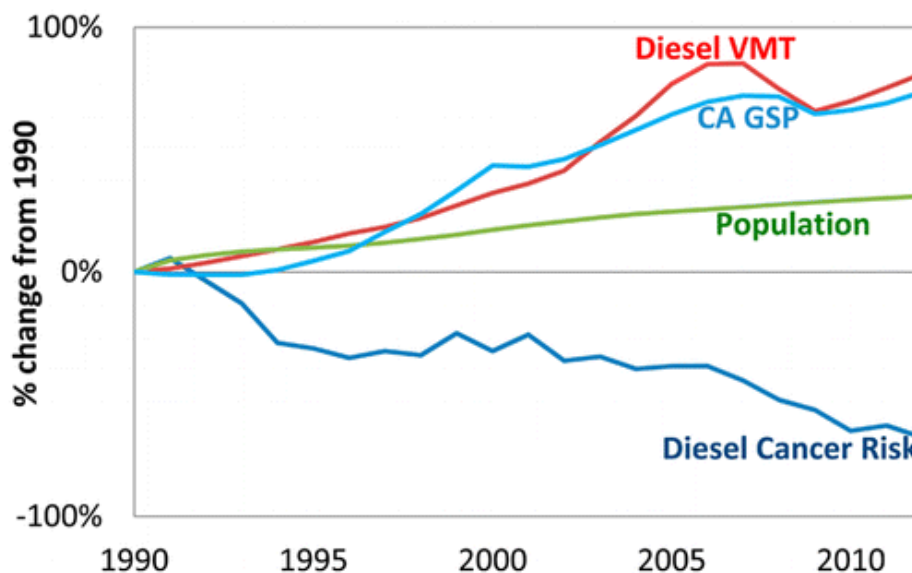
MOBILE SOURCE TACs

CARB introduced two programs that aimed at reducing mobile emissions for light and medium duty vehicles through vehicle emissions controls and cleaner fuel. In California, light-duty vehicles sold after 1996 are equipped with California's second-generation On-Board Diagnostic (OBD-II) system. The OBD-II system monitors virtually every component that can affect the emission performance of the vehicle to ensure that the vehicle remains as clean as possible over its entire life and assists repair technicians in diagnosing and fixing problems with the computerized engine controls. If a problem is detected, the OBD-II system illuminates a warning lamp on the vehicle instrument panel to alert the driver. This warning lamp typically contains the phrase "Check Engine" or "Service Engine Soon." The system would also store important information about the detected malfunction so that a repair technician can accurately find and fix the problem. CARB has recently developed similar OBD requirements for heavy-duty vehicles over 14,000 pounds (lbs). CARB's phase II Reformulated Gasoline Regulation (RFG-2), adopted in 1996, also led to a reduction of mobile source emissions. Through such regulations, benzene levels declined 88% from 1990-2012. 1,3-Butadiene concentrations also declined 85% from 1990-2012 as a result of the use of reformulated gasoline and motor vehicle regulations (30).

In 2000, CARB's Diesel Risk Reduction Plan (DRRP) recommended the replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (<15 ppm) diesel fuel. As a result of these measures, DPM concentrations have declined 68% since 2000, even though the state's population increased 31% and the amount of diesel vehicles miles traveled increased 81%, as shown on Exhibit 2-B. With the implementation of these diesel-related control regulations, CARB expects a DPM decline of 71% for 2000-2020.

SCAQMD's Multiple Air Toxics Exposure Study (MATES) study, discussed later illustrates the cancer risk trends, which show an approximate 80% reduction in risk from 2000 to 2020, which correlates to the reductions in DPM anticipated by CARB.

² It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

EXHIBIT 2-A: DPM AND DIESEL VEHICLE MILES TREND**California Population, Gross State Product (GSP),
Diesel Cancer Risk, Diesel Vehicle-Miles-Traveled (VMT)**

Source: 2020 CARB

DIESEL REGULATIONS

CARB and the Ports of Los Angeles and Long Beach (POLA and POLB) have adopted several iterations of regulations for diesel trucks that are aimed at reducing DPM. More specifically, CARB Drayage Truck Regulation (31), CARB statewide On-road Truck and Bus Regulation (32), and the Ports of Los Angeles and Long Beach Clean Truck Program (CTP) require accelerated implementation of “clean trucks” into the statewide truck fleet (33). In other words, older more polluting trucks would be replaced with newer, cleaner trucks as a function of these regulatory requirements.

Moreover, the average statewide DPM emissions for Heavy Duty Trucks (HDT), in terms of grams of DPM generated per mile traveled, would dramatically be reduced due to the aforementioned regulatory requirements.

Diesel emissions identified in this analysis would therefore overstate future DPM emissions since not all the regulatory requirements are reflected in the modeling.

CANCER RISK TRENDS

Based on information available from CARB, overall cancer risk throughout the SCAB has had a declining trend since 1990. In 1998, following an exhaustive 10-year scientific assessment process, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. The SCAQMD initiated a comprehensive urban toxic air pollution study called the Multiple Air Toxics Exposure Study (MATES). DPM accounts for more than 70% of the cancer risk.

In January 2018, as part of the overall effort to reduce air toxics exposure in the SCAB, SCAQMD began conducting the MATES V Program. MATES V field measurements were conducted at ten fixed sites (the same sites selected for MATES III and IV) to assess trends in air toxics levels. MATES V also included measurements of ultrafine particles (UFP) and black carbon (BC) concentrations, which can be compared to the UFP levels measured in MATES IV (34). The final report for the MATES V study was published August 2021. In addition to new measurements and updated modeling results, several key updates were implemented in MATES V. First, MATES V estimates cancer risks by taking into account multiple exposure pathways, which includes inhalation and non-inhalation pathways. This approach is consistent with how cancer risks are estimated in South Coast AQMD's programs such as permitting, Air Toxics Hot Spots (AB2588), and CEQA. Previous MATES studies quantified the cancer risks based on the inhalation pathway only. Second, along with cancer risk estimates, MATES V includes information on the chronic non-cancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic non-cancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazard Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time (35).

MATES-V calculated cancer risks based on monitoring data collected at ten fixed sites within the SCAB. None of the fixed monitoring sites are within the local area of the Project site. However, MATES-V has extrapolated the excess cancer risk levels throughout the SCAB by modeling the specific grids. The Project is located within a quadrant of the geographic grid of the MATES-V model which predicted a cancer risk of 293 in one million for the area containing the Project site. DPM is included in this cancer risk along with all other TAC sources. As in previous MATES iterations, DPM is the largest contributor to overall air toxics cancer risk. However, the average levels of DPM in MATES V are 53% lower at the 10 monitoring sites compared to MATES IV. Cumulative Project generated TACs are limited to DPM.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

This study quantifies air quality emissions generated by construction and operation of the Project and addresses whether the Project conflicts with implementation of the SCAQMD's AQMP and Lead Agency planning regulations. The analysis of Project-generated air emissions determines whether the Project would result in a cumulatively considerable net increase of any criteria pollutant for which the SCAB is in non-attainment under an applicable NAAQS and CAAQS. Additionally, the Project has been evaluated to determine whether the Project would expose sensitive receptors to substantial pollutant concentrations and the impacts of odors. The significance of these potential impacts is described in the following sections.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the *CEQA Guidelines* (14 CCR §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The SCAQMD has also developed regional significance thresholds for other regulated pollutants, as summarized at Table 3-1 (36). The SCAQMD's *CEQA Air Quality Significance Thresholds* (March 2023) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1: MAXIMUM DAILY REGIONAL EMISSIONS THRESHOLDS

Pollutant	Regional Construction Threshold	Regional Operational Thresholds
NO _x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM ₁₀	150 lbs/day	150 lbs/day
PM _{2.5}	55 lbs/day	55 lbs/day
SO _x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Pb	3 lbs/day	3 lbs/day

lbs/day = Pounds Per Day

3.3 MODELS EMPLOYED TO ANALYZE AIR QUALITY

3.3.1 CalEEMod

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

In May 2023, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the CalEEMod Version 2022.1.1.12. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (37). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 through 3.2.

3.4 CONSTRUCTION EMISSIONS

3.4.1 CONSTRUCTION ACTIVITIES

Construction activities associated with the Project would result in emissions of VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}. Construction related emissions are expected from the following construction activities:

- Demolition
- Site Preparation
- Grading
- Crushing/Blasting
- Building Construction
- Paving
- Architectural Coating

DEMOLITION ACTIVITIES

The site is currently developed with existing uses/structures which total approximately 43,858 sf that will be demolished. Demolished material associated with demolition will be hauled off-site.

SITE PREPARATION AND GRADING ACTIVITIES

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions”. Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. It is anticipated that the Project would require 218,100 cubic yards of export. Site preparation and grading activities are modeled as sequential phases.

ROCK CRUSHING ACTIVITIES

The Project will utilize rock crushing, which with crushed material will be used to back fill and balance the site so no import/export will be needed. It should be noted that as a conservative measure and to account for all hauling related emissions, this analysis assumes the full 218,100 CY of export with no reductions of import from rock crushing. It is anticipated that all rock crushing activities would occur during the overall grading phase. This is also conservative since spreading the emissions over a greater time frame would lower the reported daily emissions. Fugitive dust emissions would also be generated through the crushing of rocks on-site. The US EPA's AP-42 compilation of emission factors available in Chapter 11.19.2-2 were used to estimate fugitive dust from rock crushing activities. To be conservative, it is estimated that approximately 218,100 tons of rock could be crushed during the grading phase, which represents the full 218,100 anticipated export, and would represent approximately 2,612 tons per day (218,100 cy/63 days ~ 3,462 tons per day). It is estimated that crushing activities would result in 22.16 pounds per day of PM₁₀ emissions and 3.04 pounds of PM_{2.5} emissions per day. An electric rock crusher will break down the fragmented rocks and will be powered by a diesel generator, which was included in the grading phase to account for equipment emissions. PM emissions from rock crushing were added to the winter 2025 maximum construction emissions presented on Table 3-5. Additional details on the emissions calculation associated with crushing are provided in Appendix 3.1.

BLASTING ACTIVITIES

The Project site may require blasting. While the need for blasting is not known at this point, the emissions effects of blasting are included in this AQIA. For modeling purposes, it is anticipated no more than two blasting events could occur per day for logistics and safety reasons. The estimated emissions of NO_x, CO, and SO_x from explosives used for blasting were determined using emission factors in Section 13.3 (Explosives Detonation) of AP-42 (EPA 1980), and PM₁₀ and PM_{2.5} emissions were determined using Section 11.9 of AP-42 (38). According to AP-42, "Unburned hydrocarbons also result from explosions, but in most instances, methane is the only species that has been reported" (EPA 1980); methane is not a VOC, and a methane emission factor has not been determined for ammonium nitrate/fuel oil (ANFO). A rock drill has been included in the grading phase to account for equipment emissions during blasting preparation. While equipment emissions are included in overall construction emission estimates blasting activities would limit onsite activity for safety reasons and no other significant activities would occur on the same day other than a few pieces of equipment supporting the blasting activity. Blast emissions are based on a maximum of 1-ton ANFO per day for CO, NO_x, and SO₂, and PM emissions estimates are conservatively assuming the entire 64.97 acres as the blast areas. Blasting is anticipated to result in 67 lbs. of CO, 17 lbs. of NO_x, 2 lbs. of SO₂, 1.38 lbs. of PM₁₀, and 0.32 lbs. of PM_{2.5}. While blasting events would limit on-site equipment activity and typically be analyzed as a separate phase, to present a conservative analysis, the blasting emissions previously presented were added to the winter 2025 maximum construction emissions presented on Table 3-5. As shown on Table 3-5, even with blasting emissions, a less than significant impact is expected for construction source emissions.

BUILDING CONSTRUCTION, PAVING, AND ARCHITECTURAL COATING ACTIVITIES

Building construction and paving emissions are primarily associated with exhaust emissions from on-site equipment and vehicular trips to the site by construction workers and vendor trips. Architectural coating emissions include worker trips as well, but the primary pollutant emission of concern during this phase is ROG/VOC. CalEEMod default emission rates include the effects of Rule 1113 to limit ROG/VOC emissions. To present a reasonable worst-case scenario, the building construction, paving, and architectural coating activities are modeled as overlapping phases.

OFF-SITE UTILITY AND INFRASTRUCTURE IMPROVEMENTS

To support the Project development, there will be grading, trenching, and paving for off-site improvements associated with roadway construction and utility installation for the Project. It is expected that these off-site improvements will be constructed within the existing public right-of-way (ROW) on Decker Road, Seaton Avenue, Cajalco Road and Rider Street. Construction emissions from this off-site work would, therefore, be relatively short term, not concentrated in one area, and would be reduced at any given location as construction work moves linearly along the existing public right-of-way and farther from sensitive uses. The physical constraints would limit the amount of construction equipment that could be used, and any off-site and utility infrastructure construction would not use equipment totals that would exceed the equipment totals on Table 3-5. As such, no impacts beyond what has already been identified in this report are expected to occur.

ON-ROAD TRIPS

Construction generates on-road vehicle emissions from vehicle usage for workers, vendors, and haul trucks commuting to and from the site. The number of worker, vendor, and hauling trips are presented below in Table 3-2. Worker trips are based on CalEEMod defaults. It should be noted that for vendor trips, specifically, CalEEMod only assigns vendor trips to the Building Construction phase. Vendor trips would likely occur during all phases of construction. As such, the CalEEMod defaults for vendor trips have been adjusted based on a ratio of the total vendor trips to the number of days of each subphase of activity. Additionally, per client provided information, 200 truck trips per day for hauling is expected.

TABLE 3-2: CONSTRUCTION TRIP ASSUMPTIONS

Construction Activity	Worker Trips Per Day	Vendor Trips Per Day	Hauling Trips Per Day
Demolition	15	27	9
Site Preparation	18	11	0
Grading	43	31	200
Building Construction	421	95	0
Paving	15	0	0
Architectural Coating	84	0	0

3.4.2 CONSTRUCTION DURATION

For purposes of analysis, construction of Project is expected to commence in September 2024 and would last through December 2025. The construction schedule utilized in the analysis, shown in Table 3-3, represents a “worst-case” analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent³. The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines* (1).

3.4.3 CONSTRUCTION EQUIPMENT

Consistent with industry standards and typical construction practices, with the exception of the equipment needed for Building Construction which was increased. Each piece of equipment listed in Table 3-4 would operate up to a total of eight (8) hours per day, or more than two-thirds of the period during which construction activities are allowed pursuant to the County Code. In accordance with the County of Riverside Good Neighbor Policy for Logistics and Warehouse/Distribution uses, it was assumed that equipment rated 50 or less horsepower would meet at least CARB Tier 3 emissions standards, and equipment rated more than 50 horsepower would meet at least CARB Tier 4 Interim emissions standards.

TABLE 3-3: CONSTRUCTION DURATION

Construction Activity	Start Date	End Date	Working Days
Demolition	9/2/2024	11/15/2024	55
Site Preparation	11/18/2024	12/17/2024	22
Grading	12/18/2024	3/14/2025	63
Building Construction	3/17/2025	12/12/2025	195
Paving	10/2/2025	10/22/2025	15
Architectural Coating	8/11/2025	12/12/2025	90

³ As shown in the CalEEMod User's Guide Version 2022.1, Section 4.3 “Off-Road Equipment” as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3-4: CONSTRUCTION EQUIPMENT ASSUMPTIONS

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

¹ In order to account for fugitive dust emissions, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes during the site preparation and grading phases of Project construction.

3.4.4 CONSTRUCTION EMISSIONS SUMMARY

IMPACTS WITHOUT MITIGATION

The estimated maximum daily construction emissions without mitigation are summarized on Table 3-5. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction will not exceed the thresholds established by the SCAQMD for emissions of any criteria pollutant. Regional emissions resulting from the Project construction would not exceed the regional thresholds established for emissions of any criteria pollutant.

TABLE 3-5: OVERALL CONSTRUCTION EMISSIONS SUMMARY – WITHOUT MITIGATION

Year	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer						
2024	0.68	13.75	19.90	0.04	1.78	0.65
2025	57.38	21.82	62.36	0.06	8.00	2.31
Winter						
2024	2.34	60.98	87.97	0.24	10.66	3.89
2025	62.59	77.36	154.67	2.24	34.62	7.92
Maximum Daily Emissions	62.59	77.36	154.67	2.24	34.62	7.92
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	NO	NO	NO	NO	NO	NO

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1.

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the Project would result in emissions of VOCs, NO_x, SO_x, CO, PM₁₀, and PM_{2.5}. Operational emissions are expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- Stationary Source Emissions
- On-Site Cargo Handling Equipment Emissions
- Transportation Refrigeration Units (TRU) Emissions

3.5.1 AREA SOURCE EMISSIONS

ARCHITECTURAL COATINGS

Over a period of time the buildings that are part of this Project would require maintenance and would therefore produce emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings. The emissions associated with architectural coatings were calculated using CalEEMod.

CONSUMER PRODUCTS

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within CalEEMod.

LANDSCAPE MAINTENANCE EQUIPMENT

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. It should be noted that as October 9, 2021, Governor Gavin Newsom signed AB 1346. The bill aims to ban the sale of new gasoline-powered equipment under 25 gross horsepower (known as small off-road engines [SOREs]) by 2024. For purposes of analysis, the emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.5.2 ENERGY SOURCE EMISSIONS

COMBUSTION EMISSIONS ASSOCIATED WITH ELECTRICITY

Criteria pollutant emissions are emitted through the generation of electricity. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity are excluded from the evaluation of significance. Based on information provided by the Project applicant, the site is also not expected to utilize natural gas for the building envelope, and therefore would not generate any emissions from direct energy consumption. Electricity usage associated with the Project was calculated based on client provided data and includes 20% of the building user's electric power from renewable sources.

3.5.3 MOBILE SOURCE EMISSIONS

The Project related operational air quality emissions derive primarily from vehicle trips generated by the Project, including employee trips to and from the site and truck trips associated with the proposed uses. Trip characteristics available from the *Cajalco Commerce Center (PPT220050) Traffic Analysis* were utilized in this analysis (39).

APPROACH FOR ANALYSIS OF THE PROJECT

In order to determine emissions from passenger car vehicles, CalEEMod defaults for trip length and trip purpose were utilized. Default vehicle trip lengths for primary trips will be populated using data from the local metropolitan planning organizations/Regional Transportation Planning Agencies (MPO/RTPA). Trip type percentages and trip lengths provided by MPO/RTPAs truncate data at their demonstrative borders. This analysis assumes that passenger cars include Light-Duty-Auto vehicles (LDA), Light-Duty-Trucks (LDT1⁴ & LDT2⁵), Medium-Duty-Vehicles (MDV), and Motorcycles (MCY) vehicle types. In order to account for emissions generated by passenger cars, the fleet mix in Table 3-6 was utilized.

⁴ Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

⁵ Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

TABLE 3-6: PASSENGER CAR FLEET MIX

Land Use	% Vehicle Type				
	LDA	LDT1	LDT2	MDV	MCY
High-Cube Fulfillment Center	53.90%	4.13%	22.26%	17.20%	2.51%
High-Cube Cold Storage					

Note: The Project-specific passenger car fleet mix used in this analysis is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicle types.

To determine emissions from trucks for the proposed industrial uses, the analysis incorporated the SCAQMD recommended truck trip length of 15.3 miles for 2-axle (LHDT1, LHDT2), 14.2 miles for 3-axle (MHDT) trucks, and 39.9 miles for 4+-axle (HHDT) trucks and weighting the average trip lengths using traffic trip percentages. The trip length function for the proposed industrial building use has been calculated to 35.88 miles for high-cube fulfillment center and 28.56 miles for high-cube cold storage and an assumption of 100% primary trips. This trip length assumption is higher than the CalEEMod defaults for trucks. In order to be consistent with the *Cajalco Commerce Center (PPT220050) Traffic Analysis*, trucks are broken down by truck type. The truck fleet mix is estimated by rationing the trip rates for each truck type based on information provided by the SCAQMD recommended truck mix, by axle type. Heavy trucks are broken down by truck type (or axle type) and are categorized as either Light-Heavy-Duty Trucks (LHDT1⁶ & LHDT2⁷)/2-axle, Medium-Heavy-Duty Trucks (MHDT)/3-axle, and Heavy-Heavy-Duty Trucks (HHDT)/4+-axle. To account for emissions generated by trucks, the fleet mix in Table 3-7 was utilized.

TABLE 3-7: TRUCK FLEET MIX

Land Use	% Vehicle Type			
	LHDT1	LHDT2	MHDT	HHDT
High-Cube Fulfillment Center	5.52%	1.57%	8.95%	83.95%
High-Cube Cold Storage	27.30%	7.78%	10.53%	54.39%

Note: Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT1, LHDT2, MHDT, and HHDT) relative to the total number of truck trips.

FUGITIVE DUST RELATED TO VEHICULAR TRAVEL

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of brake and tire wear particulates. The emissions estimate for travel on paved roads were calculated using CalEEMod.

3.5.4 ON-SITE CARGO HANDLING EQUIPMENT SOURCE EMISSIONS

It is common for industrial buildings to require the operation of exterior cargo handling equipment in the building's truck court areas. For this Project, on-site modeled operational

⁶ Vehicles under the LHDT1 category have a GVWR of 8,501 to 10,000 lbs.

⁷ Vehicles under the LHDT2 category have a GVWR of 10,001 to 14,000 lbs.

equipment includes up to five (5) 175 horsepower (hp), natural gas-powered cargo handling equipment – port tractor operating 4 hours a day⁸ for 365 days of the year.

3.5.5 TRU EMISSIONS

In order to account for the possibility of refrigerated uses, trucks associated with the cold-storage land use are assumed to also have TRUs. For modeling purposes, 57 two-way truck trips during have been estimated to include TRUs (e.g., all truck trips that would be associated with up to 150,526-sf of high-cube cold storage use, as summarized in the Cajalco Commerce Center (PPT220050) Traffic Analysis (39). TRUs are accounted for during on-site and off-site travel. The TRU calculations are based on EMISSIONS FACTOR Model version 2021 (EMFAC2021), developed by the CARB. EMFAC2021 does not provide emission rates per hour or mile as with the on-road emission model and only provides emission inventories. Emission results are produced in tons per day while all activity, fuel consumption and horsepower hours were reported at annual levels. The emission inventory is based on specific assumptions including the average horsepower rating of specific types of equipment and the hours of operation annually. These assumptions are not always consistent with assumptions used in the modeling of project level emissions. Therefore, the emissions inventory was converted into emission rates to accurately calculate emissions from TRU operation associated with project level details. This was accomplished by converting the annual horsepower hours to daily operational characteristics and converting the daily emission levels into hourly emission rates based on the total emission of each criteria pollutant by equipment type and the average daily hours of operations. Detailed TRU emission calculations are provided in Appendix 3.4.

3.5.6 OPERATIONAL EMISSIONS SUMMARY

As previously stated, CalEEMod utilizes summer and winter EMFAC2021 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season. The estimated operational-source emissions are summarized on Table 3-8. Detailed operation model outputs for the Project are presented in Appendix 3.1. As shown on Table 3-8, the Project would exceed the numerical thresholds of significance established by the SCAQMD for emissions of NO_x.

RECOMMENDED OPERATIONAL MITIGATION MEASURES

MM AQ-1

To facilitate the possible future installation of infrastructure that would charge the batteries that power the motors of electric-powered trucks, the following shall be installed. 1) At shell building permit, an electrical room(s) and/or exterior area(s) of the site shall be designated where future electrical panels would be located for the purpose of supplying power to on-site charging facilities for electric powered trucks. Conduit shall be installed from this designated area where the panel would be located to the onsite location where the charging facilities would be located and where electric-powered trucks would park and connect to charging facilities to charge the batteries that

⁸ Based on Table II-3, Port and Rail Cargo Handling Equipment Demographics by Type, from CARB's Technology Assessment: Mobile Cargo Handling Equipment document, a single piece of equipment could operate up to 2 hours per day (Total Average Annual Activity divided by Total Number Pieces of Equipment). As such, the analysis conservatively assumes that the tractor/loader/backhoe would operate up to 4 hours per day.

power the motors of the electric-powered trucks. 2) At issuance of a building permit for Tenant Improvements, if the tenant is served by electric trucks, the electrical panel and charging units shall be installed, and the electrical wiring connections shall be made from the electrical panel to the charging units. If the tenant is not served by electric trucks, this requirement shall not apply.

MM AQ-2

Install passenger car EV charging stations and designated carpool parking stalls per the provisions of the California Green Building Standards Code and require that each building be constructed with an adequately sized electrical panel(s) and conduit to accommodate future EV charging stations at a minimum of 5 percent of the passenger car parking spaces.

MM AQ-3

As a condition of certificates of occupancy, all on-site outdoor cargo handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, forklifts, and other on-site equipment) shall be required to be powered by electricity, compressed natural gas, or gasoline and all indoor cargo handling equipment shall be required to be powered by electricity.

MM AQ-4

In order to promote alternative fuels, and help support "clean" truck fleets, the developer/successor-in-interest shall provide building occupants with information related to SCAQMD's Carl Moyer Program, or other such programs that promote truck retrofits or "clean" vehicles and information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. Tenants shall be notified about the availability of: 1) alternatively fueled cargo handling equipment; 2) grant programs for diesel-fueled vehicle engine retrofit and/or replacement; 3) designated truck parking locations in the project vicinity; 4) access to alternative fueling stations proximate to the site that supply compressed natural gas; and 5) the United States Environmental Protection Agency's SmartWay program.

MM AQ-5

Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas of the warehouse portion of the Project that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum, each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than five (5) minutes once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged; and 3) telephone numbers of the building facilities manager and the CARB to report violations. Prior to the issuance of an occupancy permit, the City shall conduct a site inspection to ensure that the signs are in place.

MM AQ-6

Once constructed, the project proponent shall ensure that all building tenants shall utilize electric equipment for landscape maintenance to the extent feasible, through requirements in the lease agreements.

MM AQ-7

All future operations shall adhere to the applicable policies:

1. Warehouse/distribution facilities greater than 250,000 square feet shall be designed to provide adequate on-site parking for commercial trucks and passenger vehicles and on-site queuing for trucks that is away from sensitive receptors. The general queuing and spill-over of trucks onto surrounding public streets shall be prevented. Commercial trucks shall not be parked in the public road right-of-way or nearby residential areas.
2. Truck driveways shall generally be placed, on streets that do not have fronting sensitive receptors.
3. Sites shall clearly mark entry and exit points for trucks and service vehicles.
4. Sites shall be densely screened with landscaping along all bordering streets and adjacent sensitive receptors, with trees spaced no further apart than 25 feet on center. Fifty percent of the landscape screening shall include a minimum of 36- inch box trees. Facility operators will be responsible to establish a long-term maintenance mechanism to assure that the landscaping remains in place and functional in accordance with the approved landscaping plan.
5. Facility operators shall maintain records of their fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks ("MHDT") and Heavy-Heavy Duty Trucks ("HHD") accessing the site use year CARB 2010 or newer engines. The records should be maintained on-site and be made available for inspection by the lead agency.
6. Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board (CARB) anti-idling regulations. At a minimum each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than five minutes; and 3) telephone numbers of the building facilities manager and CARB to report violations.
7. Facility operators shall train their managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks.
8. Signs should be posted in the appropriate locations and/or handouts should be provided that show the locations of nearest food options, fueling, truck maintenance services, and other similar convenience services.
9. Each Facility shall designate a Compliance Officer responsible for implementing the measures described herein and/or in the project conditions of approval and mitigation measures. Contact information shall be provided to the City and updated annually, and signs shall be posted in visible locations providing the contact information for the Compliance Officer to the surrounding community. The Compliance Officer also shall coordinate with CARB and SCAQMD to obtain the latest information about regional air quality concentrations, health risks, and trucking regulations.
10. Signs shall be posted in the appropriate locations heavy truck drivers to park and perform any maintenance of trucks in designated on-site areas and not within the surrounding community or on public streets.
11. All future warehouse/distribution facilities generally shall be designed so that truck bays and loading docks are a minimum of 300 feet, measured from the property line of the sensitive receptor to the nearest dock door using a direct straight-line method. This distance may be

reduced if the site design includes berms or other similar features to appropriately shield and buffer the sensitive receptors from the active truck operations areas. Other setbacks appropriate to the site's zoning classification shall be incorporated in the design.

12. Facility operators for sites that exceed 250 employees shall establish a rideshare program, in accordance with AQMD rule 2202, with the intent of discouraging single-occupancy vehicle trips and promote alternate modes of transportation, such as carpooling and transit where feasible.

These strategies would contribute to reducing heavy duty truck emissions associated with the proposed Project. The proposed Project would not conflict with these strategies. Trucks onsite are required to comply with CARB's Heavy-Duty (Tractor-Trailer) GHG Regulation, which requires SmartWay tractor trailers that include idle-reduction technologies, aerodynamic technologies, and low-rolling resistant tires that would reduce fuel consumption and associated emissions.

Despite the mitigation measures provided by Project and the anticipated regulations implemented by the EPA and CARB to improve truck efficiency, the estimated long-term emissions generated under full buildout of the proposed Project would exceed the SCAQMD's regional operational significance thresholds (see Tables 3-8) and would cumulatively contribute to the nonattainment designations in the SCAB. The predominance of the Project's operational-source emissions are generated by passenger cars and trucks accessing the Project. Neither the Project Applicant nor the City have regulatory authority to control tailpipe emissions, and no feasible MMs beyond the measures identified herein exist that would reduce Project operational-source NO_x emissions to levels that are less-than-significant. On this basis, it is concluded that Project operational-source NO_x emissions cannot be definitively reduced below applicable SCQMD thresholds and therefore, the proposed Project would result in a significant and unavoidable impact in this regard.

The summary list of mitigation measures above are all designed to reduce emissions attributable to the proposed Project. Although not specifically quantifiable, these measures will result in a reduction of air quality emissions. Therefore, the operational emissions shown below is a conservative forecast of air quality emissions and as shown on Table 3-8, will exceed the applicable SCAQMD thresholds for NO_x during operations.

TABLE 3-8: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Source	Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer						
Mobile Source	11.37	54.05	144.76	0.73	43.75	11.92
Area Source	30.08	0.37	43.64	0.00	0.08	0.06
Stationary Source	0.39	1.09	1.00	0.00	0.06	0.06
TRUs	4.13	4.52	0.49	0.00	0.19	0.18
On-Site Equipment Source	0.59	1.88	82.22	0.00	0.15	0.14
Project Maximum Daily Emissions	46.55	61.90	272.11	0.73	44.23	12.34
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	YES	NO	NO	NO	NO
Winter						
Mobile Source	10.83	56.84	120.17	0.71	43.75	11.92
Area Source	22.91	0.00	0.00	0.00	0.00	0.00
Stationary Source	0.39	1.09	1.00	0.00	0.06	0.06
TRUs	4.13	4.52	0.49	0.00	0.19	0.18
On-Site Equipment Source	0.59	1.88	82.22	0.00	0.15	0.14
Project Maximum Daily Emissions	38.85	64.32	203.88	0.71	44.15	12.29
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	NO	YES	NO	NO	NO	NO

Source: CalEEMod operational-source emissions are presented in Appendix 3.1.

3.6 LOCALIZED SIGNIFICANCE

BACKGROUND ON LST DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4⁹. LSTs represent the maximum emissions from a project that would not cause

⁹ The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD

or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (40).

EMISSIONS CONSIDERED

Based on SCAQMD's *LST Methodology*, emissions for concern during construction activities are on-site NO_x, CO, PM_{2.5}, and PM₁₀. The *LST Methodology* clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (41)." As such, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

DISPERSION MODELING

In order to estimate localized pollutant concentrations resulting from Project construction, the SCAQMD-approved American Meteorological Society/EPA Regulatory Model (AERMOD) dispersion model was utilized. The modeling approach utilized is discussed as follows:

SOURCES

It should be noted that in order to model worst-case conditions, the highest daily peak on-site emissions resulting from overlapping construction activity were modeled.

A ground level release height and a 1 meter (approximately 3.28 feet) initial vertical dimension (sigma z) were utilized for fugitive dust emissions of PM₁₀ and PM_{2.5} consistent with SCAQMD's LST guidance.

In order to account for equipment exhaust emissions from NO₂, CO, PM₁₀, and PM_{2.5} a release height of 5.0 meters was utilized consistent with SCAQMD's LST guidance.

METEOROLOGICAL DATA AND MODEL OPTIONS

In order to account for meteorological conditions at the Project site, meteorological data from the SCAQMD's Redlands monitoring station was utilized, as this is the nearest station to the Project site for which meteorological data is available. Additionally, a receptor height of 2 meters and regulatory default options were utilized consistent with SCAQMD's LST guidance.

defines Environmental Justice as "...equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

RECEPTORS

As previously stated, LSTs represent the maximum emissions from a project that would not cause or contribute to an exceedance of the most stringent applicable NAAQS and CAAQS at the nearest residence or sensitive receptor. Receptor locations are off-site locations where individuals may be exposed to emissions from Project activities.

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, and individuals with pre-existing respiratory or cardiovascular illness. Structures that house these persons or places where they gather are defined as “sensitive receptors”. These structures typically include uses such as residences, hotels, and hospitals where an individual can remain for 24 hours. Consistent with the LST Methodology, the nearest land use where an individual could remain for 24 hours to the Project site has been used to determine construction and operational air quality impacts for emissions of PM₁₀ and PM_{2.5}, since PM₁₀ and PM_{2.5} thresholds are based on a 24-hour averaging time.

LSTs apply, even for non-sensitive land uses, consistent with *LST Methodology* and SCAQMD guidance. Per the *LST Methodology*, commercial and industrial facilities are not included in the definition of sensitive receptor because employees and patrons do not typically remain onsite for a full 24 hours but are typically onsite for 8 hours or less. However, *LST Methodology* explicitly states that “LSTs based on shorter averaging periods, such as the NO₂ and CO LSTs, could also be applied to receptors such as industrial or commercial facilities since it is reasonable to assume that a worker at these sites could be present for periods of one to eight hours (41).” Therefore, any adjacent land use where an individual could remain for 1 or 8-hours, that is located at a closer distance to the Project site than the receptor used for PM₁₀ and PM_{2.5} analysis, must be considered to determine construction and operational LST air impacts for emissions of NO₂ and CO since these pollutants have an averaging time of 1 and 8-hours.

PROJECT-RELATED RECEPTORS

Receptors in the Project study area are described below and shown on Exhibit 3-A. Localized air quality impacts were evaluated at sensitive receptor land uses nearest the Project site. All distances are measured from the Project site boundary to the outdoor living areas (e.g., backyards) or at the building façade, whichever is closer to the Project site.

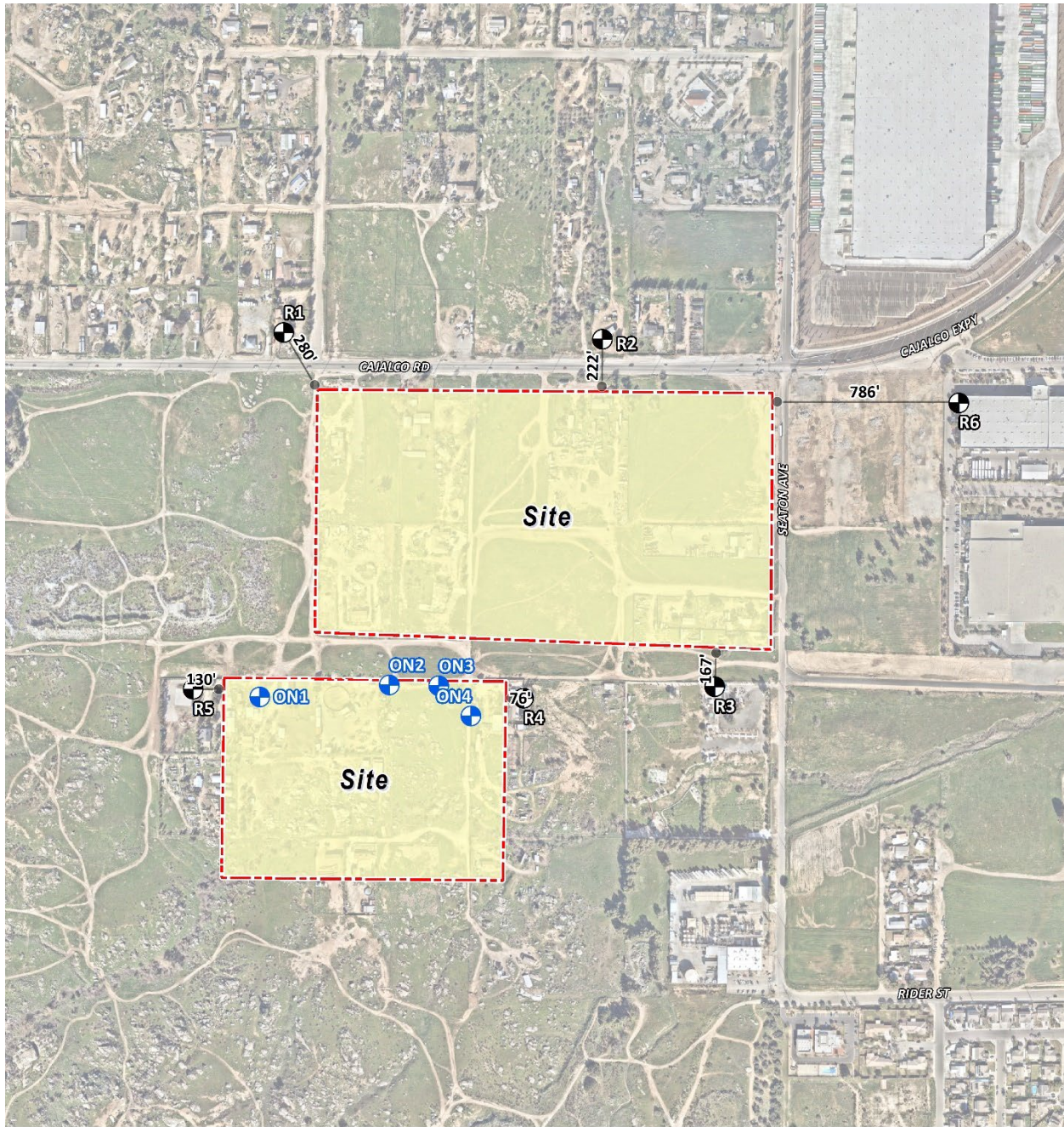
- R1: Location R1 represents La Palapa Ranch building at 19451 Decker Road, approximately 280 feet northwest of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, R1 is placed at the building façade.
- R2: Location R2 represents the existing residence at 22840 Cajalco Road, approximately 222 feet north of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, R2 is placed at the building façade.
- R3: Location R4 represents the existing residence at 19701 Seaton Avenue approximately 167 feet south of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, R3 is placed at the building façade.

- R4: Location R4 represents the existing residence at 22761 Cajalco Road, approximately 76 feet east of the Project site. R4 is placed in the private outdoor living areas (backyard) facing the Project site.
- R5: Location R5 represents the existing residence at 22655 Cajalco Road, approximately 130 feet west of the Project site. Since there are no private outdoor living areas (backyards) facing the Project site, R5 is placed at the building façade.
- R6: Location R6 represents the potential worker receptor at the Genesis Supreme RV facility located approximately 786 feet east of the Project site.
- ON1: Location ON1 represents the future receiver at the Seaton Park handball court.
- ON2: Location ON2 represents the future receiver at the Seaton Park soccer field sideline.
- ON3: Location ON3 represents the future receiver at the Seaton Park soccer field sideline.
- ON4: Location ON4 represents the future receiver at the Seaton Park portable bleachers.

The SCAQMD recommends that the nearest sensitive receptor be considered when determining a Project's impact. The nearest land use where an individual could remain for 24 hours to the Project site has been used to determine localized construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$ (since PM_{10} and $PM_{2.5}$ thresholds are based on a 24-hour averaging time).

It should be noted that exposures to on-site receptors located on the park portion of the proposed Project (Locations ON1 through ON4) would be lesser than those shown for other receptors in the Project vicinity, as any potential exposures would be short-term in nature and would not exceed the pollutant concentrations modeled at nearby sensitive receptors surrounding the Project site.

EXHIBIT 3-A: RECEPTOR LOCATIONS



LEGEND:

Site Boundary

On-Site Receiver Location

Receptor Location

Distance from receptor to Project site boundary (in feet)

3.7 CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

CONSTRUCTION-SOURCE LOCALIZED EMISSIONS

Emissions during the peak construction activity will not exceed the SCAQMD's localized significance thresholds at the maximally exposed receptor location, as illustrated on Table 3-9. All other modeled locations in the study area would experience a lesser concentration and consequently a lesser impact. As such, the Project's localized impacts during construction activity would be less than significant. Outputs from the model runs for construction LSTs are provided in Appendix 3.3.

TABLE 3-9: LOCALIZED SIGNIFICANCE SUMMARY PEAK CONSTRUCTION

Peak Construction	CO		NO ₂	PM ₁₀	PM _{2.5}
	Averaging Time				
	1-Hour	8-Hour	1-Hour	24-Hours	24-Hours
Peak Day Localized Emissions	0.10	0.03	2.57E-02	3.50	0.74
Background Concentration ^A	1.6	0.8	0.044		
Total Concentration	1.70	0.83	0.07	3.50	0.74
SCAQMD Localized Significance Threshold	20	9	0.18	10.4	10.4
Threshold Exceeded?	NO	NO	NO	NO	NO

^A Highest concentration from the last three years of available data.

Notes: PM₁₀ and PM_{2.5} concentrations are expressed in µg/m³. All others are expressed in ppm.

Based on SCAQMD's LST Methodology, background concentrations are considered only for CO and NO₂.

3.8 OPERATIONAL-SOURCE EMISSIONS LST ANALYSIS

OPERATIONAL-SOURCE LOCALIZED EMISSIONS

The LST analysis generally includes on-site sources (area, energy, mobile, and on-site cargo handling equipment – are previously discussed in Section 3.5 of this report). However, it should be noted that the CalEEMod outputs do not separate on-site and off-site emissions from mobile sources. As such, to establish a maximum potential impact scenario for analytic purposes, the modeled emissions include all on-site Project-related stationary (area) sources and on-site Project-related mobile emissions. In order to account for on-site mobile emissions, a trip length of 3.0 miles was utilized for both trucks and passenger cars.

In order to account for any potential impacts to on-site receptors as a result of operational activity, a scenario conservatively assuming 2026 emissions was analyzed. As shown in Table 3-10 below, emissions would not exceed SCAQMD's localized significance thresholds at the maximally exposed on-site receptors as a result of operational activities.

TABLE 3-10: LOCALIZED SIGNIFICANCE SUMMARY PEAK OPERATIONS

Peak Construction	CO		NO ₂	PM ₁₀	PM _{2.5}
	Averaging Time				
	1-Hour	8-Hour	1-Hour	24-Hours	24-Hours
Peak Day Localized Emissions	4.94E-02	3.72E-02	3.11E-03	2.00	0.57
Background Concentration ^A	1.6	0.8	0.044		
Total Concentration	1.65	0.84	0.05	2.00	0.57
SCAQMD Localized Significance Threshold	20	9	0.18	2.5	2.5
Threshold Exceeded?	NO	NO	NO	NO	NO

^A Highest concentration from the last three years of available data.

Notes: PM₁₀ and PM_{2.5} concentrations are expressed in µg/m³. All others are expressed in ppm.

Based on SCAQMD's LST Methodology, background concentrations are considered only for CO and NO₂.

3.9 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods¹⁰. This "hot spot" analysis did not predict any exceedance of the 1-hour (20.0 ppm) or 8-hour (9.0 ppm) CO standards, as shown on Table 3-11.

TABLE 3-11: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Boulevard/Veteran Avenue	4.6	3.5	3.7
Sunset Boulevard/Highland Avenue	4	4.5	3.5
La Cienega Boulevard/Century Boulevard	3.7	3.1	5.2
Long Beach Boulevard/Imperial Highway	3	3.1	8.4

¹⁰ The CO "hot spot" analysis conducted in 2003 is the most current study used for CO "hot spot" analysis in the SCAB.

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations
 Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, of the 8.4 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (i.e., the highest CO generating intersection within the “hot spot” analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (42). In contrast, an adverse CO concentration, known as a “hot spot”, would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur.

The ambient 1-hr and 8-hr CO concentration within the Project study area is estimated to be 0.9 ppm and 0.6 ppm, respectively (data from Lake Elsinore Area monitoring station for 2022). Therefore, even if the traffic volumes for the proposed Project were ten times the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, due to the on-going improvements in ambient air quality and vehicular emissions controls, the Project would not be capable of resulting in a CO “hot spot” at any study area intersections. As noted above, only 0.7 ppm were attributable to the traffic volumes and congestion at one of the busiest intersections in the SCAB. Therefore if these traffic volumes were multiplied by ten times, it could be expected that the CO attributable to traffic would increase tenfold as well, resulting in 7 ppm – even if this were added to either the 1-hour or 8-hour CO concentrations within the Project study area, this would result in 7.9 ppm and 7.6 ppm for the 1-hr and 8-hr timeframes, respectively. Neither of which would exceed the applicable 1-hr standard of 20 ppm or the 8-hr standard of 9 ppm.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph)—or 24,000 vph where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (43). Traffic volumes generating the CO concentrations for the “hot spot” analysis is shown on Table 3-12. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which had AM/PM traffic volumes of 8,062 vph and 7,719 vph respectively (42).

TABLE 3-12: TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Boulevard/Veteran Avenue	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Boulevard/Highland Avenue	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374

La Cienega Boulevard/Century Boulevard	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Boulevard/Imperial Highway	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

As summarized on Table 3-13 below, the intersection of I-215 Northbound Ramps and Ramona Expressway would have the highest AM and PM traffic volumes of 7,486 vph and 8,322 vph, respectively. As such, total traffic volumes at the intersections considered are less than the traffic volumes identified in the 2003 AQMP. As such, the Project considered herein along with background and cumulative development would not produce the volume of traffic required to generate a CO “hot spot” either in the context of the 2003 Los Angeles hot spot study or based on representative BAAQMD CO threshold considerations. Therefore, CO “hot spots” are not an environmental impact of concern for the Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

TABLE 3-13: PEAK HOUR TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
Clark St. & Cajalco Rd.	678/438	372/421	1,147/1,405	1,493/1,435	3,690/3,699
Harvill Av. & Cajalco Expressway	1,128/1,119	749/1,505	1,506/1,865	2,590/1,805	5,974/6,293
I-215 SB Ramps & Ramona Expressway	0/0	2,599/2,181	1,749/2,926	2,456/2,297	6,804/7,404
I-215 NB Ramps & Ramona Expressway	1,569/1,332	0/0	2,867/3,632	3,050/3,358	7,486/8,322

Source: Cajalco Commerce Center Traffic Analysis (Urban Crossroads, Inc., 2023)

3.10 AQMP

The Project site is located within the SCAB, which is characterized by relatively poor air quality. The SCAQMD has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the SCAG, county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of AQMPs to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

In December 2022, the SCAQMD released the *Final 2022 AQMP (2022 AQMP)*. The 2022 AQMP continues to evaluate current integrated strategies and control measures to meet the CAAQS, as well as explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and

developing a strategy with fair-share reductions at the federal, state, and local levels (44). Similar to the 2016 AQMP, the 2022 AQMP incorporates scientific and technological information and planning assumptions, including the 2020-2045 RTP/SCS, a planning document that supports the integration of land use and transportation to help the region meet the federal CAA requirements (27). The Project's consistency with the AQMP will be determined using the 2022 AQMP as discussed below. The Project's consistency with the AQMP will be determined using the 2022 AQMP as discussed below.

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the 1993 CEQA Handbook (45). These indicators are discussed below:

3.10.1 CONSISTENCY CRITERION No. 1

The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

The violations that Consistency Criterion No. 1 refer to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

Construction Impacts – Consistency Criterion 1

Consistency Criterion No. 1 refers to violations of the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized or regional significance thresholds were exceeded. As evaluated, the Project's localized and regional construction-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected.

Operational Impacts – Consistency Criterion 1

The Project's localized operational-source emissions would not exceed applicable LSTs. However, Project operational-source emissions would exceed applicable regional thresholds for emissions of NO_x. Accordingly, Project operational-source NO_x emissions exceedances would therefore increase the frequency or severity of existing air quality violations and would cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

On the basis of the preceding discussion, the Project is determined to be inconsistent with the first criterion.

3.10.2 CONSISTENCY CRITERION No. 2

The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

The 2022 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development

consistent with the growth projections in County of Riverside General Plan is considered to be consistent with the AQMP.

Construction Impacts – Consistency Criterion 2

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities. As such, when considering that no emissions thresholds will be exceeded, a less than significant impact would result.

Operational Impacts – Consistency Criterion 2

The Project site is located within an unincorporated portion of the County of Riverside. As per the General Plan, the unincorporated portions of the County are divided into 19 area plans. These area plans provide more detailed land use and policy direction regarding local issues such as land use, circulation, open space, and other topical areas (4).

The General Plan and MVAP designate the Project site for "Commercial Retail (CR)" land uses with Rural Community – Very Low-Density Residential (VLDR) uses. The General Plan states that the Commercial Retail land use designation is intended for local and regional serving retail and service uses at an allowable Floor Area Ratio (FAR) of 0.20-0.35 (4). The Rural Community – Very Low-Density Residential (VLDR) land use designation is intended for single-family detached residences on large parcels of 1 to 2 acres with limited agriculture and animal keeping.

Implementation of the Project will require an amendment to the General Plan Land Use designation and Zoning designation of the Project Site.

As the Project is not consistent with the current General Plan land use designations and would result in NO_x emission exceedances, the Project would result in significant and unavoidable impacts and is therefore determined to be inconsistent with the second criterion.

AQMP CONSISTENCY CONCLUSION

The Project has the potential to result in or cause NAAQS or CAAQS violations. Operational-source emissions would exceed the applicable SCAQMD regional thresholds for NO_x. As such, the Project is considered to have the potential to conflict with the AQMP and a significant and unavoidable impact would occur with respect to this threshold.

3.11 TOXIC AIR CONTAMINANTS

CONSTRUCTION AND OPERATIONAL

Based on the results of the *Cajalco Commerce Center Mobile Source Health Risk Assessment* (46), emissions generated from the Project during short-term construction and long-term operation will not exceed SCAQMD significance thresholds for cancer and non-cancer health risks. As such, a less than significant impact is expected.

3.12 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Results of the LST analysis indicate that the Project would not exceed the SCAQMD localized significance thresholds during construction. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations during Project construction.

The Project would not exceed the SCAQMD localized significance thresholds during operational activity. Further Project traffic would not create or result in a CO “hotspot.” Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations as the result of Project operations.

Additionally, results of the Health Risk Assessment determined that at the land use with the greatest potential exposure to Project construction-source and operational-source DPM emissions, also known as the maximally exposed individual receptor (MEIR), the maximum incremental cancer risk attributable to Project construction-source and operational-source DPM emissions is estimated at 2.60 in one million, which is less than the threshold of 10 in one million. At this same location, non-cancer risks were estimated to be <0.01, which would not exceed the applicable threshold of 1.0. As such, the Project will not cause a significant human health or cancer risk to adjacent land uses as a result of Project construction and operational activity. All other receptors during construction and operational activity would experience less risk than what is identified for this location.

3.12.1 FRIANT RANCH CASE

In December 2018, in the case of *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, the California Supreme Court held that an Environmental Impact Report’s (EIR) air quality analysis must meaningfully connect the identified air quality impacts to the human health consequences of those impacts, or meaningfully explain why that analysis cannot be provided.

Most local agencies, including the County of Riverside, lack the data to do their own assessment of potential health impacts from criteria air pollutant emissions, as would be required to establish customized, locally-specific thresholds of significance based on potential health impacts from an individual development project. The use of national or “generic” data to fill the gap of missing local data would not yield accurate results because such data does not capture local air patterns, local background conditions, or local population characteristics, all of which play a role in how a population experiences air pollution. Because it is impracticable to accurately isolate the exact cause of a human disease (for example, the role a particular air pollutant plays compared to the role of other allergens and genetics in causing asthma), existing scientific tools cannot accurately estimate health impacts of the Project’s air emissions without undue speculation. Instead, readers are directed to the Project’s air quality impact analysis above, which provides extensive information concerning the quantifiable and non-quantifiable health risks related to the Project’s construction and long-term operation.

Notwithstanding, this AQIA does evaluate the proposed Project’s localized impact to air quality for emissions of CO, NO_x, PM₁₀, and PM_{2.5} by comparing the proposed project’s on-site emissions to the SCAQMD’s applicable LST thresholds. The LST analysis above determined that the Project

would not result in emissions exceeding SCAQMD's LSTs. Therefore, the proposed Project would not be expected to exceed the most stringent applicable federal or state ambient air quality standards for emissions of CO, NO_x, PM₁₀, and PM_{2.5}.

As the Project's emissions would comply with federal, state, and local air quality standards, the proposed Project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level and would not provide a reliable indicator of health effects if modeled.

3.13 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with current solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors and other emissions (such as those leading to odors) associated with construction and operations activities of the proposed Project would be less than significant and no mitigation is required (47).

3.14 CUMULATIVE IMPACTS

As previously shown in Table 2-3, the CAAQS designate the Project site as nonattainment for O₃, PM₁₀, and PM_{2.5} while the NAAQS designates the Project site as nonattainment for O₃ and PM_{2.5}.

The SCAQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (48). In this report the SCAQMD clearly states (Page D-3):

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

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

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD’s recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which SCAB is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

CONSTRUCTION IMPACTS

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that proposed Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, proposed Project construction-source emissions would be considered less than significant on a Project-specific and cumulative basis.

OPERATIONAL IMPACTS

As substantiated in this analysis, Project-level operational-source NO_x emissions impacts would be significant and unavoidable. Per SCAQMD protocols, Project operational-source NO_x emissions impacts would also be cumulatively significant.

COUNTY OF RIVERSIDE GOOD NEIGHBOR POLICY

The County of Riverside adopted the Good Neighbor Policy for Logistics and Warehouse/Distribution Uses (Policy Number F-3) on November 19, 2019. (49) The goal of this policy is to provide a framework through which large-scale logistics and warehouse projects can

be designed and operated in a way that lessens any impacts on surrounding communities and the environment.

Specifically, Table 3-14 identifies the following relevant guidelines that have been reviewed for consistency:

TABLE 3-14: GOOD NEIGHBOR POLICY RELEVANT GUIDELINES

Measure		Project Consistency
1.1	An “Air Quality” study shall be prepared in accordance with the Air Quality Management District (AQMD) guidelines which includes both project specific and cumulative impact analysis.	The analysis presented here conforms with applicable analytic guidelines and requirements. The analysis substantiates that all potential air quality impacts, including potential health risk impacts would be less-than-significant.
1.2	A “Health Risk Assessment” shall be prepared when a proposed warehouse/distribution facility is located within 1,000 feet of a sensitive receptor, in accordance with AQMD guidelines.	A health risk assessment has been prepared for the proposed Project in accordance with SCAQMD guidelines and is presented under a separate cover.
2.1	During construction of the warehouse/distribution facility, all heavy-duty haul trucks accessing the site shall have CARB-Compliant 2010 engines or newer approved CARB engine standards.	All heavy-duty haul trucks accessing the Project site during construction will be in compliance with the CARB Truck and Bus regulation, which requires that heavy duty trucks utilize CARB-Compliant 2010 or newer engines by January 1, 2023.
2.2	All diesel fueled off-road construction equipment greater than 50 horsepower, including but not limited to excavators, graders, rubber-tired dozers, and similar “off-road” construction equipment shall be equipped with CARB Tier 4 Compliant engines. If the operator lacks Tier 4 equipment, and it is not available for lease or short-term rental within 50 miles of the project site, Tier 3 or cleaner off-road construction equipment may be utilized subject to County approval.	All diesel-fueled off-road construction equipment rated greater than 50 horsepower will meet CARB Tier 4 standards.
2.3	The maximum daily disturbance area (actively graded area) shall not exceed 10 acres per day. Non-Grading construction activity in areas greater than 10 acres is allowed.	The maximum daily disturbance area will not exceed 10 acres per day during demolition, site preparation and grading. It is anticipated that no more than 8.5 acres would be graded per day.
2.7	Appropriate dust control measures that meet the SCAQMD standards shall be implemented for grading and construction activity.	The Project would comply with all applicable dust control measures, including SCAQMD Rules 401, 402, and 403.
2.8	Construction equipment maintenance records and data sheets, which includes equipment design specifications and equipment emission control tier classifications, as well as any other records necessary to verify compliance, shall be kept onsite and furnished to the County upon request.	The Project will maintain records on-site during construction to demonstrate compliance with the above requirements.

Measure		Project Consistency
2.9	Construction Contractors shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.	The Project would be required to comply with statewide anti-idling rules. Compliance with anti-idling rules diminishes the potential for localized emissions concentrations and reduces potential adverse effects at sensitive receptors.
3.1	Warehouse/distribution facilities should be generally designed so that truck bays and loading docks are a minimum of 300 feet, measured from the property line of the sensitive receptor to the nearest dock door using a direct straight-line method. This distance may be reduced if the site design includes berms or other similar features to appropriately shield and buffer the sensitive receptors from the active truck operations areas. Other setbacks appropriate to the site's zoning classification shall be incorporated in the design.	As designed, the proposed Project's loading docks would not be located within 300 feet of any nearby sensitive receptors.
3.2	Warehouse/distribution facilities shall be designed to provide adequate on-site parking for commercial trucks and passenger vehicles and on-site queuing for trucks that is away from sensitive receptors. The general queuing and spill-over of trucks onto surrounding public streets shall be prevented. Commercial trucks shall not be parked in the public road right-of-way or nearby residential areas.	The site has been designed such that trucks would not need to queue on streets or elsewhere outside the proposed industrial building they serve. The Project design as approved by the County would act to limit on-site queuing, diminishing the potential for localized emissions concentrations and reduces potential adverse effects at sensitive receptors.
3.11	Warehouse/distribution facilities shall install electrical panels and conduit to facilitate future electrical connections, to eliminate idling of main and auxiliary engines during the loading and unloading process. At all cold storage facilities electrical connections shall be provided to each dock.	Loading docks would be wired for electrical hook-ups, allowing future users to seamlessly integrate electric charging for trucks, when such technology becomes readily available.
4.1	Facility operators shall maintain records of their facility owned and operated fleet equipment and ensure that all diesel-fueled Medium-Heavy Duty Trucks ("MHDT") and Heavy-Heavy Duty ("HHD") trucks with a gross vehicle weight rating greater than 19,500 pounds accessing the site use year CARB compliant 2010 or newer engines. The records should be maintained on-site and be made available for inspection by the County.	The proposed Project will comply with the CARB Truck and Bus regulation, which requires the use of CARB compliant 2010 or newer engines.
4.2	Facility operators shall prohibit truck drivers from idling more than five (5) minutes and require operators to turn off engines when not in use, in compliance with the California Air Resources Board regulations.	The Project would be required to comply with statewide anti-idling rules. Compliance with anti-idling rules diminishes the potential for localized emissions concentrations and reduces potential adverse effects at sensitive receptors.

Measure		Project Consistency
4.4	Facility operators shall coordinate with CARB and SCAQMD to obtain the latest information about regional air quality concentrations, health risks, and trucking regulations.	The operator of the proposed facility will be required to remain in compliance with applicable air quality, health risk, and trucking regulations.
4.5	On-site equipment, such as forklifts, shall be electric with the necessary electrical charging stations provided.	All on-site equipment utilized for the operation of the proposed Project will be electrically powered and charging stations will be provided on-site.
4.6	Facility operators shall establish specific truck routes between the facility and regular destinations, identifying the most direct routes to the nearest highway/freeway and avoid traveling near sensitive receptors.	The operator of the proposed facility will be required to provide this information to drivers accessing the facility.
4.9	A minimum of 5% or as required by the Cal Green Code, whichever is greater of employee parking spaces shall be designated for electric or other alternative fueled vehicles.	As designed, the proposed Project would meet or exceed California Green Building code requirements and provide parking spaces designated for EV charging at a minimum of 5% of the total auto parking stalls.
5.5	Each Facility shall designate a Compliance Officer responsible for implementing the measures described herein and/or in the project conditions of approval and mitigation measures. Contact information should be provided to the County and updated annually, and signs should be posted in visible locations providing the contact information for the Compliance Officer to the surrounding community. These signs shall also identify the website and contact information for the SCAQMD.	A designated Compliance Officer will be appointed for the facility to ensure compliance with these and other applicable requirements and contact information will be provided to the County on an annual basis. Signs will be posted in order to identify the Compliance Officer's contact information, as well as contact information for the SCAQMD.

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5 CERTIFICATIONS

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Cajalco Commerce Center. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at hqureshi@urbanxroads.com

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

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PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
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PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April 2008
Principles of Ambient Air Monitoring – CARB • August 2007
AB2588 Regulatory Standards – Trinity Consultants • November 2006
Air Dispersion Modeling – Lakes Environmental • June 2006

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APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

APPENDIX C

MAPS AND TABLES OF AREA DESIGNATIONS FOR STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

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APPENDIX C

MAPS AND TABLES OF AREA DESIGNATIONS FOR STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS

This attachment fulfills the requirement of Health and Safety Code section 40718 for CARB to publish maps that identify areas where one or more violations of any State ambient air quality standard (State standard) or national ambient air quality standard (national standard) have been measured. The national standards are those promulgated under section 109 of the federal Clean Air Act (42 U.S.C. 7409).

This attachment is divided into three parts. The first part comprises a table showing the levels, averaging times, and measurement methods for each of the State and national standards. This is followed by a section containing maps and tables showing the area designations for each pollutant for which there is a State standard in the California Code of Regulations, title 17, section 70200. The last section contains maps and tables showing the most current area designations for the national standards.

Ambient Air Quality Standards

(Updated 5/4/16)

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM10) ⁹	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		
Fine Particulate Matter (PM2.5) ⁹	24 Hour	—	—	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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Area Designations for the State Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a State standard set forth in the California Code of Regulations, title 17, section 60200. Each area is identified as attainment, nonattainment, nonattainment-transitional, or unclassified for each pollutant, as shown below:

Attainment	A
Nonattainment	N
Nonattainment-Transitional	NA-T
Unclassified	U

In general, CARB designates areas by air basin for pollutants with a regional impact and by county for pollutants with a more local impact. However, when there are areas within an air basin or county with distinctly different air quality deriving from sources and conditions not affecting the entire air basin or county, CARB may designate a smaller area. Generally, when boundaries of the designated area differ from the air basin or county boundaries, the description of the specific area is referenced at the bottom of the summary table.

FIGURE 1

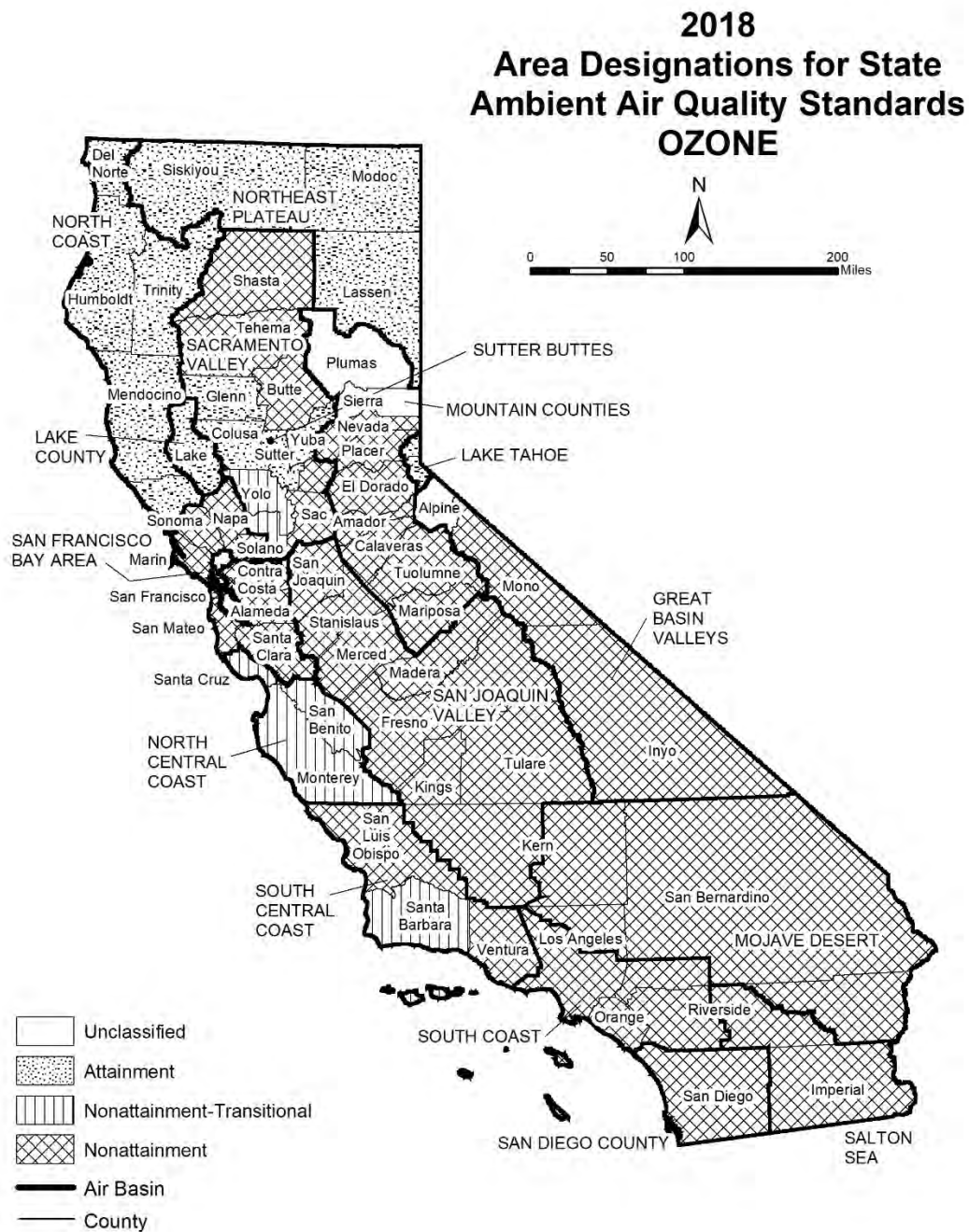


TABLE 1

**California Ambient Air Quality Standards
Area Designations for Ozone ⁽¹⁾**

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN					NORTHEAST PLATEAU AIR BASIN				X
Alpine County			X		SACRAMENTO VALLEY AIR BASIN				
Inyo County	X				Colusa and Glenn Counties				X
Mono County	X				Sutter/Yuba Counties				
LAKE COUNTY AIR BASIN				X	Sutter Buttes	X			
LAKE TAHOE AIR BASIN				X	Remainder of Sutter County				X
MOJAVE DESERT AIR BASIN	X				Yuba County				X
MOUNTAIN COUNTIES AIR BASIN					Yolo/Solano Counties		X		
Amador County	X				Remainder of Air Basin	X			
Calaveras County	X				SALTON SEA AIR BASIN	X			
El Dorado County (portion)	X				SAN DIEGO AIR BASIN	X			
Mariposa County	X				SAN FRANCISCO BAY AREA AIR BASIN	X			
Nevada County	X				SAN JOAQUIN VALLEY AIR BASIN	X			
Placer County (portion)	X				SOUTH CENTRAL COAST AIR BASIN				
Plumas County			X		San Luis Obispo County	X			
Sierra County			X		Santa Barbara County		X		
Tuolumne County	X				Ventura County	X			
NORTH CENTRAL COAST AIR BASIN		X			SOUTH COAST AIR BASIN	X			
NORTH COAST AIR BASIN				X					

(1) AB 3048 (Olberg) and AB 2525 (Miller) signed into law in 1996, made changes to Health and Safety Code, section 40925.5. One of the changes allows nonattainment districts to become nonattainment-transitional for ozone by operation of law.

FIGURE 2

**2018
Area Designations for State
Ambient Air Quality Standards
PM₁₀**



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 2

**California Ambient Air Quality Standards
Area Designation for Suspended Particulate Matter (PM10)**

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN	X			NORTH CENTRAL COAST AIR BASIN	X		
LAKE COUNTY AIR BASIN			X	NORTH COAST AIR BASIN			
LAKE TAHOE AIR BASIN	X			Del Norte, Sonoma (portion) and Trinity Counties			X
MOJAVE DESERT AIR BASIN	X			Remainder of Air Basin	X		
MOUNTAIN COUNTIES AIR BASIN				NORTHEAST PLATEAU AIR BASIN			
Amador County		X		Siskiyou County			X
Calaveras County	X			Remainder of Air Basin		X	
El Dorado County (portion)	X			SACRAMENTO VALLEY AIR BASIN			
Mariposa County				Shasta County			X
- Yosemite National Park	X			Remainder of Air Basin	X		
- Remainder of County		X		SALTON SEA AIR BASIN	X		
Nevada County	X			SAN DIEGO AIR BASIN	X		
Placer County (portion)	X			SAN FRANCISCO BAY AREA AIR BASIN	X		
Plumas County	X			SAN JOAQUIN VALLEY AIR BASIN	X		
Sierra County	X			SOUTH CENTRAL COAST AIR BASIN	X		
Tuolumne County		X		SOUTH COAST AIR BASIN	X		

**2018
Area Designations for State
Ambient Air Quality Standards
PM_{2.5}**

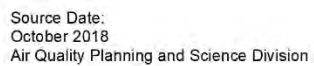


TABLE 3

**California Ambient Air Quality Standards
Area Designations for Fine Particulate Matter (PM_{2.5})**

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SALTON SEA AIR BASIN			
LAKE COUNTY AIR BASIN			X	Imperial County			
LAKE TAHOE AIR BASIN			X	- City of Calexico (3)	X		
MOJAVE DESERT AIR BASIN				Remainder of Air Basin			X
San Bernardino County				SAN DIEGO AIR BASIN	X		
- County portion of federal Southeast Desert Modified AQMA for Ozone (1)			X	SAN FRANCISCO BAY AREA AIR BASIN	X		
				SAN JOAQUIN VALLEY AIR BASIN	X		
Remainder of Air Basin		X		SOUTH CENTRAL COAST AIR BASIN			
MOUNTAIN COUNTIES AIR BASIN				San Luis Obispo County			X
Plumas County				Santa Barbara County		X	
- Portola Valley (2)	X			Ventura County			X
Remainder of Air Basin		X		SOUTH COAST AIR BASIN	X		
NORTH CENTRAL COAST AIR BASIN			X				
NORTH COAST AIR BASIN			X				
NORTHEAST PLATEAU AIR BASIN			X				
SACRAMENTO VALLEY AIR BASIN							
Butte County	X						
Colusa County			X				
Glenn County			X				
Placer County (portion)			X				
Sacramento County			X				
Shasta County			X				
Sutter and Yuba Counties			X				
Remainder of Air Basin		X					

(1) California Code of Regulations, title 17, section 60200(b)

(2) California Code of Regulations, title 17, section 60200(c)

(3) California Code of Regulations, title 17, section 60200(a)

FIGURE 4

2018
Area Designations for State
Ambient Air Quality Standards
CARBON MONOXIDE



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 4

**California Ambient Air Quality Standards
Area Designation for Carbon Monoxide***

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN					SACRAMENTO VALLEY AIR BASIN				
Alpine County			X		Butte County				X
Inyo County				X	Colusa County			X	
Mono County				X	Glenn County			X	
LAKE COUNTY AIR BASIN				X	Placer County (portion)				X
LAKE TAHOE AIR BASIN				X	Sacramento County				X
MOJAVE DESERT AIR BASIN					Shasta County			X	
Kern County (portion)			X		Solano County (portion)				X
Los Angeles County (portion)				X	Sutter County				X
Riverside County (portion)			X		Tehama County			X	
San Bernardino County (portion)				X	Yolo County				X
MOUNTAIN COUNTIES AIR BASIN					Yuba County			X	
Amador County			X		SALTON SEA AIR BASIN				X
Calaveras County			X		SAN DIEGO AIR BASIN				X
El Dorado County (portion)			X		SAN FRANCISCO BAY AREA AIR BASIN				X
Mariposa County			X		SAN JOAQUIN VALLEY AIR BASIN				
Nevada County			X		Fresno County				X
Placer County (portion)			X		Kern County (portion)				X
Plumas County				X	Kings County			X	
Sierra County			X		Madera County			X	
Tuolumne County				X	Merced County			X	
NORTH CENTRAL COAST AIR BASIN					San Joaquin County				X
Monterey County				X	Stanislaus County				X
San Benito County			X		Tulare County				X
Santa Cruz County			X		SOUTH CENTRAL COAST AIR BASIN				X
NORTH COAST AIR BASIN					SOUTH COAST AIR BASIN				X
Del Norte County			X						
Humboldt County				X					
Mendocino County				X					
Sonoma County (portion)			X						
Trinity County			X						
NORTHEAST PLATEAU AIR BASIN			X						

* The area designated for carbon monoxide is a county or portion of a county

FIGURE 5

2018
Area Designations for State
Ambient Air Quality Standards
NITROGEN DIOXIDE



Source Date:
 October 2018
 Air Quality Planning and Science Division

TABLE 5

**California Ambient Air Quality Standards
Area Designation for Nitrogen Dioxide**

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SACRAMENTO VALLEY AIR BASIN			X
LAKE COUNTY AIR BASIN			X	SALTON SEA AIR BASIN			X
LAKE TAHOE AIR BASIN			X	SAN DIEGO AIR BASIN			X
MOJAVE DESERT AIR BASIN			X	SAN FRANCISCO BAY AREA AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	SOUTH CENTRAL COAST AIR BASIN			X
NORTH COAST AIR BASIN			X	SOUTH COAST AIR BASIN			
NORTHEAST PLATEAU AIR BASIN			X	CA 60 Near-road Portion of San Bernardino, Riverside, and Los Angeles Counties	X		
				Remainder of Air Basin			X

FIGURE 6



TABLE 6

**California Ambient Air Quality Standards
Area Designation for Sulfur Dioxide***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
LAKE COUNTY AIR BASIN		X	SALTON SEA AIR BASIN		X
LAKE TAHOE AIR BASIN		X	SAN DIEGO AIR BASIN		X
MOJAVE DESERT AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X			

* The area designated for sulfur dioxide is a county or portion of a county

FIGURE 7

2018
Area Designations for State
Ambient Air Quality Standards
SULFATES



Source Date:
 October 2018
 Air Quality Planning and Science Division

TABLE 7**California Ambient Air Quality Standards
Area Designation for Sulfates**

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SACRAMENTO VALLEY AIR BASIN			X
LAKE COUNTY AIR BASIN			X	SALTON SEA AIR BASIN			X
LAKE TAHOE AIR BASIN			X	SAN DIEGO AIR BASIN			X
MOJAVE DESERT AIR BASIN			X	SAN FRANCISCO BAY AREA AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	SOUTH CENTRAL COAST AIR BASIN			X
NORTH COAST AIR BASIN			X	SOUTH COAST AIR BASIN			X
NORTHEAST PLATEAU AIR BASIN			X				

**2018
Area Designations for State
Ambient Air Quality Standards
LEAD**

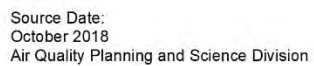


TABLE 8

**California Ambient Air Quality Standards
Area Designations for Lead (particulate)***

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN			X	SALTON SEA AIR BASIN			X
LAKE COUNTY AIR BASIN			X	SAN DIEGO AIR BASIN			X
LAKE TAHOE AIR BASIN			X	SAN FRANCISCO BAY AREA AIR BASIN			X
MOJAVE DESERT AIR BASIN			X	SAN JOAQUIN VALLEY AIR BASIN			X
MOUNTAIN COUNTIES AIR BASIN			X	SOUTH CENTRAL COAST AIR BASIN			X
NORTH CENTRAL COAST AIR BASIN			X	SOUTH COAST AIR BASIN			X
NORTH COAST AIR BASIN			X				
NORTHEAST PLATEAU AIR BASIN			X				
SACRAMENTO VALLEY AIR BASIN			X				

* The area designated for lead is a county or portion of a county. Since all areas in the State are in attainment for this standard, air basins are indicated here for simplicity.

FIGURE 9

2018
Area Designations for State
Ambient Air Quality Standards
HYDROGEN SULFIDE



Source Date:
 October 2018
 Air Quality Planning and Science Division

TABLE 9

**California Ambient Air Quality Standards
Area Designation for Hydrogen Sulfide***

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN					NORTH CENTRAL COAST AIR BASIN			X	
Alpine County			X		NORTH COAST AIR BASIN				
Inyo County				X	Del Norte County			X	
Mono County				X	Humboldt County				X
LAKE COUNTY AIR BASIN				X	Mendocino County			X	
LAKE TAHOE AIR BASIN			X		Sonoma County (portion)				
MOJAVE DESERT AIR BASIN					- Geyser Geothermal Area (2)				X
Kern County (portion)			X		- Remainder of County			X	
Los Angeles County (portion)			X		Trinity County			X	
Riverside County (portion)			X		NORTHEAST PLATEAU AIR BASIN			X	
San Bernardino County (portion)					SACRAMENTO VALLEY AIR BASIN			X	
- Searles Valley Planning Area (1)	X				SALTON SEA AIR BASIN			X	
- Remainder of County			X		SAN DIEGO AIR BASIN			X	
MOUNTAIN COUNTIES AIR BASIN					SAN FRANCISCO BAY AREA AIR BASIN			X	
Amador County					SAN JOAQUIN VALLEY AIR BASIN			X	
- City of Sutter Creek	X				SOUTH CENTRAL COAST AIR BASIN				
- Remainder of County			X		San Luis Obispo County				X
Calaveras County			X		Santa Barbara County				X
El Dorado County (portion)			X		Ventura County			X	
Mariposa County			X		SOUTH COAST AIR BASIN			X	
Nevada County			X						
Placer County (portion)			X						
Plumas County			X						
Sierra County			X						
Tuolumne County			X						

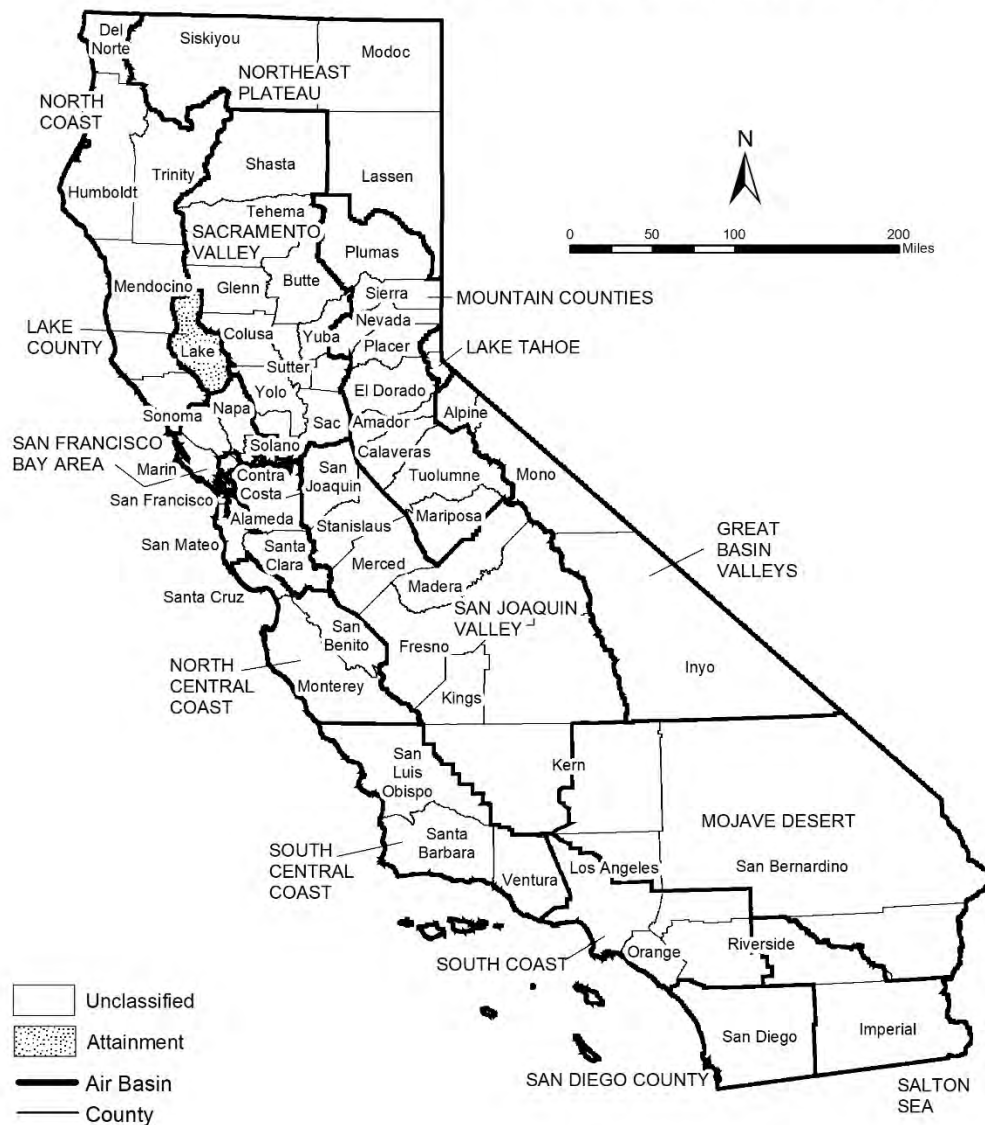
* The area designated for hydrogen sulfide is a county or portion of a county

(1) 52 Federal Register 29384 (August 7, 1987)

(2) California Code of Regulations, title 17, section 60200(d)

FIGURE 10

2018
Area Designations for State
Ambient Air Quality Standards
VISIBILITY REDUCING PARTICLES



Source Date:
 October 2018
 Air Quality Planning and Science Division

TABLE 10

**California Ambient Air Quality Standards
Area Designation for Visibility Reducing Particles**

	N	NA-T	U	A		N	NA-T	U	A
GREAT BASIN VALLEYS AIR BASIN			X		SACRAMENTO VALLEY AIR BASIN			X	
LAKE COUNTY AIR BASIN				X	SALTON SEA AIR BASIN			X	
LAKE TAHOE AIR BASIN			X		SAN DIEGO AIR BASIN			X	
MOJAVE DESERT AIR BASIN			X		SAN FRANCISCO BAY AREA AIR BASIN			X	
MOUNTAIN COUNTIES AIR BASIN			X		SAN JOAQUIN VALLEY AIR BASIN			X	
NORTH CENTRAL COAST AIR BASIN			X		SOUTH CENTRAL COAST AIR BASIN			X	
NORTH COAST AIR BASIN			X		SOUTH COAST AIR BASIN			X	
NORTHEAST PLATEAU AIR BASIN			X						

Area Designations for the National Ambient Air Quality Standards

The following maps and tables show the area designations for each pollutant with a national ambient air quality standard. Additional information about the federal area designations is available on the U.S. EPA website:

<https://www.epa.gov/green-book>

Over the last several years, U.S. EPA has been reviewing the levels of the various national standards. The agency has already promulgated new standard levels for some pollutants and is considering revising the levels for others. Information about the status of these reviews is available on the U.S. EPA website:

<https://www.epa.gov/criteria-air-pollutants>

Designation Categories

Suspended Particulate Matter (PM₁₀). The U.S. EPA uses three categories to designate areas with respect to PM₁₀:

- Attainment
- Nonattainment
- Unclassifiable

Ozone, Fine Suspended Particulate Matter (PM_{2.5}), Carbon Monoxide (CO), and Nitrogen Dioxide (NO₂). The U.S. EPA uses two categories to designate areas with respect to these standards:

- Nonattainment
- Unclassifiable/Attainment

The national 1-hour ozone standard was revoked effective June 15, 2005, and the area designations map reflects the 2015 national 8-hour ozone standard of 0.070 ppm. Original designations were finalized on August 3, 2018.

On December 14, 2012, the U.S. EPA established a new national annual primary PM_{2.5} standard of 12.0 µg/m³. New area designations reflecting this revised standard became final in December 2014. The current designation map reflects the most recently revised (2012) annual average standard of 12.0 µg/m³ as well as the 24-hour standard of 35 µg/m³, revised in 2006.

On January 22, 2010, the U.S. EPA established a new national 1-hour NO₂ standard of 100 parts per billion (ppb) and retained the annual average standard of 53 ppb. Designations for the primary NO₂ standard became effective on February 29, 2012. All areas of California meet this standard.

Sulfur Dioxide (SO₂). The U.S. EPA uses three categories to designate areas with respect to the 24-hour and annual average sulfur dioxide standards. These designation categories are:

- Nonattainment,
- Unclassifiable, and
- Attainment/Unclassifiable.

On June 2, 2010, the U.S. EPA established a new primary 1-hour SO₂ standard of 75 parts per billion (ppb). At the same time, U.S. EPA revoked the 24-hour and annual

average standards. Area designations for the 1-hour SO₂ standard were finalized on December 21, 2017 and are reflected in the area designations map.

Lead (particulate). The U.S. EPA promulgated a new rolling 3-month average lead standard in October 2008 of 0.15 µg/m³. Designations were made for this standard in November 2010.

Designation Areas

From time to time, the boundaries of the California air basins have been changed to facilitate the planning process. CARB generally initiates these changes, and they are not always reflected in the U.S. EPA's area designations. For purposes of consistency, the maps in this attachment reflect area designation boundaries and nomenclature as promulgated by the U.S. EPA. In some cases, these may not be the same as those adopted by CARB. For example, the national area designations reflect the former Southeast Desert Air Basin. In accordance with Health and Safety Code section 39606.1, CARB redefined this area in 1996 to be the Mojave Desert Air Basin and Salton Sea Air Basin. The definitions and boundaries for all areas designated for the national standards can be found in Title 40, Code of Federal Regulations (CFR), Chapter I, Subchapter C, Part 81.305. They are available on the web at:

https://ecfr.io/Title-40/se40.20.81_1305

FIGURE 11



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 11

**National Ambient Air Quality Standards
Area Designations for 8-Hour Ozone***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN (cont.)		
LAKE COUNTY AIR BASIN		X	Yolo County (2)	X	
LAKE TAHOE AIR BASIN		X	Yuba County		X
MOUNTAIN COUNTIES AIR BASIN			SAN DIEGO COUNTY	X	
Amador County	X		SAN FRANCISCO BAY AREA AIR BASIN	X	
Calaveras County	X		SAN JOAQUIN VALLEY AIR BASIN	X	
El Dorado County (portion) (2)	X		SOUTH CENTRAL COAST AIR BASIN (1)		
Mariposa County	X		San Luis Obispo County		
Nevada County			- Eastern San Luis Obispo County	X	
- Western Nevada County	X		- Remainder of County		X
- Remainder of County		X	Santa Barbara County		X
Placer County (portion) (2)	X		Ventura County		
Plumas County		X	- Area excluding Anacapa and San Nicolas Islands	X	
Sierra County		X	- Channel Islands (1)		X
Tuolumne County	X		SOUTH COAST AIR BASIN (1)	X	
NORTH CENTRAL COAST AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		
NORTH COAST AIR BASIN		X	Kern County (portion)	X	
NORTHEAST PLATEAU AIR BASIN		X	- Indian Wells Valley		X
SACRAMENTO VALLEY AIR BASIN			Imperial County	X	
Butte County	X		Los Angeles County (portion)	X	
Colusa County		X	Riverside County (portion)		
Glenn County		X	- Coachella Valley	X	
Sacramento Metro Area (2)	X		- Non-AQMA portion		X
Shasta County		X	San Bernardino County		
Sutter County			- Western portion (AQMA)	X	
- Sutter Buttes	X		- Eastern portion (non-AQMA)		X
- Southern portion of Sutter County (2)	X				
- Remainder of Sutter County		X			
Tehama County					
- Tuscan Buttes	X				
- Remainder of Tehama County		X			

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map and table reflect the 2015 8-hour ozone standard of 0.070 ppm.

(1) South Central Coast Air Basin Channel Islands:

Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.

Ventura County includes Anacapa and San Nicolas Islands.

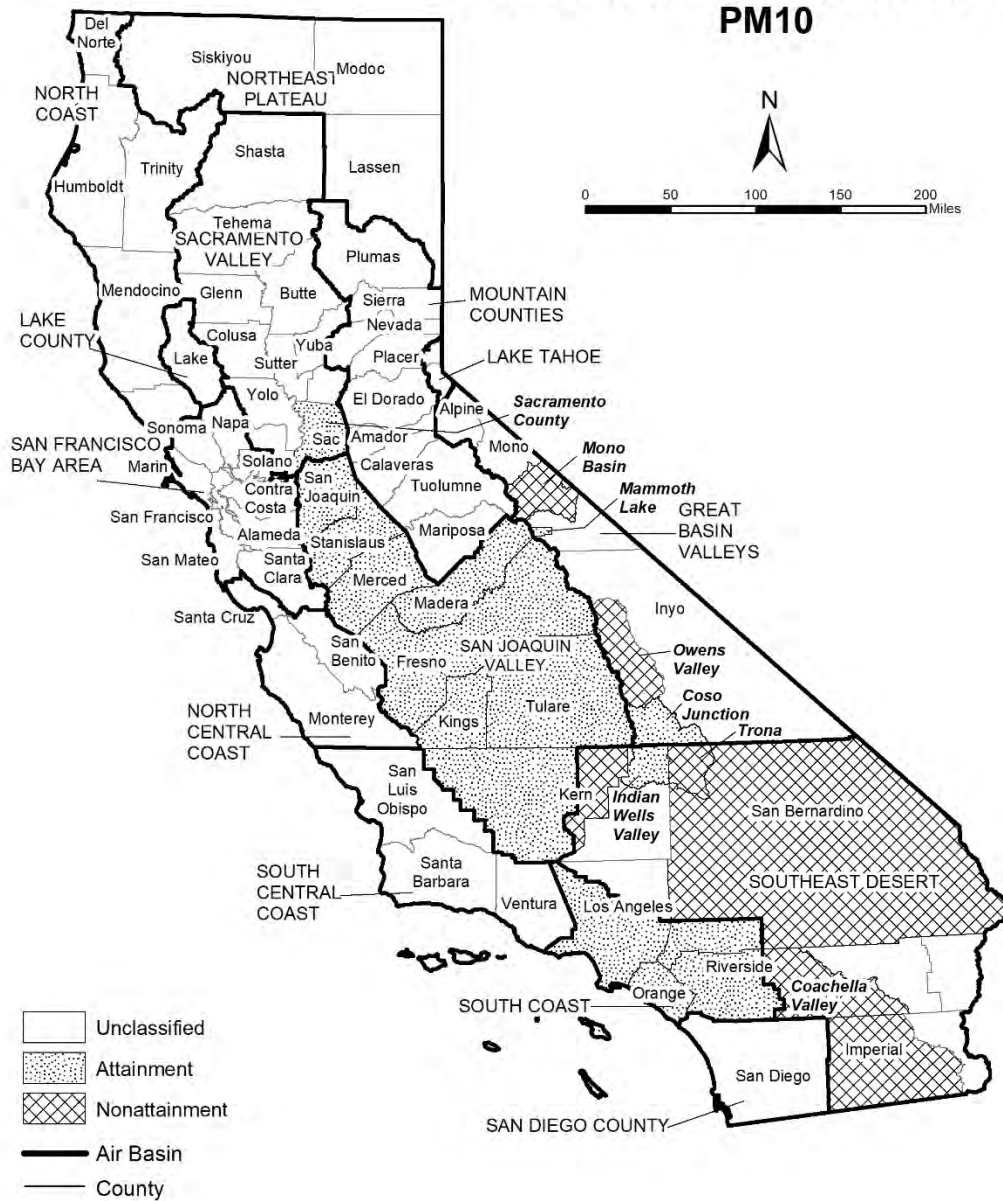
South Coast Air Basin:

Los Angeles County includes San Clemente and Santa Catalina Islands.

(2) For this purpose, the Sacramento Metro Area comprises all of Sacramento and Yolo Counties, the Sacramento Valley Air Basin portion of Solano County, the southern portion of Sutter County, and the Sacramento Valley and Mountain Counties Air Basins portions of Placer and El Dorado counties.

FIGURE 12

Area Designations for National Ambient Air Quality Standards PM₁₀



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 12

**National Ambient Air Quality Standards
Area Designations for Suspended Particulate Matter (PM10)***

	N	U	A		N	U	A
GREAT BASIN VALLEYS AIR BASIN				SAN DIEGO COUNTY		X	
Alpine County		X		SAN FRANCISCO BAY AREA AIR BASIN		X	
Inyo County				SAN JOAQUIN VALLEY AIR BASIN			X
- Owens Valley Planning Area	X			SOUTH CENTRAL COAST AIR BASIN		X	
- Coso Junction			X	SOUTH COAST AIR BASIN			X
- Remainder of County		X		SOUTHEAST DESERT AIR BASIN			
Mono County				Eastern Kern County			
- Mammoth Lake Planning Area			X	- Indian Wells Valley			X
- Mono Lake Basin	X			- Portion within San Joaquin Valley Planning Area	X		
- Remainder of County		X		- Remainder of County		X	
LAKE COUNTY AIR BASIN		X		Imperial County			
LAKE TAHOE AIR BASIN		X		- Imperial Valley Planning Area	X		
MOUNTAIN COUNTIES AIR BASIN				- Remainder of County		X	
Placer County (portion) (2)		X		Los Angeles County (portion)		X	
Remainder of Air Basin		X		Riverside County (portion)			
NORTH CENTRAL COAST AIR BASIN		X		- Coachella Valley (3)	X		
NORTH COAST AIR BASIN		X		- Non-AQMA portion		X	
NORTHEAST PLATEAU AIR BASIN		X		San Bernardino County			
SACRAMENTO VALLEY AIR BASIN				- Trona	X		
Butte County		X		- Remainder of County	X		
Colusa County		X					
Glenn County		X					
Placer County (portion) (2)		X					
Sacramento County (1)			X				
Shasta County		X					
Solano County (portion)		X					
Sutter County		X					
Tehama County		X					
Yolo County		X					
Yuba County		X					

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

(1) Air quality in Sacramento County meets the national PM10 standards. The request for redesignation to attainment was approved by U.S. EPA in September 2013.

(2) U.S. EPA designation puts the Sacramento Valley Air Basin portion of Placer County in the Mountain Counties Air Basin.

(3) Air quality in Coachella Valley meets the national PM10 standards. A request for redesignation to attainment has been submitted to U.S. EPA.

FIGURE 13

Area Designations for National Ambient Air Quality Standards PM2.5



TABLE 13

**National Ambient Air Quality Standards
Area Designations for Fine Particulate Matter (PM2.5)***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE COUNTY AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN (2)	X	
LAKE TAHOE AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN	X	
MOUNTAIN COUNTIES AIR BASIN			SOUTH CENTRAL COAST AIR BASIN		X
Plumas County			SOUTH COAST AIR BASIN (3)	X	
- Portola Valley Portion of Plumas	X		SOUTHEAST DESERT AIR BASIN		
- Remainder of Plumas County		X	Imperial County (portion) (4)	X	
Remainder of Air Basin		X	Remainder of Air Basin		X
NORTH CENTRAL COAST AIR BASIN		X			
NORTH COAST AIR BASIN		X			
NORTHEAST PLATEAU AIR BASIN		X			
SACRAMENTO VALLEY AIR BASIN					
Sacramento Metro Area (1)	X				
Sutter County		X			
Yuba County (portion)		X			
Remainder of Air Basin		X			

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305. This map reflects the 2006 24-hour PM2.5 standard as well as the 1997 and 2012 PM2.5 annual standards.

(1) For this purpose, Sacramento Metro Area comprises all of Sacramento and portions of El Dorado, Placer, Solano, and Yolo Counties. Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

(2) Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

(3) Those lands of the Santa Rosa Band of Cahulla Mission Indians in Riverside County are designated Unclassifiable/Attainment.

(4) That portion of Imperial County encompassing the urban and surrounding areas of Brawley, Calexico, El Centro, Heber, Holtville, Imperial, Seeley, and Westmorland. Air quality in this area meets the national PM2.5 standards. A Determination of Attainment for the 2006 24-hour PM2.5 standard was made by U.S. EPA in June 2017.

FIGURE 14



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 14**National Ambient Air Quality Standards
Area Designations for Carbon Monoxide***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
LAKE COUNTY AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE TAHOE AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

FIGURE 15



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 15**National Ambient Air Quality Standards
Area Designations for Nitrogen Dioxide***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SACRAMENTO VALLEY AIR BASIN		X
LAKE COUNTY AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE TAHOE AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

FIGURE 16



Source Date:
October 2018
Air Quality Planning and Science Division

TABLE 16

**National Ambient Air Quality Standards
Area Designations for Sulfur Dioxide***

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		
LAKE COUNTY AIR BASIN		X	San Luis Obispo County		X
LAKE TAHOE AIR BASIN		X	Santa Barbara County		X
MOUNTAIN COUNTIES AIR BASIN		X	Ventura County		X
NORTH CENTRAL COAST AIR BASIN		X	Channel Islands (1)		X
NORTH COAST AIR BASIN		X	SOUTH COAST AIR BASIN		X
NORTHEAST PLATEAU AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		
SACRAMENTO VALLEY AIR BASIN		X	Imperial County		X
SAN DIEGO COUNTY		X	Remainder of Air Basin		X
SAN FRANCISCO BAY AREA AIR BASIN		X			
SAN JOAQUIN VALLEY AIR BASIN					
Fresno County		X			
Kern County (portion)		X			
Kings County		X			
Madera County		X			
Merced County		X			
San Joaquin County		X			
Stanislaus County		X			
Tulare County		X			

* Definitions and references for all areas can be found in 40 CFR, Chapter I, Part 81.305.

NOTE: This map and table reflect the 2010 1-hour SO₂ standard of 75 ppb.

(1) South Central Coast Air Basin Channel Islands:

Santa Barbara County includes Santa Cruz, San Miguel, Santa Rosa, and Santa Barbara Islands.

Ventura County includes Anacapa and San Nicolas Islands.

Note that the San Clemente and Santa Catalina Islands are considered part of Los Angeles County, and therefore, are included as part of the South Coast Air Basin.

FIGURE 17

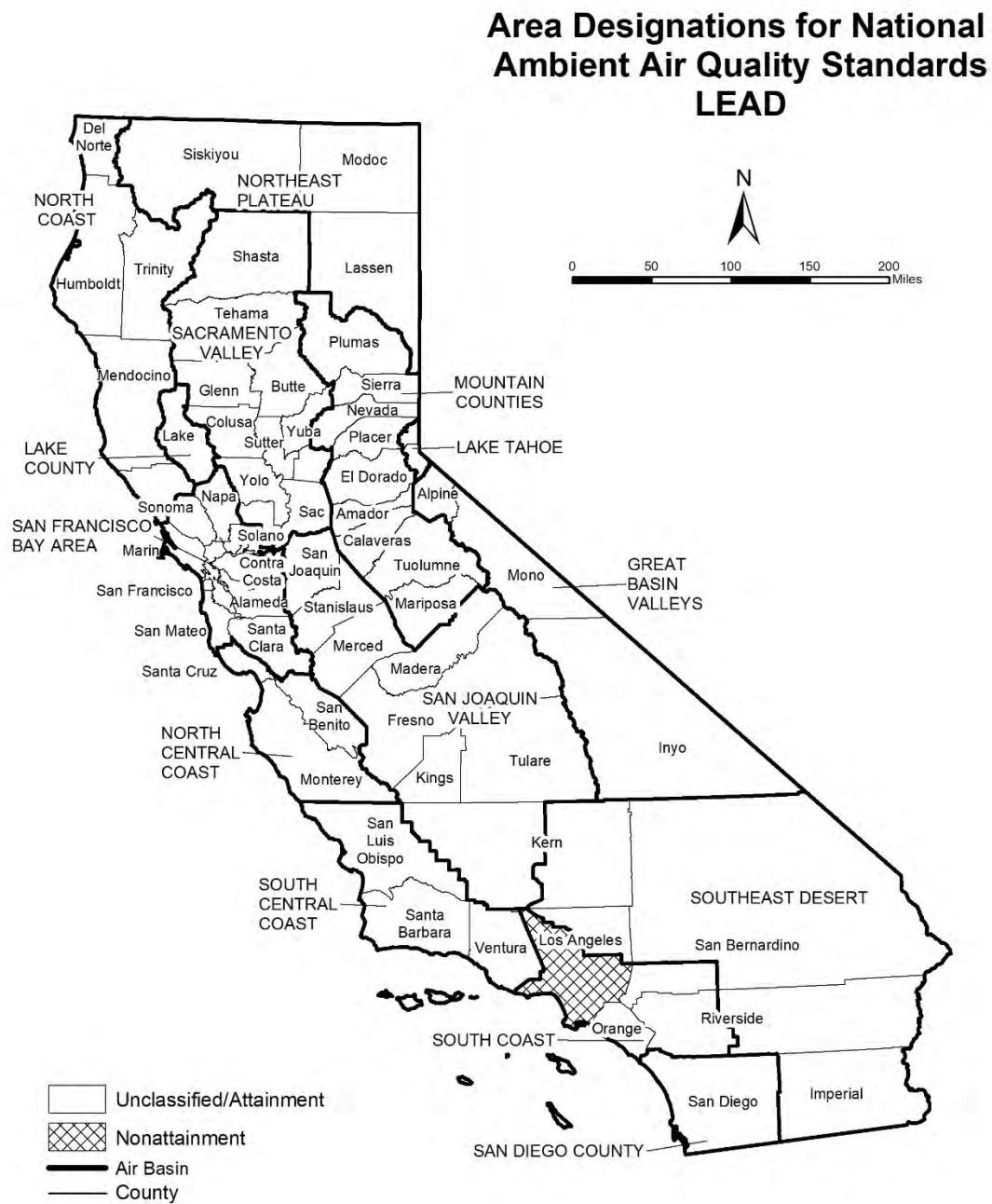


TABLE 17

**National Ambient Air Quality Standards
Area Designations for Lead (particulate)**

	N	U/A		N	U/A
GREAT BASIN VALLEYS AIR BASIN		X	SAN DIEGO COUNTY		X
LAKE COUNTY AIR BASIN		X	SAN FRANCISCO BAY AREA AIR BASIN		X
LAKE TAHOE AIR BASIN		X	SAN JOAQUIN VALLEY AIR BASIN		X
MOUNTAIN COUNTIES AIR BASIN		X	SOUTH CENTRAL COAST AIR BASIN		X
NORTH CENTRAL COAST AIR BASIN		X	SOUTH COAST AIR BASIN		
NORTH COAST AIR BASIN		X	Los Angeles County (portion) (1)	X	
NORTHEAST PLATEAU AIR BASIN		X	Remainder of Air Basin		X
SACRAMENTO VALLEY AIR BASIN		X	SOUTHEAST DESERT AIR BASIN		X

(1) Portion of County in Air Basin, not including Channel Islands

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APPENDIX 3.1:

CALEEMOD PROJECT CONSTRUCTION EMISSIONS MODEL OUTPUTS

15091 - MVCC (Construction) Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	15091 - MVCC (Construction)
Construction Start Date	9/2/2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.836642, -117.262866
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5578
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	853	1000sqft	19.6	852,984	290,915	—	—	High-Cube Fulfillment

Refrigerated Warehouse-No Rail	151	1000sqft	3.46	150,526	0.00	—	—	High-Cube Cold Storage
City Park	13.3	Acre	13.3	0.00	0.00	0.00	—	Park
Parking Lot	606	Space	3.79	0.00	0.00	—	—	—
Other Asphalt Surfaces	24.8	Acre	24.8	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.57	57.4	21.8	62.4	0.06	0.57	7.42	8.00	0.54	1.77	2.31	—	13,796	13,796	0.51	0.72	34.4	14,059
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.60	62.6	61.0	88.0	0.24	0.73	9.96	10.7	0.69	3.20	3.89	—	30,886	30,886	0.92	2.55	0.91	31,670
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.97	15.4	20.0	39.9	0.07	0.36	5.06	5.42	0.34	1.33	1.67	—	11,135	11,135	0.40	0.73	9.52	11,370
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.36	2.80	3.64	7.28	0.01	0.07	0.92	0.99	0.06	0.24	0.30	—	1,843	1,843	0.07	0.12	1.58	1,882

2.2. Construction Emissions by Year, Unmitigated

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

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.71	0.68	13.7	19.9	0.04	0.40	1.39	1.78	0.37	0.28	0.65	—	5,123	5,123	0.18	0.26	4.58	5,211
2025	3.57	57.4	21.8	62.4	0.06	0.57	7.42	8.00	0.54	1.77	2.31	—	13,796	13,796	0.51	0.72	34.4	14,059
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.73	2.34	61.0	88.0	0.24	0.70	9.96	10.7	0.69	3.20	3.89	—	30,886	30,886	0.92	2.55	0.90	31,670
2025	3.60	62.6	60.4	87.7	0.24	0.73	9.96	10.7	0.69	3.20	3.89	—	30,635	30,635	0.92	2.46	0.91	31,392
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.23	0.21	4.68	7.16	0.02	0.09	0.84	0.93	0.08	0.30	0.38	—	1,970	1,970	0.07	0.12	0.76	2,007
2025	1.97	15.4	20.0	39.9	0.07	0.36	5.06	5.42	0.34	1.33	1.67	—	11,135	11,135	0.40	0.73	9.52	11,370
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.04	0.04	0.85	1.31	< 0.005	0.02	0.15	0.17	0.01	0.05	0.07	—	326	326	0.01	0.02	0.13	332
2025	0.36	2.80	3.64	7.28	0.01	0.07	0.92	0.99	0.06	0.24	0.30	—	1,843	1,843	0.07	0.12	1.58	1,882

3. Construction Emissions Details

3.1. Demolition (2024) - Unmitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.56	12.0	18.2	0.03	0.37	—	0.37	0.35	—	0.35	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.79	0.79	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	0.56	12.0	18.2	0.03	0.37	—	0.37	0.35	—	0.35	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.79	0.79	—	0.12	0.12	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.08	1.81	2.74	< 0.005	0.06	—	0.06	0.05	—	0.05	—	516	516	0.02	< 0.005	—	518
Demolition	—	—	—	—	—	—	0.12	0.12	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.33	0.50	< 0.005	0.01	—	0.01	0.01	—	0.01	—	85.5	85.5	< 0.005	< 0.005	—	85.7
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.25	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	216	216	0.01	0.01	0.86	219
Vendor	0.04	0.02	0.95	0.30	0.01	0.01	0.23	0.24	0.01	0.06	0.08	—	838	838	0.02	0.13	2.36	879
Hauling	0.03	0.01	0.73	0.18	< 0.005	0.01	0.17	0.18	0.01	0.05	0.06	—	643	643	0.01	0.10	1.36	676
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	0.95	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	198	198	0.01	0.01	0.02	201
Vendor	0.04	0.02	0.99	0.30	0.01	0.01	0.23	0.24	0.01	0.06	0.08	—	839	839	0.02	0.13	0.06	877
Hauling	0.03	0.01	0.76	0.18	< 0.005	0.01	0.17	0.18	0.01	0.05	0.06	—	643	643	0.01	0.10	0.04	675
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	30.3	30.3	< 0.005	< 0.005	0.06	30.7
Vendor	0.01	< 0.005	0.15	0.05	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	126	126	< 0.005	0.02	0.15	132
Hauling	< 0.005	< 0.005	0.11	0.03	< 0.005	< 0.005	0.02	0.03	< 0.005	0.01	0.01	—	96.9	96.9	< 0.005	0.02	0.09	102
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.01	5.01	< 0.005	< 0.005	0.01	5.08
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.9	20.9	< 0.005	< 0.005	0.03	21.9
Hauling	< 0.005	< 0.005	0.02	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	16.0	16.0	< 0.005	< 0.005	0.01	16.8

3.3. Site Preparation (2024) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.64	0.64	14.7	28.3	0.05	0.10	—	0.10	0.10	—	0.10	—	5,293	5,293	0.21	0.04	—	5,311
Dust From Material Movement	—	—	—	—	—	—	5.66	5.66	—	2.69	2.69	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.89	1.71	< 0.005	0.01	—	0.01	0.01	—	0.01	—	319	319	0.01	< 0.005	—	320
Dust From Material Movement	—	—	—	—	—	—	0.34	0.34	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.16	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	52.8	52.8	< 0.005	< 0.005	—	53.0
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.08	0.10	1.10	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
Vendor	0.01	0.01	0.41	0.12	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	342	342	0.01	0.05	0.02	357
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	14.1	14.1	< 0.005	< 0.005	0.03	14.3
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.6	20.6	< 0.005	< 0.005	0.02	21.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.34	2.34	< 0.005	< 0.005	< 0.005	2.37
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.41	3.41	< 0.005	< 0.005	< 0.005	3.57
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2024) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.90	43.1	81.1	0.14	0.42	—	0.42	0.41	—	0.41	—	15,346	15,346	0.62	0.12	—	15,398

Dust From Material Movement	—	—	—	—	—	—	5.52	5.52	—	1.98	1.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	1.18	2.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	420	420	0.02	< 0.005	—	422
Dust From Material Movement	—	—	—	—	—	—	0.15	0.15	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.22	0.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	69.6	69.6	< 0.005	< 0.005	—	69.8
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.20	0.24	2.68	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	562	562	0.03	0.02	0.06	569
Vendor	0.04	0.03	1.14	0.35	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	963	963	0.02	0.14	0.07	1,007
Hauling	0.56	0.21	16.5	3.88	0.09	0.26	3.62	3.88	0.26	1.02	1.28	—	14,015	14,015	0.25	2.26	0.77	14,695

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	0.03	15.8
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.4	26.4	< 0.005	< 0.005	0.03	27.6
Hauling	0.02	0.01	0.45	0.11	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	384	384	0.01	0.06	0.35	403
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.58	2.58	< 0.005	< 0.005	< 0.005	2.62
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.37	4.37	< 0.005	< 0.005	0.01	4.57
Hauling	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	63.6	63.6	< 0.005	0.01	0.06	66.7

3.7. Grading (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	1.90	43.1	81.1	0.14	0.42	—	0.42	0.41	—	0.41	—	15,345	15,345	0.62	0.12	—	15,398
Dust From Material Movement	—	—	—	—	—	—	5.52	5.52	—	1.98	1.98	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.27	6.16	11.6	0.02	0.06	—	0.06	0.06	—	0.06	—	2,192	2,192	0.09	0.02	—	2,200

Dust From Material Movement	—	—	—	—	—	—	0.79	0.79	—	0.28	0.28	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.05	1.12	2.11	< 0.005	0.01	—	0.01	0.01	—	0.01	—	363	363	0.01	< 0.005	—	364
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.21	2.48	0.00	0.00	0.56	0.56	0.00	0.13	0.13	—	551	551	0.03	0.02	0.06	558
Vendor	0.04	0.02	1.09	0.33	0.01	0.01	0.27	0.28	0.01	0.07	0.09	—	949	949	0.02	0.14	0.07	993
Hauling	0.56	0.21	16.0	3.80	0.09	0.26	3.62	3.88	0.26	1.02	1.28	—	13,790	13,790	0.26	2.17	0.76	14,444
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.37	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	79.7	79.7	< 0.005	< 0.005	0.14	80.8
Vendor	0.01	< 0.005	0.16	0.05	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	136	136	< 0.005	0.02	0.17	142
Hauling	0.08	0.03	2.31	0.54	0.01	0.04	0.51	0.55	0.04	0.14	0.18	—	1,969	1,969	0.04	0.31	1.80	2,064
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.2	13.2	< 0.005	< 0.005	0.02	13.4
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.4	22.4	< 0.005	< 0.005	0.03	23.5

Hauling	0.01	0.01	0.42	0.10	< 0.005	0.01	0.09	0.10	0.01	0.03	0.03	—	326	326	0.01	0.05	0.30	342

3.9. Building Construction (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.58	13.5	19.7	0.04	0.35	—	0.35	0.33	—	0.33	—	3,405	3,405	0.14	0.03	—	3,417
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	0.58	13.5	19.7	0.04	0.35	—	0.35	0.33	—	0.33	—	3,405	3,405	0.14	0.03	—	3,417
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	0.31	7.22	10.5	0.02	0.19	—	0.19	0.18	—	0.18	—	1,819	1,819	0.07	0.01	—	1,826
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.06	1.32	1.92	< 0.005	0.03	—	0.03	0.03	—	0.03	—	301	301	0.01	< 0.005	—	302
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	2.27	1.89	1.84	32.5	0.00	0.00	5.51	5.51	0.00	1.29	1.29	—	5,940	5,940	0.25	0.21	21.8	6,030
Vendor	0.13	0.06	3.19	0.99	0.02	0.04	0.81	0.86	0.04	0.22	0.27	—	2,906	2,906	0.06	0.44	8.25	3,048
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.99	1.77	2.03	24.6	0.00	0.00	5.51	5.51	0.00	1.29	1.29	—	5,461	5,461	0.26	0.21	0.57	5,530
Vendor	0.13	0.06	3.34	1.02	0.02	0.04	0.81	0.86	0.04	0.22	0.27	—	2,908	2,908	0.06	0.44	0.21	3,042
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.05	0.94	1.18	13.9	0.00	0.00	2.93	2.93	0.00	0.69	0.69	—	2,955	2,955	0.14	0.11	5.03	2,996
Vendor	0.07	0.03	1.78	0.54	0.01	0.02	0.43	0.45	0.02	0.12	0.14	—	1,553	1,553	0.03	0.24	1.91	1,626
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.22	2.53	0.00	0.00	0.53	0.53	0.00	0.13	0.13	—	489	489	0.02	0.02	0.83	496
Vendor	0.01	0.01	0.33	0.10	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	257	257	0.01	0.04	0.32	269
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2025) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	0.29	7.24	10.6	0.01	0.16	—	0.16	0.15	—	0.15	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	4.99	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.30	0.44	< 0.005	0.01	—	0.01	0.01	—	0.01	—	62.1	62.1	< 0.005	< 0.005	—	62.3
Paving	—	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.05	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.3	10.3	< 0.005	< 0.005	—	10.3
Paving	—	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	194	194	0.01	0.01	0.02	197
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.09	8.09	< 0.005	< 0.005	0.01	8.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.34	1.34	< 0.005	< 0.005	< 0.005	1.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2025) - Unmitigated

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

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.14	2.90	2.57	< 0.005	0.18	—	0.18	0.16	—	0.16	—	356	356	0.01	< 0.005	—	357
Architect ural Coatings	—	54.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.14	2.90	2.57	< 0.005	0.18	—	0.18	0.16	—	0.16	—	356	356	0.01	< 0.005	—	357
Architect ural Coatings	—	54.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.72	0.63	< 0.005	0.04	—	0.04	0.04	—	0.04	—	87.8	87.8	< 0.005	< 0.005	—	88.1
Architect ural Coatings	—	13.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.13	0.12	< 0.005	0.01	—	0.01	0.01	—	0.01	—	14.5	14.5	< 0.005	< 0.005	—	14.6
Architect ural Coatings	—	2.45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.45	0.38	0.37	6.51	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,188	1,188	0.05	0.04	4.37	1,206
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.40	0.35	0.41	4.92	0.00	0.00	1.10	1.10	0.00	0.26	0.26	—	1,092	1,092	0.05	0.04	0.11	1,106
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.28	0.00	0.00	0.27	0.27	0.00	0.06	0.06	—	273	273	0.01	0.01	0.46	277

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.23	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	45.2	45.2	< 0.005	< 0.005	0.08	45.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	9/2/2024	11/15/2024	5.00	55.0	70
Site Preparation	Site Preparation	11/18/2024	12/17/2024	5.00	22.0	40
Grading	Grading	12/18/2024	3/14/2025	5.00	63.0	110
Building Construction	Building Construction	3/17/2025	12/12/2025	5.00	195	1110

Paving	Paving	10/2/2025	10/22/2025	5.00	15.0	75
Architectural Coating	Architectural Coating	8/11/2025	12/12/2025	5.00	90.0	75

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Tier 3	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Tier 3	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Tier 4 Interim	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	3.00	8.00	367	0.40
Site Preparation	Crawler Tractors	Diesel	Tier 4 Interim	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Tier 3	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Tier 4 Interim	2.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	2.00	8.00	367	0.40
Grading	Scrapers	Diesel	Tier 4 Interim	5.00	8.00	423	0.48
Grading	Crawler Tractors	Diesel	Tier 4 Interim	3.00	8.00	84.0	0.37
Grading	Generator Sets	Diesel	Tier 3	1.00	8.00	14.0	0.74
Grading	Bore/Drill Rigs	Diesel	Tier 4 Interim	1.00	8.00	155	0.50
Grading	Crushing/Proc. Equipment	Electric	Average	1.00	8.00	12.0	0.85
Building Construction	Cranes	Diesel	Tier 4 Interim	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	4.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Tier 3	3.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	8.00	84.0	0.37
Building Construction	Welders	Diesel	Tier 3	3.00	8.00	46.0	0.45

Paving	Pavers	Diesel	Tier 4 Interim	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Tier 4 Interim	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Tier 3	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Tier 3	2.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	27.0	10.2	HHDT,MHDT
Demolition	Hauling	9.18	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	11.0	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	42.5	18.5	LDA,LDT1,LDT2
Grading	Vendor	31.0	10.2	HHDT,MHDT
Grading	Hauling	200	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	421	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	95.0	10.2	HHDT,MHDT

Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	84.3	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	1,505,265	501,755	51,292

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Building Square Footage)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	43,858	—

Site Preparation	—	—	77.0	0.00	—
Grading	—	218,100	252	0.00	—
Paving	0.00	0.00	0.00	0.00	28.6

5.6.2. Construction Earthmoving Control Strategies

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

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
Refrigerated Warehouse-No Rail	0.00	0%
City Park	0.00	0%
Parking Lot	3.79	100%
Other Asphalt Surfaces	24.8	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	60.8	532	0.03	< 0.005
2025	60.8	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.1	annual days of extreme heat
Extreme Precipitation	2.10	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	6.94	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi. Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	4	1	1	4
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

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

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	95.3
AQ-PM	55.1
AQ-DPM	13.9
Drinking Water	10.2
Lead Risk Housing	54.6
Pesticides	52.5
Toxic Releases	43.8
Traffic	90.2
Effect Indicators	—
CleanUp Sites	60.4
Groundwater	14.3
Haz Waste Facilities/Generators	70.9
Impaired Water Bodies	0.00

Solid Waste	0.00
Sensitive Population	—
Asthma	66.5
Cardio-vascular	91.0
Low Birth Weights	49.3
Socioeconomic Factor Indicators	—
Education	93.2
Housing	80.1
Linguistic	84.3
Poverty	84.1
Unemployment	93.1

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	8.712947517
Employed	6.274862056
Median HI	6.826639292
Education	—
Bachelor's or higher	1.860644168
High school enrollment	100
Preschool enrollment	13.02450917
Transportation	—
Auto Access	65.16104196
Active commuting	54.20248941
Social	—

2-parent households	54.04850507
Voting	3.259335301
Neighborhood	—
Alcohol availability	90.15783395
Park access	8.558963172
Retail density	9.829334018
Supermarket access	10.3554472
Tree canopy	2.104452714
Housing	—
Homeownership	46.43911202
Housing habitability	15.55241884
Low-inc homeowner severe housing cost burden	28.37161555
Low-inc renter severe housing cost burden	2.322597203
Uncrowded housing	11.35634544
Health Outcomes	—
Insured adults	4.79917875
Arthritis	24.0
Asthma ER Admissions	34.2
High Blood Pressure	19.3
Cancer (excluding skin)	68.9
Asthma	7.7
Coronary Heart Disease	13.8
Chronic Obstructive Pulmonary Disease	7.1
Diagnosed Diabetes	14.5
Life Expectancy at Birth	12.9
Cognitively Disabled	46.5
Physically Disabled	37.2

Heart Attack ER Admissions	6.2
Mental Health Not Good	6.0
Chronic Kidney Disease	7.4
Obesity	3.9
Pedestrian Injuries	94.4
Physical Health Not Good	6.0
Stroke	13.0
Health Risk Behaviors	—
Binge Drinking	72.5
Current Smoker	4.8
No Leisure Time for Physical Activity	4.7
Climate Change Exposures	—
Wildfire Risk	32.2
SLR Inundation Area	0.0
Children	22.0
Elderly	91.2
English Speaking	24.7
Foreign-born	59.6
Outdoor Workers	4.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	93.6
Traffic Density	67.0
Traffic Access	23.0
Other Indices	—
Hardship	96.9
Other Decision Support	—
2016 Voting	13.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	81.0
Healthy Places Index Score for Project Location (b)	5.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Schedule provided by client data
Construction: Off-Road Equipment	Equipment provided by client data T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8 hours work days Bore Drill HP adjusted based on client provided specs.
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction Per client data, a maximum of 200 hauling truck trips per day
Construction: Architectural Coatings	SCAQMD Rule 1113

Construction: Dust From Material Movement	Provided by client
Land Use	Site acreage taken from Site Plan

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APPENDIX 3.2:

CALEEMOD PROJECT OPERATIONAL EMISSIONS MODEL OUTPUTS

15091 - MVCC (Operations) Detailed Report

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4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	15091 - MVCC (Operations)
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	9.00
Location	33.836424, -117.262929
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5578
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.20

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-No Rail	853	1000sqft	19.6	852,984	290,915	—	—	High-Cube Fulfillment

Refrigerated Warehouse-No Rail	151	1000sqft	3.46	150,526	0.00	—	—	High-Cube Cold Storage
City Park	13.3	Acre	13.3	0.00	0.00	0.00	—	Park
Parking Lot	606	Space	3.79	0.00	0.00	—	—	—
Other Asphalt Surfaces	24.8	Acre	24.8	0.00	0.00	—	—	—
User Defined Industrial	1,004	User Defined Unit	0.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Energy	E-10-B	Establish Onsite Renewable Energy Systems: Solar Power

2. Emissions Summary

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	21.6	41.8	55.5	189	0.73	1.07	42.8	43.9	1.01	11.0	12.0	954	81,655	82,609	98.8	8.89	375	88,102
Mit.	21.6	41.8	55.5	189	0.73	1.07	42.8	43.9	1.01	11.0	12.0	954	81,318	82,272	98.7	8.89	375	87,763
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	< 0.5%	< 0.5%	< 0.5%	< 0.5%	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.3	34.1	57.9	121	0.71	0.99	42.8	43.8	0.95	11.0	12.0	954	79,231	80,185	98.8	8.94	159	85,478

Mit.	13.3	34.1	57.9	121	0.71	0.99	42.8	43.8	0.95	11.0	12.0	954	78,894	79,848	98.8	8.94	159	85,139
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	< 0.5%	< 0.5%	< 0.5%	< 0.5%	—	< 0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	15.8	36.7	44.4	132	0.56	0.78	34.2	34.9	0.73	8.79	9.52	954	63,171	64,124	98.4	7.09	229	68,925
Mit.	15.8	36.7	44.4	132	0.56	0.78	34.2	34.9	0.73	8.79	9.52	954	62,834	63,788	98.4	7.08	229	68,586
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	1%	1%	< 0.5%	< 0.5%	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.88	6.70	8.11	24.1	0.10	0.14	6.23	6.37	0.13	1.60	1.74	158	10,459	10,617	16.3	1.17	37.9	11,411
Mit.	2.88	6.70	8.11	24.1	0.10	0.14	6.23	6.37	0.13	1.60	1.74	158	10,403	10,561	16.3	1.17	37.9	11,355
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	1%	1%	< 0.5%	< 0.5%	—	< 0.5%

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.4	11.4	54.0	145	0.73	0.94	42.8	43.8	0.89	11.0	11.9	—	76,358	76,358	1.81	7.75	221	78,933
Area	7.76	30.1	0.37	43.6	< 0.005	0.08	—	0.08	0.06	—	0.06	—	179	179	0.01	< 0.005	—	180
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,396	3,396	0.32	0.04	—	3,416
Water	—	—	—	—	—	—	—	—	—	—	—	445	1,522	1,966	45.7	1.10	—	3,438
Waste	—	—	—	—	—	—	—	—	—	—	—	509	0.00	509	50.9	0.00	—	1,781
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153

Stationary	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Total	21.6	41.8	55.5	189	0.73	1.07	42.8	43.9	1.01	11.0	12.0	954	81,655	82,609	98.8	8.89	375	88,102
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.9	10.8	56.8	120	0.71	0.94	42.8	43.8	0.89	11.0	11.9	—	74,114	74,114	1.84	7.80	5.74	76,490
Area	—	22.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,396	3,396	0.32	0.04	—	3,416
Water	—	—	—	—	—	—	—	—	—	—	—	445	1,522	1,966	45.7	1.10	—	3,438
Waste	—	—	—	—	—	—	—	—	—	—	—	509	0.00	509	50.9	0.00	—	1,781
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
Stationary	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Total	13.3	34.1	57.9	121	0.71	0.99	42.8	43.8	0.95	11.0	12.0	954	79,231	80,185	98.8	8.94	159	85,478
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.4	8.83	44.0	102	0.55	0.72	34.2	34.9	0.68	8.79	9.47	—	58,103	58,103	1.46	5.95	75.4	59,986
Area	5.32	27.8	0.25	29.9	< 0.005	0.05	—	0.05	0.04	—	0.04	—	123	123	0.01	< 0.005	—	123
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,396	3,396	0.32	0.04	—	3,416
Water	—	—	—	—	—	—	—	—	—	—	—	445	1,522	1,966	45.7	1.10	—	3,438
Waste	—	—	—	—	—	—	—	—	—	—	—	509	0.00	509	50.9	0.00	—	1,781
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
Stationary	0.06	0.05	0.15	0.14	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	27.4	27.4	< 0.005	< 0.005	0.00	27.5
Total	15.8	36.7	44.4	132	0.56	0.78	34.2	34.9	0.73	8.79	9.52	954	63,171	64,124	98.4	7.09	229	68,925
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.90	1.61	8.04	18.6	0.10	0.13	6.23	6.36	0.12	1.60	1.73	—	9,620	9,620	0.24	0.98	12.5	9,931
Area	0.97	5.08	0.05	5.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.4	20.4	< 0.005	< 0.005	—	20.4
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	562	562	0.05	0.01	—	566

Water	—	—	—	—	—	—	—	—	—	—	—	73.6	252	326	7.57	0.18	—	569
Waste	—	—	—	—	—	—	—	—	—	—	—	84.3	0.00	84.3	8.42	0.00	—	295
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.4	25.4
Stationary	0.01	0.01	0.03	0.02	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	4.53	4.53	< 0.005	< 0.005	0.00	4.55
Total	2.88	6.70	8.11	24.1	0.10	0.14	6.23	6.37	0.13	1.60	1.74	158	10,459	10,617	16.3	1.17	37.9	11,411

2.6. Operations Emissions by Sector, Mitigated

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

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	13.4	11.4	54.0	145	0.73	0.94	42.8	43.8	0.89	11.0	11.9	—	76,358	76,358	1.81	7.75	221	78,933
Area	7.76	30.1	0.37	43.6	< 0.005	0.08	—	0.08	0.06	—	0.06	—	179	179	0.01	< 0.005	—	180
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,059	3,059	0.29	0.04	—	3,077
Water	—	—	—	—	—	—	—	—	—	—	—	445	1,522	1,966	45.7	1.10	—	3,438
Waste	—	—	—	—	—	—	—	—	—	—	—	509	0.00	509	50.9	0.00	—	1,781
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
Stationary	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Total	21.6	41.8	55.5	189	0.73	1.07	42.8	43.9	1.01	11.0	12.0	954	81,318	82,272	98.7	8.89	375	87,763
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	12.9	10.8	56.8	120	0.71	0.94	42.8	43.8	0.89	11.0	11.9	—	74,114	74,114	1.84	7.80	5.74	76,490
Area	—	22.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,059	3,059	0.29	0.04	—	3,077
Water	—	—	—	—	—	—	—	—	—	—	—	445	1,522	1,966	45.7	1.10	—	3,438

Waste	—	—	—	—	—	—	—	—	—	—	—	509	0.00	509	50.9	0.00	—	1,781
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
Stationary	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Total	13.3	34.1	57.9	121	0.71	0.99	42.8	43.8	0.95	11.0	12.0	954	78,894	79,848	98.8	8.94	159	85,139
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	10.4	8.83	44.0	102	0.55	0.72	34.2	34.9	0.68	8.79	9.47	—	58,103	58,103	1.46	5.95	75.4	59,986
Area	5.32	27.8	0.25	29.9	< 0.005	0.05	—	0.05	0.04	—	0.04	—	123	123	0.01	< 0.005	—	123
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	3,059	3,059	0.29	0.04	—	3,077
Water	—	—	—	—	—	—	—	—	—	—	—	445	1,522	1,966	45.7	1.10	—	3,438
Waste	—	—	—	—	—	—	—	—	—	—	—	509	0.00	509	50.9	0.00	—	1,781
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
Stationary	0.06	0.05	0.15	0.14	< 0.005	0.01	0.00	0.01	0.01	0.00	0.01	0.00	27.4	27.4	< 0.005	< 0.005	0.00	27.5
Total	15.8	36.7	44.4	132	0.56	0.78	34.2	34.9	0.73	8.79	9.52	954	62,834	63,788	98.4	7.08	229	68,586
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.90	1.61	8.04	18.6	0.10	0.13	6.23	6.36	0.12	1.60	1.73	—	9,620	9,620	0.24	0.98	12.5	9,931
Area	0.97	5.08	0.05	5.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.4	20.4	< 0.005	< 0.005	—	20.4
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	506	506	0.05	0.01	—	509
Water	—	—	—	—	—	—	—	—	—	—	—	73.6	252	326	7.57	0.18	—	569
Waste	—	—	—	—	—	—	—	—	—	—	—	84.3	0.00	84.3	8.42	0.00	—	295
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.4	25.4
Stationary	0.01	0.01	0.03	0.02	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	4.53	4.53	< 0.005	< 0.005	0.00	4.55
Total	2.88	6.70	8.11	24.1	0.10	0.14	6.23	6.37	0.13	1.60	1.74	158	10,403	10,561	16.3	1.17	37.9	11,355

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.31	0.61	36.4	8.27	0.34	0.62	10.3	11.0	0.60	2.76	3.36	—	36,226	36,226	0.64	5.62	85.3	38,003
Refrigerated Warehouse-No Rail	0.44	0.28	8.72	3.05	0.08	0.15	2.85	2.99	0.14	0.76	0.90	—	8,158	8,158	0.13	1.18	27.9	8,540
City Park	4.11	3.64	4.82	46.2	0.12	0.09	10.8	10.9	0.08	2.74	2.83	—	12,581	12,581	0.41	0.51	44.1	12,788
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	7.54	6.84	4.16	87.3	0.19	0.08	18.8	18.9	0.07	4.75	4.83	—	19,393	19,393	0.63	0.44	63.9	19,603
Total	13.4	11.4	54.0	145	0.73	0.94	42.8	43.8	0.89	11.0	11.9	—	76,358	76,358	1.81	7.75	221	78,933
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrige rated Warehou se-No	1.28	0.59	38.0	8.34	0.34	0.62	10.3	11.0	0.60	2.76	3.36	—	36,237	36,237	0.64	5.63	2.21	37,931
Refrigera ted Warehou se-No Rail	0.43	0.27	9.11	3.06	0.08	0.15	2.85	2.99	0.14	0.76	0.90	—	8,160	8,160	0.13	1.18	0.72	8,515
City Park	3.90	3.43	5.17	37.6	0.12	0.09	10.8	10.9	0.08	2.74	2.83	—	11,809	11,809	0.41	0.53	1.14	11,978
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	7.24	6.54	4.61	71.2	0.18	0.08	18.8	18.9	0.07	4.75	4.83	—	17,908	17,908	0.65	0.47	1.66	18,065
Total	12.9	10.8	56.8	120	0.71	0.94	42.8	43.8	0.89	11.0	11.9	—	74,114	74,114	1.84	7.80	5.74	76,490
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrige rated Warehou se-No Rail	0.17	0.08	5.11	1.11	0.04	0.08	1.37	1.46	0.08	0.37	0.45	—	4,386	4,386	0.08	0.68	4.46	4,595
Refrigera ted Warehou se-No Rail	0.07	0.04	1.47	0.48	0.01	0.02	0.45	0.47	0.02	0.12	0.14	—	1,179	1,179	0.02	0.17	1.74	1,231
City Park	0.51	0.45	0.70	5.18	0.02	0.01	1.42	1.44	0.01	0.36	0.37	—	1,433	1,433	0.05	0.06	2.29	1,456
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

User Defined Industrial	1.15	1.04	0.76	11.8	0.03	0.01	2.98	3.00	0.01	0.75	0.77	—	2,622	2,622	0.09	0.07	3.99	2,649
Total	1.90	1.61	8.04	18.6	0.10	0.13	6.23	6.36	0.12	1.60	1.73	—	9,620	9,620	0.24	0.98	12.5	9,931

4.1.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	1.31	0.61	36.4	8.27	0.34	0.62	10.3	11.0	0.60	2.76	3.36	—	36,226	36,226	0.64	5.62	85.3	38,003
Refrigerated Warehouse-No Rail	0.44	0.28	8.72	3.05	0.08	0.15	2.85	2.99	0.14	0.76	0.90	—	8,158	8,158	0.13	1.18	27.9	8,540
City Park	4.11	3.64	4.82	46.2	0.12	0.09	10.8	10.9	0.08	2.74	2.83	—	12,581	12,581	0.41	0.51	44.1	12,788
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	7.54	6.84	4.16	87.3	0.19	0.08	18.8	18.9	0.07	4.75	4.83	—	19,393	19,393	0.63	0.44	63.9	19,603
Total	13.4	11.4	54.0	145	0.73	0.94	42.8	43.8	0.89	11.0	11.9	—	76,358	76,358	1.81	7.75	221	78,933
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrige Warehouse-No Rail	1.28	0.59	38.0	8.34	0.34	0.62	10.3	11.0	0.60	2.76	3.36	—	36,237	36,237	0.64	5.63	2.21	37,931
Refrigerated Warehouse-No Rail	0.43	0.27	9.11	3.06	0.08	0.15	2.85	2.99	0.14	0.76	0.90	—	8,160	8,160	0.13	1.18	0.72	8,515
City Park	3.90	3.43	5.17	37.6	0.12	0.09	10.8	10.9	0.08	2.74	2.83	—	11,809	11,809	0.41	0.53	1.14	11,978
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	7.24	6.54	4.61	71.2	0.18	0.08	18.8	18.9	0.07	4.75	4.83	—	17,908	17,908	0.65	0.47	1.66	18,065
Total	12.9	10.8	56.8	120	0.71	0.94	42.8	43.8	0.89	11.0	11.9	—	74,114	74,114	1.84	7.80	5.74	76,490
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.17	0.08	5.11	1.11	0.04	0.08	1.37	1.46	0.08	0.37	0.45	—	4,386	4,386	0.08	0.68	4.46	4,595
Refrigerated Warehouse-No Rail	0.07	0.04	1.47	0.48	0.01	0.02	0.45	0.47	0.02	0.12	0.14	—	1,179	1,179	0.02	0.17	1.74	1,231
City Park	0.51	0.45	0.70	5.18	0.02	0.01	1.42	1.44	0.01	0.36	0.37	—	1,433	1,433	0.05	0.06	2.29	1,456
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

User Defined Industrial	1.15	1.04	0.76	11.8	0.03	0.01	2.98	3.00	0.01	0.75	0.77	—	2,622	2,622	0.09	0.07	3.99	2,649
Total	1.90	1.61	8.04	18.6	0.10	0.13	6.23	6.36	0.12	1.60	1.73	—	9,620	9,620	0.24	0.98	12.5	9,931

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,862	1,862	0.18	0.02	—	1,873
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,534	1,534	0.15	0.02	—	1,542
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,396	3,396	0.32	0.04	—	3,416

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,862	1,862	0.18	0.02	—	1,873
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,534	1,534	0.15	0.02	—	1,542
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,396	3,396	0.32	0.04	—	3,416
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	308	308	0.03	< 0.005	—	310
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	254	254	0.02	< 0.005	—	255
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	562	562	0.05	0.01	—	566

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,676	1,676	0.16	0.02	—	1,686
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,383	1,383	0.13	0.02	—	1,391
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,059	3,059	0.29	0.04	—	3,077
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,676	1,676	0.16	0.02	—	1,686
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	1,383	1,383	0.13	0.02	—	1,391
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	3,059	3,059	0.29	0.04	—	3,077
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	278	278	0.03	< 0.005	—	279

Refrigerated Warehouse-No	—	—	—	—	—	—	—	—	—	—	—	—	229	229	0.02	< 0.005	—	230
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	506	506	0.05	0.01	—	509

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig rated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig rated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Refrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Refrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig rated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Refrigera ted Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrig rated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Refrigerated Warehouse-No Rail	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	21.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	7.76	7.16	0.37	43.6	< 0.005	0.08	—	0.08	0.06	—	0.06	—	179	179	0.01	< 0.005	—	180
Total	7.76	30.1	0.37	43.6	< 0.005	0.08	—	0.08	0.06	—	0.06	—	179	179	0.01	< 0.005	—	180

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	21.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	1.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	22.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	3.94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.97	0.90	0.05	5.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.4	20.4	< 0.005	< 0.005	—	20.4
Total	0.97	5.08	0.05	5.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.4	20.4	< 0.005	< 0.005	—	20.4

4.3.2. Mitigated

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

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	21.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architect ural Coatings	—	1.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landsca pe Equipme nt	7.76	7.16	0.37	43.6	< 0.005	0.08	—	0.08	0.06	—	0.06	—	179	179	0.01	< 0.005	—	180
Total	7.76	30.1	0.37	43.6	< 0.005	0.08	—	0.08	0.06	—	0.06	—	179	179	0.01	< 0.005	—	180
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consum er Products	—	21.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	—	1.34	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	22.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consum er Products	—	3.94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	—	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landsca pe Equipme nt	0.97	0.90	0.05	5.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.4	20.4	< 0.005	< 0.005	—	20.4
Total	0.97	5.08	0.05	5.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	20.4	20.4	< 0.005	< 0.005	—	20.4

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	378	1,297	1,675	38.9	0.94	—	2,926
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	66.7	225	291	6.86	0.17	—	512
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	445	1,522	1,966	45.7	1.10	—	3,438
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	378	1,297	1,675	38.9	0.94	—	2,926

Refrigerated Warehouse-No	—	—	—	—	—	—	—	—	—	—	—	66.7	225	291	6.86	0.17	—	512
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	445	1,522	1,966	45.7	1.10	—	3,438
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	62.6	215	277	6.44	0.15	—	484
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	11.0	37.2	48.3	1.14	0.03	—	84.8
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	73.6	252	326	7.57	0.18	—	569

4.4.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	378	1,297	1,675	38.9	0.94	—	2,926
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	66.7	225	291	6.86	0.17	—	512
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	445	1,522	1,966	45.7	1.10	—	3,438
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	378	1,297	1,675	38.9	0.94	—	2,926

Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	66.7	225	291	6.86	0.17	—	512
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	445	1,522	1,966	45.7	1.10	—	3,438
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	62.6	215	277	6.44	0.15	—	484
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	11.0	37.2	48.3	1.14	0.03	—	84.8
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	73.6	252	326	7.57	0.18	—	569

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	432	0.00	432	43.2	0.00	—	1,512
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	76.3	0.00	76.3	7.62	0.00	—	267
City Park	—	—	—	—	—	—	—	—	—	—	—	0.62	0.00	0.62	0.06	0.00	—	2.16
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	509	0.00	509	50.9	0.00	—	1,781
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrige rated Warehou se-No	—	—	—	—	—	—	—	—	—	—	—	432	0.00	432	43.2	0.00	—	1,512
Refrigera ted Warehou se-No Rail	—	—	—	—	—	—	—	—	—	—	—	76.3	0.00	76.3	7.62	0.00	—	267
City Park	—	—	—	—	—	—	—	—	—	—	—	0.62	0.00	0.62	0.06	0.00	—	2.16
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	509	0.00	509	50.9	0.00	—	1,781
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrige rated Warehou se-No Rail	—	—	—	—	—	—	—	—	—	—	—	71.5	0.00	71.5	7.15	0.00	—	250
Refrigera ted Warehou se-No Rail	—	—	—	—	—	—	—	—	—	—	—	12.6	0.00	12.6	1.26	0.00	—	44.2
City Park	—	—	—	—	—	—	—	—	—	—	—	0.10	0.00	0.10	0.01	0.00	—	0.36
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	84.3	0.00	84.3	8.42	0.00	—	295

4.5.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	432	0.00	432	43.2	0.00	—	1,512
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	76.3	0.00	76.3	7.62	0.00	—	267
City Park	—	—	—	—	—	—	—	—	—	—	—	0.62	0.00	0.62	0.06	0.00	—	2.16
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	509	0.00	509	50.9	0.00	—	1,781
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrige Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	432	0.00	432	43.2	0.00	—	1,512
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	76.3	0.00	76.3	7.62	0.00	—	267
City Park	—	—	—	—	—	—	—	—	—	—	—	0.62	0.00	0.62	0.06	0.00	—	2.16
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	509	0.00	509	50.9	0.00	—	1,781
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	71.5	0.00	71.5	7.15	0.00	—	250
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	12.6	0.00	12.6	1.26	0.00	—	44.2
City Park	—	—	—	—	—	—	—	—	—	—	—	0.10	0.00	0.10	0.01	0.00	—	0.36
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	84.3	0.00	84.3	8.42	0.00	—	295

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Refrigerated	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.4	25.4
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.4	25.4

4.6.2. Mitigated

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

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	153	153
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Refrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.4	25.4
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.4	25.4

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

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

4.7.2. Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Total	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200

Total	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.01	0.01	0.03	0.02	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	4.53	4.53	< 0.005	< 0.005	0.00	4.55
Total	0.01	0.01	0.03	0.02	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	4.53	4.53	< 0.005	< 0.005	0.00	4.55

4.8.2. Mitigated

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

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Total	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Total	0.43	0.39	1.09	1.00	< 0.005	0.06	0.00	0.06	0.06	0.00	0.06	0.00	200	200	0.01	< 0.005	0.00	200
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Emergency Generator	0.01	0.01	0.03	0.02	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	4.53	4.53	< 0.005	< 0.005	0.00	4.55

Total	0.01	0.01	0.03	0.02	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.00	< 0.005	0.00	4.53	4.53	< 0.005	< 0.005	0.00	4.55

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

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

4.9.2. Mitigated

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

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

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

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

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

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

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

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

Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

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

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

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

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

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

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Unrefrigerated Warehouse-No Rail	324	27.3	11.1	86,508	11,630	979	398	3,103,900
Refrigerated Warehouse-No Rail	114	64.4	61.7	36,285	3,254	1,840	1,763	1,036,307
City Park	748	29.3	32.7	198,259	15,262	597	668	4,044,936
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	1,700	969	929	542,201	27,029	15,413	14,775	8,620,835

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	324	27.3	11.1	86,508	11,630	979	398	3,103,900
Refrigerated Warehouse-No Rail	114	64.4	61.7	36,285	3,254	1,840	1,763	1,036,307
City Park	748	29.3	32.7	198,259	15,262	597	668	4,044,936
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
User Defined Industrial	1,700	969	929	542,201	27,029	15,413	14,775	8,620,835

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	1,505,265	501,755	51,292

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	1,963,646	346	0.0330	0.0040	0.00
Refrigerated Warehouse-No Rail	1,616,854	346	0.0330	0.0040	0.00
City Park	0.00	346	0.0330	0.0040	0.00
Parking Lot	0.00	346	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
User Defined Industrial	0.00	346	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	1,767,203	346	0.0330	0.0040	0.00
Refrigerated Warehouse-No Rail	1,458,028	346	0.0330	0.0040	0.00
City Park	0.00	346	0.0330	0.0040	0.00
Parking Lot	0.00	346	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
User Defined Industrial	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	197,252,550	4,612,664
Refrigerated Warehouse-No Rail	34,809,138	0.00
City Park	0.00	0.00
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	197,252,550	4,612,664
Refrigerated Warehouse-No Rail	34,809,138	0.00
City Park	0.00	0.00

Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	802	—
Refrigerated Warehouse-No Rail	141	—
City Park	1.15	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—
User Defined Industrial	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	802	—
Refrigerated Warehouse-No Rail	141	—
City Park	1.15	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—
User Defined Industrial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Refrigerated Warehouse-No Rail	Cold storage	User Defined	150	7.50	7.50	7.50	25.0
City Park	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	User Defined	150	0.04	1.00	0.00	1.00

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Refrigerated Warehouse-No Rail	Cold storage	User Defined	150	7.50	7.50	7.50	25.0
City Park	Other commercial A/C and heat pumps	User Defined	750	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	User Defined	150	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
Emergency Generator	Diesel	1.00	1.00	50.0	238	0.73

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.1.2. Mitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

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

5.18.2.2. Mitigated

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

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

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

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	29.1	annual days of extreme heat
Extreme Precipitation	2.10	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	6.94	annual hectares burned

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

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about $\frac{3}{4}$ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

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

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

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

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

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

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	1	1	1	2

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

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

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

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

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

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	95.3
AQ-PM	55.1
AQ-DPM	13.9
Drinking Water	10.2
Lead Risk Housing	54.6
Pesticides	52.5
Toxic Releases	43.8
Traffic	90.2
Effect Indicators	—
CleanUp Sites	60.4
Groundwater	14.3
Haz Waste Facilities/Generators	70.9
Impaired Water Bodies	0.00
Solid Waste	0.00

Sensitive Population	—
Asthma	66.5
Cardio-vascular	91.0
Low Birth Weights	49.3
Socioeconomic Factor Indicators	—
Education	93.2
Housing	80.1
Linguistic	84.3
Poverty	84.1
Unemployment	93.1

7.2. Healthy Places Index Scores

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

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	8.712947517
Employed	6.274862056
Median HI	6.826639292
Education	—
Bachelor's or higher	1.860644168
High school enrollment	100
Preschool enrollment	13.02450917
Transportation	—
Auto Access	65.16104196
Active commuting	54.20248941
Social	—
2-parent households	54.04850507

Voting	3.259335301
Neighborhood	—
Alcohol availability	90.15783395
Park access	8.558963172
Retail density	9.829334018
Supermarket access	10.3554472
Tree canopy	2.104452714
Housing	—
Homeownership	46.43911202
Housing habitability	15.55241884
Low-inc homeowner severe housing cost burden	28.37161555
Low-inc renter severe housing cost burden	2.322597203
Uncrowded housing	11.35634544
Health Outcomes	—
Insured adults	4.79917875
Arthritis	24.0
Asthma ER Admissions	34.2
High Blood Pressure	19.3
Cancer (excluding skin)	68.9
Asthma	7.7
Coronary Heart Disease	13.8
Chronic Obstructive Pulmonary Disease	7.1
Diagnosed Diabetes	14.5
Life Expectancy at Birth	12.9
Cognitively Disabled	46.5
Physically Disabled	37.2
Heart Attack ER Admissions	6.2

Mental Health Not Good	6.0
Chronic Kidney Disease	7.4
Obesity	3.9
Pedestrian Injuries	94.4
Physical Health Not Good	6.0
Stroke	13.0
Health Risk Behaviors	—
Binge Drinking	72.5
Current Smoker	4.8
No Leisure Time for Physical Activity	4.7
Climate Change Exposures	—
Wildfire Risk	32.2
SLR Inundation Area	0.0
Children	22.0
Elderly	91.2
English Speaking	24.7
Foreign-born	59.6
Outdoor Workers	4.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	93.6
Traffic Density	67.0
Traffic Access	23.0
Other Indices	—
Hardship	96.9
Other Decision Support	—
2016 Voting	13.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	81.0
Healthy Places Index Score for Project Location (b)	5.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

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

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

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Operations: Vehicle Data	Trip characteristics based on information provided in the Traffic Analysis
Operations: Fleet Mix	Passenger Car Mix estimated based on CalEEMod default fleet mix and the ratio of the vehicle classes (LDA, LDT1, LDT2, MDV, MCY). Truck Fleet Mix based on 2, 3 and 4 axle trucks
Operations: Architectural Coatings	SCAQMD Rule 1113
Operations: Energy Use	Per client data, natural gas will not be utilized for the Project.

Operations: Refrigerants	As of 1 January 2022, new commercial refrigeration equipment may not use refrigerants with a GWP of 150 or greater. Further, R-404A (the CalEEMod default) is unacceptable for new supermarket and cold storage systems as of 1 January 2019 and 2023, respectively. Beginning 1 January 2025, all new air conditioning equipment may not use refrigerants with a GWP of 750 or greater.
Construction: Construction Phases	Schedule provided by client data
Construction: Off-Road Equipment	Equipment provided by client data T/L/B replaced with Crawler Tractor to accurately calculate disturbance for Site Preparation and Grading phases Standard 8 hours work days
Construction: Trips and VMT	Vendor Trips adjusted based on CalEEMod defaults for Building Construction and number of days for Demolition, Site Preparation, Grading, and Building Construction Per client data, a maximum of 200 hauling truck trips per day
Construction: Architectural Coatings	SCAQMD Rule 1113
Land Use	Site acreage taken from site plan

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APPENDIX 3.3:

AERMOD LST MODELING OUTPUTS

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Cons CO\15091 Cons CO.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 1 8
  URBANOPT 2189641 Riverside_County
  POLLUTID CO
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Cons CO.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
** Source Parameters **
SRCPARAM VOL1      0.1110731316   5.000   30.453   1.400
SRCPARAM VOL3      0.1110731316   5.000   30.453   1.400
SRCPARAM VOL5      0.1110731316   5.000   30.453   1.400
SRCPARAM VOL7      0.1110731316   5.000   30.453   1.400
SRCPARAM VOL8      0.1110731316   5.000   30.453   1.400
SRCPARAM VOL9      0.1110731316   5.000   30.453   1.400
SRCPARAM VOL10     0.1110731316   5.000   30.453   1.400
SRCPARAM VOL11     0.1110731316   5.000   30.453   1.400

```

SRCPARAM	VOL12	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL13	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL14	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL15	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL16	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL17	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL18	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL19	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL20	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL21	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL22	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL23	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL24	0.1110731316	5.000	30.453	1.400
URBANSRC	ALL				

** Variable Emissions Type: "By Hour / Day (HRDOW)"

** Variable Emission Scenario: "Scenario 1"

** WeekDays:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL1	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL3	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL5	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL7	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL7	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL7	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0

[illegible]

[illegible]

[illegible]

[illegible]

```
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
SRCGROUP ALL
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
  INCLUDED "15091 Cons CO.rou"
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
  SURFFILE PERI_V9_ADJU\PERI_v9.SFC
  PROFFILE PERI_V9_ADJU\PERI_v9.PFL
  SURFDATA 3171 2010
  UAIRDATA 3190 2010
  SITEDATA 99999 2010
  PROFBASE 442.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
  RECTABLE ALLAVE 1ST
  RECTABLE 1 1ST
  RECTABLE 8 1ST
** Auto-Generated Plotfiles
  PLOTFILE 1 ALL 1ST "15091 CONS CO.AD\01H1GALL.PLT" 31
  PLOTFILE 8 ALL 1ST "15091 CONS CO.AD\08H1GALL.PLT" 32
  SUMMFILE "15091 Cons CO.sum"
OU FINISHED
**
*****
** Project Parameters
*****
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```



```

** Lakes Environmental AERMOD MPI
**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Cons CO\15091 Cons CO.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 1 8
  URBANOPT 2189641 Riverside_County
  POLLUTID CO
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Cons CO.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
** Source Parameters **
SRCPARAM VOL1      0.1110731316      5.000      30.453      1.400
SRCPARAM VOL3      0.1110731316      5.000      30.453      1.400
SRCPARAM VOL5      0.1110731316      5.000      30.453      1.400
SRCPARAM VOL7      0.1110731316      5.000      30.453      1.400
SRCPARAM VOL8      0.1110731316      5.000      30.453      1.400
SRCPARAM VOL9      0.1110731316      5.000      30.453      1.400
SRCPARAM VOL10     0.1110731316      5.000      30.453      1.400

```

SRCPARAM	VOL11	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL12	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL13	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL14	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL15	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL16	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL17	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL18	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL19	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL20	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL21	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL22	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL23	0.1110731316	5.000	30.453	1.400
SRCPARAM	VOL24	0.1110731316	5.000	30.453	1.400
URBANSRC	ALL				

** Variable Emissions Type: "By Hour / Day (HRDOW)"

** Variable Emission Scenario: "Scenario 1"

** WeekDays:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL1	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL3	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL5	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL7	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL7	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0

[illegible]

[illegible]

[illegible]

[illegible]

```

EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
SRCGROUP ALL
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
  INCLUDED "15091 Cons CO.rou"
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
  SURFFILE PERI_V9_ADJU\PERI_v9.SFC
  PROFFILE PERI_V9_ADJU\PERI_v9.PFL
  SURFDATA 3171 2010
  UAIRDATA 3190 2010
  SITEDATA 99999 2010
  PROFBASE 442.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
  RECTABLE ALLAVE 1ST
  RECTABLE 1 1ST
  RECTABLE 8 1ST
** Auto-Generated Plotfiles
  PLOTFILE 1 ALL 1ST "15091 CONS CO.AD\01H1GALL.PLT" 31
  PLOTFILE 8 ALL 1ST "15091 CONS CO.AD\08H1GALL.PLT" 32
  SUMMFILE "15091 Cons CO.sum"
OU FINISHED

```

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

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

```

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

```

```

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

```

```

***** WARNING MESSAGES *****
ME W186      423      MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used      0.50
ME W187      423      MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

```

```

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

```

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05

PAGE 1

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

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

- * Model Uses Regulatory DEFAULT Options
- * Model Is Setup For Calculation of Average CONCentration Values.
- * NO GAS DEPOSITION Data Provided.
- * NO PARTICLE DEPOSITION Data Provided.
- * Model Uses NO DRY DEPLETION. DDPLETE = F
- * Model Uses NO WET DEPLETION. WETDPLT = F
- * Stack-tip Downwash.
- * Model Accounts for ELEVated Terrain Effects.
- * Use Calms Processing Routine.
- * Use Missing Data Processing Routine.
- * No Exponential Decay.
- * Model Uses URBAN Dispersion Algorithm for the SBL for 21 Source(s),
for Total of 1 Urban Area(s):
Urban Population = 2189641.0 ; Urban Roughness Length = 1.000 m
- * Urban Roughness Length of 1.0 Meter Used.
- * 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: CO

**Model Calculates 2 Short Term Average(s) of: 1-HR 8-HR

**This Run Includes: 21 Source(s); 1 Source Group(s); and 47 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 21 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)
and: 0 SWPOINT source(s)

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

**The AERMET Input Meteorological Data Version Date: 16216

**Output Options Selected:

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing
Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 442.00 ; Decay Coef. =
0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate


```
VOL20      0  0.11107E+00  475372.0  3743856.5  481.0      5.00      30.45      1.40
YES   HRDOW
VOL21      0  0.11107E+00  475490.3  3743857.1  478.8      5.00      30.45      1.40
YES   HRDOW
VOL22      0  0.11107E+00  475365.5  3743561.1  476.8      5.00      30.45      1.40
YES   HRDOW
VOL23      0  0.11107E+00  475253.4  3743562.4  481.6      5.00      30.45      1.40
YES   HRDOW
VOL24      0  0.11107E+00  475138.1  3743563.2  486.4      5.00      30.45      1.40
YES   HRDOW
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***          08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:10:05
```

```
                PAGE 3
*** MODELOPTs:  RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*
```

*** SOURCE IDs DEFINING SOURCE GROUPS ***

```
SRCGROUP ID                      SOURCE IDs
-----
ALL      VOL1      , VOL3      , VOL5      , VOL7      , VOL8      , VOL9      ,
VOL10    , VOL11    ,
VOL12    , VOL13    , VOL14    , VOL15    , VOL16    , VOL17    ,
VOL18    , VOL19    ,
VOL20    , VOL21    , VOL22    , VOL23    , VOL24    ,
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***          08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:10:05
```

```
                PAGE 4
*** MODELOPTs:  RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*
```

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

```
URBAN ID  URBAN POP                      SOURCE IDs
-----
2189641.  VOL1      , VOL3      , VOL5      , VOL7      , VOL8      ,
VOL9      , VOL10    ,
VOL11    ,
VOL12    , VOL13    , VOL14    , VOL15    , VOL16    , VOL17    ,
VOL18    , VOL19    ,
VOL20    , VOL21    , VOL22    , VOL23    , VOL24    ,
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***          08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:10:05
```

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL1 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL3 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***

11:10:05

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL5 ; SOURCE TYPE = VOLUME :
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
 SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
 MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

11:10:05

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL7 ; SOURCE TYPE = VOLUME :
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
 SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	

```
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:10:05
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL8 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

```
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01   14
.1000E+01   15 .1000E+01   16 .1000E+01
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
```

DAY OF WEEK = SATURDAY

```
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
```

DAY OF WEEK = SUNDAY

```
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
```

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*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:10:05
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL9 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

```
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01   14
.1000E+01   15 .1000E+01   16 .1000E+01
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
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DAY OF WEEK = SATURDAY

```

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL10 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL11 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -

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                                DAY OF WEEK = WEEKDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01 14
.1000E+01 15  .1000E+01 16  .1000E+01
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
*** 11:10:05

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                                PAGE 13
*** MODELOPTs:  RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL12 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01 14
.1000E+01 15  .1000E+01 16  .1000E+01
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
*** 11:10:05

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

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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL13 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
.1000E+01		15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
.0000E+00		15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
.0000E+00		15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL14 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
.1000E+01		15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
.0000E+00		15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
.0000E+00		15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL15 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL16 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22

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.0000E+00  23 .0000E+00  24 .0000E+00
                                DAY OF WEEK = SUNDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:10:05
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                                PAGE 18
*** MODELOPTs:  RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *
```

```
SOURCE ID = VOL17 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SATURDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SUNDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
 9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:10:05
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                                PAGE 19
*** MODELOPTs:  RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *
```

```
SOURCE ID = VOL18 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
 1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
 9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
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17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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***
                                ***
                                11:10:05

                                PAGE 20
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL19 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
- - - - -
                                DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
***
                                ***
                                11:10:05

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL20 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
- - - - -

```

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11-10-05

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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ U*

SOURCE ID = VOL21				; SOURCE TYPE = VOLUME		:					
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
SCALAR	HOUR	SCALAR	HOUR	SCALAR							

DAY OF WEEK = SATURDAY

DAY OF WEEK = SUNDAY

```
*** AERMOD - VERSION 22112 ***      C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11-10-05
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL22 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR
SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

11:10:05

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL23 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR
SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14

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.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL24 ; SOURCE TYPE = VOLUME :

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL
SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

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*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

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

(475146.6, 3744202.5,	493.9,	493.9,	2.0);	(475113.0, 3744175.7,
495.1,	495.1,	2.0);		
(475037.5, 3744171.1,	499.7,	499.7,	2.0);	(475003.3, 3744194.3,
500.8,	513.0,	2.0);		
(474973.8, 3744217.1,	503.2,	513.0,	2.0);	(475158.9, 3744265.7,
493.0,	493.0,	2.0);		
(475561.0, 3744189.8,	479.1,	479.1,	2.0);	(475620.6, 3744192.9,
478.3,	478.3,	2.0);		
(476022.0, 3744121.5,	471.0,	471.0,	2.0);	(476021.4, 3744054.7,
471.9,	471.9,	2.0);		
(476034.9, 3743961.1,	471.0,	471.0,	2.0);	(476034.4, 3743833.7,
471.0,	471.0,	2.0);		
(475059.3, 3743678.9,	487.3,	487.3,	2.0);	(475048.5, 3743620.0,
488.5,	488.5,	2.0);		

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
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11:10:05

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

[illegible]

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

(METERS/SEC)

[illegible]

First hour of profile data

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

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*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR	SOURCE GROUP: ALL ***				
INCLUDING SOURCE(S):	VOL1	,	VOL3	,	
VOL5	,	VOL7	,	VOL8	
, VOL10	,	VOL11	,	VOL12	,
, VOL15	,	VOL16	,	VOL13	,
, VOL18	,	VOL19	,	VOL20	,
, VOL23	,	VOL24	,	VOL21	,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

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X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD
475146.64	3744202.50	52.77032	(16010516)	475112.97	
3744175.66	43.79690	(16010516)			
475037.46	3744171.11	26.10292	(10121516)	475003.34	
3744194.31	22.89283	(10121516)			
474973.77	3744217.06	22.18068	(10121516)	475158.92	
3744265.73	42.65090	(16010516)			
475561.05	3744189.76	62.57027	(10121516)	475620.65	
3744192.95	58.78959	(10121516)			
476022.00	3744121.55	19.99967	(10121516)	476021.40	
3744054.73	21.48949	(10121516)			
476034.92	3743961.08	22.45373	(10122916)	476034.44	
3743833.66	22.39315	(16010716)			
475059.35	3743678.88	119.19754	(16010616)	475048.50	
3743620.04	101.37865	(11010316)			

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FF *** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                    08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:10:05
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X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD
475146.64	3744202.50	19.56105	(16010516)	475112.97	
3744175.66	15.37842	(16010516)			
475037.46	3744171.11	9.54132	(11121216)	475003.34	
3744194.31	7.79591	(11121216)			
474973.77	3744217.06	6.75371	(10121516)	475158.92	
3744265.73	17.05976	(16010516)			

475561.05	3744189.76	29.45624	(16010516)	475620.65
3744192.95	25.89194	(11112416)		
476022.00	3744121.55	5.29017	(16030716)	476021.40
3744054.73	5.61249	(16030716)		
476034.92	3743961.08	5.58034	(14040116)	476034.44
3743833.66	6.48186	(14040116)		
475059.35	3743678.88	28.90365	(14120316)	475048.50
3743620.04	23.04547	(10121516)		
475935.55	3743551.90	6.58954c	(10102116)	475683.50
3743480.93	8.76628	(14120116)		
475443.74	3743717.06	28.10920	(11112416)	475706.71
3743746.17	27.39585	(14120116)		
475941.47	3743535.07	6.30736c	(10102116)	475815.76
3743304.00	5.58802	(14120116)		
475932.99	3743505.26	6.30274	(14120116)	475933.83
3743472.84	6.06403	(14120116)		
475940.25	3743428.98	5.64036	(14120116)	475935.78
3743407.74	5.56239	(14120116)		
475896.38	3743329.79	5.36671	(14120116)	476014.30
3743338.17	4.15594	(14120116)		
474177.19	3743537.24	2.06921	(14120316)	474175.64
3743395.68	2.28435c	(10122116)		
474176.41	3743645.14	1.97343	(14120316)	474425.93
3743758.69	2.56755	(14120316)		
474577.72	3743867.11	3.20882	(10121516)	474590.57
3743989.17	4.18894	(10121516)		
474592.18	3744075.89	4.13189	(10121516)	474915.52
3744193.66	5.97630	(10121516)		
474841.11	3744193.13	6.37997	(10121516)	475376.61
3744371.75	13.18941	(16010516)		
475878.54	3744298.48	8.61311	(11112416)	475682.76
3744476.50	7.34409	(10100516)		
475728.87	3744369.46	9.49721	(11112416)	473300.31
3743374.59	1.03424	(14120316)		
473285.29	3743456.06	0.94585	(14120316)	473563.14
3744593.37	1.49753	(10121516)		
473693.91	3744822.42	1.63725	(10121516)	473729.89
3744880.84	1.54323	(10121516)		
473723.32	3744920.30	1.46318	(10121516)	477058.55
3744344.84	0.88425	(10121516)		
477121.37	3744258.35	0.80722		
(10121516)				

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05

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

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

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

DATE

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

ALL HIGH 1ST HIGH VALUE IS 119.19754 ON 16010616: AT (475059.35, 3743678.88,
487.27, 487.27, 2.00) DC

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

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05

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

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

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

DATE

NETWORK

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

ALL HIGH 1ST HIGH VALUE IS 29.45624 ON 16010516: AT (475561.05, 3744189.76,
479.06, 479.06, 2.00) DC

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

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:05

PAGE 33

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

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 2028 Informational Message(s)

A Total of 43824 Hours Were Processed

A Total of 978 Calm Hours Identified

A Total of 1050 Missing Hours Identified (2.40 Percent)

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

***** WARNING MESSAGES *****
ME W186 423 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 423 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

*** AERMOD Finishes Successfully ***

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Cons NOX\15091 Cons NOX.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 1
  URBANOPT 2189641 Riverside_County
  POLLUTID NOX
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Cons NOX.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
** Source Parameters **
SRCPARAM VOL1      0.0450742418   5.000   30.453   1.400
SRCPARAM VOL3      0.0450742418   5.000   30.453   1.400
SRCPARAM VOL5      0.0450742418   5.000   30.453   1.400
SRCPARAM VOL7      0.0450742418   5.000   30.453   1.400
SRCPARAM VOL8      0.0450742418   5.000   30.453   1.400
SRCPARAM VOL9      0.0450742418   5.000   30.453   1.400
SRCPARAM VOL10     0.0450742418   5.000   30.453   1.400
SRCPARAM VOL11     0.0450742418   5.000   30.453   1.400

```

SRCPARAM	VOL12	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL13	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL14	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL15	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL16	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL17	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL18	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL19	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL20	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL21	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL22	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL23	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL24	0.0450742418	5.000	30.453	1.400
URBANSRC	ALL				

** Variable Emissions Type: "By Hour / Day (HRDOW)"

** Variable Emission Scenario: "Scenario 1"

** WeekDays:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL1	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL3	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL5	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL7	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL7	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL7	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0

[illegible]

[illegible]

[illegible]

[illegible]

```
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
SRCGROUP ALL
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
  INCLUDED "15091 Cons NOX.rou"
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
  SURFFILE PERI_V9_ADJU\PERI_v9.SFC
  PROFFILE PERI_V9_ADJU\PERI_v9.PFL
  SURFDATA 3171 2010
  UAIRDATA 3190 2010
  SITEDATA 99999 2010
  PROFBASE 442.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
  RECTABLE ALLAVE 1ST
  RECTABLE 1 1ST
** Auto-Generated Plotfiles
  PLOTFILE 1 ALL 1ST "15091 CONS NOX.AD\01H1GALL.PLT" 31
  SUMMFILE "15091 Cons NOX.sum"
OU FINISHED
**
*****
** Project Parameters
*****
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS    m
** ZONE     11
** ZONEINX  0
**
```

```

** Lakes Environmental AERMOD MPI
**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Cons NOX\15091 Cons NOX.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 1
  URBANOPT 2189641 Riverside_County
  POLLUTID NOX
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Cons NOX.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587    3743682.707    478.060
LOCATION VOL3      VOLUME      475255.408    3743684.018    480.550
LOCATION VOL5      VOLUME      475140.193    3743684.832    484.370
LOCATION VOL7      VOLUME      475257.277    3744055.697    486.420
LOCATION VOL8      VOLUME      475373.751    3744055.067    482.330
LOCATION VOL9      VOLUME      475492.113    3744055.697    481.870
LOCATION VOL10     VOLUME      475604.809    3744057.586    478.940
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LOCATION VOL13     VOLUME      475712.595    3743956.600    477.240
LOCATION VOL14     VOLUME      475256.773    3743953.452    485.790
LOCATION VOL15     VOLUME      475373.247    3743952.822    483.490
LOCATION VOL16     VOLUME      475491.610    3743953.452    481.550
LOCATION VOL17     VOLUME      475603.047    3743859.014    478.680
LOCATION VOL18     VOLUME      475711.336    3743860.273    476.280
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LOCATION VOL21     VOLUME      475490.350    3743857.125    478.750
LOCATION VOL22     VOLUME      475365.538    3743561.053    476.820
LOCATION VOL23     VOLUME      475253.359    3743562.364    481.610
LOCATION VOL24     VOLUME      475138.144    3743563.178    486.390
** Source Parameters **
SRCPARAM VOL1      0.0450742418    5.000    30.453    1.400
SRCPARAM VOL3      0.0450742418    5.000    30.453    1.400
SRCPARAM VOL5      0.0450742418    5.000    30.453    1.400
SRCPARAM VOL7      0.0450742418    5.000    30.453    1.400
SRCPARAM VOL8      0.0450742418    5.000    30.453    1.400
SRCPARAM VOL9      0.0450742418    5.000    30.453    1.400
SRCPARAM VOL10     0.0450742418    5.000    30.453    1.400

```

SRCPARAM	VOL11	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL12	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL13	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL14	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL15	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL16	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL17	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL18	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL19	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL20	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL21	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL22	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL23	0.0450742418	5.000	30.453	1.400
SRCPARAM	VOL24	0.0450742418	5.000	30.453	1.400
URBANSRC	ALL				

** Variable Emissions Type: "By Hour / Day (HRDOW)"

** Variable Emission Scenario: "Scenario 1"

** WeekDays:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL1	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL3	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL5	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL7	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL7	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0

[illegible]

[illegible]

[illegible]

[illegible]

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EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
SRCGROUP ALL
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
    INCLUDED "15091 Cons NOX.rou"
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
    SURFFILE PERI_V9_ADJU\PERI_v9.SFC
    PROFFILE PERI_V9_ADJU\PERI_v9.PFL
    SURFDATA 3171 2010
    UAIRDATA 3190 2010
    SITEDATA 99999 2010
    PROFBASE 442.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
    RECTABLE ALLAVE 1ST
    RECTABLE 1 1ST
** Auto-Generated Plotfiles
    PLOTFILE 1 ALL 1ST "15091 CONS NOX.AD\01H1GALL.PLT" 31
    SUMMFILE "15091 Cons NOX.sum"
OU FINISHED

```

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

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

```

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

```

```

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

```

```

***** WARNING MESSAGES *****
ME W186      423      MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
ME W187      423      MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

```

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

```

PAGE 1

*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

- * Model Uses Regulatory DEFAULT Options
- * Model Is Setup For Calculation of Average CONCentration Values.
- * NO GAS DEPOSITION Data Provided.
- * NO PARTICLE DEPOSITION Data Provided.
- * Model Uses NO DRY DEPLETION. DDPLETE = F
- * Model Uses NO WET DEPLETION. WETDPLT = F
- * Stack-tip Downwash.
- * Model Accounts for ELEVated Terrain Effects.
- * Use Calms Processing Routine.
- * Use Missing Data Processing Routine.
- * No Exponential Decay.
- * Model Uses URBAN Dispersion Algorithm for the SBL for 21 Source(s),
for Total of 1 Urban Area(s):
- Urban Population = 2189641.0 ; Urban Roughness Length = 1.000 m
- * Urban Roughness Length of 1.0 Meter Used.
- * 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: NOX

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

**This Run Includes: 21 Source(s); 1 Source Group(s); and 47 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 21 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)
and: 0 SWPOINT source(s)

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

**The AERMET Input Meteorological Data Version Date: 16216

**Output Options Selected:

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 442.00 ; Decay Coef. =
0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate
Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

		NUMBER	EMISSION RATE				BASE	RELEASE	INIT.	INIT.
		URBAN	EMISSION RATE							
SOURCE		PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	SY	SZ	
SOURCE	SCALAR	VARY								
ID		CATS.		(METERS)	(METERS)	(METERS)	(METERS)	(METERS)		
(METERS)			BY							
VOL1		0	0.45074E-01	475367.6	3743682.7	478.1	5.00	30.45	1.40	
YES	HRDOW									
VOL3		0	0.45074E-01	475255.4	3743684.0	480.6	5.00	30.45	1.40	
YES	HRDOW									
VOL5		0	0.45074E-01	475140.2	3743684.8	484.4	5.00	30.45	1.40	
YES	HRDOW									
VOL7		0	0.45074E-01	475257.3	3744055.7	486.4	5.00	30.45	1.40	
YES	HRDOW									
VOL8		0	0.45074E-01	475373.8	3744055.1	482.3	5.00	30.45	1.40	
YES	HRDOW									
VOL9		0	0.45074E-01	475492.1	3744055.7	481.9	5.00	30.45	1.40	
YES	HRDOW									
VOL10		0	0.45074E-01	475604.8	3744057.6	478.9	5.00	30.45	1.40	
YES	HRDOW									
VOL11		0	0.45074E-01	475713.1	3744058.8	476.7	5.00	30.45	1.40	
YES	HRDOW									
VOL12		0	0.45074E-01	475604.3	3743955.3	479.0	5.00	30.45	1.40	
YES	HRDOW									
VOL13		0	0.45074E-01	475712.6	3743956.6	477.2	5.00	30.45	1.40	
YES	HRDOW									
VOL14		0	0.45074E-01	475256.8	3743953.5	485.8	5.00	30.45	1.40	
YES	HRDOW									
VOL15		0	0.45074E-01	475373.2	3743952.8	483.5	5.00	30.45	1.40	
YES	HRDOW									
VOL16		0	0.45074E-01	475491.6	3743953.5	481.6	5.00	30.45	1.40	
YES	HRDOW									
VOL17		0	0.45074E-01	475603.0	3743859.0	478.7	5.00	30.45	1.40	
YES	HRDOW									
VOL18		0	0.45074E-01	475711.3	3743860.3	476.3	5.00	30.45	1.40	
YES	HRDOW									
VOL19		0	0.45074E-01	475255.5	3743857.1	483.5	5.00	30.45	1.40	
YES	HRDOW									
VOL20		0	0.45074E-01	475372.0	3743856.5	481.0	5.00	30.45	1.40	
YES	HRDOW									

VOL21 0 0.45074E-01 475490.3 3743857.1 478.8 5.00 30.45 1.40
YES HRDOW
VOL22 0 0.45074E-01 475365.5 3743561.1 476.8 5.00 30.45 1.40
YES HRDOW
VOL23 0 0.45074E-01 475253.4 3743562.4 481.6 5.00 30.45 1.40
YES HRDOW
VOL24 0 0.45074E-01 475138.1 3743563.2 486.4 5.00 30.45 1.40
YES HRDOW
*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:52

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

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs

ALL VOL1 , VOL3 , VOL5 , VOL7 , VOL8 , VOL9 ,
VOL10 , VOL11 ,
VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 ,
VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 ,
*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:52

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

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

URBAN ID URBAN POP SOURCE IDs

2189641. VOL1 , VOL3 , VOL5 , VOL7 , VOL8 ,
VOL9 , VOL10 ,
VOL11 ,
VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 ,
VOL18 , VOL19 ,
VOL20 , VOL21 , VOL22 , VOL23 , VOL24 ,
*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL1 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR
DAY OF WEEK = WEEKDAY							
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00
5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY							
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00
5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY							
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00
5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00
21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

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 MVCC\15091 MVC *** 08/18/23
 *** AERMET - VERSION 16216 ***
 *** *** 11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL3		; SOURCE TYPE = VOLUME									
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = WEEKDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

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 MVCC\15091 MVC *** 08/18/23
 *** AERMET - VERSION 16216 ***
 *** *** 11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL5 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR
SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

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MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL7 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR
SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14


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.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:52
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL8 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL9 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00

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9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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*** 11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL10 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
-----
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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*** 11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL11 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
-----
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6

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.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL12 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

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SOURCE ID = VOL13 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR
SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01		15	.1000E+01	16	.1000E+01					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00		15	.0000E+00	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00		15	.0000E+00	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

*** 11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL14 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR
SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01		15	.1000E+01	16	.1000E+01					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00		15	.0000E+00	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00		15	.0000E+00	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL15 ; SOURCE TYPE = VOLUME :
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
 SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
 MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL16 ; SOURCE TYPE = VOLUME :
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
 SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

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1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:52
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL17 ; SOURCE TYPE = VOLUME :

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL
SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

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*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:52
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL18 ; SOURCE TYPE = VOLUME :

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL
SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

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                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
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11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL19 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01 14
.1000E+01 15  .1000E+01 16  .1000E+01
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL20 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -

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- - - - -
                                DAY OF WEEK = WEEKDAY
1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SATURDAY
1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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***
                                PAGE 22
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL21 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SATURDAY
1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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***
                                PAGE 23
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL22 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

11:10:52

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL23 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22

.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL24 ; SOURCE TYPE = VOLUME :

HOURLY SCALAR	HOURLY SCALAR	HOURLY SCALAR	HOURLY SCALAR	HOURLY SCALAR	HOURLY SCALAR	HOURLY SCALAR	HOURLY SCALAR	HOURLY SCALAR	HOURLY SCALAR
DAY OF WEEK = WEEKDAY									
1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6 .0000E+00	7 .0000E+00	8 .0000E+00	9 .1000E+01	10 .1000E+01
11 .1000E+01	12 .1000E+01	13 .1000E+01	14 .1000E+01	15 .1000E+01	16 .1000E+01	17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00
21 .0000E+00	22 .0000E+00	23 .0000E+00	24 .0000E+00	DAY OF WEEK = SATURDAY					
1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6 .0000E+00	7 .0000E+00	8 .0000E+00	9 .0000E+00	10 .0000E+00
11 .0000E+00	12 .0000E+00	13 .0000E+00	14 .0000E+00	15 .0000E+00	16 .0000E+00	17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00
21 .0000E+00	22 .0000E+00	23 .0000E+00	24 .0000E+00	DAY OF WEEK = SUNDAY					
1 .0000E+00	2 .0000E+00	3 .0000E+00	4 .0000E+00	5 .0000E+00	6 .0000E+00	7 .0000E+00	8 .0000E+00	9 .0000E+00	10 .0000E+00
11 .0000E+00	12 .0000E+00	13 .0000E+00	14 .0000E+00	15 .0000E+00	16 .0000E+00	17 .0000E+00	18 .0000E+00	19 .0000E+00	20 .0000E+00
21 .0000E+00	22 .0000E+00	23 .0000E+00	24 .0000E+00						

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

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

(475146.6, 3744202.5,	493.9,	493.9,	2.0);	(475113.0, 3744175.7,
495.1,	495.1,	2.0);		
(475037.5, 3744171.1,	499.7,	499.7,	2.0);	(475003.3, 3744194.3,
500.8,	513.0,	2.0);		
(474973.8, 3744217.1,	503.2,	513.0,	2.0);	(475158.9, 3744265.7,
493.0,	493.0,	2.0);		
(475561.0, 3744189.8,	479.1,	479.1,	2.0);	(475620.6, 3744192.9,
478.3,	478.3,	2.0);		
(476022.0, 3744121.5,	471.0,	471.0,	2.0);	(476021.4, 3744054.7,
471.9,	471.9,	2.0);		
(476034.9, 3743961.1,	471.0,	471.0,	2.0);	(476034.4, 3743833.7,
471.0,	471.0,	2.0);		
(475059.3, 3743678.9,	487.3,	487.3,	2.0);	(475048.5, 3743620.0,
488.5,	488.5,	2.0);		
(475935.5, 3743551.9,	471.4,	471.4,	2.0);	(475683.5, 3743480.9,
475.3,	475.3,	2.0);		

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***
***                                     *** 11:10:52

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***  MODELOPTs:      RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ  U*
```

[illegible]

```

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES
***

```


10	01	01	1	17	-3.6	0.087	-9.000	-9.000	-999.	71.	15.6	0.19	0.61	0.64	0.90
351.	9.1	290.4	5.5												
10	01	01	1	18	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	1.00	0.90
186.	9.1	287.5	5.5												
10	01	01	1	19	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	1.00	0.90
275.	9.1	285.9	5.5												
10	01	01	1	20	-1.2	0.064	-9.000	-9.000	-999.	39.	18.1	0.19	0.61	1.00	0.40
181.	9.1	285.4	5.5												
10	01	01	1	21	-7.8	0.125	-9.000	-9.000	-999.	106.	21.3	0.19	0.61	1.00	1.30
318.	9.1	284.9	5.5												
10	01	01	1	22	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90
196.	9.1	283.1	5.5												
10	01	01	1	23	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90
330.	9.1	281.4	5.5												
10	01	01	1	24	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61	1.00	1.30
332.	9.1	280.9	5.5												

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	5.5	0	-999.	-99.00	282.6	99.0	-99.00	-99.00
10	01	01	01	9.1	1	335.	1.30	-999.0	99.0	-99.00	-99.00

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

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

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR
 SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): VOL1 , VOL3 ,
 VOL5 , VOL7 , VOL8 ,
 VOL9 , VOL10 , VOL11 , VOL12 , VOL13 ,
 VOL14 , VOL15 , VOL16 ,
 VOL17 , VOL18 , VOL19 , VOL20 , VOL21 ,
 VOL22 , VOL23 , VOL24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD
(M)	CONC	(YYMMDDHH)			
475146.64	3744202.50	21.41456	(16010516)	475112.97	
3744175.66	17.77308	(16010516)			
475037.46	3744171.11	10.59274	(10121516)	475003.34	
3744194.31	9.29007	(10121516)			
474973.77	3744217.06	9.00107	(10121516)	475158.92	
3744265.73	17.30803	(16010516)			
475561.05	3744189.76	25.39145	(10121516)	475620.65	
3744192.95	23.85722	(10121516)			
476022.00	3744121.55	8.11600	(10121516)	476021.40	
3744054.73	8.72058	(10121516)			
476034.92	3743961.08	9.11188	(10122916)	476034.44	
3743833.66	9.08730	(16010716)			
475059.35	3743678.88	48.37118	(16010616)	475048.50	
3743620.04	41.14015	(11010316)			
475935.55	3743551.90	7.42296	(10121516)	475683.50	
3743480.93	10.62384	(10121516)			

475443.74	3743717.06	41.76436	(10121516)	475706.71
3743746.17	26.09864	(10121516)		
475941.47	3743535.07	7.11220	(10121516)	475815.76
3743304.00	5.80798	(10121516)		
475932.99	3743505.26	6.86872	(10121516)	475933.83
3743472.84	6.48870	(10121516)		
475940.25	3743428.98	5.95790	(10121516)	475935.78
3743407.74	5.79563	(10121516)		
475896.38	3743329.79	5.41204	(10121516)	476014.30
3743338.17	4.60140	(10121516)		
474177.19	3743537.24	2.91264	(14120316)	474175.64
3743395.68	5.04308	(10122116)		
474176.41	3743645.14	2.57694	(14120316)	474425.93
3743758.69	4.04891	(16010616)		
474577.72	3743867.11	5.75225	(16010616)	474590.57
3743989.17	7.63325	(10121516)		
474592.18	3744075.89	7.73469	(10121516)	474915.52
3744193.66	8.73288	(10121516)		
474841.11	3744193.13	12.59619	(10121516)	475376.61
3744371.75	11.16292	(16010516)		
475878.54	3744298.48	10.21924	(10020516)	475682.76
3744476.50	7.04947	(10121516)		
475728.87	3744369.46	9.44587	(10020516)	473300.31
3743374.59	1.28641	(14120316)		
473285.29	3743456.06	1.04929	(14120316)	473563.14
3744593.37	3.57945	(10121516)		
473693.91	3744822.42	3.58353	(10121516)	473729.89
3744880.84	3.15275	(10121516)		
473723.32	3744920.30	2.86850	(10121516)	477058.55
3744344.84	1.31734	(10121516)		
477121.37	3744258.35	1.26603		
(10121516)				

*** AERMOD - VERSION 22112 *** ** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

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

DATE

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

ALL HIGH 1ST HIGH VALUE IS 48.37118 ON 16010616: AT (475059.35, 3743678.88,
487.27, 487.27, 2.00) DC

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

*** AERMOD - VERSION 22112 *** ** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:10:52

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

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

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

A Total of 0 Fatal Error Message(s)
 A Total of 4 Warning Message(s)
 A Total of 2028 Informational Message(s)

 A Total of 43824 Hours Were Processed

 A Total of 978 Calm Hours Identified

 A Total of 1050 Missing Hours Identified (2.40 Percent)

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

***** WARNING MESSAGES *****
 ME W186 423 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
 ME W187 423 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
 MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

 *** AERMOD Finishes Successfully ***

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Cons PM10\15091 Cons PM10.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 24
  URBANOPT 2189641 Riverside_County
  POLLUTID PM_10
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Cons PM10.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
LOCATION PAREA1    AREAPOLY    475778.045   3744123.425   475.030
** Source Parameters **
SRCPARAM VOL1      0.0003149947   5.000   30.453   1.400
SRCPARAM VOL3      0.0003149947   5.000   30.453   1.400
SRCPARAM VOL5      0.0003149947   5.000   30.453   1.400
SRCPARAM VOL7      0.0003149947   5.000   30.453   1.400
SRCPARAM VOL8      0.0003149947   5.000   30.453   1.400
SRCPARAM VOL9      0.0003149947   5.000   30.453   1.400
SRCPARAM VOL10     0.0003149947   5.000   30.453   1.400

```


SRCPARAM	VOL11	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL12	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL13	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL14	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL15	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL16	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL17	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL18	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL19	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL20	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL21	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL22	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL23	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL24	0.0003149947	5.000	30.453	1.400
SRCPARAM	PAREA1	1.6194E-06	0.000	12	1.000
AREAVERT	PAREA1	475778.045	3744123.425	475778.045	3743793.947
AREAVERT	PAREA1	475193.731	3743790.931	475193.731	3743750.218
AREAVERT	PAREA1	475432.734	3743747.956	475431.226	3743495.381
AREAVERT	PAREA1	475071.590	3743497.643	475073.852	3743751.726
AREAVERT	PAREA1	475185.437	3743752.480	475185.437	3743791.685
AREAVERT	PAREA1	475189.207	3743791.685	475190.715	3744121.917
URBANSRC	ALL				

** Variable Emissions Type: "By Hour / Day (HRDOW)"

** Variable Emission Scenario: "Scenario 1"

** WeekDays:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL1	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL3	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL5	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

[illegible]

[illegible]

[illegible]

[illegible]

```

** Saturday:
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT PAREA1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
SRCGROUP ALL
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
    INCLUDED "15091 Cons PM10.rou"
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
    SURFFILE PERI_V9_ADJU\PERI_v9.SFC
    PROFFILE PERI_V9_ADJU\PERI_v9.PFL
    SURFDATA 3171 2010
    UAIRDATA 3190 2010
    SITEDATA 99999 2010
    PROFBASE 442.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
    RECTABLE ALLAVE 1ST
    RECTABLE 24 1ST
** Auto-Generated Plotfiles
    PLOTFILE 24 ALL 1ST "15091 CONS PM10.AD\24H1GALL.PLT" 31
    SUMMFILE "15091 Cons PM10.sum"
OU FINISHED
**
*****
** Project Parameters

```

```
*****
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS     m
** ZONE      11
** ZONEINX   0
**
```

```

** Lakes Environmental AERMOD MPI
**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Cons PM10\15091 Cons PM10.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 24
  URBANOPT 2189641 Riverside_County
  POLLUTID PM_10
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Cons PM10.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
LOCATION PAREA1    AREAPOLY    475778.045   3744123.425   475.030
** Source Parameters **
SRCPARAM VOL1    0.0003149947   5.000   30.453   1.400
SRCPARAM VOL3    0.0003149947   5.000   30.453   1.400
SRCPARAM VOL5    0.0003149947   5.000   30.453   1.400
SRCPARAM VOL7    0.0003149947   5.000   30.453   1.400
SRCPARAM VOL8    0.0003149947   5.000   30.453   1.400
SRCPARAM VOL9    0.0003149947   5.000   30.453   1.400

```


SRCPARAM	VOL10	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL11	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL12	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL13	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL14	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL15	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL16	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL17	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL18	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL19	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL20	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL21	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL22	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL23	0.0003149947	5.000	30.453	1.400
SRCPARAM	VOL24	0.0003149947	5.000	30.453	1.400
SRCPARAM	PAREA1	1.6194E-06	0.000	12	1.000
AREAVERT	PAREA1	475778.045	3744123.425	475778.045	3743793.947
AREAVERT	PAREA1	475193.731	3743790.931	475193.731	3743750.218
AREAVERT	PAREA1	475432.734	3743747.956	475431.226	3743495.381
AREAVERT	PAREA1	475071.590	3743497.643	475073.852	3743751.726
AREAVERT	PAREA1	475185.437	3743752.480	475185.437	3743791.685
AREAVERT	PAREA1	475189.207	3743791.685	475190.715	3744121.917
URBANSRC	ALL				

** Variable Emissions Type: "By Hour / Day (HRDOW)"

** Variable Emission Scenario: "Scenario 1"

** WeekDays:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL1	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL3	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL5	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

[illegible]

[illegible]

[illegible]

```

    EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
    EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
    EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
    EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT PAREA1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
    EMISFACT PAREA1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
    EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
    EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
    EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
    SRCGROUP ALL
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
    INCLUDED "15091 Cons PM10.rou"
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
    SURFFILE PERI_V9_ADJU\PERI_v9.SFC
    PROFFILE PERI_V9_ADJU\PERI_v9.PFL
    SURFDATA 3171 2010
    UAIRDATA 3190 2010
    SITEDATA 99999 2010
    PROFBASE 442.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
    RECTABLE ALLAVE 1ST
    RECTABLE 24 1ST
** Auto-Generated Plotfiles
    PLOTFILE 24 ALL 1ST "15091 CONS PM10.AD\24H1GALL.PLT" 31
    SUMMFILE "15091 Cons PM10.sum"
OU FINISHED

```

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

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

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

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

***** WARNING MESSAGES *****
ME W186 446 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 446 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

*** SETUP Finishes Successfully ***

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 10:57:54

PAGE 1

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

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

- * Model Uses Regulatory DEFAULT Options
- * Model Is Setup For Calculation of Average CONCentration Values.
- * NO GAS DEPOSITION Data Provided.
- * NO PARTICLE DEPOSITION Data Provided.
- * Model Uses NO DRY DEPLETION. DDPLETE = F
- * Model Uses NO WET DEPLETION. WETDPLT = F
- * Stack-tip Downwash.
- * Model Accounts for ELEVated Terrain Effects.
- * Use Calms Processing Routine.
- * Use Missing Data Processing Routine.
- * No Exponential Decay.
- * Model Uses URBAN Dispersion Algorithm for the SBL for 22 Source(s),
for Total of 1 Urban Area(s):
Urban Population = 2189641.0 ; Urban Roughness Length = 1.000 m
- * Urban Roughness Length of 1.0 Meter Used.
- * 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: PM_10

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

**This Run Includes: 22 Source(s); 1 Source Group(s); and 47 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 21 VOLUME source(s)
and: 1 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)
and: 0 SWPOINT source(s)

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

**The AERMET Input Meteorological Data Version Date: 16216

**Output Options Selected:

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)

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

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

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 442.00 ; 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:

aermod.inp

**Output Print File:

aermod.out

**Detailed Error/Message File: 15091 Cons

PM10.err

**File for Summary of Results: 15091 Cons

PM10.sum

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 10:57:54

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

*** VOLUME SOURCE DATA ***

SOURCE	NUMBER	EMISSION RATE			BASE	RELEASE	INIT.	INIT.
SOURCE	URBAN	EMISSION RATE			ELEV.	HEIGHT	SY	SZ
ID	PART.	(GRAMS/SEC)	X	Y	(METERS)	(METERS)	(METERS)	(METERS)
(METERS)	CATS.	BY						
VOL1	0	0.31499E-03	475367.6	3743682.7	478.1	5.00	30.45	1.40
YES HRDOW								
VOL3	0	0.31499E-03	475255.4	3743684.0	480.6	5.00	30.45	1.40
YES HRDOW								
VOL5	0	0.31499E-03	475140.2	3743684.8	484.4	5.00	30.45	1.40
YES HRDOW								
VOL7	0	0.31499E-03	475257.3	3744055.7	486.4	5.00	30.45	1.40
YES HRDOW								
VOL8	0	0.31499E-03	475373.8	3744055.1	482.3	5.00	30.45	1.40
YES HRDOW								
VOL9	0	0.31499E-03	475492.1	3744055.7	481.9	5.00	30.45	1.40


```

YES      HRDOW
*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     ***
                                     10:57:54

```

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

SOURCE		NUMBER	EMISSION RATE	LOCATION OF AREA		BASE	RELEASE	NUMBER	INIT.
SOURCE		URBAN	EMISSION RATE						
ID	SCALAR	PART.	(GRAMS/SEC	X	Y	ELEV.	HEIGHT	OF VERTS.	SZ
		VARY							
		CATS.	/METER**2)	(METERS)	(METERS)	(METERS)	(METERS)		
			BY						

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                  *** 10:57:54

```

```
*** MODELOPTs:      RegDFAULT  CONC  ELEV  FLGPOL  URBAN  ADJ  U*
```

SOURCE IDs

```

ALL      VOL1      , VOL3      , VOL5      , VOL7      , VOL8      , VOL9      ,
VOL10    , VOL11    ,

VOL12    , VOL13    , VOL14    , VOL15    , VOL16    , VOL17    ,
VOL18    , VOL19    ,

VOL20    , VOL21    , VOL22    , VOL23    , VOL24    , PAREA1 ,
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
***

```

10:57:54

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

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

```

URBAN ID      URBAN POP      SOURCE IDs
-----
2189641. VOL1      , VOL3      , VOL5      , VOL7      , VOL8      ,
VOL9      , VOL10    ,
VOL11      ,

VOL12    , VOL13    , VOL14    , VOL15    , VOL16    , VOL17    ,
VOL18    , VOL19    ,

VOL20    , VOL21    , VOL22    , VOL23    , VOL24    , PAREA1 ,
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
***

```

10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

```

SOURCE ID = VOL1      ; SOURCE TYPE = VOLUME      :
HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
SCALAR  HOUR  SCALAR  HOUR  SCALAR
-----
DAY OF WEEK = WEEKDAY
1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00  2 .0000E+00  3 .0000E+00  4 .0000E+00  5 .0000E+00  6
.0000E+00  7 .0000E+00  8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14

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.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 10:57:54
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL3 ; SOURCE TYPE = VOLUME :

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL
SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

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*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 10:57:54
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL5 ; SOURCE TYPE = VOLUME :

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL
SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						

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9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
*** 10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL7 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
-----
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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*** 10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL8 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
-----
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6

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.0000E+00    7 .0000E+00    8 .0000E+00
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01   14
.1000E+01   15 .1000E+01   16 .1000E+01
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SATURDAY
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***      08/18/23
*** AERMET - VERSION 16216 ***
***
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10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL9          ; SOURCE TYPE = VOLUME      :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -
- - - - -
                                DAY OF WEEK = WEEKDAY
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01   14
.1000E+01   15 .1000E+01   16 .1000E+01
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SATURDAY
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***      08/18/23
*** AERMET - VERSION 16216 ***
***
***
10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

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SOURCE ID = VOL10 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR
SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01		15	.1000E+01	16	.1000E+01					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00		15	.0000E+00	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00		15	.0000E+00	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

*** 10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL11 ; SOURCE TYPE = VOLUME :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR
SCALAR	HOUR	SCALAR	HOUR	SCALAR						

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01		15	.1000E+01	16	.1000E+01					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00		15	.0000E+00	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00		7	.0000E+00	8	.0000E+00					
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00		15	.0000E+00	16	.0000E+00					
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00		23	.0000E+00	24	.0000E+00					

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC *** 08/18/23

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL12 ; SOURCE TYPE = VOLUME :
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
 SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
 MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL13 ; SOURCE TYPE = VOLUME :
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
 SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

```
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 10:57:54
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL14 ; SOURCE TYPE = VOLUME :

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL
SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

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*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 10:57:54
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL15 ; SOURCE TYPE = VOLUME :

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL
SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						


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                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL16 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01 14
.1000E+01 15  .1000E+01 16  .1000E+01
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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10:57:54

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                                PAGE 19
*** MODELOPTs:  RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL17 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -

```

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- - - - -
                                DAY OF WEEK = WEEKDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01 14
.1000E+01 15  .1000E+01 16  .1000E+01
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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                                PAGE 20
*** MODELOPTs:  RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL18 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01 14
.1000E+01 15  .1000E+01 16  .1000E+01
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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***
                                PAGE 21
*** MODELOPTs:  RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL19 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

*** *** 10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL20 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22

.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL21 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 10:57:54

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL22 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00

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17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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10:57:54

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                                PAGE 25
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL23 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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10:57:54

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                                PAGE 26
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL24 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14

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.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
*** 10:57:54

```

```

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = PAREA1 ; SOURCE TYPE = AREAPOLY :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
*** 10:57:54

```

```

PAGE 28
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

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

```


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

(METERS/SEC)

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                *** 10:57:54

```

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

FREE

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

[illegible]

First hour of profile data

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

*** AERMET - VERSION 16216 ***

* * *

PAGE 31

INCLUDING SOURCE(S): VOL1 , VOL3
VOL5 , VOL7 , VOL8

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)

475146.64	3744202.50	1.65229	(10121524)	475112.97
3744175.66	1.93402	(10121524)		
475037.46	3744171.11	1.69995	(10121524)	475003.34
3744194.31	1.50430	(10121524)		
474973.77	3744217.06	1.33812	(10121524)	475158.92
3744265.73	1.32572	(16010524)		
475561.05	3744189.76	2.48047c	(10121724)	475620.65
3744192.95	2.37043c	(10121724)		
476022.00	3744121.55	0.51343c	(10012924)	476021.40
3744054.73	0.48782c	(10012924)		
476034.92	3743961.08	0.53001	(14040124)	476034.44
3743833.66	0.65282	(14040124)		
475059.35	3743678.88	3.50166	(10121524)	475048.50
3743620.04	2.73196	(10121524)		
475935.55	3743551.90	0.52967	(14120124)	475683.50
3743480.93	0.75725	(16122224)		
475443.74	3743717.06	3.44677	(15122224)	475706.71
3743746.17	2.57779b	(10120624)		
475941.47	3743535.07	0.51247	(14120124)	475815.76
3743304.00	0.43095	(14120124)		
475932.99	3743505.26	0.53175	(14120124)	475933.83
3743472.84	0.51726	(14120124)		
475940.25	3743428.98	0.48608	(14120124)	475935.78
3743407.74	0.48099	(14120124)		
475896.38	3743329.79	0.45076	(14120124)	476014.30
3743338.17	0.36152	(14120124)		
474177.19	3743537.24	0.31686	(11012424)	474175.64
3743395.68	0.28248	(11012424)		
474176.41	3743645.14	0.31249	(11012424)	474425.93
3743758.69	0.33371	(11012424)		
474577.72	3743867.11	0.67777	(10121524)	474590.57
3743989.17	0.56159	(10121524)		
474592.18	3744075.89	0.48510	(10121524)	474915.52
3744193.66	1.27400	(10121524)		
474841.11	3744193.13	1.06576	(10121524)	475376.61
3744371.75	1.33817c	(10121724)		
475878.54	3744298.48	0.70955	(15122224)	475682.76
3744476.50	0.80731c	(10121724)		
475728.87	3744369.46	0.94228c	(10121724)	473300.31
3743374.59	0.22001	(11012424)		
473285.29	3743456.06	0.21967	(11012424)	473563.14
3744593.37	0.35145	(10121524)		
473693.91	3744822.42	0.31837	(10121524)	473729.89
3744880.84	0.21983	(10121524)		
473723.32	3744920.30	0.17333	(10121524)	477058.55
3744344.84	0.12596	(14122224)		
477121.37	3744258.35	0.13124		
(14122224)				

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
 MVCC\15091 MVC *** 08/18/23
 *** AERMET - VERSION 16216 ***
 *** *** 10:57:54

PAGE 32

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

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM₁₀ IN
 MICROGRAMS/M³

**

DATE

NETWORK

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

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Cons PM25\15091 Cons PM25.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 24
  URBANOPT 2189641 Riverside_County
  POLLUTID PM_2.5
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Cons PM25.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587  3743682.707  478.060
LOCATION VOL3      VOLUME      475255.408  3743684.018  480.550
LOCATION VOL5      VOLUME      475140.193  3743684.832  484.370
LOCATION VOL7      VOLUME      475257.277  3744055.697  486.420
LOCATION VOL8      VOLUME      475373.751  3744055.067  482.330
LOCATION VOL9      VOLUME      475492.113  3744055.697  481.870
LOCATION VOL10     VOLUME      475604.809  3744057.586  478.940
LOCATION VOL11     VOLUME      475713.098  3744058.845  476.670
LOCATION VOL12     VOLUME      475604.306  3743955.341  479.000
LOCATION VOL13     VOLUME      475712.595  3743956.600  477.240
LOCATION VOL14     VOLUME      475256.773  3743953.452  485.790
LOCATION VOL15     VOLUME      475373.247  3743952.822  483.490
LOCATION VOL16     VOLUME      475491.610  3743953.452  481.550
LOCATION VOL17     VOLUME      475603.047  3743859.014  478.680
LOCATION VOL18     VOLUME      475711.336  3743860.273  476.280
LOCATION VOL19     VOLUME      475255.514  3743857.125  483.480
LOCATION VOL20     VOLUME      475371.988  3743856.495  481.000
LOCATION VOL21     VOLUME      475490.350  3743857.125  478.750
LOCATION VOL22     VOLUME      475365.538  3743561.053  476.820
LOCATION VOL23     VOLUME      475253.359  3743562.364  481.610
LOCATION VOL24     VOLUME      475138.144  3743563.178  486.390
LOCATION PAREA1    AREAPOLY    475778.045  3744123.425  475.030
** Source Parameters **
SRCPARAM VOL1      0.0003074948  5.000  30.453  1.400
SRCPARAM VOL3      0.0003074948  5.000  30.453  1.400
SRCPARAM VOL5      0.0003074948  5.000  30.453  1.400
SRCPARAM VOL7      0.0003074948  5.000  30.453  1.400
SRCPARAM VOL8      0.0003074948  5.000  30.453  1.400
SRCPARAM VOL9      0.0003074948  5.000  30.453  1.400
SRCPARAM VOL10     0.0003074948  5.000  30.453  1.400

```

SRCPARAM	VOL11	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL12	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL13	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL14	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL15	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL16	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL17	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL18	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL19	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL20	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL21	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL22	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL23	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL24	0.0003074948	5.000	30.453	1.400
SRCPARAM	PAREA1	3.3083E-07	0.000	12	1.000
AREAVERT	PAREA1	475778.045	3744123.425	475778.045	3743793.947
AREAVERT	PAREA1	475193.731	3743790.931	475193.731	3743750.218
AREAVERT	PAREA1	475432.734	3743747.956	475431.226	3743495.381
AREAVERT	PAREA1	475071.590	3743497.643	475073.852	3743751.726
AREAVERT	PAREA1	475185.437	3743752.480	475185.437	3743791.685
AREAVERT	PAREA1	475189.207	3743791.685	475190.715	3744121.917
URBANSRC	ALL				

** Variable Emissions Type: "By Hour / Day (HRDOW)"

** Variable Emission Scenario: "Scenario 1"

** WeekDays:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL1	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL3	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL5	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

[illegible]

[illegible]

[illegible]

[illegible]

```

** Saturday:
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT PAREA1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
SRCGROUP ALL
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
  INCLUDED "15091 Cons PM25.rou"
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
  SURFFILE PERI_V9_ADJU\PERI_v9.SFC
  PROFFILE PERI_V9_ADJU\PERI_v9.PFL
  SURFDATA 3171 2010
  UAIRDATA 3190 2010
  SITEDATA 99999 2010
  PROFBASE 442.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
  RECTABLE ALLAVE 1ST
  RECTABLE 24 1ST
** Auto-Generated Plotfiles
  PLOTFILE 24 ALL 1ST "15091 CONS PM25.AD\24H1GALL.PLT" 31
  SUMMFILE "15091 Cons PM25.sum"
OU FINISHED
**
*****
** Project Parameters

```

```
*****
** PROJCTN  CoordinateSystemUTM
** DESCPTN  UTM: Universal Transverse Mercator
** DATUM    North American Datum 1983
** DTMRGN   CONUS
** UNITS     m
** ZONE      11
** ZONEINX   0
**
```

```

** Lakes Environmental AERMOD MPI
**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Cons PM25\15091 Cons PM25.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 24
  URBANOPT 2189641 Riverside_County
  POLLUTID PM_2.5
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Cons PM25.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
LOCATION PAREA1    AREAPOLY    475778.045   3744123.425   475.030
** Source Parameters **
SRCPARAM VOL1      0.0003074948    5.000    30.453    1.400
SRCPARAM VOL3      0.0003074948    5.000    30.453    1.400
SRCPARAM VOL5      0.0003074948    5.000    30.453    1.400
SRCPARAM VOL7      0.0003074948    5.000    30.453    1.400
SRCPARAM VOL8      0.0003074948    5.000    30.453    1.400
SRCPARAM VOL9      0.0003074948    5.000    30.453    1.400

```

SRCPARAM	VOL10	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL11	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL12	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL13	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL14	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL15	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL16	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL17	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL18	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL19	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL20	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL21	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL22	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL23	0.0003074948	5.000	30.453	1.400
SRCPARAM	VOL24	0.0003074948	5.000	30.453	1.400
SRCPARAM	PAREA1	3.3083E-07	0.000	12	1.000
AREAVERT	PAREA1	475778.045	3744123.425	475778.045	3743793.947
AREAVERT	PAREA1	475193.731	3743790.931	475193.731	3743750.218
AREAVERT	PAREA1	475432.734	3743747.956	475431.226	3743495.381
AREAVERT	PAREA1	475071.590	3743497.643	475073.852	3743751.726
AREAVERT	PAREA1	475185.437	3743752.480	475185.437	3743791.685
AREAVERT	PAREA1	475189.207	3743791.685	475190.715	3744121.917
URBANSRC	ALL				

** Variable Emissions Type: "By Hour / Day (HRDOW)"

** Variable Emission Scenario: "Scenario 1"

** WeekDays:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL1	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL1	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL3	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Sunday:

EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL3	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** WeekDays:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	1.0	1.0	1.0	1.0
EMISFACT	VOL5	HRDOW	1.0	1.0	1.0	1.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

** Saturday:

EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0
EMISFACT	VOL5	HRDOW	0.0	0.0	0.0	0.0	0.0	0.0

[illegible]

[illegible]

[illegible]

```

EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT VOL24          HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 1.0 1.0 1.0 1.0
EMISFACT PAREA1         HRDOW 1.0 1.0 1.0 1.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1         HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
SRCGROUP ALL
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
  INCLUDED "15091 Cons PM25.rou"
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
  SURFFILE PERI_V9_ADJU\PERI_v9.SFC
  PROFFILE PERI_V9_ADJU\PERI_v9.PFL
  SURFDATA 3171 2010
  UAIRDATA 3190 2010
  SITEDATA 99999 2010
  PROFBASE 442.0 METERS
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
  RECTABLE ALLAVE 1ST
  RECTABLE 24 1ST
** Auto-Generated Plotfiles
  PLOTFILE 24 ALL 1ST "15091 CONS PM25.AD\24H1GALL.PLT" 31
  SUMMFILE "15091 Cons PM25.sum"
OU FINISHED

```

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

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

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

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

***** WARNING MESSAGES *****
ME W186 446 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 446 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

*** SETUP Finishes Successfully ***

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:03:00

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

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

- * Model Uses Regulatory DEFAULT Options
- * Model Is Setup For Calculation of Average CONCentration Values.
- * NO GAS DEPOSITION Data Provided.
- * NO PARTICLE DEPOSITION Data Provided.
- * Model Uses NO DRY DEPLETION. DDPLETE = F
- * Model Uses NO WET DEPLETION. WETDPLT = F
- * Stack-tip Downwash.
- * Model Accounts for ELEVated Terrain Effects.
- * Use Calms Processing Routine.
- * Use Missing Data Processing Routine.
- * No Exponential Decay.
- * Model Uses URBAN Dispersion Algorithm for the SBL for 22 Source(s),
for Total of 1 Urban Area(s):
Urban Population = 2189641.0 ; Urban Roughness Length = 1.000 m
- * Urban Roughness Length of 1.0 Meter Used.
- * 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: PM_2.5

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

**This Run Includes: 22 Source(s); 1 Source Group(s); and 47 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 21 VOLUME source(s)
and: 1 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)
and: 0 SWPOINT source(s)

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

**The AERMET Input Meteorological Data Version Date: 16216

**Output Options Selected:

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 442.00 ; 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:

aermod.inp

**Output Print File:

aermod.out

**Detailed Error/Message File: 15091 Cons

PM25.err

**File for Summary of Results: 15091 Cons

PM25.sum

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE	NUMBER	EMISSION RATE			BASE	RELEASE	INIT.	INIT.
SOURCE	URBAN	EMISSION RATE			ELEV.	HEIGHT	SY	SZ
ID	PART.	(GRAMS/SEC)	X	Y	(METERS)	(METERS)	(METERS)	(METERS)
(METERS)	CATS.	BY						
VOL1	0	0.30749E-03	475367.6	3743682.7	478.1	5.00	30.45	1.40
YES HRDOW								
VOL3	0	0.30749E-03	475255.4	3743684.0	480.6	5.00	30.45	1.40
YES HRDOW								
VOL5	0	0.30749E-03	475140.2	3743684.8	484.4	5.00	30.45	1.40
YES HRDOW								
VOL7	0	0.30749E-03	475257.3	3744055.7	486.4	5.00	30.45	1.40
YES HRDOW								
VOL8	0	0.30749E-03	475373.8	3744055.1	482.3	5.00	30.45	1.40
YES HRDOW								
VOL9	0	0.30749E-03	475492.1	3744055.7	481.9	5.00	30.45	1.40

YES	HRDOW								
VOL10		0	0.30749E-03	475604.8	3744057.6	478.9	5.00	30.45	1.40
YES	HRDOW								
VOL11		0	0.30749E-03	475713.1	3744058.8	476.7	5.00	30.45	1.40
YES	HRDOW								
VOL12		0	0.30749E-03	475604.3	3743955.3	479.0	5.00	30.45	1.40
YES	HRDOW								
VOL13		0	0.30749E-03	475712.6	3743956.6	477.2	5.00	30.45	1.40
YES	HRDOW								
VOL14		0	0.30749E-03	475256.8	3743953.5	485.8	5.00	30.45	1.40
YES	HRDOW								
VOL15		0	0.30749E-03	475373.2	3743952.8	483.5	5.00	30.45	1.40
YES	HRDOW								
VOL16		0	0.30749E-03	475491.6	3743953.5	481.6	5.00	30.45	1.40
YES	HRDOW								
VOL17		0	0.30749E-03	475603.0	3743859.0	478.7	5.00	30.45	1.40
YES	HRDOW								
VOL18		0	0.30749E-03	475711.3	3743860.3	476.3	5.00	30.45	1.40
YES	HRDOW								
VOL19		0	0.30749E-03	475255.5	3743857.1	483.5	5.00	30.45	1.40
YES	HRDOW								
VOL20		0	0.30749E-03	475372.0	3743856.5	481.0	5.00	30.45	1.40
YES	HRDOW								
VOL21		0	0.30749E-03	475490.3	3743857.1	478.8	5.00	30.45	1.40
YES	HRDOW								
VOL22		0	0.30749E-03	475365.5	3743561.1	476.8	5.00	30.45	1.40
YES	HRDOW								
VOL23		0	0.30749E-03	475253.4	3743562.4	481.6	5.00	30.45	1.40
YES	HRDOW								
VOL24		0	0.30749E-03	475138.1	3743563.2	486.4	5.00	30.45	1.40

```

YES      HRDOW
*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:03:00

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

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*** AREAPOLY SOURCE DATA ***

		NUMBER	EMISSION RATE	LOCATION OF AREA		BASE	RELEASE	NUMBER	INIT.
		URBAN	EMISSION RATE						
SOURCE	PART.	(GRAMS/SEC	X	Y	ELEV.	HEIGHT	OF VERTS.	SZ	
SOURCE	SCALAR VARY								
ID	CATS.	/METER**2)	(METERS)	(METERS)	(METERS)	(METERS)			
(METERS)		BY							


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PAREA1      0  0.33083E-06  475778.0  3744123.4  475.0  0.00  12  1.00
YES      HRDOW
*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:03:00

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

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*** SOURCE IDs DEFINING SOURCE GROUPS ***

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

```

ALL      VOL1      , VOL3      , VOL5      , VOL7      , VOL8      , VOL9      ,
VOL10    , VOL11    ,

VOL12    , VOL13    , VOL14    , VOL15    , VOL16    , VOL17    ,
VOL18    , VOL19    ,

VOL20    , VOL21    , VOL22    , VOL23    , VOL24    , PAREA1    ,
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
***

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

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

URBAN ID	URBAN POP	SOURCE IDs
VOL11	2189641.	VOL1 , VOL3 , VOL5 , VOL7 , VOL8 , VOL9 , VOL10 , VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 , VOL18 , VOL19 , VOL20 , VOL21 , VOL22 , VOL23 , VOL24 , PAREA1

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*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = VOL1		; SOURCE TYPE = VOLUME		:		:		:		:	
HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01
13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.1000E+01	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY											
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00
7	.0000E+00	8	.0000E+00	9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00
13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00	17	.0000E+00	18	.0000E+00
19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL3 ; SOURCE TYPE = VOLUME :

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL
SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL5 ; SOURCE TYPE = VOLUME :

HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL
SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR	HOURL	SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						

```

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
*** 11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL7 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
-----
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
*** 11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL8 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR
-----
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6

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.0000E+00    7 .0000E+00    8 .0000E+00
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01   14
.1000E+01   15 .1000E+01   16 .1000E+01
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SATURDAY
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***      08/18/23
*** AERMET - VERSION 16216 ***
***
***
11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL9          ; SOURCE TYPE = VOLUME      :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -
- - - - -
                                DAY OF WEEK = WEEKDAY
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01   14
.1000E+01   15 .1000E+01   16 .1000E+01
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SATURDAY
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00    2 .0000E+00    3 .0000E+00    4 .0000E+00    5 .0000E+00    6
.0000E+00    7 .0000E+00    8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00   14
.0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00   22
.0000E+00   23 .0000E+00   24 .0000E+00
*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***      08/18/23
*** AERMET - VERSION 16216 ***
***
***
11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

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SOURCE ID = VOL10 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
.1000E+01		15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
.0000E+00		15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
.0000E+00		15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL11 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
.1000E+01		15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
.0000E+00		15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
.0000E+00		7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
.0000E+00		15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
.0000E+00		23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL12 ; SOURCE TYPE = VOLUME :
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
 SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
 MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL13 ; SOURCE TYPE = VOLUME :
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
 SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	
	.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	
	.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	
	.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	
	.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

```
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:03:00
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL14 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

```
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
```

DAY OF WEEK = SATURDAY

```
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
```

DAY OF WEEK = SUNDAY

```
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
```

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*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:03:00
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL15 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

```
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
```

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                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
***
11:03:00

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                                PAGE 18
*** MODELOPTs:  RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL16 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
-----
                                DAY OF WEEK = WEEKDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01 14
.1000E+01 15  .1000E+01 16  .1000E+01
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
***
11:03:00

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                                PAGE 19
*** MODELOPTs:  RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL17 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
-----

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- - - - -
                                DAY OF WEEK = WEEKDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01 14
.1000E+01 15  .1000E+01 16  .1000E+01
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
***
                                PAGE 20
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL18 ; SOURCE TYPE = VOLUME :
  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR  SCALAR  HOUR
  SCALAR  HOUR  SCALAR  HOUR  SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .1000E+01 10  .1000E+01 11  .1000E+01 12  .1000E+01 13  .1000E+01 14
.1000E+01 15  .1000E+01 16  .1000E+01
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SATURDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
                                DAY OF WEEK = SUNDAY
1  .0000E+00  2  .0000E+00  3  .0000E+00  4  .0000E+00  5  .0000E+00  6
.0000E+00  7  .0000E+00  8  .0000E+00
9  .0000E+00 10  .0000E+00 11  .0000E+00 12  .0000E+00 13  .0000E+00 14
.0000E+00 15  .0000E+00 16  .0000E+00
17 .0000E+00 18  .0000E+00 19  .0000E+00 20  .0000E+00 21  .0000E+00 22
.0000E+00 23  .0000E+00 24  .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
***
***
                                PAGE 21
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

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* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL19 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL20 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14
.1000E+01	15	.1000E+01	16	.1000E+01						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22
.0000E+00	23	.0000E+00	24	.0000E+00						

DAY OF WEEK = SUNDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6
.0000E+00	7	.0000E+00	8	.0000E+00						
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14
.0000E+00	15	.0000E+00	16	.0000E+00						
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22

.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL21 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL22 ; SOURCE TYPE = VOLUME :
HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
SCALAR HOUR SCALAR HOUR SCALAR

DAY OF WEEK = WEEKDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00


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17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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11:03:00

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                                PAGE 25
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL23 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
                                DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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11:03:00

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                                PAGE 26
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = VOL24 ; SOURCE TYPE = VOLUME :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
                                DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14

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.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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*** 11:03:00

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

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK
(HRDOW) *

SOURCE ID = PAREA1 ; SOURCE TYPE = AREAPOLY :
  HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
  SCALAR HOUR SCALAR HOUR SCALAR
- - - - -
DAY OF WEEK = WEEKDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01 14
.1000E+01 15 .1000E+01 16 .1000E+01
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SATURDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
DAY OF WEEK = SUNDAY
1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00 6
.0000E+00 7 .0000E+00 8 .0000E+00
9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13 .0000E+00 14
.0000E+00 15 .0000E+00 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00 22
.0000E+00 23 .0000E+00 24 .0000E+00
*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
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*** 11:03:00

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

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

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

(METERS/SEC)

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*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                *** 11:03:00

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

FREE

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

[illegible]

First hour of profile data

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

*** AERMET - VERSION 16216 ***

* * *

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INCLUDING SOURCE(S): VOL1 , VOL3 ,
VOL5 , VOL7 , VOL8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

* *

X-COORD	(M)	Y-COORD	(M)	CONC	(YYMMDDHH)	X-COORD	(M)	Y-COORD	(M)	CONC	(YYMMDDHH)

475146.64	3744202.50	0.34679	(10121524)	475112.97
3744175.66	0.40418	(10121524)		
475037.46	3744171.11	0.35382	(10121524)	475003.34
3744194.31	0.31282	(10121524)		
474973.77	3744217.06	0.27829	(10121524)	475158.92
3744265.73	0.28328	(16010524)		
475561.05	3744189.76	0.52217c	(10121724)	475620.65
3744192.95	0.49892c	(10121724)		
476022.00	3744121.55	0.10856c	(10012924)	476021.40
3744054.73	0.10342c	(10012924)		
476034.92	3743961.08	0.11235	(14040124)	476034.44
3743833.66	0.13810	(14040124)		
475059.35	3743678.88	0.73592	(10121524)	475048.50
3743620.04	0.57493	(10121524)		
475935.55	3743551.90	0.11293	(14120124)	475683.50
3743480.93	0.15911	(16122224)		
475443.74	3743717.06	0.72384	(15122224)	475706.71
3743746.17	0.54526b	(10120624)		
475941.47	3743535.07	0.10924	(14120124)	475815.76
3743304.00	0.09212	(14120124)		
475932.99	3743505.26	0.11323	(14120124)	475933.83
3743472.84	0.11010	(14120124)		
475940.25	3743428.98	0.10342	(14120124)	475935.78
3743407.74	0.10232	(14120124)		
475896.38	3743329.79	0.09600	(14120124)	476014.30
3743338.17	0.07689	(14120124)		
474177.19	3743537.24	0.06531	(11012424)	474175.64
3743395.68	0.05824	(11012424)		
474176.41	3743645.14	0.06445	(11012424)	474425.93
3743758.69	0.06899	(11012424)		
474577.72	3743867.11	0.14080	(10121524)	474590.57
3743989.17	0.11778	(10121524)		
474592.18	3744075.89	0.10212	(10121524)	474915.52
3744193.66	0.26463	(10121524)		
474841.11	3744193.13	0.22238	(10121524)	475376.61
3744371.75	0.27984c	(10121724)		
475878.54	3744298.48	0.15046	(15122224)	475682.76
3744476.50	0.16864c	(10121724)		
475728.87	3744369.46	0.19733c	(10121724)	473300.31
3743374.59	0.04526	(11012424)		
473285.29	3743456.06	0.04520	(11012424)	473563.14
3744593.37	0.07289	(10121524)		
473693.91	3744822.42	0.06623	(10121524)	473729.89
3744880.84	0.04604	(10121524)		
473723.32	3744920.30	0.03648	(10121524)	477058.55
3744344.84	0.02608	(14122224)		
477121.37	3744258.35	0.02715		
(14122224)				

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
 MVCC\15091 MVC *** 08/18/23
 *** AERMET - VERSION 16216 ***
 *** *** 11:03:00

PAGE 32

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

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM_{2.5} IN
 MICROGRAMS/M³

**

DATE

NETWORK


```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Ops CO\15091 Ops CO.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 1 8
  URBANOPT 2189641 Riverside_County
  POLLUTID CO
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Ops CO.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
** Source Parameters **
SRCPARAM VOL1      0.0474268622   5.000   30.453   1.400
SRCPARAM VOL3      0.0474268622   5.000   30.453   1.400
SRCPARAM VOL5      0.0474268622   5.000   30.453   1.400
SRCPARAM VOL7      0.0474268622   5.000   30.453   1.400
SRCPARAM VOL8      0.0474268622   5.000   30.453   1.400
SRCPARAM VOL9      0.0474268622   5.000   30.453   1.400
SRCPARAM VOL10     0.0474268622   5.000   30.453   1.400
SRCPARAM VOL11     0.0474268622   5.000   30.453   1.400

```


SRCPARAM	VOL12	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL13	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL14	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL15	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL16	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL17	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL18	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL19	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL20	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL21	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL22	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL23	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL24	0.0474268622	5.000	30.453	1.400
URBANSRC	ALL				
SRCGROUP	ALL				

SO FINISHED

**

** AERMOD Receptor Pathway

**

**

RE STARTING

INCLUDED "15091 Ops CO.rou"

RE FINISHED

**

** AERMOD Meteorology Pathway

**

**

ME STARTING

SURFFILE PERI_V9_ADJU\PERI_v9.SFC

PROFFILE PERI_V9_ADJU\PERI_v9.PFL

SURFDATA 3171 2010

UAIRDATA 3190 2010

SITEDATA 99999 2010

PROFBASE 442.0 METERS

ME FINISHED

**

** AERMOD Output Pathway

**

**

OU STARTING

RECTABLE ALLAVE 1ST

RECTABLE 1 1ST

RECTABLE 8 1ST

** Auto-Generated Plotfiles

PLOTFILE 1 ALL 1ST "15091 OPS CO.AD\01H1GALL.PLT" 31

PLOTFILE 8 ALL 1ST "15091 OPS CO.AD\08H1GALL.PLT" 32

SUMMFILE "15091 Ops CO.sum"

OU FINISHED

**

** Project Parameters

** PROJCTN CoordinateSystemUTM

** DESCPTN UTM: Universal Transverse Mercator

** DATUM North American Datum 1983

** DTMRGN CONUS

** UNITS m

** ZONE 11

** ZONEINX 0

**

```

** Lakes Environmental AERMOD MPI
**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Ops CO\15091 Ops CO.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 1 8
  URBANOPT 2189641 Riverside_County
  POLLUTID CO
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Ops CO.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587    3743682.707    478.060
LOCATION VOL3      VOLUME      475255.408    3743684.018    480.550
LOCATION VOL5      VOLUME      475140.193    3743684.832    484.370
LOCATION VOL7      VOLUME      475257.277    3744055.697    486.420
LOCATION VOL8      VOLUME      475373.751    3744055.067    482.330
LOCATION VOL9      VOLUME      475492.113    3744055.697    481.870
LOCATION VOL10     VOLUME      475604.809    3744057.586    478.940
LOCATION VOL11     VOLUME      475713.098    3744058.845    476.670
LOCATION VOL12     VOLUME      475604.306    3743955.341    479.000
LOCATION VOL13     VOLUME      475712.595    3743956.600    477.240
LOCATION VOL14     VOLUME      475256.773    3743953.452    485.790
LOCATION VOL15     VOLUME      475373.247    3743952.822    483.490
LOCATION VOL16     VOLUME      475491.610    3743953.452    481.550
LOCATION VOL17     VOLUME      475603.047    3743859.014    478.680
LOCATION VOL18     VOLUME      475711.336    3743860.273    476.280
LOCATION VOL19     VOLUME      475255.514    3743857.125    483.480
LOCATION VOL20     VOLUME      475371.988    3743856.495    481.000
LOCATION VOL21     VOLUME      475490.350    3743857.125    478.750
LOCATION VOL22     VOLUME      475365.538    3743561.053    476.820
LOCATION VOL23     VOLUME      475253.359    3743562.364    481.610
LOCATION VOL24     VOLUME      475138.144    3743563.178    486.390
** Source Parameters **
SRCPARAM VOL1      0.0474268622    5.000    30.453    1.400
SRCPARAM VOL3      0.0474268622    5.000    30.453    1.400
SRCPARAM VOL5      0.0474268622    5.000    30.453    1.400
SRCPARAM VOL7      0.0474268622    5.000    30.453    1.400
SRCPARAM VOL8      0.0474268622    5.000    30.453    1.400
SRCPARAM VOL9      0.0474268622    5.000    30.453    1.400
SRCPARAM VOL10     0.0474268622    5.000    30.453    1.400

```

SRCPARAM	VOL11	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL12	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL13	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL14	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL15	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL16	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL17	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL18	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL19	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL20	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL21	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL22	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL23	0.0474268622	5.000	30.453	1.400
SRCPARAM	VOL24	0.0474268622	5.000	30.453	1.400
URBANSRC	ALL				
SRCGROUP	ALL				

SO FINISHED

**

 ** AERMOD Receptor Pathway

**
 **
 RE STARTING
 INCLUDED "15091 Ops CO.rou"
 RE FINISHED
 **

 ** AERMOD Meteorology Pathway

 **
 **

ME STARTING
 SURFFILE PERI_V9_ADJU\PERI_v9.SFC
 PROFFILE PERI_V9_ADJU\PERI_v9.PFL
 SURFDATA 3171 2010
 UAIRDATA 3190 2010
 SITEDATA 99999 2010
 PROFBASE 442.0 METERS

ME FINISHED
 **

 ** AERMOD Output Pathway

 **
 **

OU STARTING
 RECTABLE ALLAVE 1ST
 RECTABLE 1 1ST
 RECTABLE 8 1ST
 ** Auto-Generated Plotfiles
 PLOTFILE 1 ALL 1ST "15091 OPS CO.AD\01H1GALL.PLT" 31
 PLOTFILE 8 ALL 1ST "15091 OPS CO.AD\08H1GALL.PLT" 32
 SUMMFILE "15091 Ops CO.sum"
 OU FINISHED

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

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

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

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

***** WARNING MESSAGES *****
ME W186 105 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 105 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

*** SETUP Finishes Successfully ***

*** AERMOD - VERSION 22112 *** *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:05:57

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

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

- * Model Uses Regulatory DEFAULT Options
- * Model Is Setup For Calculation of Average CONCentration Values.
- * NO GAS DEPOSITION Data Provided.
- * NO PARTICLE DEPOSITION Data Provided.
- * Model Uses NO DRY DEPLETION. DDPLETE = F
- * Model Uses NO WET DEPLETION. WETDPLT = F
- * Stack-tip Downwash.
- * Model Accounts for ELEVated Terrain Effects.
- * Use Calms Processing Routine.
- * Use Missing Data Processing Routine.
- * No Exponential Decay.
- * Model Uses URBAN Dispersion Algorithm for the SBL for 21 Source(s),
for Total of 1 Urban Area(s):
Urban Population = 2189641.0 ; Urban Roughness Length = 1.000 m
- * Urban Roughness Length of 1.0 Meter Used.
- * 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: CO

**Model Calculates 2 Short Term Average(s) of: 1-HR 8-HR

**This Run Includes: 21 Source(s); 1 Source Group(s); and 47 Receptor(s)

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

and: 21 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)

and: 0 SWPOINT source(s)

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

**The AERMET Input Meteorological Data Version Date: 16216

**Output Options Selected:

```
**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) =    442.00 ;  Decay Coef. =
0.000           ;  Rot. Angle =      0.0
                  Emission Units = GRAMS/SEC                      ;  Emission Rate
                  Unit Factor =    0.10000E+07
                  Output Units  = MICROGRAMS/M**3

```

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

VOL1	0	0.47427E-01	475367.6	3743682.7	478.1	5.00	30.45	1.40	
YES									
VOL3	0	0.47427E-01	475255.4	3743684.0	480.6	5.00	30.45	1.40	
YES									
VOL5	0	0.47427E-01	475140.2	3743684.8	484.4	5.00	30.45	1.40	
YES									
VOL7	0	0.47427E-01	475257.3	3744055.7	486.4	5.00	30.45	1.40	
YES									
VOL8	0	0.47427E-01	475373.8	3744055.1	482.3	5.00	30.45	1.40	
YES									
VOL9	0	0.47427E-01	475492.1	3744055.7	481.9	5.00	30.45	1.40	
YES									
VOL10	0	0.47427E-01	475604.8	3744057.6	478.9	5.00	30.45	1.40	
YES									
VOL11	0	0.47427E-01	475713.1	3744058.8	476.7	5.00	30.45	1.40	
YES									
VOL12	0	0.47427E-01	475604.3	3743955.3	479.0	5.00	30.45	1.40	
YES									
VOL13	0	0.47427E-01	475712.6	3743956.6	477.2	5.00	30.45	1.40	
YES									

VOL14	0	0.47427E-01	475256.8	3743953.5	485.8	5.00	30.45	1.40
YES								
VOL15	0	0.47427E-01	475373.2	3743952.8	483.5	5.00	30.45	1.40
YES								
VOL16	0	0.47427E-01	475491.6	3743953.5	481.6	5.00	30.45	1.40
YES								
VOL17	0	0.47427E-01	475603.0	3743859.0	478.7	5.00	30.45	1.40
YES								
VOL18	0	0.47427E-01	475711.3	3743860.3	476.3	5.00	30.45	1.40
YES								
VOL19	0	0.47427E-01	475255.5	3743857.1	483.5	5.00	30.45	1.40
YES								
VOL20	0	0.47427E-01	475372.0	3743856.5	481.0	5.00	30.45	1.40
YES								
VOL21	0	0.47427E-01	475490.3	3743857.1	478.8	5.00	30.45	1.40
YES								
VOL22	0	0.47427E-01	475365.5	3743561.1	476.8	5.00	30.45	1.40
YES								
VOL23	0	0.47427E-01	475253.4	3743562.4	481.6	5.00	30.45	1.40
YES								
VOL24	0	0.47427E-01	475138.1	3743563.2	486.4	5.00	30.45	1.40
YES								

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:05:57

```

PAGE 3

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

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs							
-----	-----							
ALL	VOL1	, VOL3	, VOL5	, VOL7	, VOL8	, VOL9	,	
VOL10	, VOL11	,						
	VOL12	, VOL13	, VOL14	, VOL15	, VOL16	, VOL17	,	
	VOL18	, VOL19	,					
	VOL20	, VOL21	, VOL22	, VOL23	, VOL24	,		

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:05:57

```

PAGE 4

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

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

URBAN ID	URBAN POP	SOURCE IDs						
-----	-----	-----						
	2189641.	VOL1	, VOL3	, VOL5	, VOL7	, VOL8	,	
	VOL9	, VOL10	,					
VOL11	,							
	VOL12	, VOL13	, VOL14	, VOL15	, VOL16	, VOL17	,	
	VOL18	, VOL19	,					

PAGE 5

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

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

(475146.6, 3744202.5,	493.9,	493.9,	2.0);	(475113.0, 3744175.7,
495.1,	495.1,	2.0);		
(475037.5, 3744171.1,	499.7,	499.7,	2.0);	(475003.3, 3744194.3,
500.8,	513.0,	2.0);		
(474973.8, 3744217.1,	503.2,	513.0,	2.0);	(475158.9, 3744265.7,
493.0,	493.0,	2.0);		
(475561.0, 3744189.8,	479.1,	479.1,	2.0);	(475620.6, 3744192.9,
478.3,	478.3,	2.0);		
(476022.0, 3744121.5,	471.0,	471.0,	2.0);	(476021.4, 3744054.7,
471.9,	471.9,	2.0);		
(476034.9, 3743961.1,	471.0,	471.0,	2.0);	(476034.4, 3743833.7,
471.0,	471.0,	2.0);		
(475059.3, 3743678.9,	487.3,	487.3,	2.0);	(475048.5, 3743620.0,
488.5,	488.5,	2.0);		
(475935.5, 3743551.9,	471.4,	471.4,	2.0);	(475683.5, 3743480.9,
475.3,	475.3,	2.0);		
(475443.7, 3743717.1,	477.2,	477.2,	2.0);	(475706.7, 3743746.2,
476.0,	476.0,	2.0);		
(475941.5, 3743535.1,	471.0,	471.0,	2.0);	(475815.8, 3743304.0,
476.8,	476.8,	2.0);		
(475933.0, 3743505.3,	471.0,	471.0,	2.0);	(475933.8, 3743472.8,
472.1,	472.1,	2.0);		
(475940.2, 3743429.0,	472.7,	472.7,	2.0);	(475935.8, 3743407.7,
472.8,	472.8,	2.0);		
(475896.4, 3743329.8,	474.2,	474.2,	2.0);	(476014.3, 3743338.2,
473.6,	473.6,	2.0);		
(474177.2, 3743537.2,	514.0,	514.0,	2.0);	(474175.6, 3743395.7,
513.0,	513.0,	2.0);		
(474176.4, 3743645.1,	512.8,	512.8,	2.0);	(474425.9, 3743758.7,
513.6,	513.6,	2.0);		
(474577.7, 3743867.1,	505.1,	505.1,	2.0);	(474590.6, 3743989.2,
512.7,	512.7,	2.0);		
(474592.2, 3744075.9,	512.0,	543.0,	2.0);	(474915.5, 3744193.7,
504.6,	519.0,	2.0);		
(474841.1, 3744193.1,	511.7,	519.0,	2.0);	(475376.6, 3744371.8,
486.3,	486.3,	2.0);		
(475878.5, 3744298.5,	472.7,	472.7,	2.0);	(475682.8, 3744476.5,
473.2,	473.2,	2.0);		
(475728.9, 3744369.5,	474.2,	474.2,	2.0);	(473300.3, 3743374.6,
513.4,	513.4,	2.0);		
(473285.3, 3743456.1,	514.3,	514.3,	2.0);	(473563.1, 3744593.4,
512.0,	512.0,	2.0);		
(473693.9, 3744822.4,	513.9,	513.9,	2.0);	(473729.9, 3744880.8,
514.0,	514.0,	2.0);		
(473723.3, 3744920.3,	514.0,	514.0,	2.0);	(477058.5, 3744344.8,
455.0,	455.0,	2.0);		
(477121.4, 3744258.3,	455.0,	455.0,		
2.0);				

142.	9.1	280.9	5.5												
10	01	01	1	03	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90
324.	9.1	280.4	5.5												
10	01	01	1	04	-1.3	0.064	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	1.00	0.40
294.	9.1	278.8	5.5												
10	01	01	1	05	-3.9	0.088	-9.000	-9.000	-999.	62.	15.0	0.19	0.61	1.00	0.90
205.	9.1	278.1	5.5												
10	01	01	1	06	-1.3	0.065	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	1.00	0.40
3.	9.1	277.0	5.5												
10	01	01	1	07	-8.0	0.125	-9.000	-9.000	-999.	106.	21.0	0.19	0.61	1.00	1.30
99.	9.1	277.0	5.5												
10	01	01	1	08	-3.3	0.086	-9.000	-9.000	-999.	61.	16.8	0.19	0.61	0.54	0.90
319.	9.1	278.8	5.5												
10	01	01	1	09	20.1	0.128	0.307	0.010	49.	110.	-9.0	0.19	0.61	0.33	0.90
239.	9.1	284.2	5.5												
10	01	01	1	10	56.7	0.087	0.560	0.010	107.	62.	-1.0	0.19	0.61	0.26	0.40
188.	9.1	289.2	5.5												
10	01	01	1	11	81.5	0.323	0.867	0.008	277.	441.	-35.9	0.19	0.61	0.23	2.70
310.	9.1	290.9	5.5												
10	01	01	1	12	97.1	0.281	1.058	0.008	421.	357.	-19.7	0.19	0.61	0.22	2.20
357.	9.1	293.1	5.5												
10	01	01	1	13	92.2	0.279	1.117	0.008	523.	354.	-20.4	0.19	0.61	0.22	2.20
356.	9.1	293.8	5.5												
10	01	01	1	14	77.6	0.275	1.102	0.008	595.	347.	-23.2	0.19	0.61	0.23	2.20
50.	9.1	294.2	5.5												
10	01	01	1	15	54.9	0.230	1.006	0.008	640.	266.	-19.2	0.19	0.61	0.27	1.80
53.	9.1	293.8	5.5												
10	01	01	1	16	12.3	0.206	0.613	0.008	648.	225.	-61.5	0.19	0.61	0.36	1.80
11.	9.1	292.5	5.5												
10	01	01	1	17	-3.6	0.087	-9.000	-9.000	-999.	71.	15.6	0.19	0.61	0.64	0.90
351.	9.1	290.4	5.5												
10	01	01	1	18	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	1.00	0.90
186.	9.1	287.5	5.5												
10	01	01	1	19	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	1.00	0.90
275.	9.1	285.9	5.5												
10	01	01	1	20	-1.2	0.064	-9.000	-9.000	-999.	39.	18.1	0.19	0.61	1.00	0.40
181.	9.1	285.4	5.5												
10	01	01	1	21	-7.8	0.125	-9.000	-9.000	-999.	106.	21.3	0.19	0.61	1.00	1.30
318.	9.1	284.9	5.5												
10	01	01	1	22	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90
196.	9.1	283.1	5.5												
10	01	01	1	23	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90
330.	9.1	281.4	5.5												
10	01	01	1	24	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61	1.00	1.30
332.	9.1	280.9	5.5												

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	5.5	0	-999.	-99.00	282.6	99.0	-99.00	-99.00
10	01	01	01	9.1	1	335.	1.30	-999.0	99.0	-99.00	-99.00

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

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:05:57
  
```

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

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR
SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL3 ,
VOL5 , VOL7 , VOL8 ,
VOL9 , VOL10 , VOL11 , VOL12 , VOL13 ,

VOL14 , VOL15 , VOL16 ,
VOL17 , VOL18 , VOL19 , VOL20 , VOL21 ,
VOL22 , VOL23 , VOL24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD
(M)	CONC	(YYMMDDHH)			
475146.64	3744202.50	34.14906	(14081420)	475112.97	
3744175.66	36.38351	(11082920)			
475037.46	3744171.11	35.78609	(15091920)	475003.34	
3744194.31	33.35310	(15091920)			
474973.77	3744217.06	31.42919	(15091920)	475158.92	
3744265.73	28.62326	(14072520)			
475561.05	3744189.76	40.99945	(14041207)	475620.65	
3744192.95	42.85061	(14041207)			
476022.00	3744121.55	13.16902	(16040918)	476021.40	
3744054.73	13.57514	(14022617)			
476034.92	3743961.08	13.85463	(14022617)	476034.44	
3743833.66	13.56847	(16082707)			
475059.35	3743678.88	50.89589	(16010616)	475048.50	
3743620.04	45.63548	(16071821)			
475935.55	3743551.90	13.57775	(16050618)	475683.50	
3743480.93	12.87353	(15101507)			
475443.74	3743717.06	56.56256	(14041207)	475706.71	
3743746.17	38.54657	(11091107)			
475941.47	3743535.07	12.88747	(16050618)	475815.76	
3743304.00	7.60063	(16050618)			
475932.99	3743505.26	11.78582	(16050618)	475933.83	
3743472.84	10.68781	(16050618)			
475940.25	3743428.98	9.43355	(16050618)	475935.78	
3743407.74	8.88559	(16050618)			
475896.38	3743329.79	7.43523	(16050618)	476014.30	
3743338.17	7.71971	(16050618)			
474177.19	3743537.24	17.75291	(14090720)	474175.64	
3743395.68	18.00514	(14090220)			
474176.41	3743645.14	17.58938	(15062421)	474425.93	
3743758.69	20.50822	(15071721)			
474577.72	3743867.11	23.05939	(10082104)	474590.57	
3743989.17	23.05641	(10032120)			
474592.18	3744075.89	22.90308	(11080304)	474915.52	
3744193.66	30.15457	(14062720)			
474841.11	3744193.13	27.17948	(11090521)	475376.61	
3744371.75	20.94298	(10071721)			
475878.54	3744298.48	20.40799	(14041207)	475682.76	
3744476.50	12.44722	(14113016)			
475728.87	3744369.46	17.19689	(14041207)	473300.31	
3743374.59	11.18019	(15101321)			
473285.29	3743456.06	11.30513	(15062421)	473563.14	
3744593.37	10.86025	(11090521)			
473693.91	3744822.42	10.86553	(15091920)	473729.89	
3744880.84	10.73798	(10092803)			
473723.32	3744920.30	10.58639	(15102820)	477058.55	
3744344.84	2.68671	(16092818)			
477121.37	3744258.35	2.52035			
(16092818)					

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

*** THE 1ST HIGHEST 8-HR AVERAGE CONCENTRATION VALUES FOR
 SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): VOL1 , VOL3 ,
 VOL5 , VOL7 , VOL8 ,
 VOL9 , VOL10 , VOL11 , VOL12 , VOL13 ,
 VOL14 , VOL15 , VOL16 ,
 VOL17 , VOL18 , VOL19 , VOL20 , VOL21 ,
 VOL22 , VOL23 , VOL24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD
(M)	CONC	(YYMMDDHH)			
475146.64	3744202.50	29.10553	(16123108)	475112.97	
3744175.66	29.03146	(16123108)			
475037.46	3744171.11	24.36653	(16123108)	475003.34	
3744194.31	22.36529	(16123108)			
474973.77	3744217.06	20.90548	(16123108)	475158.92	
3744265.73	24.83379	(16123108)			
475561.05	3744189.76	26.01837m	(10060508)	475620.65	
3744192.95	24.44934m	(10060508)			
476022.00	3744121.55	8.37161m	(10060508)	476021.40	
3744054.73	8.99221m	(10060508)			
476034.92	3743961.08	8.95526m	(10060508)	476034.44	
3743833.66	8.63582m	(10060508)			
475059.35	3743678.88	29.78289m	(10060508)	475048.50	
3743620.04	29.14870	(16122224)			
475935.55	3743551.90	7.66302m	(10060508)	475683.50	
3743480.93	10.95365m	(10060508)			
475443.74	3743717.06	42.63078m	(10060508)	475706.71	
3743746.17	26.72203m	(10060508)			
475941.47	3743535.07	7.34344m	(10060508)	475815.76	
3743304.00	6.00079m	(10060508)			
475932.99	3743505.26	7.09306m	(10060508)	475933.83	
3743472.84	6.70186m	(10060508)			
475940.25	3743428.98	6.15527m	(10060508)	475935.78	
3743407.74	5.98814m	(10060508)			
475896.38	3743329.79	5.59291m	(10060508)	476014.30	
3743338.17	4.75717m	(10060508)			
474177.19	3743537.24	5.82244	(11010224)	474175.64	
3743395.68	6.22597c	(14120308)			
474176.41	3743645.14	5.98779	(11010224)	474425.93	
3743758.69	7.28490	(11010224)			
474577.72	3743867.11	9.70834	(11010224)	474590.57	
3743989.17	8.84272	(14040424)			
474592.18	3744075.89	10.36947	(14040424)	474915.52	
3744193.66	17.28214	(16123108)			
474841.11	3744193.13	13.18553	(16123108)	475376.61	
3744371.75	16.95557	(16120624)			
475878.54	3744298.48	9.17182	(14013108)	475682.76	
3744476.50	7.32222	(16041024)			
475728.87	3744369.46	9.54917	(16041024)	473300.31	
3743374.59	3.04373c	(10121108)			
473285.29	3743456.06	2.82762	(11092308)	473563.14	
3744593.37	3.43766m	(16081024)			
473693.91	3744822.42	3.91106m	(14061724)	473729.89	
3744880.84	4.08437m	(14061724)			
473723.32	3744920.30	4.05084m	(14061724)	477058.55	

3744344.84 1.42619 (14042608)
477121.37 3744258.35 1.42266
(14042608)

*** AERMOD - VERSION 22112 *** ** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:05:57

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

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

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

DATE

NETWORK

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

ALL HIGH 1ST HIGH VALUE IS 56.56256 ON 14041207: AT (475443.74, 3743717.06,
477.21, 477.21, 2.00) DC

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

*** AERMOD - VERSION 22112 *** ** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:05:57

PAGE 11

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

*** THE SUMMARY OF HIGHEST 8-HR RESULTS ***

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

DATE

NETWORK

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

ALL HIGH 1ST HIGH VALUE IS 42.63078m ON 10060508: AT (475443.74, 3743717.06,
477.21, 477.21, 2.00) DC

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

*** AERMOD - VERSION 22112 *** ** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***

11:05:57

PAGE 12

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

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 2028 Informational Message(s)

A Total of 43824 Hours Were Processed

A Total of 978 Calm Hours Identified

A Total of 1050 Missing Hours Identified (2.40 Percent)

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

***** WARNING MESSAGES *****
ME W186 105 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 105 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

*** AERMOD Finishes Successfully ***

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Ops NOX\15091 Ops NOX.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 1
  URBANOPT 2189641 Riverside_County
  POLLUTID NOX
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Ops NOX.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
** Source Parameters **
SRCPARAM VOL1      0.0049000576   5.000   30.453   1.400
SRCPARAM VOL3      0.0049000576   5.000   30.453   1.400
SRCPARAM VOL5      0.0049000576   5.000   30.453   1.400
SRCPARAM VOL7      0.0049000576   5.000   30.453   1.400
SRCPARAM VOL8      0.0049000576   5.000   30.453   1.400
SRCPARAM VOL9      0.0049000576   5.000   30.453   1.400
SRCPARAM VOL10     0.0049000576   5.000   30.453   1.400
SRCPARAM VOL11     0.0049000576   5.000   30.453   1.400

```

SRCPARAM	VOL12	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL13	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL14	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL15	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL16	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL17	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL18	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL19	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL20	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL21	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL22	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL23	0.0049000576	5.000	30.453	1.400
SRCPARAM	VOL24	0.0049000576	5.000	30.453	1.400
URBANSRC	ALL				
SRCGROUP	ALL				

SO FINISHED

**

** AERMOD Receptor Pathway

**

**

RE STARTING

INCLUDED "15091 Ops NOX.rou"

RE FINISHED

**

** AERMOD Meteorology Pathway

**

**

ME STARTING

SURFFILE PERI_V9_ADJU\PERI_v9.SFC

PROFFILE PERI_V9_ADJU\PERI_v9.PFL

SURFDATA 3171 2010

UAIRDATA 3190 2010

SITEDATA 99999 2010

PROFBASE 442.0 METERS

ME FINISHED

**

** AERMOD Output Pathway

**

**

OU STARTING

RECTABLE ALLAVE 1ST

RECTABLE 1 1ST

** Auto-Generated Plotfiles

PLOTFILE 1 ALL 1ST "15091 OPS NOX.AD\01H1GALL.PLT" 31

SUMMFILE "15091 Ops NOX.sum"

OU FINISHED

**

** Project Parameters

** PROJCTN CoordinateSystemUTM

** DESCPTN UTM: Universal Transverse Mercator

** DATUM North American Datum 1983

** DTMRGN CONUS

** UNITS m

** ZONE 11

** ZONEINX 0

**

```

** Lakes Environmental AERMOD MPI
**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Ops NOX\15091 Ops NOX.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 1
  URBANOPT 2189641 Riverside_County
  POLLUTID NOX
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Ops NOX.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587    3743682.707    478.060
LOCATION VOL3      VOLUME      475255.408    3743684.018    480.550
LOCATION VOL5      VOLUME      475140.193    3743684.832    484.370
LOCATION VOL7      VOLUME      475257.277    3744055.697    486.420
LOCATION VOL8      VOLUME      475373.751    3744055.067    482.330
LOCATION VOL9      VOLUME      475492.113    3744055.697    481.870
LOCATION VOL10     VOLUME      475604.809    3744057.586    478.940
LOCATION VOL11     VOLUME      475713.098    3744058.845    476.670
LOCATION VOL12     VOLUME      475604.306    3743955.341    479.000
LOCATION VOL13     VOLUME      475712.595    3743956.600    477.240
LOCATION VOL14     VOLUME      475256.773    3743953.452    485.790
LOCATION VOL15     VOLUME      475373.247    3743952.822    483.490
LOCATION VOL16     VOLUME      475491.610    3743953.452    481.550
LOCATION VOL17     VOLUME      475603.047    3743859.014    478.680
LOCATION VOL18     VOLUME      475711.336    3743860.273    476.280
LOCATION VOL19     VOLUME      475255.514    3743857.125    483.480
LOCATION VOL20     VOLUME      475371.988    3743856.495    481.000
LOCATION VOL21     VOLUME      475490.350    3743857.125    478.750
LOCATION VOL22     VOLUME      475365.538    3743561.053    476.820
LOCATION VOL23     VOLUME      475253.359    3743562.364    481.610
LOCATION VOL24     VOLUME      475138.144    3743563.178    486.390
** Source Parameters **
SRCPARAM VOL1      0.0049000576    5.000    30.453    1.400
SRCPARAM VOL3      0.0049000576    5.000    30.453    1.400
SRCPARAM VOL5      0.0049000576    5.000    30.453    1.400
SRCPARAM VOL7      0.0049000576    5.000    30.453    1.400
SRCPARAM VOL8      0.0049000576    5.000    30.453    1.400
SRCPARAM VOL9      0.0049000576    5.000    30.453    1.400
SRCPARAM VOL10     0.0049000576    5.000    30.453    1.400

```



```
SRCPARAM VOL11      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL12      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL13      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL14      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL15      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL16      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL17      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL18      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL19      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL20      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL21      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL22      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL23      0.0049000576      5.000      30.453      1.400
SRCPARAM VOL24      0.0049000576      5.000      30.453      1.400
URBANSRC ALL
SRCGROUP ALL
```

SO FINISHED

**

** AERMOD Receptor Pathway

**

**

RE STARTING

INCLUDED "15091 Ops NOX.rou"

RE FINISHED

**

** AERMOD Meteorology Pathway

**

**

ME STARTING

SURFFILE PERI_V9_ADJU\PERI_v9.SFC

PROFFILE PERI_V9_ADJU\PERI_v9.PFL

SURFDATA 3171 2010

UAIRDATA 3190 2010

SITEDATA 99999 2010

PROFBASE 442.0 METERS

ME FINISHED

**

** AERMOD Output Pathway

**

**

OU STARTING

RECTABLE ALLAVE 1ST

RECTABLE 1 1ST

** Auto-Generated Plotfiles

PLOTFILE 1 ALL 1ST "15091 OPS NOX.AD\01H1GALL.PLT" 31

SUMMFILE "15091 Ops NOX.sum"

OU FINISHED

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

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

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

***** FATAL ERROR MESSAGES *****

*** NONE ***

ME W186	105	MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used	0.50
ME W187	105	MEOPEN: ADJ U* Option for Stable Low Winds used in AERMET	

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

```

FF *** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAS\15091 MVCC\15091
MVCC\15091 MVC ***                      08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:07:23

```

```

*** MODELOPTs:      PAGE      1
                    RegDEFAULT CONC  ELEV  FLGPOL  URBAN  ADJ  U*

```

*** MODEL SETUP OPTIONS SUMMARY ***

```
** Model Options Selected:
```

```

* Model Uses Regulatory DEFAULT Options
* Model Is Setup For Calculation of Average CONcEntration Values.
* NO GAS DEPOSITION Data Provided.
* NO PARTICLE DEPOSITION Data Provided.
* Model Uses NO DRY DEPLETION. DDPLETE = F
* Model Uses NO WET DEPLETION. WETDPLT = F
* Stack-tip Downwash.
* Model Accounts for ELEVated Terrain Effects.
* Use Calms Processing Routine.
* Use Missing Data Processing Routine.
* No Exponential Decay.
* Model Uses URBAN Dispersion Algorithm for the SBL for      21 Source(s),
  for Total of      1 Urban Area(s):
Urban Population =    2189641.0 ; Urban Roughness Length =  1.000 m
* Urban Roughness Length of 1.0 Meter Used.
* 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: NOX

```

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

****This Run Includes:** 21 Source(s); 1 Source Group(s); and 47 Receptor(s)

```
with:      0 POINT(s), including
           0 POINTCAP(s) and      0 POINTHOR(s)
and:      21 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)
and:      0 SWPOINT source(s)
```

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

**The AERMET Input Meteorological Data Version Date: 16216

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

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

VOL15	0	0.49001E-02	475373.2	3743952.8	483.5	5.00	30.45	1.40
YES								
VOL16	0	0.49001E-02	475491.6	3743953.5	481.6	5.00	30.45	1.40
YES								
VOL17	0	0.49001E-02	475603.0	3743859.0	478.7	5.00	30.45	1.40
YES								
VOL18	0	0.49001E-02	475711.3	3743860.3	476.3	5.00	30.45	1.40
YES								
VOL19	0	0.49001E-02	475255.5	3743857.1	483.5	5.00	30.45	1.40
YES								
VOL20	0	0.49001E-02	475372.0	3743856.5	481.0	5.00	30.45	1.40
YES								
VOL21	0	0.49001E-02	475490.3	3743857.1	478.8	5.00	30.45	1.40
YES								
VOL22	0	0.49001E-02	475365.5	3743561.1	476.8	5.00	30.45	1.40
YES								
VOL23	0	0.49001E-02	475253.4	3743562.4	481.6	5.00	30.45	1.40
YES								
VOL24	0	0.49001E-02	475138.1	3743563.2	486.4	5.00	30.45	1.40
YES								

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:07:23

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

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
-----	-----
ALL	VOL1 , VOL3 , VOL5 , VOL7 , VOL8 , VOL9 ,
VOL10	, VOL11 ,
	VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 ,
	VOL18 , VOL19 ,
	VOL20 , VOL21 , VOL22 , VOL23 , VOL24 ,

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*** AERMET - VERSION 16216 ***
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*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL URBAN ADJ_U*

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

URBAN ID	URBAN POP	SOURCE IDs
-----	-----	-----
	2189641.	VOL1 , VOL3 , VOL5 , VOL7 , VOL8 ,
	VOL9 , VOL10 ,	
VOL11		
	VOL12 , VOL13 , VOL14 , VOL15 , VOL16 , VOL17 ,	
	VOL18 , VOL19 ,	
	VOL20 , VOL21 , VOL22 , VOL23 , VOL24 ,	

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091

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

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

(475146.6, 3744202.5, 493.9, 493.9, 2.0);	(475113.0, 3744175.7, 495.1, 495.1, 2.0);
(475037.5, 3744171.1, 499.7, 499.7, 2.0);	(475003.3, 3744194.3, 500.8, 513.0, 2.0);
(474973.8, 3744217.1, 503.2, 513.0, 2.0);	(475158.9, 3744265.7, 493.0, 493.0, 2.0);
(475561.0, 3744189.8, 479.1, 479.1, 2.0);	(475620.6, 3744192.9, 478.3, 478.3, 2.0);
(476022.0, 3744121.5, 471.0, 471.0, 2.0);	(476021.4, 3744054.7, 471.9, 471.9, 2.0);
(476034.9, 3743961.1, 471.0, 471.0, 2.0);	(476034.4, 3743833.7, 471.0, 471.0, 2.0);
(475059.3, 3743678.9, 487.3, 487.3, 2.0);	(475048.5, 3743620.0, 488.5, 488.5, 2.0);
(475935.5, 3743551.9, 471.4, 471.4, 2.0);	(475683.5, 3743480.9, 475.3, 475.3, 2.0);
(475443.7, 3743717.1, 477.2, 477.2, 2.0);	(475706.7, 3743746.2, 476.0, 476.0, 2.0);
(475941.5, 3743535.1, 471.0, 471.0, 2.0);	(475815.8, 3743304.0, 476.8, 476.8, 2.0);
(475933.0, 3743505.3, 471.0, 471.0, 2.0);	(475933.8, 3743472.8, 472.1, 472.1, 2.0);
(475940.2, 3743429.0, 472.7, 472.7, 2.0);	(475935.8, 3743407.7, 472.8, 472.8, 2.0);
(475896.4, 3743329.8, 474.2, 474.2, 2.0);	(476014.3, 3743338.2, 473.6, 473.6, 2.0);
(474177.2, 3743537.2, 514.0, 514.0, 2.0);	(474175.6, 3743395.7, 513.0, 513.0, 2.0);
(474176.4, 3743645.1, 512.8, 512.8, 2.0);	(474425.9, 3743758.7, 513.6, 513.6, 2.0);
(474577.7, 3743867.1, 505.1, 505.1, 2.0);	(474590.6, 3743989.2, 512.7, 512.7, 2.0);
(474592.2, 3744075.9, 512.0, 543.0, 2.0);	(474915.5, 3744193.7, 504.6, 519.0, 2.0);
(474841.1, 3744193.1, 511.7, 519.0, 2.0);	(475376.6, 3744371.8, 486.3, 486.3, 2.0);
(475878.5, 3744298.5, 472.7, 472.7, 2.0);	(475682.8, 3744476.5, 473.2, 473.2, 2.0);
(475728.9, 3744369.5, 474.2, 474.2, 2.0);	(473300.3, 3743374.6, 513.4, 513.4, 2.0);
(473285.3, 3743456.1, 514.3, 514.3, 2.0);	(473563.1, 3744593.4, 512.0, 512.0, 2.0);
(473693.9, 3744822.4, 513.9, 513.9, 2.0);	(473729.9, 3744880.8, 514.0, 514.0, 2.0);
(473723.3, 3744920.3, 514.0, 514.0, 2.0);	(477058.5, 3744344.8, 455.0, 455.0, 2.0);
(477121.4, 3744258.3, 455.0, 455.0, 2.0);	

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

[illegible]

```

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

```

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

Surface station no.:	3171	Upper air station no.:	3190
Name:	UNKNOWN	Name:	
UNKNOWN			
Year:	2010	Year:	2010

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS
WD			HT	REF	TA												
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	01	01		1	01	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61	1.00	1.30	
335.			9.1		282.5	5.5											
10	01	01		1	02	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90	
142.			9.1		280.9	5.5											
10	01	01		1	03	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90	

324.	9.1	280.4	5.5											
10 01 01	1 04	-1.3	0.064	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	1.00	0.40		
294.	9.1	278.8	5.5											
10 01 01	1 05	-3.9	0.088	-9.000	-9.000	-999.	62.	15.0	0.19	0.61	1.00	0.90		
205.	9.1	278.1	5.5											
10 01 01	1 06	-1.3	0.065	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	1.00	0.40		
3.	9.1	277.0	5.5											
10 01 01	1 07	-8.0	0.125	-9.000	-9.000	-999.	106.	21.0	0.19	0.61	1.00	1.30		
99.	9.1	277.0	5.5											
10 01 01	1 08	-3.3	0.086	-9.000	-9.000	-999.	61.	16.8	0.19	0.61	0.54	0.90		
319.	9.1	278.8	5.5											
10 01 01	1 09	20.1	0.128	0.307	0.010	49.	110.	-9.0	0.19	0.61	0.33	0.90		
239.	9.1	284.2	5.5											
10 01 01	1 10	56.7	0.087	0.560	0.010	107.	62.	-1.0	0.19	0.61	0.26	0.40		
188.	9.1	289.2	5.5											
10 01 01	1 11	81.5	0.323	0.867	0.008	277.	441.	-35.9	0.19	0.61	0.23	2.70		
310.	9.1	290.9	5.5											
10 01 01	1 12	97.1	0.281	1.058	0.008	421.	357.	-19.7	0.19	0.61	0.22	2.20		
357.	9.1	293.1	5.5											
10 01 01	1 13	92.2	0.279	1.117	0.008	523.	354.	-20.4	0.19	0.61	0.22	2.20		
356.	9.1	293.8	5.5											
10 01 01	1 14	77.6	0.275	1.102	0.008	595.	347.	-23.2	0.19	0.61	0.23	2.20		
50.	9.1	294.2	5.5											
10 01 01	1 15	54.9	0.230	1.006	0.008	640.	266.	-19.2	0.19	0.61	0.27	1.80		
53.	9.1	293.8	5.5											
10 01 01	1 16	12.3	0.206	0.613	0.008	648.	225.	-61.5	0.19	0.61	0.36	1.80		
11.	9.1	292.5	5.5											
10 01 01	1 17	-3.6	0.087	-9.000	-9.000	-999.	71.	15.6	0.19	0.61	0.64	0.90		
351.	9.1	290.4	5.5											
10 01 01	1 18	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	1.00	0.90		
186.	9.1	287.5	5.5											
10 01 01	1 19	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	1.00	0.90		
275.	9.1	285.9	5.5											
10 01 01	1 20	-1.2	0.064	-9.000	-9.000	-999.	39.	18.1	0.19	0.61	1.00	0.40		
181.	9.1	285.4	5.5											
10 01 01	1 21	-7.8	0.125	-9.000	-9.000	-999.	106.	21.3	0.19	0.61	1.00	1.30		
318.	9.1	284.9	5.5											
10 01 01	1 22	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90		
196.	9.1	283.1	5.5											
10 01 01	1 23	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90		
330.	9.1	281.4	5.5											
10 01 01	1 24	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61	1.00	1.30		
332.	9.1	280.9	5.5											

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	5.5	0	-999.	-99.00	282.6	99.0	-99.00	-99.00
10	01	01	01	9.1	1	335.	1.30	-999.0	99.0	-99.00	-99.00

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

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MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

11:07:23

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

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR	
SOURCE GROUP: ALL	***
INCLUDING SOURCE(S):	VOL1 , VOL3 ,
VOL5 , VOL7	, VOL8 ,
VOL9 , VOL10	, VOL11 , VOL12 , VOL13 ,
VOL14 , VOL15	, VOL16 ,
VOL17 , VOL18	, VOL19 , VOL20 , VOL21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD
475146.64	3744202.50	3.52822	(14081420)	475112.97	
3744175.66	3.75908	(11082920)			
475037.46	3744171.11	3.69735	(15091920)	475003.34	
3744194.31	3.44598	(15091920)			
474973.77	3744217.06	3.24721	(15091920)	475158.92	
3744265.73	2.95730	(14072520)			
475561.05	3744189.76	4.23599	(14041207)	475620.65	
3744192.95	4.42725	(14041207)			
476022.00	3744121.55	1.36060	(16040918)	476021.40	
3744054.73	1.40256	(14022617)			
476034.92	3743961.08	1.43144	(14022617)	476034.44	
3743833.66	1.40187	(16082707)			
475059.35	3743678.88	5.25847	(16010616)	475048.50	
3743620.04	4.71497	(16071821)			
475935.55	3743551.90	1.40283	(16050618)	475683.50	
3743480.93	1.33007	(15101507)			
475443.74	3743717.06	5.84394	(14041207)	475706.71	
3743746.17	3.98256	(11091107)			
475941.47	3743535.07	1.33151	(16050618)	475815.76	
3743304.00	0.78528	(16050618)			
475932.99	3743505.26	1.21769	(16050618)	475933.83	
3743472.84	1.10425	(16050618)			
475940.25	3743428.98	0.97466	(16050618)	475935.78	
3743407.74	0.91804	(16050618)			
475896.38	3743329.79	0.76819	(16050618)	476014.30	
3743338.17	0.79759	(16050618)			
474177.19	3743537.24	1.83420	(14090720)	474175.64	
3743395.68	1.86026	(14090220)			
474176.41	3743645.14	1.81730	(15062421)	474425.93	
3743758.69	2.11887	(15071721)			
474577.72	3743867.11	2.38245	(10082104)	474590.57	
3743989.17	2.38215	(10032120)			
474592.18	3744075.89	2.36631	(11080304)	474915.52	
3744193.66	3.11552	(14062720)			
474841.11	3744193.13	2.80813	(11090521)	475376.61	
3744371.75	2.16379	(10071721)			
475878.54	3744298.48	2.10852	(14041207)	475682.76	
3744476.50	1.28602	(14113016)			
475728.87	3744369.46	1.77675	(14041207)	473300.31	
3743374.59	1.15512	(15101321)			
473285.29	3743456.06	1.16803	(15062421)	473563.14	
3744593.37	1.12206	(11090521)			
473693.91	3744822.42	1.12261	(15091920)	473729.89	
3744880.84	1.10943	(10092803)			
473723.32	3744920.30	1.09377	(15102820)	477058.55	
3744344.84	0.27759	(16092818)			
477121.37	3744258.35	0.26040			
(16092818)					

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:07:23

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

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

ALL HIGH 1ST HIGH VALUE IS 5.84394 ON 14041207: AT (475443.74, 3743717.06,
477.21, 477.21, 2.00) DC

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

*** AERMOD - VERSION 22112 *** ** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

*** 11:07:23

PAGE 10

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

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 2028 Informational Message(s)

A Total of 43824 Hours Were Processed

A Total of 978 Calm Hours Identified

A Total of 1050 Missing Hours Identified (2.40 Percent)

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

***** WARNING MESSAGES *****
ME W186 105 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 105 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

*** AERMOD Finishes Successfully ***

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Ops PM10\15091 Ops PM10.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 24
  URBANOPT 2189641 Riverside_County
  POLLUTID PM_10
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Ops PM10.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
** Source Parameters **
SRCPARAM VOL1      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL3      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL5      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL7      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL8      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL9      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL10     0.0030844281   5.000   30.453   1.400
SRCPARAM VOL11     0.0030844281   5.000   30.453   1.400

```

SRCPARAM	VOL12	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL13	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL14	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL15	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL16	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL17	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL18	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL19	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL20	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL21	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL22	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL23	0.0030844281	5.000	30.453	1.400
SRCPARAM	VOL24	0.0030844281	5.000	30.453	1.400

URBANSRC ALL

SRCGROUP ALL

SO FINISHED

**

** AERMOD Receptor Pathway

**

**

RE STARTING

INCLUDED "15091 Ops PM10.rou"

RE FINISHED

**

** AERMOD Meteorology Pathway

**

**

ME STARTING

SURFFILE PERI_V9_ADJU\PERI_v9.SFC

PROFFILE PERI_V9_ADJU\PERI_v9.PFL

SURFDATA 3171 2010

UAIRDATA 3190 2010

SITEDATA 99999 2010

PROFBASE 442.0 METERS

ME FINISHED

**

** AERMOD Output Pathway

**

**

OU STARTING

RECTABLE ALLAVE 1ST

RECTABLE 24 1ST

** Auto-Generated Plotfiles

PLOTFILE 24 ALL 1ST "15091 OPS PM10.AD\24H1GALL.PLT" 31

SUMMFILE "15091 Ops PM10.sum"

OU FINISHED

**

** Project Parameters

** PROJCTN CoordinateSystemUTM

** DESCPTN UTM: Universal Transverse Mercator

** DATUM North American Datum 1983

** DTMRGN CONUS

** UNITS m

** ZONE 11

** ZONEINX 0

**

```

** Lakes Environmental AERMOD MPI
**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Ops PM10\15091 Ops PM10.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 24
  URBANOPT 2189641 Riverside_County
  POLLUTID PM_10
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Ops PM10.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
** Source Parameters **
SRCPARAM VOL1      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL3      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL5      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL7      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL8      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL9      0.0030844281   5.000   30.453   1.400
SRCPARAM VOL10     0.0030844281   5.000   30.453   1.400

```

SRCPARAM VOL11	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL12	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL13	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL14	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL15	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL16	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL17	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL18	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL19	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL20	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL21	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL22	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL23	0.0030844281	5.000	30.453	1.400
SRCPARAM VOL24	0.0030844281	5.000	30.453	1.400
URBANSRC ALL				
SRCGROUP ALL				

SO FINISHED

** AERMOD Receptor Pathway

**
**

RE STARTING

INCLUDED "15091 Ops PM10.rou"

RE FINISHED

** AERMOD Meteorology Pathway

**
**

ME STARTING

SURFFILE PERI_V9_ADJU\PERI_v9.SFC

PROFFILE PERI_V9_ADJU\PERI_v9.PFL

SURFDATA 3171 2010

UAIRDATA 3190 2010

SITEDATA 99999 2010

PROFBASE 442.0 METERS

ME FINISHED

** AERMOD Output Pathway

**
**

OU STARTING

RECTABLE ALLAVE 1ST

RECTABLE 24 1ST

** Auto-Generated Plotfiles

PLOTFILE 24 ALL 1ST "15091 OPS PM10.AD\24H1GALL.PLT" 31

SUMMFILE "15091 Ops PM10.sum"

OU FINISHED

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

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

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

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

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

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

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

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

```

**Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =   442.00 ;  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:
```

aermod.inp

```
**Output Print File:
```

aermod.out

**Detailed Error/Message File: 15091 Ops

PM10.err

```
**File for Summary of Results: 15091 Ops
```

PM10.sum

```
*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
```

*** AERMET - VERSION 16216 ***

* * *

* * *

11:08:09

PAGE 2

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

*** VOLUME SOURCE DATA ***

[illegible]

VOL1	0	0.30844E-02	475367.6	3743682.7	478.1	5.00	30.45	1.40
YES								
VOL3	0	0.30844E-02	475255.4	3743684.0	480.6	5.00	30.45	1.40
YES								
VOL5	0	0.30844E-02	475140.2	3743684.8	484.4	5.00	30.45	1.40
YES								
VOL7	0	0.30844E-02	475257.3	3744055.7	486.4	5.00	30.45	1.40
YES								
VOL8	0	0.30844E-02	475373.8	3744055.1	482.3	5.00	30.45	1.40
YES								
VOL9	0	0.30844E-02	475492.1	3744055.7	481.9	5.00	30.45	1.40
YES								
VOL10	0	0.30844E-02	475604.8	3744057.6	478.9	5.00	30.45	1.40
YES								
VOL11	0	0.30844E-02	475713.1	3744058.8	476.7	5.00	30.45	1.40
YES								
VOL12	0	0.30844E-02	475604.3	3743955.3	479.0	5.00	30.45	1.40
YES								
VOL13	0	0.30844E-02	475712.6	3743956.6	477.2	5.00	30.45	1.40
YES								
VOL14	0	0.30844E-02	475256.8	3743953.5	485.8	5.00	30.45	1.40
YES								

VOL15	0	0.30844E-02	475373.2	3743952.8	483.5	5.00	30.45	1.40
YES								
VOL16	0	0.30844E-02	475491.6	3743953.5	481.6	5.00	30.45	1.40
YES								
VOL17	0	0.30844E-02	475603.0	3743859.0	478.7	5.00	30.45	1.40
YES								
VOL18	0	0.30844E-02	475711.3	3743860.3	476.3	5.00	30.45	1.40
YES								
VOL19	0	0.30844E-02	475255.5	3743857.1	483.5	5.00	30.45	1.40
YES								
VOL20	0	0.30844E-02	475372.0	3743856.5	481.0	5.00	30.45	1.40
YES								
VOL21	0	0.30844E-02	475490.3	3743857.1	478.8	5.00	30.45	1.40
YES								
VOL22	0	0.30844E-02	475365.5	3743561.1	476.8	5.00	30.45	1.40
YES								
VOL23	0	0.30844E-02	475253.4	3743562.4	481.6	5.00	30.45	1.40
YES								
VOL24	0	0.30844E-02	475138.1	3743563.2	486.4	5.00	30.45	1.40
YES								

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:08:09

```

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

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs							
-----	-----							
ALL	VOL1	, VOL3	, VOL5	, VOL7	, VOL8	, VOL9	,	
VOL10	, VOL11	,						
	VOL12	, VOL13	, VOL14	, VOL15	, VOL16	, VOL17	,	
	VOL18	, VOL19	,					
	VOL20	, VOL21	, VOL22	, VOL23	, VOL24	,		

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***                  08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:08:09

```

PAGE 4

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

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

URBAN ID	URBAN POP	SOURCE IDs						
-----	-----	-----						
	2189641.	VOL1	, VOL3	, VOL5	, VOL7	, VOL8	,	
	VOL9	, VOL10	,					
VOL11	,							
	VOL12	, VOL13	, VOL14	, VOL15	, VOL16	, VOL17	,	
	VOL18	, VOL19	,					
	VOL20	, VOL21	, VOL22	, VOL23	, VOL24	,		

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091

```


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

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

(475146.6, 3744202.5, 493.9, 493.9, 2.0);	(475113.0, 3744175.7, 495.1, 495.1, 2.0);
(475037.5, 3744171.1, 499.7, 499.7, 2.0);	(475003.3, 3744194.3, 500.8, 513.0, 2.0);
(474973.8, 3744217.1, 503.2, 513.0, 2.0);	(475158.9, 3744265.7, 493.0, 493.0, 2.0);
(475561.0, 3744189.8, 479.1, 479.1, 2.0);	(475620.6, 3744192.9, 478.3, 478.3, 2.0);
(476022.0, 3744121.5, 471.0, 471.0, 2.0);	(476021.4, 3744054.7, 471.9, 471.9, 2.0);
(476034.9, 3743961.1, 471.0, 471.0, 2.0);	(476034.4, 3743833.7, 471.0, 471.0, 2.0);
(475059.3, 3743678.9, 487.3, 487.3, 2.0);	(475048.5, 3743620.0, 488.5, 488.5, 2.0);
(475935.5, 3743551.9, 471.4, 471.4, 2.0);	(475683.5, 3743480.9, 475.3, 475.3, 2.0);
(475443.7, 3743717.1, 477.2, 477.2, 2.0);	(475706.7, 3743746.2, 476.0, 476.0, 2.0);
(475941.5, 3743535.1, 471.0, 471.0, 2.0);	(475815.8, 3743304.0, 476.8, 476.8, 2.0);
(475933.0, 3743505.3, 471.0, 471.0, 2.0);	(475933.8, 3743472.8, 472.1, 472.1, 2.0);
(475940.2, 3743429.0, 472.7, 472.7, 2.0);	(475935.8, 3743407.7, 472.8, 472.8, 2.0);
(475896.4, 3743329.8, 474.2, 474.2, 2.0);	(476014.3, 3743338.2, 473.6, 473.6, 2.0);
(474177.2, 3743537.2, 514.0, 514.0, 2.0);	(474175.6, 3743395.7, 513.0, 513.0, 2.0);
(474176.4, 3743645.1, 512.8, 512.8, 2.0);	(474425.9, 3743758.7, 513.6, 513.6, 2.0);
(474577.7, 3743867.1, 505.1, 505.1, 2.0);	(474590.6, 3743989.2, 512.7, 512.7, 2.0);
(474592.2, 3744075.9, 512.0, 543.0, 2.0);	(474915.5, 3744193.7, 504.6, 519.0, 2.0);
(474841.1, 3744193.1, 511.7, 519.0, 2.0);	(475376.6, 3744371.8, 486.3, 486.3, 2.0);
(475878.5, 3744298.5, 472.7, 472.7, 2.0);	(475682.8, 3744476.5, 473.2, 473.2, 2.0);
(475728.9, 3744369.5, 474.2, 474.2, 2.0);	(473300.3, 3743374.6, 513.4, 513.4, 2.0);
(473285.3, 3743456.1, 514.3, 514.3, 2.0);	(473563.1, 3744593.4, 512.0, 512.0, 2.0);
(473693.9, 3744822.4, 513.9, 513.9, 2.0);	(473729.9, 3744880.8, 514.0, 514.0, 2.0);
(473723.3, 3744920.3, 514.0, 514.0, 2.0);	(477058.5, 3744344.8, 455.0, 455.0, 2.0);
(477121.4, 3744258.3, 455.0, 455.0, 2.0);	

PAGE 6

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

[illegible]

```

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

```

PAGE 7

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

Surface station no.:	3171	Upper air station no.:	3190
Name:	UNKNOWN	Name:	
UNKNOWN			
Year:	2010	Year:	2010

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS
WD			HT	REF	TA												
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	01	01		1	01	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61	1.00	1.30	
335.			9.1		282.5	5.5											
10	01	01		1	02	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90	
142.			9.1		280.9	5.5											
10	01	01		1	03	-3.9	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90	

324.	9.1	280.4	5.5												
10	01	01	1	04	-1.3	0.064	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	1.00	0.40
294.	9.1	278.8	5.5												
10	01	01	1	05	-3.9	0.088	-9.000	-9.000	-999.	62.	15.0	0.19	0.61	1.00	0.90
205.	9.1	278.1	5.5												
10	01	01	1	06	-1.3	0.065	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	1.00	0.40
3.	9.1	277.0	5.5												
10	01	01	1	07	-8.0	0.125	-9.000	-9.000	-999.	106.	21.0	0.19	0.61	1.00	1.30
99.	9.1	277.0	5.5												
10	01	01	1	08	-3.3	0.086	-9.000	-9.000	-999.	61.	16.8	0.19	0.61	0.54	0.90
319.	9.1	278.8	5.5												
10	01	01	1	09	20.1	0.128	0.307	0.010	49.	110.	-9.0	0.19	0.61	0.33	0.90
239.	9.1	284.2	5.5												
10	01	01	1	10	56.7	0.087	0.560	0.010	107.	62.	-1.0	0.19	0.61	0.26	0.40
188.	9.1	289.2	5.5												
10	01	01	1	11	81.5	0.323	0.867	0.008	277.	441.	-35.9	0.19	0.61	0.23	2.70
310.	9.1	290.9	5.5												
10	01	01	1	12	97.1	0.281	1.058	0.008	421.	357.	-19.7	0.19	0.61	0.22	2.20
357.	9.1	293.1	5.5												
10	01	01	1	13	92.2	0.279	1.117	0.008	523.	354.	-20.4	0.19	0.61	0.22	2.20
356.	9.1	293.8	5.5												
10	01	01	1	14	77.6	0.275	1.102	0.008	595.	347.	-23.2	0.19	0.61	0.23	2.20
50.	9.1	294.2	5.5												
10	01	01	1	15	54.9	0.230	1.006	0.008	640.	266.	-19.2	0.19	0.61	0.27	1.80
53.	9.1	293.8	5.5												
10	01	01	1	16	12.3	0.206	0.613	0.008	648.	225.	-61.5	0.19	0.61	0.36	1.80
11.	9.1	292.5	5.5												
10	01	01	1	17	-3.6	0.087	-9.000	-9.000	-999.	71.	15.6	0.19	0.61	0.64	0.90
351.	9.1	290.4	5.5												
10	01	01	1	18	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	1.00	0.90
186.	9.1	287.5	5.5												
10	01	01	1	19	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	1.00	0.90
275.	9.1	285.9	5.5												
10	01	01	1	20	-1.2	0.064	-9.000	-9.000	-999.	39.	18.1	0.19	0.61	1.00	0.40
181.	9.1	285.4	5.5												
10	01	01	1	21	-7.8	0.125	-9.000	-9.000	-999.	106.	21.3	0.19	0.61	1.00	1.30
318.	9.1	284.9	5.5												
10	01	01	1	22	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90
196.	9.1	283.1	5.5												
10	01	01	1	23	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90
330.	9.1	281.4	5.5												
10	01	01	1	24	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61	1.00	1.30
332.	9.1	280.9	5.5												

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	5.5	0	-999.	-99.00	282.6	99.0	-99.00	-99.00
10	01	01	01	9.1	1	335.	1.30	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

*** 11:08:09

PAGE 8

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

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR
SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL3 ,
VOL5 , VOL7 , VOL8 ,
VOL9 , VOL10 , VOL11 , VOL12 , VOL13 ,
VOL14 , VOL15 , VOL16 ,
VOL17 , VOL18 , VOL19 , VOL20 , VOL21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM₁₀ IN
MICROGRAMS/M³ **

X-COORD (M) (M)	Y-COORD (M) CONC (YYMMDDHH)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD
475146.64	3744202.50	1.08027m (10121824)	475112.97	
3744175.66	0.98139 (15031824)			
475037.46	3744171.11	0.76796 (11121224)	475003.34	
3744194.31	0.68843m (16123124)			
474973.77	3744217.06	0.63908m (16123124)	475158.92	
3744265.73	0.96297m (10121824)			
475561.05	3744189.76	1.23159c (14121524)	475620.65	
3744192.95	1.15443 (11111924)			
476022.00	3744121.55	0.38344c (14121524)	476021.40	
3744054.73	0.41206c (14121524)			
476034.92	3743961.08	0.41078m (16031424)	476034.44	
3743833.66	0.40068m (16031424)			
475059.35	3743678.88	1.49551c (14120324)	475048.50	
3743620.04	1.31863c (14120324)			
475935.55	3743551.90	0.36327b (14111524)	475683.50	
3743480.93	0.50726m (16031424)			
475443.74	3743717.06	2.00421c (14121524)	475706.71	
3743746.17	1.24406c (14121524)			
475941.47	3743535.07	0.34829b (14111524)	475815.76	
3743304.00	0.27976b (14111524)			
475932.99	3743505.26	0.33597b (14111524)	475933.83	
3743472.84	0.31760b (14111524)			
475940.25	3743428.98	0.29202b (14111524)	475935.78	
3743407.74	0.28390b (14111524)			
475896.38	3743329.79	0.26370b (14111524)	476014.30	
3743338.17	0.22827b (14111524)			
474177.19	3743537.24	0.18353c (14120324)	474175.64	
3743395.68	0.19777c (14120324)			
474176.41	3743645.14	0.16588 (11010224)	474425.93	
3743758.69	0.20980c (14120324)			
474577.72	3743867.11	0.28549 (11010224)	474590.57	
3743989.17	0.27677 (14040424)			
474592.18	3744075.89	0.30707 (14040424)	474915.52	
3744193.66	0.52378m (16123124)			
474841.11	3744193.13	0.39649 (11121224)	475376.61	
3744371.75	0.73329b (10121924)			
475878.54	3744298.48	0.41310 (15122224)	475682.76	
3744476.50	0.35341 (11111924)			
475728.87	3744369.46	0.44478 (11111924)	473300.31	
3743374.59	0.09089m (10090624)			
473285.29	3743456.06	0.08651m (10090624)	473563.14	
3744593.37	0.09896c (10030124)			
473693.91	3744822.42	0.10564m (10042324)	473729.89	
3744880.84	0.11953m (10042324)			
473723.32	3744920.30	0.12370m (10042324)	477058.55	
3744344.84	0.06324c (14121524)			
477121.37	3744258.35	0.06082c (14121524)		

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:08:09

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM₁₀ IN
MICROGRAMS/M³

**

GROUP ID	DATE	AVERAGE CONC	RECEPTOR	NETWORK
ZELEV, ZHILL, ZFLAG)	(YYMMDDHH)	GRID-ID	(XR, YR,	
ALL HIGH 1ST HIGH VALUE IS	2.00421c ON 14121524: AT (	475443.74,	3743717.06,	
477.21, 477.21, 2.00) DC				

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

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

*** 11:08:09

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

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 2028 Informational Message(s)

A Total of 43824 Hours Were Processed

A Total of 978 Calm Hours Identified

A Total of 1050 Missing Hours Identified (2.40 Percent)

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

***** WARNING MESSAGES *****
ME W186 105 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 105 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

*** AERMOD Finishes Successfully ***

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Ops PM25\15091 Ops PM25.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 24
  URBANOPT 2189641 Riverside_County
  POLLUTID PM_2.5
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Ops PM25.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
** Source Parameters **
SRCPARAM VOL1      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL3      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL5      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL7      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL8      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL9      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL10     0.0008819852   5.000   30.453   1.400
SRCPARAM VOL11     0.0008819852   5.000   30.453   1.400

```

SRCPARAM	VOL12	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL13	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL14	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL15	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL16	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL17	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL18	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL19	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL20	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL21	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL22	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL23	0.0008819852	5.000	30.453	1.400
SRCPARAM	VOL24	0.0008819852	5.000	30.453	1.400
URBANSRC	ALL				
SRCGROUP	ALL				

SO FINISHED

**

** AERMOD Receptor Pathway

**

**

RE STARTING

INCLUDED "15091 Ops PM25.rou"

RE FINISHED

**

** AERMOD Meteorology Pathway

**

**

ME STARTING

SURFFILE PERI_V9_ADJU\PERI_v9.SFC

PROFFILE PERI_V9_ADJU\PERI_v9.PFL

SURFDATA 3171 2010

UAIRDATA 3190 2010

SITEDATA 99999 2010

PROFBASE 442.0 METERS

ME FINISHED

**

** AERMOD Output Pathway

**

**

OU STARTING

RECTABLE ALLAVE 1ST

RECTABLE 24 1ST

** Auto-Generated Plotfiles

PLOTFILE 24 ALL 1ST "15091 OPS PM25.AD\24H1GALL.PLT" 31

SUMMFILE "15091 Ops PM25.sum"

OU FINISHED

**

** Project Parameters

** PROJCTN CoordinateSystemUTM

** DESCPTN UTM: Universal Transverse Mercator

** DATUM North American Datum 1983

** DTMRGN CONUS

** UNITS m

** ZONE 11

** ZONEINX 0

**

```

** Lakes Environmental AERMOD MPI
**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 11.2.0
** Lakes Environmental Software Inc.
** Date: 8/18/2023
** File: C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 Ops PM25\15091 Ops PM25.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091 MVCC\15091 MVC
  MODELOPT DFAULT CONC
  AVERTIME 24
  URBANOPT 2189641 Riverside_County
  POLLUTID PM_2.5
  FLAGPOLE 2.00
  RUNORNOT RUN
  ERRORFIL "15091 Ops PM25.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
LOCATION VOL1      VOLUME      475367.587   3743682.707   478.060
LOCATION VOL3      VOLUME      475255.408   3743684.018   480.550
LOCATION VOL5      VOLUME      475140.193   3743684.832   484.370
LOCATION VOL7      VOLUME      475257.277   3744055.697   486.420
LOCATION VOL8      VOLUME      475373.751   3744055.067   482.330
LOCATION VOL9      VOLUME      475492.113   3744055.697   481.870
LOCATION VOL10     VOLUME      475604.809   3744057.586   478.940
LOCATION VOL11     VOLUME      475713.098   3744058.845   476.670
LOCATION VOL12     VOLUME      475604.306   3743955.341   479.000
LOCATION VOL13     VOLUME      475712.595   3743956.600   477.240
LOCATION VOL14     VOLUME      475256.773   3743953.452   485.790
LOCATION VOL15     VOLUME      475373.247   3743952.822   483.490
LOCATION VOL16     VOLUME      475491.610   3743953.452   481.550
LOCATION VOL17     VOLUME      475603.047   3743859.014   478.680
LOCATION VOL18     VOLUME      475711.336   3743860.273   476.280
LOCATION VOL19     VOLUME      475255.514   3743857.125   483.480
LOCATION VOL20     VOLUME      475371.988   3743856.495   481.000
LOCATION VOL21     VOLUME      475490.350   3743857.125   478.750
LOCATION VOL22     VOLUME      475365.538   3743561.053   476.820
LOCATION VOL23     VOLUME      475253.359   3743562.364   481.610
LOCATION VOL24     VOLUME      475138.144   3743563.178   486.390
** Source Parameters **
SRCPARAM VOL1      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL3      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL5      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL7      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL8      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL9      0.0008819852   5.000   30.453   1.400
SRCPARAM VOL10     0.0008819852   5.000   30.453   1.400

```



```
SRCPARAM VOL11      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL12      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL13      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL14      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL15      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL16      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL17      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL18      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL19      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL20      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL21      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL22      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL23      0.0008819852      5.000      30.453      1.400
SRCPARAM VOL24      0.0008819852      5.000      30.453      1.400
URBANSRC ALL
SRCGROUP ALL
```

SO FINISHED

**

** AERMOD Receptor Pathway

**
**

RE STARTING

INCLUDED "15091 Ops PM25.rou"

RE FINISHED

**

** AERMOD Meteorology Pathway

**
**

ME STARTING

SURFFILE PERI_V9_ADJU\PERI_v9.SFC

PROFFILE PERI_V9_ADJU\PERI_v9.PFL

SURFDATA 3171 2010

UAIRDATA 3190 2010

SITEDATA 99999 2010

PROFBASE 442.0 METERS

ME FINISHED

**

** AERMOD Output Pathway

**
**

OU STARTING

RECTABLE ALLAVE 1ST

RECTABLE 24 1ST

** Auto-Generated Plotfiles

PLOTFILE 24 ALL 1ST "15091 OPS PM25.AD\24H1GALL.PLT" 31

SUMMFILE "15091 Ops PM25.sum"

OU FINISHED

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

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

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

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

ME W186	105	MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used	0.50
ME W187	105	MEOPEN: ADJ U* Option for Stable Low Winds used in AERMET	

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

```

FF *** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAS\15091 MVCC\15091
MVCC\15091 MVC ***                      08/18/23
*** AERMET - VERSION 16216 ***
***                                     *** 11:08:58

```

```

*** MODELOPTs:      PAGE      1
                    RegDFault  CONC  ELEV  FLGPOL  URBAN  ADJ  U*

```

*** MODEL SETUP OPTIONS SUMMARY ***

```

** Model Options Selected:

```

```

* Model Uses Regulatory DEFAULT Options
* Model Is Setup For Calculation of Average CONCentration Values.
* NO GAS DEPOSITION Data Provided.
* NO PARTICLE DEPOSITION Data Provided.
* Model Uses NO DRY DEPLETION. DDPLETE = F
* Model Uses NO WET DEPLETION. WETDPLT = F
* Stack-tip Downwash.
* Model Accounts for ELEVated Terrain Effects.
* Use Calms Processing Routine.
* Use Missing Data Processing Routine.
* No Exponential Decay.
* Model Uses URBAN Dispersion Algorithm for the SBL for      21 Source(s),
  for Total of      1 Urban Area(s):
Urban Population =    2189641.0 ; Urban Roughness Length =  1.000 m
* Urban Roughness Length of 1.0 Meter Used.
* 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: PM 2.5

```

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

****This Run Includes:** 21 Source(s); 1 Source Group(s); and 47 Receptor(s)

```

with:      0 POINT(s), including
           0 POINTCAP(s) and      0 POINTHOR(s)
and:      21 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)
and:      0 SWPOINT source(s)

```

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

**The AERMET Input Meteorological Data Version Date: 16216

```

**Output Options Selected:

```

Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

VOL15	0	0.88199E-03	475373.2	3743952.8	483.5	5.00	30.45	1.40
YES								
VOL16	0	0.88199E-03	475491.6	3743953.5	481.6	5.00	30.45	1.40
YES								
VOL17	0	0.88199E-03	475603.0	3743859.0	478.7	5.00	30.45	1.40
YES								
VOL18	0	0.88199E-03	475711.3	3743860.3	476.3	5.00	30.45	1.40
YES								
VOL19	0	0.88199E-03	475255.5	3743857.1	483.5	5.00	30.45	1.40
YES								
VOL20	0	0.88199E-03	475372.0	3743856.5	481.0	5.00	30.45	1.40
YES								
VOL21	0	0.88199E-03	475490.3	3743857.1	478.8	5.00	30.45	1.40
YES								
VOL22	0	0.88199E-03	475365.5	3743561.1	476.8	5.00	30.45	1.40
YES								
VOL23	0	0.88199E-03	475253.4	3743562.4	481.6	5.00	30.45	1.40
YES								
VOL24	0	0.88199E-03	475138.1	3743563.2	486.4	5.00	30.45	1.40
YES								

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***      08/18/23
*** AERMET - VERSION 16216 ***
***                                     ***      11:08:58

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

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs							
-----	-----							
ALL	VOL1	, VOL3	, VOL5	, VOL7	, VOL8	, VOL9	,	
VOL10	, VOL11	,						
	VOL12	, VOL13	, VOL14	, VOL15	, VOL16	, VOL17	,	
	VOL18	, VOL19	,					
	VOL20	, VOL21	, VOL22	, VOL23	, VOL24	,		

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC ***      08/18/23
*** AERMET - VERSION 16216 ***
***                                     ***      11:08:58

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

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

URBAN ID	URBAN POP	SOURCE IDs						
-----	-----	-----						
	2189641.	VOL1	, VOL3	, VOL5	, VOL7	, VOL8	,	
	VOL9	, VOL10	,					
VOL11	,							
	VOL12	, VOL13	, VOL14	, VOL15	, VOL16	, VOL17	,	
	VOL18	, VOL19	,					
	VOL20	, VOL21	, VOL22	, VOL23	, VOL24	,		

```

*** AERMOD - VERSION 22112 ***      *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091

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

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

(475146.6, 3744202.5, 493.9, 493.9, 2.0);	(475113.0, 3744175.7, 495.1, 495.1, 2.0);
(475037.5, 3744171.1, 499.7, 499.7, 2.0);	(475003.3, 3744194.3, 500.8, 513.0, 2.0);
(474973.8, 3744217.1, 503.2, 513.0, 2.0);	(475158.9, 3744265.7, 493.0, 493.0, 2.0);
(475561.0, 3744189.8, 479.1, 479.1, 2.0);	(475620.6, 3744192.9, 478.3, 478.3, 2.0);
(476022.0, 3744121.5, 471.0, 471.0, 2.0);	(476021.4, 3744054.7, 471.9, 471.9, 2.0);
(476034.9, 3743961.1, 471.0, 471.0, 2.0);	(476034.4, 3743833.7, 471.0, 471.0, 2.0);
(475059.3, 3743678.9, 487.3, 487.3, 2.0);	(475048.5, 3743620.0, 488.5, 488.5, 2.0);
(475935.5, 3743551.9, 471.4, 471.4, 2.0);	(475683.5, 3743480.9, 475.3, 475.3, 2.0);
(475443.7, 3743717.1, 477.2, 477.2, 2.0);	(475706.7, 3743746.2, 476.0, 476.0, 2.0);
(475941.5, 3743535.1, 471.0, 471.0, 2.0);	(475815.8, 3743304.0, 476.8, 476.8, 2.0);
(475933.0, 3743505.3, 471.0, 471.0, 2.0);	(475933.8, 3743472.8, 472.1, 472.1, 2.0);
(475940.2, 3743429.0, 472.7, 472.7, 2.0);	(475935.8, 3743407.7, 472.8, 472.8, 2.0);
(475896.4, 3743329.8, 474.2, 474.2, 2.0);	(476014.3, 3743338.2, 473.6, 473.6, 2.0);
(474177.2, 3743537.2, 514.0, 514.0, 2.0);	(474175.6, 3743395.7, 513.0, 513.0, 2.0);
(474176.4, 3743645.1, 512.8, 512.8, 2.0);	(474425.9, 3743758.7, 513.6, 513.6, 2.0);
(474577.7, 3743867.1, 505.1, 505.1, 2.0);	(474590.6, 3743989.2, 512.7, 512.7, 2.0);
(474592.2, 3744075.9, 512.0, 543.0, 2.0);	(474915.5, 3744193.7, 504.6, 519.0, 2.0);
(474841.1, 3744193.1, 511.7, 519.0, 2.0);	(475376.6, 3744371.8, 486.3, 486.3, 2.0);
(475878.5, 3744298.5, 472.7, 472.7, 2.0);	(475682.8, 3744476.5, 473.2, 473.2, 2.0);
(475728.9, 3744369.5, 474.2, 474.2, 2.0);	(473300.3, 3743374.6, 513.4, 513.4, 2.0);
(473285.3, 3743456.1, 514.3, 514.3, 2.0);	(473563.1, 3744593.4, 512.0, 512.0, 2.0);
(473693.9, 3744822.4, 513.9, 513.9, 2.0);	(473729.9, 3744880.8, 514.0, 514.0, 2.0);
(473723.3, 3744920.3, 514.0, 514.0, 2.0);	(477058.5, 3744344.8, 455.0, 455.0, 2.0);
(477121.4, 3744258.3, 455.0, 455.0, 2.0);	

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

[illegible]

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

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

Surface station no.:	3171	Upper air station no.:	3190
Name:	UNKNOWN	Name:	
	UNKNOWN		
Year:	2010	Year:	2010

First 24 hours of scalar data																	
YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS
WD				HT	REF	TA											
10	01	01	1	01	-7.9	0.125	-9.000	-9.000	-999.	106.		21.2	0.19	0.61	1.00	1.30	
335.			9.1	282.5	5.5												
10	01	01	1	02	-3.9	0.088	-9.000	-9.000	-999.	62.		15.1	0.19	0.61	1.00	0.90	
142.			9.1	280.9	5.5												
10	01	01	1	03	-3.9	0.088	-9.000	-9.000	-999.	62.		15.1	0.19	0.61	1.00	0.90	

324.	9.1	280.4	5.5												
10	01	01	1	04	-1.3	0.064	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	1.00	0.40
294.	9.1	278.8	5.5												
10	01	01	1	05	-3.9	0.088	-9.000	-9.000	-999.	62.	15.0	0.19	0.61	1.00	0.90
205.	9.1	278.1	5.5												
10	01	01	1	06	-1.3	0.065	-9.000	-9.000	-999.	39.	18.3	0.19	0.61	1.00	0.40
3.	9.1	277.0	5.5												
10	01	01	1	07	-8.0	0.125	-9.000	-9.000	-999.	106.	21.0	0.19	0.61	1.00	1.30
99.	9.1	277.0	5.5												
10	01	01	1	08	-3.3	0.086	-9.000	-9.000	-999.	61.	16.8	0.19	0.61	0.54	0.90
319.	9.1	278.8	5.5												
10	01	01	1	09	20.1	0.128	0.307	0.010	49.	110.	-9.0	0.19	0.61	0.33	0.90
239.	9.1	284.2	5.5												
10	01	01	1	10	56.7	0.087	0.560	0.010	107.	62.	-1.0	0.19	0.61	0.26	0.40
188.	9.1	289.2	5.5												
10	01	01	1	11	81.5	0.323	0.867	0.008	277.	441.	-35.9	0.19	0.61	0.23	2.70
310.	9.1	290.9	5.5												
10	01	01	1	12	97.1	0.281	1.058	0.008	421.	357.	-19.7	0.19	0.61	0.22	2.20
357.	9.1	293.1	5.5												
10	01	01	1	13	92.2	0.279	1.117	0.008	523.	354.	-20.4	0.19	0.61	0.22	2.20
356.	9.1	293.8	5.5												
10	01	01	1	14	77.6	0.275	1.102	0.008	595.	347.	-23.2	0.19	0.61	0.23	2.20
50.	9.1	294.2	5.5												
10	01	01	1	15	54.9	0.230	1.006	0.008	640.	266.	-19.2	0.19	0.61	0.27	1.80
53.	9.1	293.8	5.5												
10	01	01	1	16	12.3	0.206	0.613	0.008	648.	225.	-61.5	0.19	0.61	0.36	1.80
11.	9.1	292.5	5.5												
10	01	01	1	17	-3.6	0.087	-9.000	-9.000	-999.	71.	15.6	0.19	0.61	0.64	0.90
351.	9.1	290.4	5.5												
10	01	01	1	18	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	1.00	0.90
186.	9.1	287.5	5.5												
10	01	01	1	19	-3.8	0.087	-9.000	-9.000	-999.	62.	15.2	0.19	0.61	1.00	0.90
275.	9.1	285.9	5.5												
10	01	01	1	20	-1.2	0.064	-9.000	-9.000	-999.	39.	18.1	0.19	0.61	1.00	0.40
181.	9.1	285.4	5.5												
10	01	01	1	21	-7.8	0.125	-9.000	-9.000	-999.	106.	21.3	0.19	0.61	1.00	1.30
318.	9.1	284.9	5.5												
10	01	01	1	22	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90
196.	9.1	283.1	5.5												
10	01	01	1	23	-3.8	0.088	-9.000	-9.000	-999.	62.	15.1	0.19	0.61	1.00	0.90
330.	9.1	281.4	5.5												
10	01	01	1	24	-7.9	0.125	-9.000	-9.000	-999.	106.	21.2	0.19	0.61	1.00	1.30
332.	9.1	280.9	5.5												

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
10	01	01	01	5.5	0	-999.	-99.00	282.6	99.0	-99.00	-99.00
10	01	01	01	9.1	1	335.	1.30	-999.0	99.0	-99.00	-99.00

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

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23

*** AERMET - VERSION 16216 ***

11:08:58

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

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR
SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): VOL1 , VOL3 ,
VOL5 , VOL7 , VOL8 ,
VOL9 , VOL10 , VOL11 , VOL12 , VOL13 ,
VOL14 , VOL15 , VOL16 ,
VOL17 , VOL18 , VOL19 , VOL20 , VOL21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_{2.5} IN
MICROGRAMS/M³ **

X-COORD (M) (M)	Y-COORD (M) CONC (YYMMDDHH)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD
475146.64	3744202.50	0.30890m (10121824)	475112.97	
3744175.66	0.28063 (15031824)			
475037.46	3744171.11	0.21960 (11121224)	475003.34	
3744194.31	0.19686m (16123124)			
474973.77	3744217.06	0.18274m (16123124)	475158.92	
3744265.73	0.27536m (10121824)			
475561.05	3744189.76	0.35217c (14121524)	475620.65	
3744192.95	0.33011 (11111924)			
476022.00	3744121.55	0.10964c (14121524)	476021.40	
3744054.73	0.11783c (14121524)			
476034.92	3743961.08	0.11746m (16031424)	476034.44	
3743833.66	0.11457m (16031424)			
475059.35	3743678.88	0.42764c (14120324)	475048.50	
3743620.04	0.37706c (14120324)			
475935.55	3743551.90	0.10387b (14111524)	475683.50	
3743480.93	0.14505m (16031424)			
475443.74	3743717.06	0.57310c (14121524)	475706.71	
3743746.17	0.35574c (14121524)			
475941.47	3743535.07	0.09959b (14111524)	475815.76	
3743304.00	0.08000b (14111524)			
475932.99	3743505.26	0.09607b (14111524)	475933.83	
3743472.84	0.09082b (14111524)			
475940.25	3743428.98	0.08350b (14111524)	475935.78	
3743407.74	0.08118b (14111524)			
475896.38	3743329.79	0.07541b (14111524)	476014.30	
3743338.17	0.06527b (14111524)			
474177.19	3743537.24	0.05248c (14120324)	474175.64	
3743395.68	0.05655c (14120324)			
474176.41	3743645.14	0.04743 (11010224)	474425.93	
3743758.69	0.05999c (14120324)			
474577.72	3743867.11	0.08163 (11010224)	474590.57	
3743989.17	0.07914 (14040424)			
474592.18	3744075.89	0.08780 (14040424)	474915.52	
3744193.66	0.14977m (16123124)			
474841.11	3744193.13	0.11338 (11121224)	475376.61	
3744371.75	0.20968b (10121924)			
475878.54	3744298.48	0.11813 (15122224)	475682.76	
3744476.50	0.10106 (11111924)			
475728.87	3744369.46	0.12718 (11111924)	473300.31	
3743374.59	0.02599m (10090624)			
473285.29	3743456.06	0.02474m (10090624)	473563.14	
3744593.37	0.02830c (10030124)			
473693.91	3744822.42	0.03021m (10042324)	473729.89	
3744880.84	0.03418m (10042324)			
473723.32	3744920.30	0.03537m (10042324)	477058.55	
3744344.84	0.01808c (14121524)			
477121.37	3744258.35	0.01739c (14121524)		

*** AERMOD - VERSION 22112 *** ** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:08:58

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM_{2.5} IN
MICROGRAMS/M³

**

GROUP ID	DATE	AVERAGE CONC	RECEPTOR	NETWORK
ZELEV, ZHILL, ZFLAG)	(YYMMDDHH)	GRID-ID	(XR, YR,	
ALL HIGH 1ST HIGH VALUE IS	0.57310c ON 14121524: AT (	475443.74,	3743717.06,	
477.21, 477.21, 2.00) DC				

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

*** AERMOD - VERSION 22112 *** C:\Users\Michael Tirohn\Desktop\HRAs\15091 MVCC\15091
MVCC\15091 MVC *** 08/18/23
*** AERMET - VERSION 16216 ***
*** 11:08:58

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

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

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

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 2028 Informational Message(s)

A Total of 43824 Hours Were Processed

A Total of 978 Calm Hours Identified

A Total of 1050 Missing Hours Identified (2.40 Percent)

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

***** WARNING MESSAGES *****
ME W186 105 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 105 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 14010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 2 year gap

*** AERMOD Finishes Successfully ***

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APPENDIX 3.4:

TRU CALCULATIONS

TRU Type

TRU - Instate Trailer TRU

▼

Number of Units

31

Operating Time Each Unit

4

TRU Type

TRU - Instate Truck TRU

▼

Number of Units

26

Operating Time Each Unit

4

TRU Type

TRU - Out-of-State Genset TRU

▼

Number of Units

0

Operating Time Each Unit

4

TRU Type

TRU - Instate Trailer TRU

▼

Number of Units

0

Operating Time Each Unit

4

Unit	Emissions Pounds per Day						Annual
	ROG	NO _x	CO	SOX	PM10	PM2.5	MT CO ₂
TRU - Instate Trailer TRU	2.13	1.96	0.27	0.00	0.06	0.06	408.32
TRU - Instate Truck TRU	2.00	2.56	0.22	0.00	0.13	0.12	403.57
TRU - Out-of-State Genset TRU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRU - Instate Trailer TRU	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	4.13	4.52	0.49	0.00	0.19	0.18	811.90

Total Two Way Truck Trips	57

TRU Emission Calculation

The TRU calculations are based on the 2021 Offroad Emissions model, version 1.0.2 (Orion), developed by the California Air Resources Board. The following parameters were used to generate the emissions database:

Region: Riverside County

Scenario: All Adopted Rules – Exhaust

Vehicle Classification: Types – All TRU Types

Orion does not provide emission rates per hour or mile as with the on-road emission model and only provides emission inventories. Emission results are produced in tons per day while all activity, fuel consumption and horsepower hours were reported at annual levels. The emission inventory is based on specific assumptions including the average horsepower rating of specific types of equipment and the hours of operation annually. These assumptions are not always consistent with assumptions used in the modeling of project level emissions. Therefore, the emissions inventory was converted into emission rates to accurately calculate emissions from TRU operation associated with project level details. This was accomplished by converting the annual horsepower hours to daily operational characteristics and converting the daily emission levels into hourly emission rates based on the total emission of each criteria pollutant by equipment type and the average daily hours of operation.

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