CEDAR AVENUE TECHNOLOGY PARK PROJECT

AIR QUALITY IMPACT ANALYSIS

PREPARED BY

Michael Baker
INTERNATIONAL

AUGUST 2017

1.0 INTRODUCTION

2.0 AIR QUALITY

FIGURES

TABLES

APPENDICES

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1.0 INTRODUCTION

This report evaluates air quality impacts associated with the proposed Cedar Avenue Technology Park Project in accordance with methodologies recommended by the California Air Resources Board (CARB) and the South Coast Air Quality Management District (SCAQMD). The Project's consistency with applicable plans, policies, and regulations, as well as the introduction of new sources of air pollutants, are analyzed in this report. Where quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). Technical data is included as see Appendix A, *Air Quality Emissions Data.*

1.1 PROJECT LOCATION

The Project site is located in unincorporated San Bernardino County within the community of Bloomington, in between the cities of Rialto and Fontana, just north of the San Bernardino and Riverside County line. Nearby cities include Fontana to the west, Rialto to the east and Jurupa Valley to the south. The Project site is located just south of Interstate 10 (I-10), immediately east of Cedar Avenue, north of Orange Street, and west of Vine Street. Refer to Figure 1, *Regional Vicinity,* and Figure 2, *Project Location.*

Surrounding land uses include a Union Pacific railway and I-10 to the north, Cedar Avenue to the west with vacant land beyond, a school campus consisting of Colton Joint Unified School District administrative buildings and Slover Mountain High School (Continuation), and an office/warehouse facility to the east.

1.2 PROJECT DESCRIPTION

The Project would construct a single 184,770 square foot warehouse distribution building within an approximately 9.81-acre property, with associated facilities and improvements such as a small office area, parking, bicycle racks, and landscaping; refer to Figure 3, *Site Plan*. Landscaping would be provided and would represent approximately 19 percent of the site coverage. There would be a total of 151 automobile parking stalls constructed for employee parking with access from Orange Street and Vine Street. All parking and site paving would be concrete and asphalt, and would represent approximately 34 percent of the site coverage. Truck access would be from Vine Street, and a 400 foot long dockyard would located along the eastern side of the proposed building and include several trailer storage stalls, dock high doors, and 2 grade level ramps.

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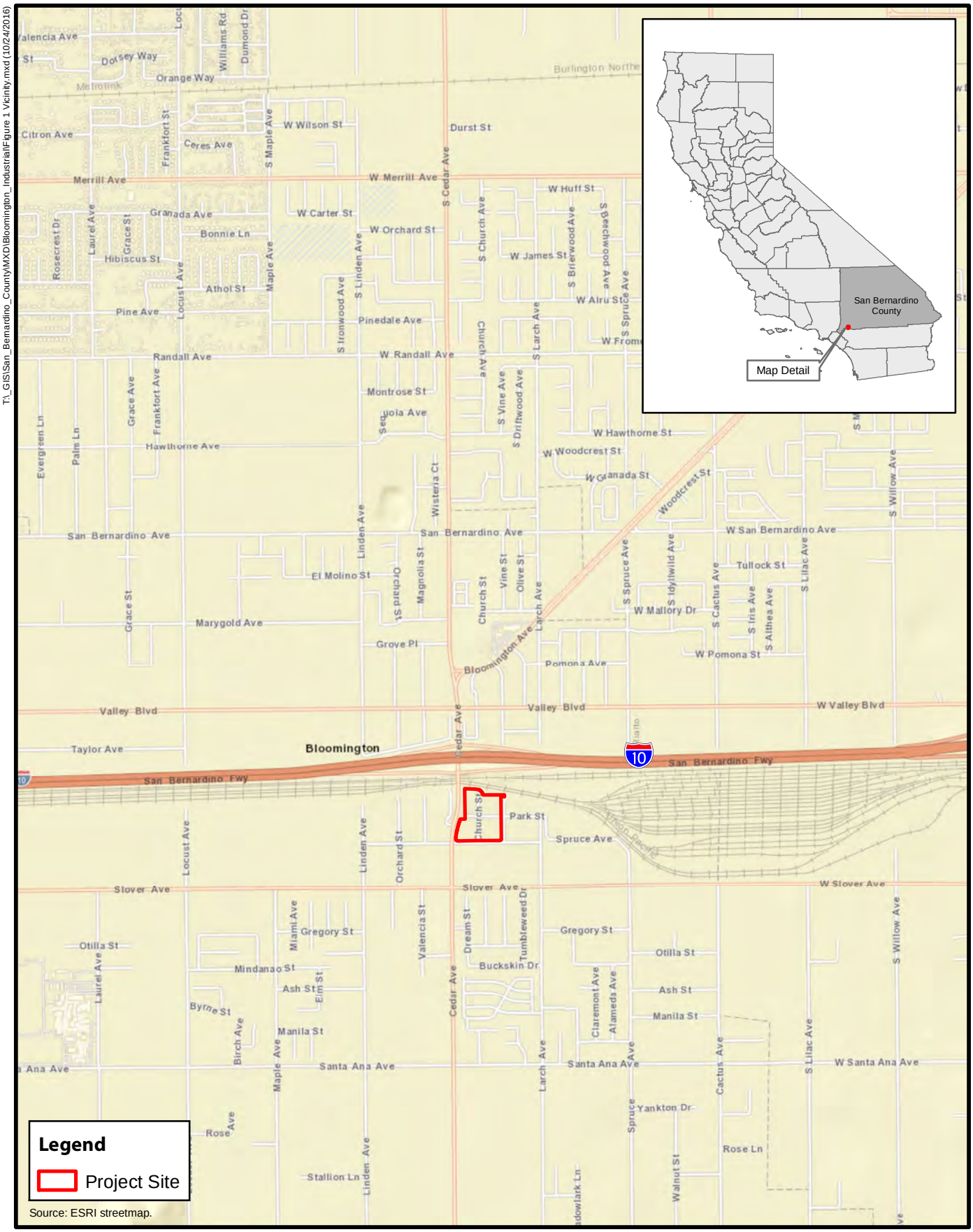

FIGURE 1

Regional Vicinity

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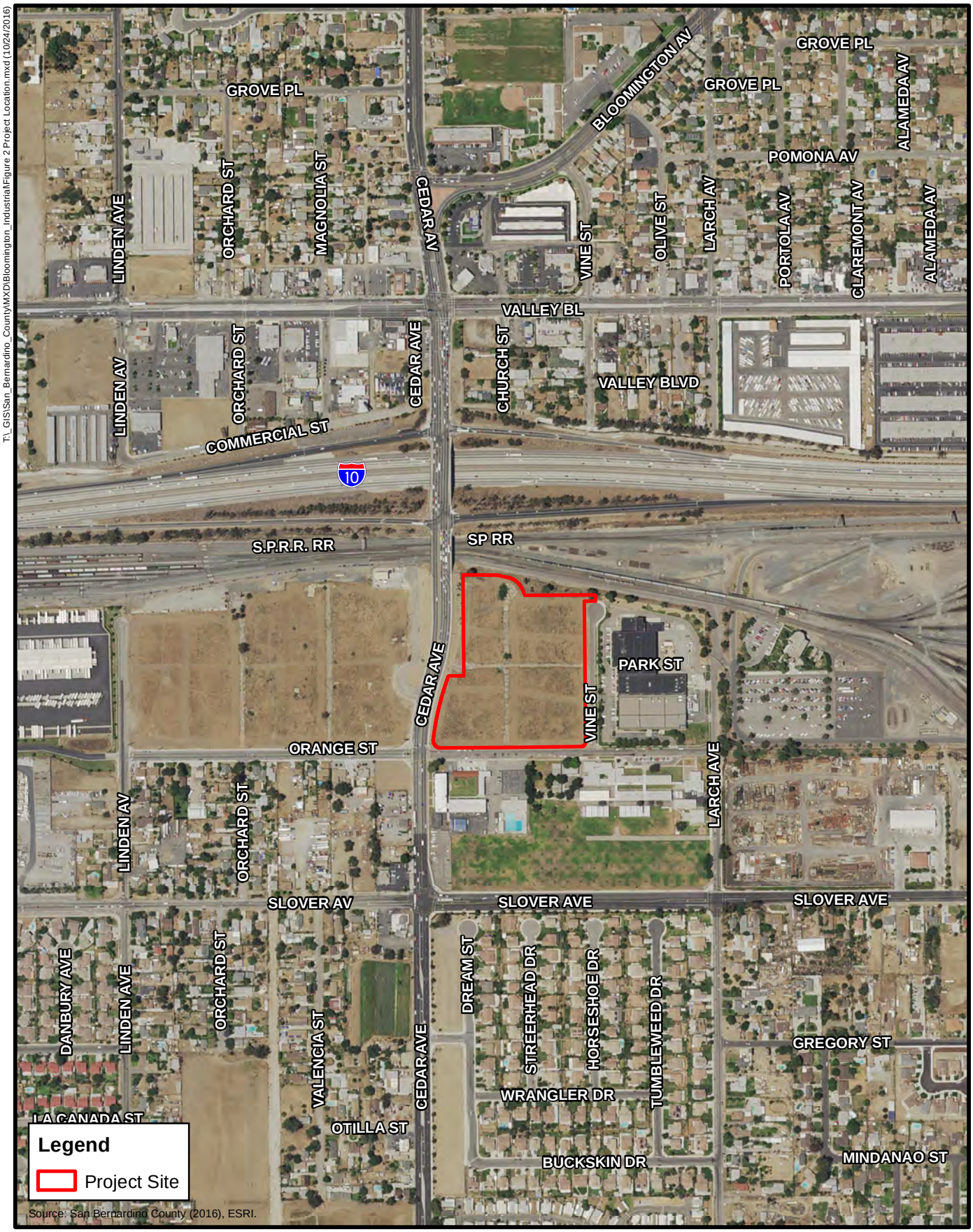

FIGURE 2
Project Location

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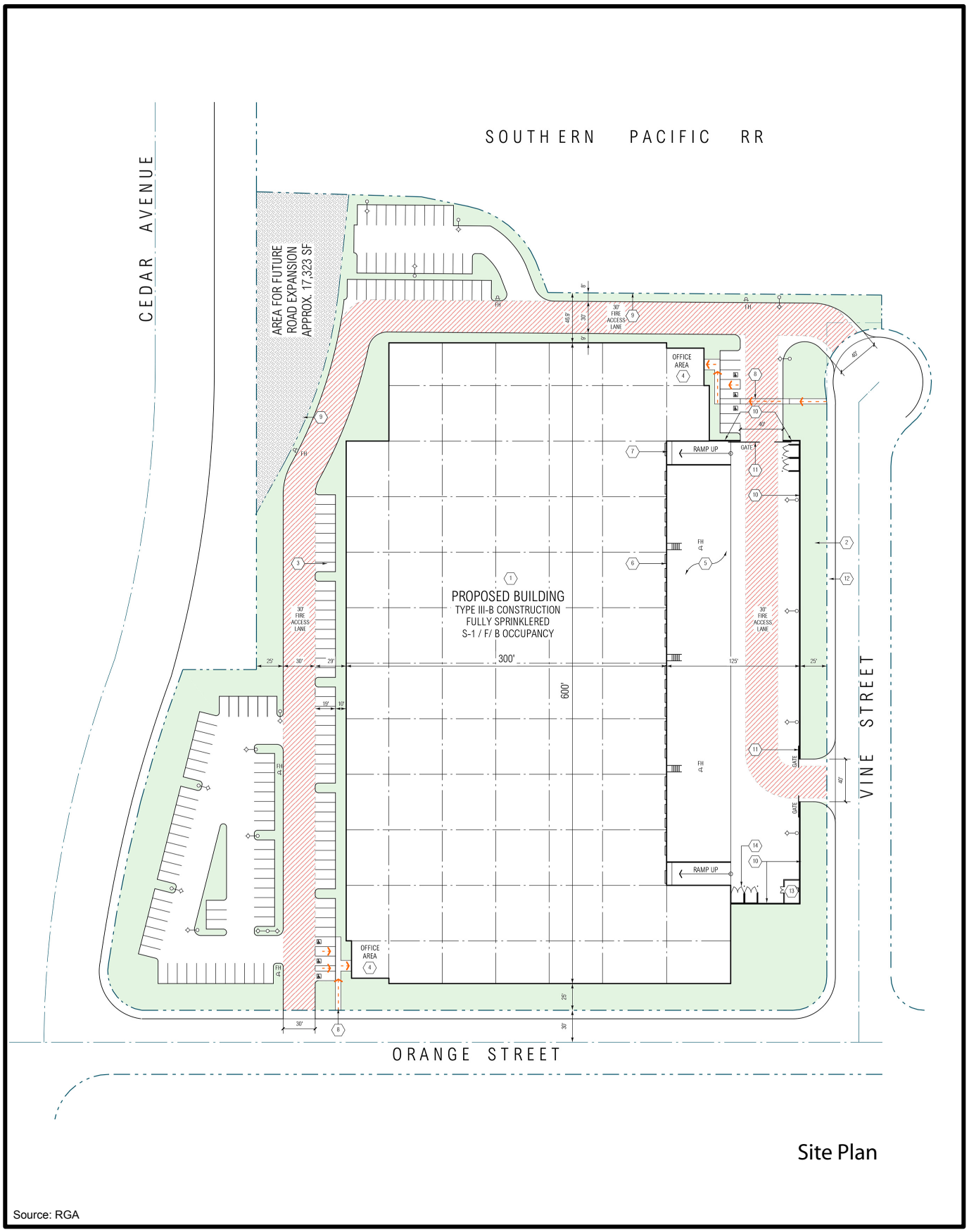

Site Plan

Source: RGA

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FIGURE 3
Cedar Avenue Technology Park

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2.0 AIR QUALITY

This report describes the existing air quality-related setting in the Project region, applicable air quality regulations, and analyzes potential short- and long-term impacts that could result from implementation of the proposed Cedar Avenue Technology Park Project.

2.1 ENVIRONMENTAL SETTING

South Coast Air Basin

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project site lies within the northwestern portion of the South Coast Air Basin (Basin). The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), lead, and fugitive dust are primary air pollutants. Of these, CO, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere (for example, ozone (O_3) is formed by a chemical reaction between ROG and NOx in the presence of sunlight). O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants.

Sources and health effects commonly associated with criteria pollutants are summarized in Table 1, *Criteria Air Pollutants Summary of Common Sources and Effects*.

TABLE 1: CRITERIA AIR POLLUTANTS SUMMARY OF COMMON SOURCES AND EFFECTS

Pollutant	Major Man-Made Sources	Human Health & Welfare Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NOx) in the presence of sunlight. VOCs are also commonly referred to as reactive organic gases (ROGs). Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM_{10} & $PM_{2.5}$)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned; when gasoline is extracted from oil; or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.

Source: California Air Pollution Control Officers Association, *Health Effects*, 2013, Website: www.capcoa.org/health-effects/

Ambient Air Quality

Criteria Air Pollutant Monitoring Data

Ambient air quality in Bloomington, and thus at the Project site, can be inferred from ambient air quality measurements conducted at air quality monitoring stations. Existing levels of ambient air quality and historical trends in the region are documented by measurements made by the SCAQMD, the air pollution regulatory agency in the air basin that maintains air quality monitoring stations which process ambient air quality measurements.

Ozone, PM_{10}, and $PM_{2.5}$ are the primary pollutants affecting the SCAQMD. The nearest air quality monitoring site to the Project site that monitors ambient concentrations of ozone and airborne particulates is located at the Fontana-Arrow Highway Monitoring Station (14360 Arrow Highway, Fontana CA 92335), approximately 6 miles northwest of the Project site. Table 2, *Ambient Air Quality Monitoring Data*, summarizes the published data since 2014 for each year that the monitoring data is provided.

TABLE 2: AMBIENT AIR QUALITY MONITORING DATA

Pollutant Standards	2014[1]	2015[1]	2016[1]
Ozone			
Max 1-hour concentration (ppm)	0.127	0.133	0.139
Max 8-hour concentration (ppm) (state/federal)	0.106 / 0.105	0.111 / 0.111	0.105 / 0.105
Number of days above state 1-hour standard	34	31	36
Number of days above state/federal 8-hour standard	52 / 52	59 / 57	52 / 49
Coarse Particulate Matter			
Max 24-hour concentration (µg/m^3) (state/federal)	65.0 / 68.0	92.0 / 96.0	* / 94.0
Number of days above state/federal standard	* / 0	* / *	* / 0
Fine Particulate Matter			
Max 24-hour concentration (µg/m^3) (state/federal)	34.9 / 34.5	50.5 / 50.5	58.8 / 58.8
Number of days above federal standard	*	10.4	3.2

µg/m^3 = micrograms per cubic meter; ppm = parts per million; * = No data is currently available to determine the value.

Notes:

1. Measurements taken at the Fontana-Arrow Highway Monitoring Station located at 14360 Arrow Highway, Fontana CA 92335.

Source: California Air Resources Board, *Aerometric Data Analysis and Management System (ADAM) Air Quality Data Statistics*, 2015. Website: http://www.arb.ca.gov/adam/index.html. Accessed August, 2017.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

To date, CARB has designated nearly 200 compounds as TACs. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show

potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine.[1] Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Children are considered more susceptible to health effects of air pollution due to their immature immune systems and developing organs.[2] As such, schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Other land uses considered sensitive receptors include playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The nearest sensitive land use would be the school to the south of the Project site at approximately 60 feet distant. Additionally, there is a residential neighborhood in the Project vicinity located approximately 300 feet to the southwest, across Cedar Avenue. Other sensitive land uses near the Project site include residences approximately 750 feet to the south as well as approximately 770 feet to the north, across I-10.

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[1] U.S. Environmental Protection Agency, *Health Assessment Document for Diesel Engine Exhaust,* 2002, http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=29060.

[2] Office of Environmental Health Hazard Assessment, *Air Toxicology and Epidemiology: Air Pollution and Children's Health,* 2007, http://oehha.ca.gov/public_info/facts/airkids.html.

2.2 REGULATORY FRAMEWORK

FEDERAL & STATE

Ambient Air Quality Standards

The proposed Project has the ability to release gaseous emissions of criteria pollutants and dust into the ambient air; therefore, development activities under the proposed Project fall under the ambient air quality standards promulgated at the local, state, and federal levels. The federal Clean Air Act of 1971 and the Clean Air Act Amendments (1977) established the national ambient air quality standards (NAAQS), which are promulgated by the U.S. Environmental Protection Agency (EPA). The State of California has also adopted its own California ambient air quality standards (CAAQS), which are promulgated by CARB. Implementation of the Project would occur in a portion of San Bernardino County that is under the air quality regulatory jurisdiction of the SCAQMD, and is therefore subject to the rules and regulations adopted by the air district to achieve the NAAQS and CAAQS. Applicable federal, state, regional, and local laws, regulations, plans, and guidelines relevant to the California Environmental Quality Act (CEQA) review process are summarized below. As shown in Table 3, *Air Quality Standards*, these pollutants include O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

Air Quality Attainment Plans

The SCAQMD and the Southern California Association of Governments (SCAG) are the agencies responsible for preparing the Air Quality Management Plan (AQMP) for the Basin pursuant to the federal Clean Air Act in order to reduce emissions of criteria pollutants for which the basin is in nonattainment. The SCAQMD drafted the 2012 Air Quality Management Plan in order to reduce emissions for which the South Coast Air Basin is in nonattainment. The 2012 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2012 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, SCAG, and the EPA. The 2012 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts.[3] (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.)

[3] *Final 2012 Air Quality Management Plan,* South Coast Air Quality Management District, 2013.

TABLE 3: AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	National Standards
Ozone (O_3)	8 Hour	0.070 ppm (137µg/m^3)	0.070 ppm (137µg/m^3)
	1 Hour	0.09 ppm (180 µg/m^3)	—
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	53 ppb (100 µg/m^3)
Sulfur Dioxide (SO_2)	24 Hour	0.04 ppm (105 µg/m^3)	N/A
	3 Hour	—	N/A
	1 Hour	0.25 ppm (665 µg/m^3)	75 ppb
Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	N/A
	24 Hour	50 µg/m^3	150 µg/m^3
Particulate Matter – Fine ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	15 µg/m^3
	24 Hour	N/A	35 µg/m^3
Sulfates	24 Hour	25 µg/m^3	N/A
Lead	Calendar Quarter	N/A	1.5 µg/m^3
	30 Day Average	1.5 µg/m^3)	N/A
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	N/A
Vinyl Chloride (chloroethene)	24 Hour	0.01 ppm (26 µg/m^3)	N/A
Visibility-Reducing Particles	8 Hour (10:00 to 18:00 PST)	—	N/A
mg/m^3=milligrams per cubic meter; ppm=parts per million; ppb=parts per billion; µg/m^3=micrograms per cubic meter			
Source: California Air Resources Board, *Ambient Air Quality Standards*, 2017. Website: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.			

The AQMP provides local guidance for the State Implementation Plan (SIP), which provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. Areas for which there is insufficient data available are designated unclassified. The attainment status for the western portion of San Bernardino County is included in Table 4, *Federal and State Ambient Air Quality Attainment Status for San Bernardino County*. The region is nonattainment for state ozone, PM_{10}, and $PM_{2.5}$ standards and nonattainment for federal ozone and $PM_{2.5}$. It is noted that the SCAQMD has currently released the draft 2016 AQMP, which is expected to be adopted by the SCAQMD Governing Board in December of this year. The 2016 AQMP is a comprehensive and integrated plan primarily focused on addressing the ozone and $PM_{2.5}$ standards. The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including the latest applicable growth assumptions, Regional Transportation Plan/Sustainable Communities Strategy, and updated emission inventory methodologies for various source categories.

TABLE 4: FEDERAL AND STATE AMBIENT AIR QUALITY ATTAINMENT STATUS FOR WESTERN SAN BERNARDINO COUNTY

Pollutant	Federal	State
8-Hour Ozone (O_3)	Nonattainment	Nonattainment
Coarse Particulate Matter (PM_{10})	Attainment/Serious Maintenance	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment/Maintenance	Attainment
Nitrogen Dioxide (NO_2)	Attainment/Maintenance	Attainment
Sulfur Dioxide (SO_2)	Unclassified/Attainment	Attainment

South Coast Air Quality Management District, NAAQS/CAAQS and Attainment Status for South Coast Air Basin, February 2016. Website: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2. Accessed August 2017.
U.S. Environmental Protection Agency, *The Green Book Nonattainment Areas for Criteria Pollutants*, accessed August 3, 2017. Website: https://www3.epa.gov/airquality/greenbook/. Accessed August 2017.

Toxic Air Contaminant Regulations

In 1983, the California legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal Clean Air Act (42 United States Code Section 7412[b]) is a TAC. Under state law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as toxic air contaminants. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for eleven TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High-priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

Since the last update to the TAC list in December 1999, CARB has designated 244 compounds as toxic air contaminants.[4] Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines. As the project is proposing an industrial warehouse requiring daily visits from heavy-duty diesel trucks during operations, it would be a source of DPM concentrations during project operations.

California Diesel Risk Reduction Plan

In September 2000, CARB adopted the Diesel Risk Reduction Plan (DRRP), which recommends many control measures to reduce the risks associated with DPM and achieve a goal of an 85 percent reduction of DPM generated by 2020. The DRRP incorporates measures to reduce emissions from diesel-fueled vehicles and stationary diesel-fueled engines. Ongoing efforts by CARB to reduce diesel-exhaust emissions from these sources include the development of specific statewide regulations, which are designed to further reduce DPM emissions. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce DPM emissions.

Since the initial adoption of the DRRP in September 2000, CARB has adopted numerous rules related to the reduction of DPM from mobile sources, as well as the use of cleaner-burning fuels. Transportation sources addressed by these rules include public transit buses, school buses, on-road heavy-duty trucks, and off-road heavy-duty equipment.

On-Road Heavy-Duty Diesel Vehicles (In Use) Regulation

CARB's On-Road Heavy-Duty Diesel Vehicles (In Use) Regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks were required to be retrofitted with particulate matter filters beginning January 1, 2012, and older trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. The regulation applies to nearly all privately and federally-owned diesel-fueled trucks and buses, as well as to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds.

[4] California Air Resources Board, *Final Staff Report: Update to the Toxic Air Contaminant List*, 1999.

LOCAL

South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. The agency's primary responsibility is ensuring that the federal and state ambient air quality standards are attained and maintained in the South Coast Air Basin. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, and conducting public education campaigns, as well as many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

The following is a list of noteworthy SCAQMD rules that are required of the proposed Project during construction activities:

- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement Best Available Control Measures for all sources and all forms of visible particulate matter are prohibited from crossing any property line. Rule 403 is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. Examples of some PM_{10} suppression techniques are summarized below.

    a. Portions of the construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized in a manner acceptable to the City.

    b. All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.

    c. All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.

d. The area disturbed by clearing, grading, earth moving, or excavation operations will be minimized at all times.

e. Where vehicles leave the construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.

f. A wheel washing system will be installed and used to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

g. Water will be applied to active portions of the site, including unpaved roads, in sufficient quantity.

- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

2.3 IMPACT ASSESSMENT

The impact analysis provided below is based on guidance from the SCAQMD, the applicable air quality control officer for the Basin. According to the SCAQMD, an air quality impact is considered significant if a proposed project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations.

METHODOLOGY

The proposed Project's criteria air pollutant emissions were calculated using the California Emissions Estimator Model (CalEEMod), version 2016.3.1, computer program (refer to Appendix A). CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for the use of government agencies, land use planners, and environmental professionals. This model was developed in coordination with the SCAQMD and is the most current emissions model approved for use in California by various other air districts. Emissions modeling is based on Project-specific data (e.g., size and type of proposed use) and vehicle trip information from the project's Traffic Impact Analysis (*Cedar Avenue Technology Park Traffic Impact Analysis*, prepared by Michael Baker International, 2016).

THRESHOLDS OF SIGNIFICANCE

The following thresholds of significance are based, in part, on CEQA Guidelines Appendix G. For purposes of this EIR, implementation of the proposed Project may have a significant adverse impact related to land use if it would do any of the following:

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Conflict with or obstruct implementation of any applicable air quality plan.
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The significance criteria established by the applicable air quality management or air pollution control district (SCAQMD) may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if a proposed project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality for construction and operational activities of land use developments, which are applicable to the proposed Project, as shown in Table 5, *SCAQMD Regional Significance Thresholds*.

TABLE 5 SCAQMD REGIONAL SIGNIFICANCE THRESHOLDS

Air Pollutant	Construction Activities	Operations
Reactive Organic Gases (ROG)	75 pounds/day	55 pounds/day
Carbon Monoxide (CO)	550 pounds/day	550 pounds/day
Nitrogen Oxides (NO_x)	100 pounds/day	55 pounds/day
Sulfur Oxides (SO_x)	150 pounds/day	150 pounds/day
Coarse Particulates (PM_{10})	150 pounds/day	150 pounds/day
Fine Particulates ($PM_{2.5}$)	55 pounds/day	55 pounds/day
Source: SCAQMD (South Coast Air Quality Management District), 1993, ($PM_{2.5}$ threshold adopted June 1, 2007)		

Carbon Monoxide Hot-Spot Analysis

In addition to the daily thresholds listed above, the proposed Project would be subject to the ambient air quality standards. These are addressed though an analysis of localized carbon monoxide impacts. The California 1-hour and 8-hour CO standards are:

- 1-hour = 20 parts per million
- 8-hour = 9 parts per million

The significance of localized impacts depends on whether ambient CO levels in the vicinity of a project are above state and federal CO standards. CO concentrations in San Bernardino County no longer exceed the California or national ambient air quality standards criteria, and the Basin has been designated as attainment under the 1-hour and 8-hour standards.

Localized Significance Thresholds

In addition to the CO hot-spot analysis, the SCAQMD developed localized significance thresholds (LSTs) for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (off-site mobile source emissions are not included the LST analysis). LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent national or state ambient air quality standard. LSTs are based on the ambient concentrations of that pollutant within the project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. The Project site is located in SCAQMD SRA 34. Table 6, *Local Significance Threshold (LST) Impacts – Pounds per Day*, shows the localized significance thresholds for a 1-acre, 2-acre, and 5-acre project site in SRA 34 with sensitive receptors located within 82 feet (25 meters) of a project site.

TABLE 6: LOCAL SIGNIFICANCE THRESHOLD (LST) IMPACTS – POUNDS PER DAY

Project Size	NOx	CO	PM_{10}	$PM_{2.5}$
1 Acre (construction/operations)	118/118	657/657	4/1	3/1
2 Acres (construction/operations)	170/170	957/957	7/2	4/1
5 Acres (construction/operations)	270/270	1,720 /1,720	14/4	8/2

Source: *SCAQMD (South Coast Air Quality Management District), Localized Significance Threshold Appendix C – Mass Rate LST Look-up Tables, 2009. Website: www.aqmd.gov/cega/handbook/LST/LST.html.*

Toxic Air Contaminant Thresholds

The SCAQMD regulates levels of air toxics through a permitting process that covers both construction and operation. The SCAQMD has adopted Rule 1401 for both new and modified sources that use materials classified as air toxics. The SCAQMD CEQA Guidelines for permit processing consider the following types of projects significant:

- Any project involving the emission of a carcinogenic or TAC identified in SCAQMD Rule 1401 that exceeds the maximum individual cancer risk of 1 in 1 million or 10 in 1 million if the project is constructed with best available control strategy for toxics using the procedures in SCAQMD Rule 1401.
- Any project that could accidentally release an acutely hazardous material or routinely release a TAC, posing an acute health hazard.
- Any project that could emit an air contaminant not currently regulated by SCAQMD rule but that is on the federal or state air toxics list.

Based on these significance thresholds and criteria, the Project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially

significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

IMPACT ASSESSMENT

VIOLATE ANY AIR QUALITY STANDARDS OR CONTRIBUTE SUBSTANTIALLY TO AN EXISTING OR PROJECTED AIR QUALITY VIOLATION DURING PROJECT CONSTRUCTION

Construction associated with the Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern in the Project area include ozone-precursor pollutants (i.e., ROG and NO_x), $PM_{10,}$ and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but have the potential to represent a significant air quality impact.

Construction results in the temporary generation of emissions ensuing from site grading and excavation, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water. Construction-related emissions are expected from site preparation, grading, building construction, paving, architectural coatings, and construction workers commuting. Grading of the Project site would consist of 8,430 cubic yards (cy) of cut, 10,500 cy of fill and 2,070 cy of soil import. Architectural coatings (i.e., painting) would occur sporadically throughout the building phase, as needed.

The estimate for construction duration is based upon California Emissions Estimator Model (CalEEMod) model defaults, as are the number and type of equipment that would be used were utilized. Please refer to specific detailed modeling inputs/outputs, including construction equipment assumptions, contained in Appendix A.

Construction-Related Regional Air Quality Impacts

The estimated maximum daily construction emissions are summarized in Table 7, *Construction-Related Emissions*. As previously stated, all construction projects in the South Coast Air Basin are subject to SCAQMD rules and regulations in effect at the time of construction, including Rule 403 described above. The construction emissions summarized in Table 7 account for the quantifiable PM-reducing requirements of SCAQMD Rule 403.

TABLE 7: CONSTRUCTION-RELATED EMISSIONS

Construction Activities	Maximum Emissions (pounds per day)[1]					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_X)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)
Year 1 (2017)	18.19	59.68	8.69	5.70	49.43	0.10
Year 2 (2018)	17.20	52.41	5.65	3.31	46.78	0.10
SCAQMD Thresholds	*75*	*100*	*150*	*55*	*550*	*150*
Exceed Threshold?	No	No	No	No	No	No

Notes:

1. Emissions calculated using CalEEMod version 2016.3.1. Emission estimates account for the quantifiable PM-reducing requirements of SCAQMD Rule 403, including watering exposed surfaces three times daily; cleaning trackout on adjacent streets, covering stock piles with tarps; watering all haul roads twice daily; and limiting speeds on unpaved roads to 15 miles per hour. Site requirements for soil movement would include imported soil. Architectural coatings are assumed to be applied sporadically throughout the duration of building construction.

Refer to Appendix A for daily emission model outputs.

As shown in Table 2-7, emissions resulting from Project construction would not exceed any applicable thresholds. Construction-related regional air quality impacts are considered less than significant.

Construction-Related Localized Air Quality Impacts

Localized Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the Final Localized Significance Threshold Methodology (dated June 2003 [revised 2009]) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 8, *Equipment-Specific Grading Rates*, is used to determine the maximum daily disturbed acreage for comparison to LSTs.

TABLE 8: EQUIPMENT-SPECIFIC GRADING RATES

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Site Preparation	Crawler Tractor	4	0.5	8	2.0
	Rubber-Tired Dozers	3	0.5	8	1.5
				Total Acres Graded per Day	3.5
Grading	Crawler Tractor	3	0.5	8	1.5
	Graders	1	0.5	8	0.5
	Rubber-Tired Dozers	1	0.5	8	0.5
	Scrapers	1	1.0	8	1.0
				Total Acres Graded per Day	3.5

Source: CalEEMod version 2016.3.1.

For this Project, the appropriate source receptor area (SRA) for the localized significance thresholds is the Central San Bernardino Valley area (SRA 34) since this area includes the Project

site. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. As shown in Table 8, Project construction is anticipated to disturb a maximum of 3.5 acres in a single day.

The SCAQMD's methodology clearly states that "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest existing sensitive receptor to the development boundaries is located 90 feet from the proposed development. Therefore, LSTs for receptors at 25 meters (82 feet) are used in this analysis.

Table 9, *Localized Significance of Emissions*, presents the results of localized emissions during construction activity. The LSTs have been adjusted to reflect a maximum disturbance of 3.5 acres daily assumed for the proposed Project. As shown in Table 9, air pollutant emissions resulting from Project construction would not exceed the applicable LST; therefore, this impact is less than significant.

TABLE 9: LOCALIZED SIGNIFICANCE OF EMISSIONS

Activity	Nitrogen Oxide (NO_X)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Carbon Monoxide (CO)
Maximum Daily Emissions (on-site)	47.26	8.49	5.64	21.72
SCAQMD Localized Threshold (adjusted for 3.5 acres of disturbance)	220	11	6	1,338
Significant?	No	No	Yes	No
Notes: Emissions projections account for adherence to various components of SCAQMD Rule 403, including application of water on the project site, employment of wheel washing systems, replacement of ground cover in disturbed areas, sweeping adjacent streets daily, and reestablishing vegetation on inactive portions of the site.				
Source: CalEEMod version 2016.3.1.				

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant impact.

VIOLATE ANY AIR QUALITY STANDARDS OR CONTRIBUTE SUBSTANTIALLY TO AN EXISTING OR PROJECTED AIR QUALITY VIOLATION DURING PROJECT OPERATION

Operational activities associated with the proposed Project would result in emissions of ROG, NO_x, CO, sulfur oxides (SO_X), PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources: vehicles, combustion emissions associated with natural gas and electricity, fugitive dust related to vehicular travel, landscape maintenance equipment, emissions from consumer products, and architectural coatings.

The Project-related operational-related regional emissions burdens, along with a comparison of SCAQMD-recommended significance thresholds, are shown in Table 10, *Long-Term Operational Emissions*.

TABLE 10: LONG-TERM OPERATIONAL EMISSIONS

Source	Pollutant (pounds/day)[1]					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_X)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)
Summer Emissions						
Area Source	4.23	0.00	0.00	0.00	0.04	0.00
Energy Use	0.01	0.10	0.00	0.00	0.09	0.00
Mobile Source	1.94	12.30	6.09	1.69	25.99	0.09
Offroad (Forklifts)	0.64	5.71	0.44	0.41	4.78	0.00
Total	6.82	18.11	6.55	2.10	30.90	0.09
Winter Emissions						
Area Source	4.23	0.00	0.00	0.00	0.04	0.00
Energy Use	0.01	0.10	0.00	0.00	0.09	0.00
Mobile Source	1.71	12.45	6.10	1.69	22.50	0.08
Offroad (Forklifts)	0.64	5.71	0.44	0.41	4.78	0.00
Total	6.60	18.26	6.55	2.10	27.41	0.09
Potentially Significant Impact Threshold (Daily Emissions)	*55*	*55*	*550*	*150*	*150*	*55*
Exceed Daily Threshold?	No	No	No	No	No	No
Notes: 1. Emissions calculated using CalEEMod version 2016.3.1.						
Refer to Appendix A for daily emission model outputs.						

As shown in Table 10, emissions resulting from Project operations would not exceed the SCAQMD regional emissions thresholds for operational activity. Therefore, this impact is less than significant. (According to the SCAQMD methodology, LSTs apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Health Risk Assessment (HRA) prepared by Michael Baker International (see Appendix B), discussed below, replaces the need to do an operational LST analysis.)

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant impact.

CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the California Clean Air Act requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously mentioned, the Project site is located in the South Coast Air Basin, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the federal Clean Air Act, to reduce emissions of criteria pollutants for which the air basin is in nonattainment. In order to reduce such emissions, the SCAQMD drafted the 2012 Air Quality Management Plan. The 2012 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2012 AQMP pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's Regional Transportation Plan/Sustainable Communities Strategy, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts.[5] (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.)

Criteria for determining consistency with the AQMP are defined by the following indicators:

- 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.

- Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP or increments based on the years of the project buildout phase.

[5] *Final 2012 Air Quality Management Plan,* South Coast Air Quality Management District, 2013.

The violations to which Consistency Criterion No. 1 refer are the California ambient air quality standards (CAAQS) and the national ambient air quality standards (NAAQS). As evaluated above, the Project would not exceed operational standards and therefore would not violate air quality standards. Additionally, the analysis for long-term local air quality impacts shows that future carbon monoxide (CO) concentration levels along roadways and at intersections affected by project traffic would not exceed the 1-hour and 8-hour state CO pollutant concentration standards (see below). Thus, a less than significant impact is expected, and the project would be consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies and demonstrates that the applicable ambient air quality standards can be achieved within the time frames required under federal law. Growth projections from local general plans adopted by cities in the district are provided to SCAG, which develops regional growth forecasts that are used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in the San Bernardino County General Plan is considered to be consistent with the AQMP. The proposed project is consistent with the land use designation and development density presented in the General Plan and therefore would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP. Thus, no impact would occur, as the project is consistent with both criteria.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant impact.

EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS

Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The California Air Resources Board (CARB) has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

As previously stated, the Project site is located just north of a school campus consisting of Colton Joint Unified School District administrative buildings and Slover Mountain High School (Continuation). Other sensitive land uses near the Project site include residences approximately 750 feet to the south as well as approximately 770 feet to the north, across I-10.

Construction-Generated Air Toxics

Construction-generated diesel PM emissions contribute to negative health impacts when construction is extended over lengthy periods of time. The use of diesel-powered equipment during construction would be temporary and episodic and would occur over several locations isolated from one another. Furthermore, the proposed Project would be subject to and would comply with California regulations limiting idling to no more than 5 minutes, which would further reduce nearby sensitive receptors' exposure to temporary and variable diesel PM emissions. Project construction would not be a substantial source of other CARB-identified TACs.

Construction projects contained in a site of less than 5 acres are generally considered to represent less than significant health risk impacts due to (1) limitations on the off-road diesel equipment able to operate and thus a reduced amount of generated diesel PM, (2) the reduced amount of dust-generating ground disturbance possible compared to larger construction sites, and (3) the reduced duration of construction activities compared to the development of larger sites. For these reasons and because diesel fumes disperse rapidly over relatively short distances, diesel PM generated by most construction activities, in and of itself, would not be expected to create conditions where the probability of contracting cancer is greater than 10 in 1 million for nearby receptors. As shown in Table 8, Project construction is estimated to disturb up to 3.5 acres daily. In addition, SCAQMD Rule 403 requires that basic construction mitigation measures are employed during all construction projects, including measures that would substantially reduce nuisance fugitive dust.

Furthermore, as discussed in the LST analysis previously presented, results indicate that the proposed Project would not exceed the SCAQMD LSTs, and a less than significant impact is expected during construction activity. 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. Therefore, sensitive receptors would not be subject to a significant air quality impact during Project construction. This impact is less than significant.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affecting residents, school children, hospital patients, the elderly, etc.).

The SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service LOS D or worse. Because traffic congestion is highest at intersections where vehicles queue and are subject to reduced speeds, these hot spots are typically produced at intersections.

The Basin is designated as an Attainment/Maintenance area for the Federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. CO emissions have continued to decline since this time. The Basin was re-designated as attainment in 2007, and is no longer addressed in the SCAQMD's AQMP. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

A detailed CO analysis was conducted in the Fe*deral Attainment Plan for Carbon Monoxide (CO Plan)* for the SCAQMD's *2003 Air Quality Management Plan*. The locations selected for microscale modeling in the CO Plan are worst-case intersections in the Basin, and would likely experience the highest CO concentrations. Thus, CO analysis within the CO Plan is utilized in a comparison to the proposed Project, since it represents a worst-case scenario with heavy traffic volumes within the Basin.

Of these locations, the Wilshire Boulevard/Veteran Avenue intersection in Los Angeles experienced the highest CO concentration (4.6 parts per million [ppm]), which is well below the 35-ppm 1-hr CO Federal standard. The Wilshire Boulevard/Veteran Avenue intersection is one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day. As the CO hotspots were not experienced at the Wilshire Boulevard/Veteran Avenue intersection, it can be reasonably inferred that CO hotspots would not be experienced at any intersections near the Project site due the addition of approximately 658 daily trips that would occur as a result of Project implementation. Therefore, impacts would be less than significant in this regard.

Operational Diesel Particulate Matter

In order to analysis potential health risks resulting from project-generated diesel particulate matter, a health risk assessment (HRA) was prepared by Michael Baker International (2016). The HRA evaluated the increased potential for cancer risk and non-carcinogenic hazards as a result of the proposed Project. According to the HRA, the expected annual average diesel $PM_{2.5}$ emission concentrations at a sensitive receptor resulting from operation of the project (135 daily heavy truck deliveries) would be 0.03 $\mu g/m^3$ at the greatest. This level of concentration would be experienced at the school campus directly south of the project site across Orange Street. These are the closest sensitive receptors to the Project site. The calculations conservatively assume no cleaner technology with lower emissions in future years.

Cancer Risk

Cancer risk calculations for schools are based on a 9-year exposure period. The calculated carcinogenic risk at these locations, directly south of the site, as a result of the Project is depicted in Table 11, *Maximum Operational Health Risk at the Southern School Campus.* It should be noted that the risk level based on a 9-year exposure period is conservative as Slover Mountain High School is a continuation school and sensitive receptors would have a shorter exposure period, resulting in lower risk levels. As shown, impacts related to cancer risk and $PM_{2.5}$ concentrations from heavy trucks would be less than significant at the school campus.

TABLE 11 MAXIMUM OPERATIONAL HEALTH RISK AT THE SOUTHERLY SCHOOL CAMPUS

Exposure Scenario	Maximum Cancer Risk (Risk per Million)[1]	Significance Threshold (Risk per Million)	Exceeds SCAQMD Significance Threshold?
Slover Mountain High School (Continuation), across Orange Street (9-Year Exposure)	8.93	10	No

Notes:
1. Refer to Appendix B, *Health Risk Assessment*.

As previously noted, there are also residential land uses in the Project vicinity. There are residential neighborhoods in the Project vicinity located approximately 300 feet to the southwest across Cedar Avenue, approximately 750 feet to the south beyond the school campus, as well as approximately 770 feet to the north, across I-10. According to the HRA, the expected annual average diesel $PM_{2.5}$ emission concentrations at the residential neighborhoods to the north and southwest resulting from operation of the project (135 daily heavy truck deliveries) would be 0.002 $\mu g/m^3$ and 0.005 $\mu g/m^3$, respectively. The expected annual average diesel $PM_{2.5}$ emission concentrations at the residential neighborhood to the south resulting from operation of the project (135 daily heavy truck deliveries) would be 0.006 $\mu g/m^3$ at the greatest. Cancer risk calculations for residences are based on 70-, 30-, and 9-year exposure periods. The calculated carcinogenic risk at these residential neighborhoods, as a result of the Project is depicted in Table 12, *Maximum Operational Health Risk at Project Vicinity Residences*. As shown, impacts related to cancer risk and $PM_{2.5}$ concentrations from heavy trucks would be less than significant at these sensitive receptors.

TABLE 12 MAXIMUM OPERATIONAL HEALTH RISK AT PROJECT VICINITY RESIDENCES

Exposure Scenario	Maximum Cancer Risk (Risk per Million)[1]	Significance Threshold (Risk per Million)	Exceeds SCAQMD Significance Threshold?
Residential Neighborhood to the North across I-10			
70-Year Exposure	0.98	10	No
30-Year Exposure	0.83	10	No
9-Year Exposure	0.60	10	No
Residential Neighborhood to the Southwest across Cedar Avenue			
70-Year Exposure	2.46	10	No
30-Year Exposure	2.07	10	No
9-Year Exposure	1.49	10	No
Residential Neighborhood to the South beyond School Campus			
70-Year Exposure	2.95	10	No
30-Year Exposure	2.48	10	No
9-Year Exposure	1.79	10	No

Notes:
1. Refer to Appendix B, *Health Risk Assessment*.

Non-Carcinogenic Hazards

The significance thresholds for TAC exposure also require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index associated with the emissions from the Project would be 0.006 and 0.158, respectively. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits and a less than significant impact would occur.

Conclusion

As described, non-carcinogenic hazards resulting from the proposed Project are calculated to be within acceptable limits. Additionally, impacts related to cancer risk and $PM_{2.5}$ concentrations from heavy trucks would be less than significant at the school campus, would be less than significant at the nearest residential neighborhoods. Therefore, impacts related to health risk from heavy trucks would be less than significant.

However, as identified the school facilities south of the Project site are 60 feet away. Therefore, while the increased cancer risk from heavy trucks would be below the applicable significance

threshold **Mitigation Measure HRA-1** is recommended in order to enforce existing regulation and reduce the generation of diesel particulate matter.

Mitigation Measures:

MM-1 Prior to the certificate of occupancy issuance, the project applicant shall demonstrate to the satisfaction of the San Bernardino County Land Use Services Director that the following measures would be implemented during project operations. These measures shall be enforced and maintained through Covenants, Codes, and Restrictions (CC&Rs), or other means acceptable to the San Bernardino County Land Use Services Director.

- 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.

- All service equipment (e.g., forklifts) used within the site shall be electric or compressed natural gas-powered.

Level of Significance: Less than significant impact.

CREATE OBJECTIONABLE ODORS AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

According to the *SCAQMD CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed Project does not include any uses identified by the SCAQMD as being associated with odors.

Construction activities associated with the Project may generate detectable odors from heavy-duty equipment exhaust. Construction-related odors would be short-term in nature and cease upon Project completion. Additionally, construction-related odors dissipate rapidly as the nature of construction necessitates the need to move equipment around the construction site throughout a work day. Any impacts to existing adjacent land uses would be short-term and are less than significant.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant impact.

RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF ANY CRITERIA POLLUTANT FOR WHICH THE PROJECT REGION IS NON-ATTAINMENT UNDER AN APPLICABLE FEDERAL OR STATE AMBIENT AIR QUALITY STANDARD (INCLUDING RELEASING EMISSIONS WHICH EXCEED QUANTITATIVE THRESHOLDS FOR OZONE PRECURSORS)

Projects could contribute to an existing or projected air quality exceedance because the Basin is currently in nonattainment for O_3 and $PM_{2.5}$. With regard to determining the significance of the cumulative contribution from the project, the SCAQMD recommends that any given project's potential contribution to cumulative impacts be assessed using the same significance criteria as for project-specific impacts. Therefore, individual projects that do not generate operational or construction emissions exceeding the SCAQMD's daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin 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. As previously noted, the project would not exceed the applicable SCAQMD regional thresholds for construction and operational-source emissions. As such, the project would not result in a cumulatively considerable impact.

Mitigation Measures: No mitigation measures are required.

Level of Significance: Less than significant impact.

APPENDIX A
Criteria Pollutant Modeling Outputs

Cedar Avenue Technology Park

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	184.77	1000sqft	4.24	184,770.00	0
Other Asphalt Surfaces	17.32	1000sqft	0.40	17,320.00	0
Other Non-Asphalt Surfaces	77.85	1000sqft	1.79	77,850.00	0
Parking Lot	138.25	1000sqft	3.17	138,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Accounts for warehouse, future road expansion, parking lot, & landscaped areas

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - equipment

Trips and VMT -

Grading - Import Data provided for Grading.

Vehicle Trips - Trip generation per Traffic Impact Analysis

Land Use Change -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Operational Off-Road Equipment - 4 forklifts

Fleet Mix - Traffic fleet mix per Traffic Impact Analysis

Cedar Avenue Technology Park - San Bernardino-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	165.00
tblConstructionPhase	NumDays	230.00	220.00
tblConstructionPhase	NumDays	20.00	220.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	9/20/2019	3/30/2018
tblConstructionPhase	PhaseEndDate	2/1/2019	3/30/2018
tblConstructionPhase	PhaseStartDate	2/2/2019	8/13/2017
tblConstructionPhase	PhaseStartDate	3/31/2018	5/27/2017
tblFleetMix	FleetMixLandUseSubType	Unrefrigerated Warehouse-No Rail	Other Asphalt Surfaces
tblFleetMix	FleetMixLandUseSubType	Other Asphalt Surfaces	Other Non-Asphalt Surfaces
tblFleetMix	FleetMixLandUseSubType	Other Non-Asphalt Surfaces	Parking Lot
tblFleetMix	FleetMixLandUseSubType	Parking Lot	Unrefrigerated Warehouse-No Rail
tblGrading	MaterialImported	0.00	2,070.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	4.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	1.68	3.56
tblVehicleTrips	SU_TR	1.68	3.56
tblVehicleTrips	WD_TR	1.68	3.56

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	18.1789	59.6340	51.6733	0.1000	16.0092	3.2132	18.6438	8.7427	3.0071	11.1666	0.0000	10,079.7734	10,079.7734	1.6561	0.0000	10,121.1772
2018	17.1910	52.3876	48.7545	0.0992	2.9681	2.6828	5.6509	0.7972	2.5125	3.3097	0.0000	9,932.6501	9,932.6501	1.6212	0.0000	9,973.1804
Maximum	**18.1789**	**59.6340**	**51.6733**	**0.1000**	**16.0092**	**3.2132**	**18.6438**	**8.7427**	**3.0071**	**11.1666**	**0.0000**	**10,079.7734**	**10,079.7734**	**1.6561**	**0.0000**	**10,121.1772**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	18.1789	59.6340	51.6733	0.1000	6.0581	3.2132	8.6927	3.2728	3.0071	5.6966	0.0000	10,079.7734	10,079.7734	1.6561	0.0000	10,121.1772
2018	17.1910	52.3876	48.7545	0.0992	2.9681	2.6828	5.6509	0.7972	2.5125	3.3097	0.0000	9,932.6501	9,932.6501	1.6212	0.0000	9,973.1804
Maximum	**18.1789**	**59.6340**	**51.6733**	**0.1000**	**6.0581**	**3.2132**	**8.6927**	**3.2728**	**3.0071**	**5.6966**	**0.0000**	**10,079.7734**	**10,079.7734**	**1.6561**	**0.0000**	**10,121.1772**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.44**	**0.00**	**40.96**	**57.34**	**0.00**	**37.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2323	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977
Energy	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137
Mobile	1.9389	12.2957	25.9917	0.0854	6.0105	0.0843	6.0947	1.6086	0.0795	1.6881		8,676.8825	8,676.8825	0.4386		8,687.8478
Offroad	0.6398	5.7132	4.7768	6.1100e-003		0.4426	0.4426		0.4072	0.4072		605.2816	605.2816	0.1915		610.0692
Total	**6.8221**	**18.1110**	**30.8971**	**0.0921**	**6.0105**	**0.5347**	**6.5452**	**1.6086**	**0.4946**	**2.1032**		**9,404.3438**	**9,404.3438**	**0.6327**	**2.2400e-003**	**9,420.8284**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2323	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977
Energy	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137
Mobile	1.9389	12.2957	25.9917	0.0854	6.0105	0.0843	6.0947	1.6086	0.0795	1.6881		8,676.8825	8,676.8825	0.4386		8,687.8478
Offroad	0.6398	5.7132	4.7768	6.1100e-003		0.4426	0.4426		0.4072	0.4072		605.2816	605.2816	0.1915		610.0692
Total	**6.8221**	**18.1110**	**30.8971**	**0.0921**	**6.0105**	**0.5347**	**6.5452**	**1.6086**	**0.4946**	**2.1032**		**9,404.3438**	**9,404.3438**	**0.6327**	**2.2400e-003**	**9,420.8284**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Cedar Avenue Technology Park - San Bernardino-South Coast County, Summer

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/3/2017	4/28/2017	5	20	
2	Grading	Grading	4/29/2017	5/26/2017	5	20	
3	Building Construction	Building Construction	5/27/2017	3/30/2018	5	220	
4	Paving	Paving	5/27/2017	3/30/2018	5	220	
5	Architectural Coating	Architectural Coating	8/13/2017	3/30/2018	5	165	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 5.36

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 277,155; Non-Residential Outdoor: 92,385; Striped Parking Area: 14,005 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	205.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	176.00	69.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	35.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.8080	0.0000	15.8080	8.6894	0.0000	8.6894			0.0000			0.0000
Off-Road	4.4991	47.2629	21.7204	0.0348		2.6332	2.6332		2.4225	2.4225		3,567.2138	3,567.2138	1.0930		3,594.5384
Total	**4.4991**	**47.2629**	**21.7204**	**0.0348**	**15.8080**	**2.6332**	**18.4412**	**8.6894**	**2.4225**	**11.1119**		**3,567.2138**	**3,567.2138**	**1.0930**		**3,594.5384**

3.2 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1315	0.0928	1.1561	2.2500e-003	0.2012	1.4500e-003	0.2027	0.0534	1.3400e-003	0.0547		223.5383	223.5383	9.1200e-003		223.7664
Total	**0.1315**	**0.0928**	**1.1561**	**2.2500e-003**	**0.2012**	**1.4500e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**223.5383**	**223.5383**	**9.1200e-003**		**223.7664**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8569	0.0000	5.8569	3.2194	0.0000	3.2194			0.0000			0.0000
Off-Road	4.4991	47.2629	21.7204	0.0348		2.6332	2.6332		2.4225	2.4225	0.0000	3,567.2137	3,567.2137	1.0930		3,594.5384
Total	**4.4991**	**47.2629**	**21.7204**	**0.0348**	**5.8569**	**2.6332**	**8.4901**	**3.2194**	**2.4225**	**5.6419**	**0.0000**	**3,567.2137**	**3,567.2137**	**1.0930**		**3,594.5384**

3.2 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1315	0.0928	1.1561	2.2500e-003	0.2012	1.4500e-003	0.2027	0.0534	1.3400e-003	0.0547		223.5383	223.5383	9.1200e-003		223.7664
Total	**0.1315**	**0.0928**	**1.1561**	**2.2500e-003**	**0.2012**	**1.4500e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**223.5383**	**223.5383**	**9.1200e-003**		**223.7664**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**6.5523**	**1.7774**	**8.3298**	**3.3675**	**1.6352**	**5.0027**		**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0840	3.1280	0.4559	8.2900e-003	0.1794	0.0155	0.1949	0.0492	0.0149	0.0640		878.5111	878.5111	0.0495		879.7484
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1096	0.0773	0.9634	1.8800e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1200e-003	0.0456		186.2819	186.2819	7.6000e-003		186.4720
Total	**0.1936**	**3.2053**	**1.4193**	**0.0102**	**0.3471**	**0.0167**	**0.3638**	**0.0937**	**0.0160**	**0.1096**		**1,064.7930**	**1,064.7930**	**0.0571**		**1,066.2204**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4276	0.0000	2.4276	1.2477	0.0000	1.2477			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**2.4276**	**1.7774**	**4.2051**	**1.2477**	**1.6352**	**2.8829**	**0.0000**	**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.3 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0840	3.1280	0.4559	8.2900e-003	0.1794	0.0155	0.1949	0.0492	0.0149	0.0640		878.5111	878.5111	0.0495		879.7484
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1096	0.0773	0.9634	1.8800e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1200e-003	0.0456		186.2819	186.2819	7.6000e-003		186.4720
Total	**0.1936**	**3.2053**	**1.4193**	**0.0102**	**0.3471**	**0.0167**	**0.3638**	**0.0937**	**0.0160**	**0.1096**		**1,064.7930**	**1,064.7930**	**0.0571**		**1,066.2204**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3189	9.0119	2.0758	0.0191	0.4420	0.0746	0.5166	0.1273	0.0714	0.1986		2,010.0516	2,010.0516	0.1447		2,013.6681
Worker	1.2859	0.9070	11.3037	0.0220	1.9673	0.0142	1.9815	0.5217	0.0131	0.5348		2,185.7081	2,185.7081	0.0892		2,187.9382
Total	**1.6049**	**9.9189**	**13.3795**	**0.0411**	**2.4092**	**0.0888**	**2.4980**	**0.6490**	**0.0845**	**0.7335**		**4,195.7597**	**4,195.7597**	**0.2339**		**4,201.6063**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3189	9.0119	2.0758	0.0191	0.4420	0.0746	0.5166	0.1273	0.0714	0.1986		2,010.0516	2,010.0516	0.1447		2,013.6681
Worker	1.2859	0.9070	11.3037	0.0220	1.9673	0.0142	1.9815	0.5217	0.0131	0.5348		2,185.7081	2,185.7081	0.0892		2,187.9382
Total	**1.6049**	**9.9189**	**13.3795**	**0.0411**	**2.4092**	**0.0888**	**2.4980**	**0.6490**	**0.0845**	**0.7335**		**4,195.7597**	**4,195.7597**	**0.2339**		**4,201.6063**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.4 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2781	8.4572	1.8157	0.0191	0.4420	0.0587	0.5007	0.1273	0.0562	0.1834		2,007.3890	2,007.3890	0.1376		2,010.8293
Worker	1.1482	0.7895	9.8964	0.0214	1.9673	0.0137	1.9809	0.5217	0.0126	0.5343		2,125.0744	2,125.0744	0.0783		2,127.0320
Total	**1.4263**	**9.2467**	**11.7120**	**0.0404**	**2.4092**	**0.0724**	**2.4816**	**0.6490**	**0.0688**	**0.7178**		**4,132.4634**	**4,132.4634**	**0.2159**		**4,137.8613**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.4 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2781	8.4572	1.8157	0.0191	0.4420	0.0587	0.5007	0.1273	0.0562	0.1834		2,007.3890	2,007.3890	0.1376		2,010.8293
Worker	1.1482	0.7895	9.8964	0.0214	1.9673	0.0137	1.9809	0.5217	0.0126	0.5343		2,125.0744	2,125.0744	0.0783		2,127.0320
Total	**1.4263**	**9.2467**	**11.7120**	**0.0404**	**2.4092**	**0.0724**	**2.4816**	**0.6490**	**0.0688**	**0.7178**		**4,132.4634**	**4,132.4634**	**0.2159**		**4,137.8613**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9874**	**20.7178**	**15.0320**	**0.0228**		**1.1592**	**1.1592**		**1.0665**	**1.0665**		**2,330.6461**	**2,330.6461**	**0.7141**		**2,348.4988**

3.5 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1096	0.0773	0.9634	1.8800e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1200e-003	0.0456		186.2819	186.2819	7.6000e-003		186.4720
Total	**0.1096**	**0.0773**	**0.9634**	**1.8800e-003**	**0.1677**	**1.2100e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**186.2819**	**186.2819**	**7.6000e-003**		**186.4720**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9874**	**20.7178**	**15.0320**	**0.0228**		**1.1592**	**1.1592**		**1.0665**	**1.0665**	**0.0000**	**2,330.6461**	**2,330.6461**	**0.7141**		**2,348.4988**

3.5 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1096	0.0773	0.9634	1.8800e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1200e-003	0.0456		186.2819	186.2819	7.6000e-003		186.4720
Total	**0.1096**	**0.0773**	**0.9634**	**1.8800e-003**	**0.1677**	**1.2100e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**186.2819**	**186.2819**	**7.6000e-003**		**186.4720**

3.5 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6862**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**		**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.5 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0979	0.0673	0.8434	1.8200e-003	0.1677	1.1600e-003	0.1688	0.0445	1.0700e-003	0.0455		181.1143	181.1143	6.6700e-003		181.2811
Total	**0.0979**	**0.0673**	**0.8434**	**1.8200e-003**	**0.1677**	**1.1600e-003**	**0.1688**	**0.0445**	**1.0700e-003**	**0.0455**		**181.1143**	**181.1143**	**6.6700e-003**		**181.2811**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6862**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**	**0.0000**	**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.5 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0979	0.0673	0.8434	1.8200e-003	0.1677	1.1600e-003	0.1688	0.0445	1.0700e-003	0.0455		181.1143	181.1143	6.6700e-003		181.2811
Total	**0.0979**	**0.0673**	**0.8434**	**1.8200e-003**	**0.1677**	**1.1600e-003**	**0.1688**	**0.0445**	**1.0700e-003**	**0.0455**		**181.1143**	**181.1143**	**6.6700e-003**		**181.2811**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.7741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**11.1064**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2557	0.1804	2.2479	4.3800e-003	0.3912	2.8200e-003	0.3940	0.1038	2.6000e-003	0.1064		434.6579	434.6579	0.0177		435.1014
Total	**0.2557**	**0.1804**	**2.2479**	**4.3800e-003**	**0.3912**	**2.8200e-003**	**0.3940**	**0.1038**	**2.6000e-003**	**0.1064**		**434.6579**	**434.6579**	**0.0177**		**435.1014**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.7741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**11.1064**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2557	0.1804	2.2479	4.3800e-003	0.3912	2.8200e-003	0.3940	0.1038	2.6000e-003	0.1064		434.6579	434.6579	0.0177		435.1014
Total	**0.2557**	**0.1804**	**2.2479**	**4.3800e-003**	**0.3912**	**2.8200e-003**	**0.3940**	**0.1038**	**2.6000e-003**	**0.1064**		**434.6579**	**434.6579**	**0.0177**		**435.1014**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.7741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**11.0728**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2283	0.1570	1.9680	4.2500e-003	0.3912	2.7200e-003	0.3939	0.1038	2.5000e-003	0.1063		422.6000	422.6000	0.0156		422.9893
Total	**0.2283**	**0.1570**	**1.9680**	**4.2500e-003**	**0.3912**	**2.7200e-003**	**0.3939**	**0.1038**	**2.5000e-003**	**0.1063**		**422.6000**	**422.6000**	**0.0156**		**422.9893**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.7741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**11.0728**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2283	0.1570	1.9680	4.2500e-003	0.3912	2.7200e-003	0.3939	0.1038	2.5000e-003	0.1063		422.6000	422.6000	0.0156		422.9893
Total	**0.2283**	**0.1570**	**1.9680**	**4.2500e-003**	**0.3912**	**2.7200e-003**	**0.3939**	**0.1038**	**2.5000e-003**	**0.1063**		**422.6000**	**422.6000**	**0.0156**		**422.9893**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9389	12.2957	25.9917	0.0854	6.0105	0.0843	6.0947	1.6086	0.0795	1.6881		8,676.8825	8,676.8825	0.4386		8,687.8478
Unmitigated	1.9389	12.2957	25.9917	0.0854	6.0105	0.0843	6.0947	1.6086	0.0795	1.6881		8,676.8825	8,676.8825	0.4386		8,687.8478

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	657.78	657.78	657.78	2,819,064	2,819,064
Total	657.78	657.78	657.78	2,819,064	2,819,064

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Other Non-Asphalt Surfaces	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Parking Lot	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Unrefrigerated Warehouse-No Rail	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137
NaturalGas Unmitigated	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1037.75	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137
Total		**0.0112**	**0.1017**	**0.0855**	**6.1000e-004**		**7.7300e-003**	**7.7300e-003**		**7.7300e-003**	**7.7300e-003**		**122.0882**	**122.0882**	**2.3400e-003**	**2.2400e-003**	**122.8137**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.03775	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137
Total		**0.0112**	**0.1017**	**0.0855**	**6.1000e-004**		**7.7300e-003**	**7.7300e-003**		**7.7300e-003**	**7.7300e-003**		**122.0882**	**122.0882**	**2.3400e-003**	**2.2400e-003**	**122.8137**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2323	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977
Unmitigated	4.2323	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4871					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7411					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0900e-003	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977
Total	**4.2323**	**4.0000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0915**	**0.0915**	**2.5000e-004**		**0.0977**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4871					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7411					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0900e-003	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977
Total	**4.2323**	**4.0000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0915**	**0.0915**	**2.5000e-004**		**0.0977**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	4	8.00	260	89	0.20	CNG

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.6398	5.7132	4.7768	6.1100e-003		0.4426	0.4426		0.4072	0.4072		605.2816	605.2816	0.1915		610.0692
Total	**0.6398**	**5.7132**	**4.7768**	**6.1100e-003**		**0.4426**	**0.4426**		**0.4072**	**0.4072**		**605.2816**	**605.2816**	**0.1915**		**610.0692**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Cedar Avenue Technology Park

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	184.77	1000sqft	4.24	184,770.00	0
Other Asphalt Surfaces	17.32	1000sqft	0.40	17,320.00	0
Other Non-Asphalt Surfaces	77.85	1000sqft	1.79	77,850.00	0
Parking Lot	138.25	1000sqft	3.17	138,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Accounts for warehouse, future road expansion, parking lot, & landscaped areas

Construction Phase - Building construction, paving, and painting assumed to occur simultaneously

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - equipment

Trips and VMT -

Grading - Import Data provided for Grading.

Vehicle Trips - Trip generation per Traffic Impact Analysis

Land Use Change -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Operational Off-Road Equipment - 4 forklifts

Fleet Mix - Traffic fleet mix per Traffic Impact Analysis

Cedar Avenue Technology Park - San Bernardino-South Coast County, Winter

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	165.00
tblConstructionPhase	NumDays	230.00	220.00
tblConstructionPhase	NumDays	20.00	220.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	9/20/2019	3/30/2018
tblConstructionPhase	PhaseEndDate	2/1/2019	3/30/2018
tblConstructionPhase	PhaseStartDate	2/2/2019	8/13/2017
tblConstructionPhase	PhaseStartDate	3/31/2018	5/27/2017
tblFleetMix	FleetMixLandUseSubType	Unrefrigerated Warehouse-No Rail	Other Asphalt Surfaces
tblFleetMix	FleetMixLandUseSubType	Other Asphalt Surfaces	Other Non-Asphalt Surfaces
tblFleetMix	FleetMixLandUseSubType	Other Non-Asphalt Surfaces	Parking Lot
tblFleetMix	FleetMixLandUseSubType	Parking Lot	Unrefrigerated Warehouse-No Rail
tblGrading	MaterialImported	0.00	2,070.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	4.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblVehicleTrips	ST_TR	1.68	3.56
tblVehicleTrips	SU_TR	1.68	3.56
tblVehicleTrips	WD_TR	1.68	3.56

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	18.1877	59.6758	49.4322	0.0964	16.0092	3.2142	18.6438	8.7427	3.0080	11.1666	0.0000	9,716.8436	9,716.8436	1.6563	0.0000	9,758.2511
2018	17.1996	52.4057	46.7831	0.0956	2.9681	2.6836	5.6517	0.7972	2.5132	3.3104	0.0000	9,575.3923	9,575.3923	1.6229	0.0000	9,615.9641
Maximum	**18.1877**	**59.6758**	**49.4322**	**0.0964**	**16.0092**	**3.2142**	**18.6438**	**8.7427**	**3.0080**	**11.1666**	**0.0000**	**9,716.8436**	**9,716.8436**	**1.6563**	**0.0000**	**9,758.2511**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	18.1877	59.6758	49.4322	0.0964	6.0581	3.2142	8.6927	3.2728	3.0080	5.6966	0.0000	9,716.8436	9,716.8436	1.6563	0.0000	9,758.2511
2018	17.1996	52.4057	46.7831	0.0956	2.9681	2.6836	5.6517	0.7972	2.5132	3.3104	0.0000	9,575.3923	9,575.3923	1.6229	0.0000	9,615.9641
Maximum	**18.1877**	**59.6758**	**49.4322**	**0.0964**	**6.0581**	**3.2142**	**8.6927**	**3.2728**	**3.0080**	**5.6966**	**0.0000**	**9,716.8436**	**9,716.8436**	**1.6563**	**0.0000**	**9,758.2511**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.44**	**0.00**	**40.96**	**57.34**	**0.00**	**37.78**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2323	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977
Energy	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137
Mobile	1.7119	12.4488	22.5043	0.0786	6.0105	0.0849	6.0954	1.6086	0.0801	1.6887		8,002.9851	8,002.9851	0.4358		8,013.8807
Offroad	0.6398	5.7132	4.7768	6.1100e-003		0.4426	0.4426		0.4072	0.4072		605.2816	605.2816	0.1915		610.0692
Total	**6.5952**	**18.2642**	**27.4096**	**0.0853**	**6.0105**	**0.5354**	**6.5459**	**1.6086**	**0.4952**	**2.1038**		**8,730.4464**	**8,730.4464**	**0.6299**	**2.2400e-003**	**8,746.8614**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2323	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977
Energy	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137
Mobile	1.7119	12.4488	22.5043	0.0786	6.0105	0.0849	6.0954	1.6086	0.0801	1.6887		8,002.9851	8,002.9851	0.4358		8,013.8807
Offroad	0.6398	5.7132	4.7768	6.1100e-003		0.4426	0.4426		0.4072	0.4072		605.2816	605.2816	0.1915		610.0692
Total	**6.5952**	**18.2642**	**27.4096**	**0.0853**	**6.0105**	**0.5354**	**6.5459**	**1.6086**	**0.4952**	**2.1038**		**8,730.4464**	**8,730.4464**	**0.6299**	**2.2400e-003**	**8,746.8614**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Cedar Avenue Technology Park - San Bernardino-South Coast County, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/3/2017	4/28/2017	5	20	
2	Grading	Grading	4/29/2017	5/26/2017	5	20	
3	Building Construction	Building Construction	5/27/2017	3/30/2018	5	220	
4	Paving	Paving	5/27/2017	3/30/2018	5	220	
5	Architectural Coating	Architectural Coating	8/13/2017	3/30/2018	5	165	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 5.36

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 277,155; Non-Residential Outdoor: 92,385; Striped Parking Area: 14,005 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	205.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	176.00	69.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	35.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					15.8080	0.0000	15.8080	8.6894	0.0000	8.6894			0.0000			0.0000
Off-Road	4.4991	47.2629	21.7204	0.0348		2.6332	2.6332		2.4225	2.4225		3,567.2138	3,567.2138	1.0930		3,594.5384
Total	**4.4991**	**47.2629**	**21.7204**	**0.0348**	**15.8080**	**2.6332**	**18.4412**	**8.6894**	**2.4225**	**11.1119**		**3,567.2138**	**3,567.2138**	**1.0930**		**3,594.5384**

3.2 Site Preparation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1311	0.0979	0.9570	2.0200e-003	0.2012	1.4500e-003	0.2027	0.0534	1.3400e-003	0.0547		200.5907	200.5907	8.0500e-003		200.7920
Total	**0.1311**	**0.0979**	**0.9570**	**2.0200e-003**	**0.2012**	**1.4500e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**200.5907**	**200.5907**	**8.0500e-003**		**200.7920**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.8569	0.0000	5.8569	3.2194	0.0000	3.2194			0.0000			0.0000
Off-Road	4.4991	47.2629	21.7204	0.0348		2.6332	2.6332		2.4225	2.4225	0.0000	3,567.2137	3,567.2137	1.0930		3,594.5384
Total	**4.4991**	**47.2629**	**21.7204**	**0.0348**	**5.8569**	**2.6332**	**8.4901**	**3.2194**	**2.4225**	**5.6419**	**0.0000**	**3,567.2137**	**3,567.2137**	**1.0930**		**3,594.5384**

3.2 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1311	0.0979	0.9570	2.0200e-003	0.2012	1.4500e-003	0.2027	0.0534	1.3400e-003	0.0547		200.5907	200.5907	8.0500e-003		200.7920
Total	**0.1311**	**0.0979**	**0.9570**	**2.0200e-003**	**0.2012**	**1.4500e-003**	**0.2027**	**0.0534**	**1.3400e-003**	**0.0547**		**200.5907**	**200.5907**	**8.0500e-003**		**200.7920**

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352		3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**6.5523**	**1.7774**	**8.3298**	**3.3675**	**1.6352**	**5.0027**		**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0874	3.1572	0.5181	8.0900e-003	0.1794	0.0157	0.1951	0.0492	0.0151	0.0643		856.7746	856.7746	0.0534		858.1105
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1093	0.0815	0.7975	1.6800e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1200e-003	0.0456		167.1589	167.1589	6.7100e-003		167.3267
Total	**0.1967**	**3.2387**	**1.3156**	**9.7700e-003**	**0.3471**	**0.0170**	**0.3640**	**0.0937**	**0.0162**	**0.1098**		**1,023.9336**	**1,023.9336**	**0.0601**		**1,025.4372**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4276	0.0000	2.4276	1.2477	0.0000	1.2477			0.0000			0.0000
Off-Road	3.0705	33.8868	17.1042	0.0297		1.7774	1.7774		1.6352	1.6352	0.0000	3,037.9107	3,037.9107	0.9308		3,061.1809
Total	**3.0705**	**33.8868**	**17.1042**	**0.0297**	**2.4276**	**1.7774**	**4.2051**	**1.2477**	**1.6352**	**2.8829**	**0.0000**	**3,037.9107**	**3,037.9107**	**0.9308**		**3,061.1809**

3.3 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0874	3.1572	0.5181	8.0900e-003	0.1794	0.0157	0.1951	0.0492	0.0151	0.0643		856.7746	856.7746	0.0534		858.1105
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1093	0.0815	0.7975	1.6800e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1200e-003	0.0456		167.1589	167.1589	6.7100e-003		167.3267
Total	**0.1967**	**3.2387**	**1.3156**	**9.7700e-003**	**0.3471**	**0.0170**	**0.3640**	**0.0937**	**0.0162**	**0.1098**		**1,023.9336**	**1,023.9336**	**0.0601**		**1,025.4372**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3327	8.9898	2.3342	0.0184	0.4420	0.0755	0.5175	0.1273	0.0723	0.1995		1,935.2417	1,935.2417	0.1583		1,939.1984
Worker	1.2820	0.9568	9.3571	0.0197	1.9673	0.0142	1.9815	0.5217	0.0131	0.5348		1,961.3315	1,961.3315	0.0787		1,963.2996
Total	**1.6147**	**9.9466**	**11.6914**	**0.0381**	**2.4092**	**0.0897**	**2.4990**	**0.6490**	**0.0854**	**0.7343**		**3,896.5732**	**3,896.5732**	**0.2370**		**3,902.4980**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3327	8.9898	2.3342	0.0184	0.4420	0.0755	0.5175	0.1273	0.0723	0.1995		1,935.2417	1,935.2417	0.1583		1,939.1984
Worker	1.2820	0.9568	9.3571	0.0197	1.9673	0.0142	1.9815	0.5217	0.0131	0.5348		1,961.3315	1,961.3315	0.0787		1,963.2996
Total	**1.6147**	**9.9466**	**11.6914**	**0.0381**	**2.4092**	**0.0897**	**2.4990**	**0.6490**	**0.0854**	**0.7343**		**3,896.5732**	**3,896.5732**	**0.2370**		**3,902.4980**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.4 Building Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2911	8.4209	2.0668	0.0183	0.4420	0.0595	0.5014	0.1273	0.0569	0.1842		1,930.8204	1,930.8204	0.1514		1,934.6053
Worker	1.1448	0.8318	8.1655	0.0192	1.9673	0.0137	1.9809	0.5217	0.0126	0.5343		1,906.4847	1,906.4847	0.0689		1,908.2062
Total	**1.4359**	**9.2527**	**10.2323**	**0.0375**	**2.4092**	**0.0731**	**2.4824**	**0.6490**	**0.0695**	**0.7185**		**3,837.3050**	**3,837.3050**	**0.2203**		**3,842.8115**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.4 Building Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2911	8.4209	2.0668	0.0183	0.4420	0.0595	0.5014	0.1273	0.0569	0.1842		1,930.8204	1,930.8204	0.1514		1,934.6053
Worker	1.1448	0.8318	8.1655	0.0192	1.9673	0.0137	1.9809	0.5217	0.0126	0.5343		1,906.4847	1,906.4847	0.0689		1,908.2062
Total	**1.4359**	**9.2527**	**10.2323**	**0.0375**	**2.4092**	**0.0731**	**2.4824**	**0.6490**	**0.0695**	**0.7185**		**3,837.3050**	**3,837.3050**	**0.2203**		**3,842.8115**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665		2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9874**	**20.7178**	**15.0320**	**0.0228**		**1.1592**	**1.1592**		**1.0665**	**1.0665**		**2,330.6461**	**2,330.6461**	**0.7141**		**2,348.4988**

3.5 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1093	0.0815	0.7975	1.6800e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1200e-003	0.0456		167.1589	167.1589	6.7100e-003		167.3267
Total	**0.1093**	**0.0815**	**0.7975**	**1.6800e-003**	**0.1677**	**1.2100e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**167.1589**	**167.1589**	**6.7100e-003**		**167.3267**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9449	20.7178	15.0320	0.0228		1.1592	1.1592		1.0665	1.0665	0.0000	2,330.6461	2,330.6461	0.7141		2,348.4988
Paving	0.0425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9874**	**20.7178**	**15.0320**	**0.0228**		**1.1592**	**1.1592**		**1.0665**	**1.0665**	**0.0000**	**2,330.6461**	**2,330.6461**	**0.7141**		**2,348.4988**

3.5 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1093	0.0815	0.7975	1.6800e-003	0.1677	1.2100e-003	0.1689	0.0445	1.1200e-003	0.0456		167.1589	167.1589	6.7100e-003		167.3267
Total	**0.1093**	**0.0815**	**0.7975**	**1.6800e-003**	**0.1677**	**1.2100e-003**	**0.1689**	**0.0445**	**1.1200e-003**	**0.0456**		**167.1589**	**167.1589**	**6.7100e-003**		**167.3267**

3.5 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6862**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**		**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.5 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0976	0.0709	0.6959	1.6300e-003	0.1677	1.1600e-003	0.1688	0.0445	1.0700e-003	0.0455		162.4845	162.4845	5.8700e-003		162.6312
Total	**0.0976**	**0.0709**	**0.6959**	**1.6300e-003**	**0.1677**	**1.1600e-003**	**0.1688**	**0.0445**	**1.0700e-003**	**0.0455**		**162.4845**	**162.4845**	**5.8700e-003**		**162.6312**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.0425					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6862**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**	**0.0000**	**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.5 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0976	0.0709	0.6959	1.6300e-003	0.1677	1.1600e-003	0.1688	0.0445	1.0700e-003	0.0455		162.4845	162.4845	5.8700e-003		162.6312
Total	**0.0976**	**0.0709**	**0.6959**	**1.6300e-003**	**0.1677**	**1.1600e-003**	**0.1688**	**0.0445**	**1.0700e-003**	**0.0455**		**162.4845**	**162.4845**	**5.8700e-003**		**162.6312**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.7741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.1909
Total	**11.1064**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2549	0.1903	1.8608	3.9200e-003	0.3912	2.8200e-003	0.3940	0.1038	2.6000e-003	0.1064		390.0375	390.0375	0.0157		390.4289
Total	**0.2549**	**0.1903**	**1.8608**	**3.9200e-003**	**0.3912**	**2.8200e-003**	**0.3940**	**0.1038**	**2.6000e-003**	**0.1064**		**390.0375**	**390.0375**	**0.0157**		**390.4289**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.7741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.1909
Total	**11.1064**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.1909**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2549	0.1903	1.8608	3.9200e-003	0.3912	2.8200e-003	0.3940	0.1038	2.6000e-003	0.1064		390.0375	390.0375	0.0157		390.4289
Total	**0.2549**	**0.1903**	**1.8608**	**3.9200e-003**	**0.3912**	**2.8200e-003**	**0.3940**	**0.1038**	**2.6000e-003**	**0.1064**		**390.0375**	**390.0375**	**0.0157**		**390.4289**

3.6 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.7741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**11.0728**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2277	0.1654	1.6238	3.8100e-003	0.3912	2.7200e-003	0.3939	0.1038	2.5000e-003	0.1063		379.1305	379.1305	0.0137		379.4728
Total	**0.2277**	**0.1654**	**1.6238**	**3.8100e-003**	**0.3912**	**2.7200e-003**	**0.3939**	**0.1038**	**2.5000e-003**	**0.1063**		**379.1305**	**379.1305**	**0.0137**		**379.4728**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.7741					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**11.0728**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.6 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2277	0.1654	1.6238	3.8100e-003	0.3912	2.7200e-003	0.3939	0.1038	2.5000e-003	0.1063		379.1305	379.1305	0.0137		379.4728
Total	**0.2277**	**0.1654**	**1.6238**	**3.8100e-003**	**0.3912**	**2.7200e-003**	**0.3939**	**0.1038**	**2.5000e-003**	**0.1063**		**379.1305**	**379.1305**	**0.0137**		**379.4728**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7119	12.4488	22.5043	0.0786	6.0105	0.0849	6.0954	1.6086	0.0801	1.6887		8,002.9851	8,002.9851	0.4358		8,013.8807
Unmitigated	1.7119	12.4488	22.5043	0.0786	6.0105	0.0849	6.0954	1.6086	0.0801	1.6887		8,002.9851	8,002.9851	0.4358		8,013.8807

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	657.78	657.78	657.78	2,819,064	2,819,064
Total	657.78	657.78	657.78	2,819,064	2,819,064

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Other Non-Asphalt Surfaces	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Parking Lot	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Unrefrigerated Warehouse-No Rail	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137
NaturalGas Unmitigated	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1037.75	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137
Total		**0.0112**	**0.1017**	**0.0855**	**6.1000e-004**		**7.7300e-003**	**7.7300e-003**		**7.7300e-003**	**7.7300e-003**		**122.0882**	**122.0882**	**2.3400e-003**	**2.2400e-003**	**122.8137**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	1.03775	0.0112	0.1017	0.0855	6.1000e-004		7.7300e-003	7.7300e-003		7.7300e-003	7.7300e-003		122.0882	122.0882	2.3400e-003	2.2400e-003	122.8137
Total		**0.0112**	**0.1017**	**0.0855**	**6.1000e-004**		**7.7300e-003**	**7.7300e-003**		**7.7300e-003**	**7.7300e-003**		**122.0882**	**122.0882**	**2.3400e-003**	**2.2400e-003**	**122.8137**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2323	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977
Unmitigated	4.2323	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4871					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7411					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0900e-003	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977
Total	**4.2323**	**4.0000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0915**	**0.0915**	**2.5000e-004**		**0.0977**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4871					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.7411					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.0900e-003	4.0000e-004	0.0431	0.0000		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004		0.0915	0.0915	2.5000e-004		0.0977
Total	**4.2323**	**4.0000e-004**	**0.0431**	**0.0000**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**		**0.0915**	**0.0915**	**2.5000e-004**		**0.0977**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	4	8.00	260	89	0.20	CNG

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.6398	5.7132	4.7768	6.1100e-003		0.4426	0.4426		0.4072	0.4072		605.2816	605.2816	0.1915		610.0692
Total	**0.6398**	**5.7132**	**4.7768**	**6.1100e-003**		**0.4426**	**0.4426**		**0.4072**	**0.4072**		**605.2816**	**605.2816**	**0.1915**		**610.0692**

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B
Health Risk Assessment

CEDAR AVENUE TECHNOLOGY PARK PROJECT

HEALTH RISK ASSESSMENT

PREPARED BY

Michael Baker
INTERNATIONAL

NOVEMBER 2016

1.0 INTRODUCTION

2.0 HEALTH RISK ASSESSMENT

FIGURES

TABLES

APPENDICES

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1.0 INTRODUCTION

This report evaluates the potential health risks associated with the proposed Cedar Avenue Technology Park Project (Project). The purpose of this Health Risk Assessment is to evaluate potential health risks associated with Toxic Air Contaminants (TAC) including Diesel Particulate Matter (DPM) resulting from the implementation of the proposed Project in the community of Bloomington, unincorporated San Bernardino County, California. This Health Risk Assessment was prepared in accordance with the requirements of the South Coast Air Quality Management District (SCAQMD) and guidance from the Office of Environmental Health Hazard Assessment (OEHHA) to determine if health risks are likely to occur from the proposed Project. Technical data is included as see Appendix A, *Dispersion Modeling Data.*

1.1 PROJECT LOCATION

The Project site is located in unincorporated San Bernardino County within the community of Bloomington, in between the cities of Rialto and Fontana, just north of the San Bernardino and Riverside County line. Nearby cities include Fontana to the west, Rialto to the east and Jurupa Valley to the south. The Project site is located just south of Interstate 10 (I-10), immediately east of Cedar Avenue, north of Orange Street, and west of Vine Street. Refer to Figure 1, *Regional Vicinity,* and Figure 2, *Project Location.*

Surrounding land uses include a Union Pacific railway and I-10 to the north, Cedar Avenue to the west with vacant land beyond, a school campus consisting of Colton Joint Unified School District administrative buildings and Slover Mountain High School (Continuation), and an office/warehouse facility to the east.

1.2 PROJECT DESCRIPTION

The Project would construct a single 184,770 square foot warehouse distribution building within an approximately 9.6-acre property, with associated facilities and improvements such as a small office area, parking, bicycle racks, and landscaping; refer to Figure 3, *Site Plan*. Landscaping would be provided and would represent approximately 19 percent of the site coverage. There would be a total of 151 automobile parking stalls constructed for employee parking with access from Orange Street and Vine Street. All parking and site paving would be concrete and asphalt, and would represent approximately 34 percent of the site coverage. Truck access would be from Vine Street, and a 400 foot long dockyard would located along the eastern side of the proposed building and include several trailer storage stalls, dock high doors, and 2 grade level ramps.

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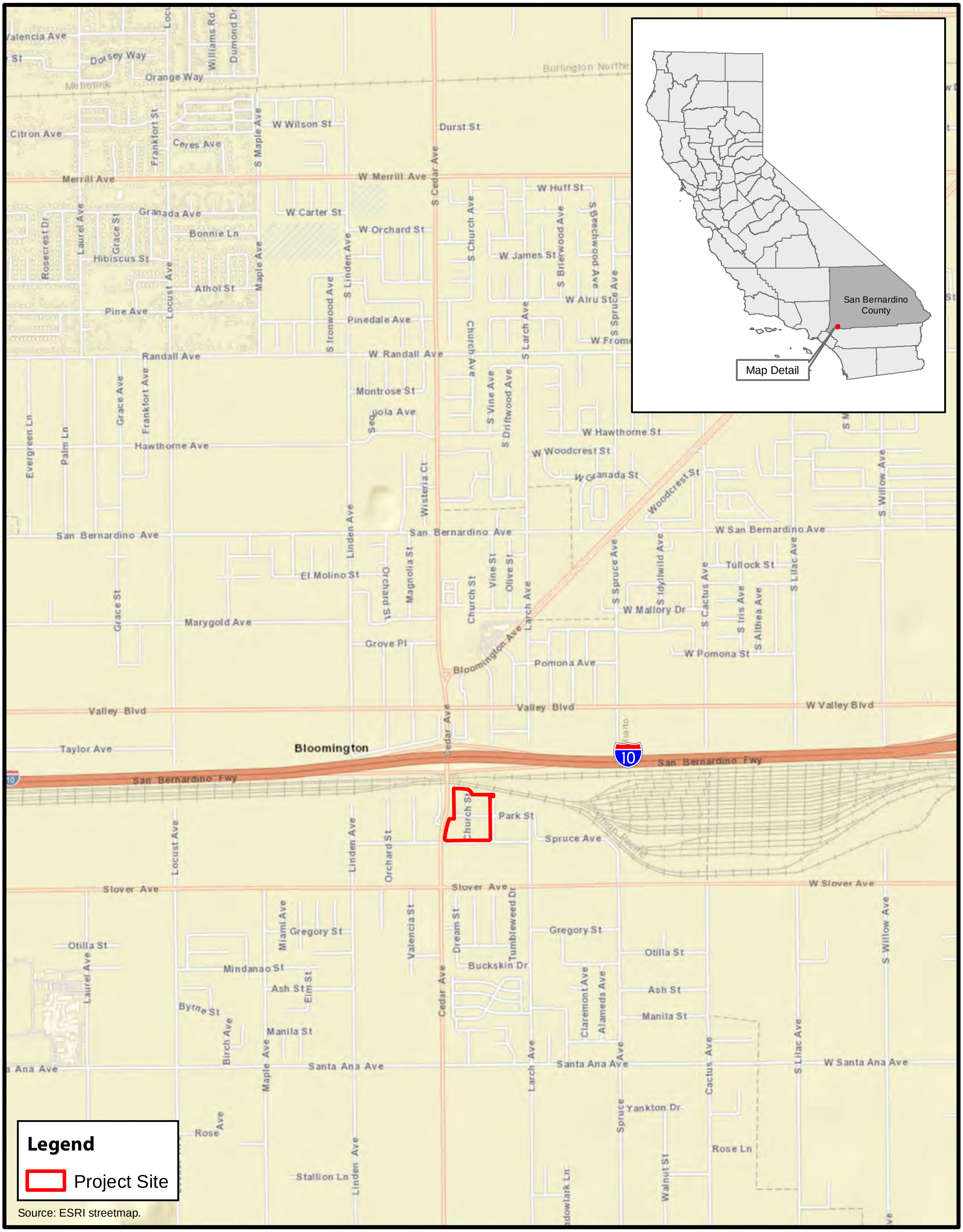

T:_GIS\San_Bernardino_County\MXD\Bloomington_Industrial\Figure 1 Vicinity.mxd (10/24/2016)

N

0 1,000 2,000

Feet

FIGURE 1

Regional Vicinity

Michael Baker INTERNATIONAL

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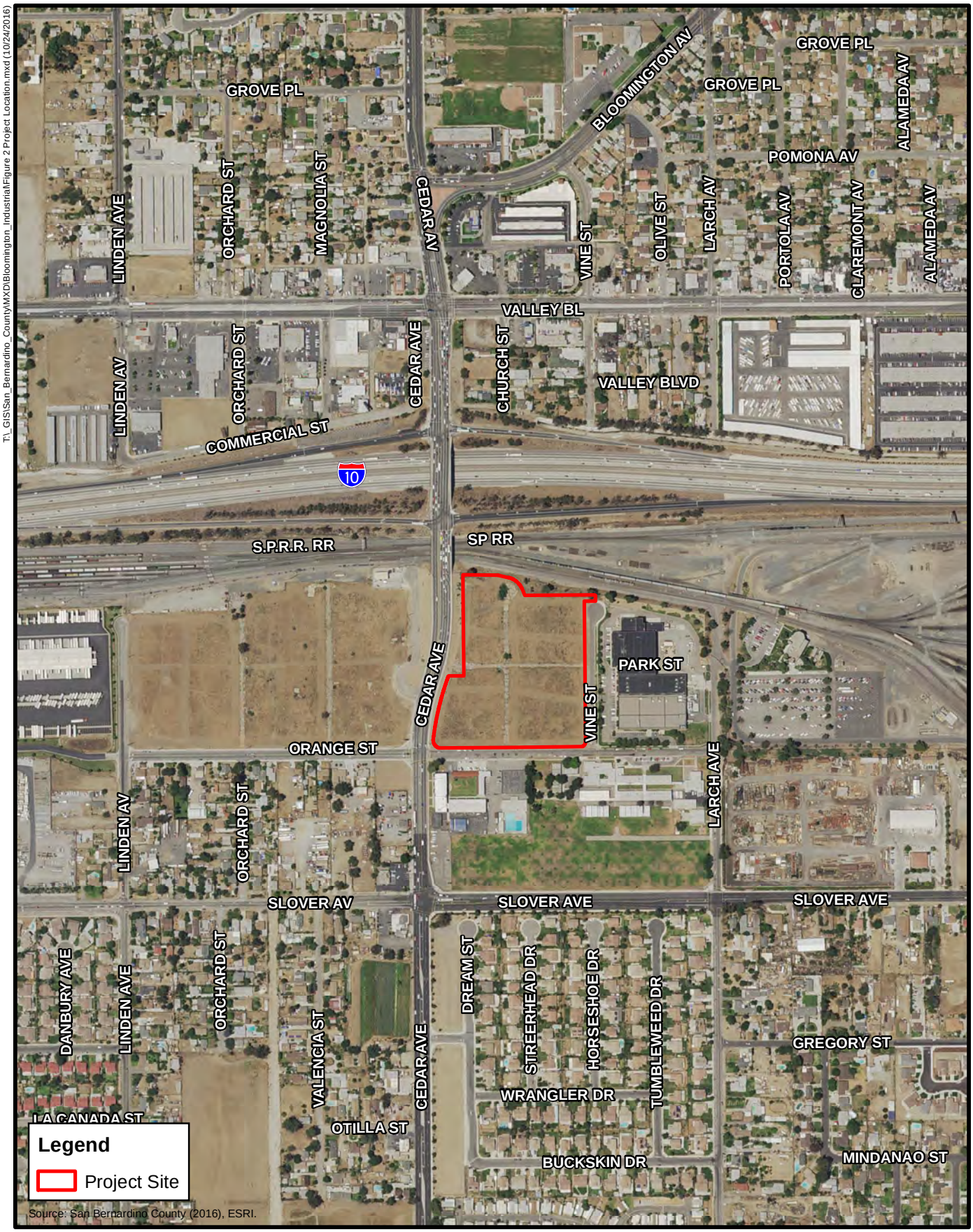

FIGURE 2
Project Location

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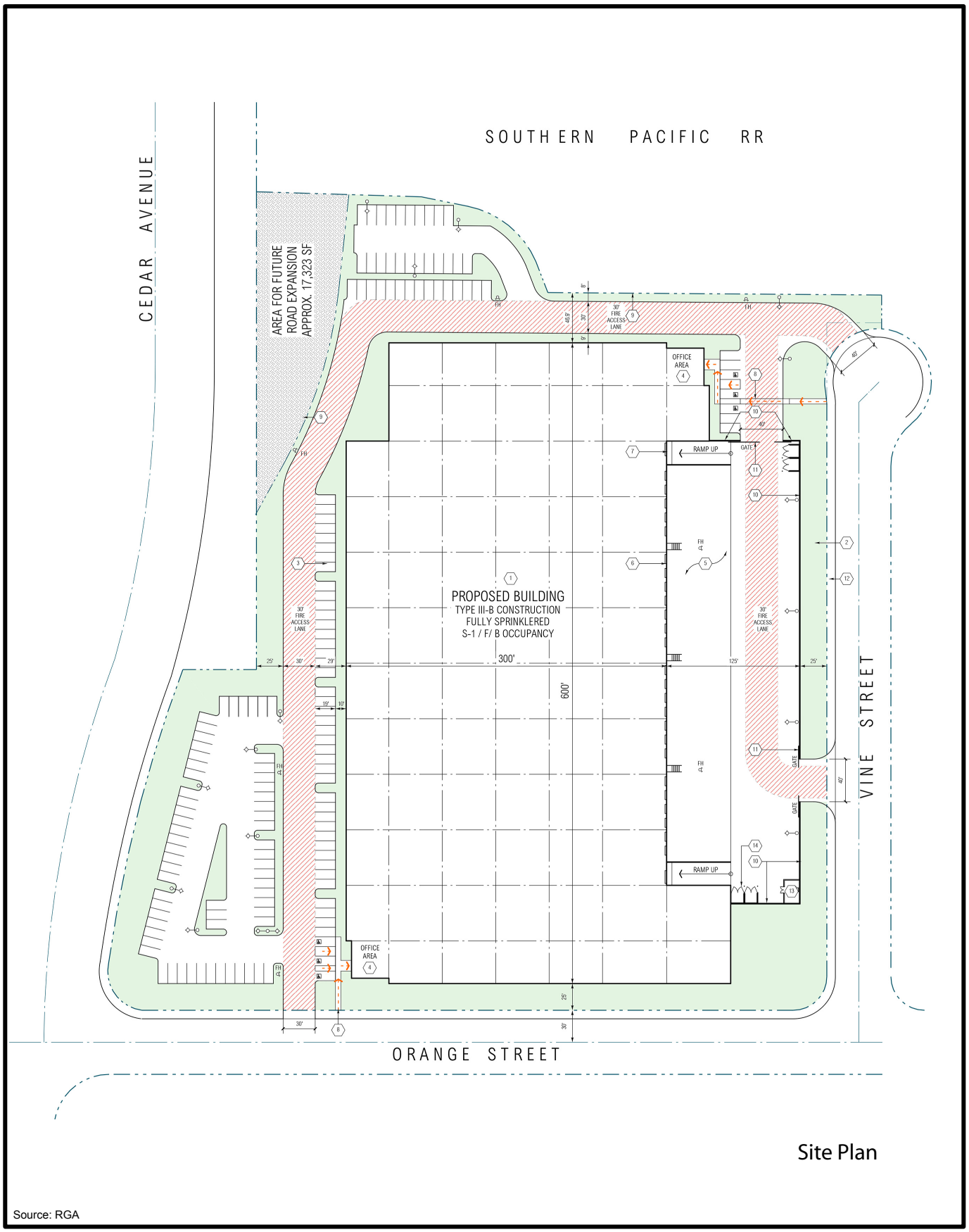
T:_CSIWork\San Bernardino, County of\Cedar Avenue Warehouse\Figures



Site Plan

Source: RGA

0 50 100
FEET

FIGURE 3
Cedar Avenue Technology Park

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2.0 HEALTH RISK ASSESSMENT

2.1 ENVIRONMENTAL SETTING

Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project site lies within the northwestern portion of the South Coast Air Basin (Basin). The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

Climate

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin. These factors along with applicable regulations are discussed below.

The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit (°F). However, with a less-pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have had recorded temperatures over 100°F in recent years.

Meteorology

Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation in the Basin is typically nine to 14 inches annually and is rarely in the form of snow or hail due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

A temperature inversion is defined as an increase in temperature with height, or to the layer within which such an increase occurs. The height of the inversion is important in determining

pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O_3) observed during summer months in the Basin. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the Project is located offers clear skies and sunshine, yet is still susceptible to air inversions. These inversions trap a layer of stagnant air near the ground, where it is then further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

Toxic Air Contaminants

TACs are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Hazardous Air Pollutants (HAP) is a term used by the Federal Clean Air Act (FCAA) that includes a variety of pollutants generated or emitted by industrial production activities. Identified as TACs under the California Clean Air Act (CCAA), ten have been singled out through ambient air quality data as being the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. CARB provides emission inventories for only the larger air basins.

TACs do not have ambient air quality standards because no safe levels of TACs can be determined. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Air Toxic "Hot Spots" Information and Assessment Act (Assembly Bill [AB] 2588) apply to facilities that use, produce, or emit toxic chemicals. Facilities subject to the toxic emission inventory requirements of the act must prepare and submit toxic emission inventory plans and reports, and periodically update those reports.

Toxic contaminants often result from fugitive emissions during fuel storage and transfer activities, and from leaking valves and pipes. For example, the electronics industry, including semiconductor manufacturing, uses highly toxic chlorinated solvents in semiconductor production processes. Sources of air toxics go beyond industry, however. Automobile exhaust also contains toxic air pollutants such as benzene and 1,3-butadiene. The following are health effects related to common Toxic Air Contaminants:

Acetaldehyde. Acetaldehyde is directly emitted into the atmosphere and is also formed in the atmosphere from photochemical oxidation. Acetaldehyde is generated as exhaust from mobile sources and fuel combustion from stationary internal combustion engines, boilers, and process heaters. Acetaldehyde is a carcinogen that can also cause chronic non-cancer toxicity in the respiratory system. Symptoms of chronic intoxication of acetaldehyde in humans resemble those of alcoholism. The primary short-term effect of inhalation exposure to acetaldehyde is irritation of the eyes, skin, and respiratory tract. At higher exposure levels, erythematic, coughing, and pulmonary edema, and necrosis may also occur.

Benzene. Approximately 84 percent of the benzene emitted in California comes from motor vehicles, including evaporative leakage and unburned fuel exhaust. Benzene is highly carcinogenic and occurs throughout California. Benzene also has non-cancer health effects. Brief inhalation exposure to high concentrations can cause central nervous system symptoms of nausea, tremors, drowsiness, dizziness, headache, intoxication, and unconsciousness.

Neurological symptoms of inhalation exposure to benzene include drowsiness, dizziness, headaches, and unconsciousness. Ingestion of large amounts of benzene may result in vomiting, dizziness, and convulsions. Exposure to liquid and vapor may irritate the skin, eyes, and upper respiratory tract. Redness and blisters may result from dermal exposure to benzene. Chronic inhalation of certain levels of benzene causes blood disorders because benzene specifically affects bone marrow, which produces blood cells. Aplastic anemia, excessive bleeding, and damage to the immune system (by changes in blood levels of antibodies and loss of white blood cells) may develop. Increased incidence of leukemia (cancer of the tissues that form white blood cells) has been observed in humans occupationally exposed to benzene.

1,3-Butadiene. The majority of 1,3-butadiene emissions comes from incomplete combustion of gasoline and diesel fuels. 1,3-butadiene has been identified as a carcinogen in California. Butadiene vapors at elevated levels cause neurological effects such as blurred vision, fatigue, headache, and vertigo. Dermal exposure to 1,3-butadiene causes a sensation of cold, followed by a burning sensation, and can lead to frostbite. Chronic exposure to 1,3-butadiene via inhalation has been shown to result in an increase in cardiovascular diseases, and increase in the occurrence of leukemia, and an increased incidence of respiratory, bladder, stomach, and lymphato-hematopoietic cancers.

Carbon Tetrachloride. The primary sources of carbon tetrachloride in California include chemical manufacturing facilities and petroleum refineries. Carbon tetrachloride has been identified as a probable human carcinogen in California. Carbon tetrachloride is also a central nervous system depressant and mild eye and respiratory tract irritant. Acute inhalation and oral exposures to high levels of carbon tetrachloride can damage the liver and kidneys in humans and animals. Symptoms of acute exposure in humans include headache, weakness, lethargy, nausea, and vomiting.

Chromium, Hexavalent. Chromium planting and other metal finishing processes are the primary sources of hexavalent chromium emissions in California. California has identified hexavalent chromium as a carcinogen. Exposure to inhaled hexavalent chromium may result in lung cancer, and short-term exposure symptoms may include renal toxicity, gastrointestinal hemorrhage, and intravascular hemolysis.

Inhalation exposure of hexavalent exposure targets the respiratory tract. Exposure to very high concentrations of hexavalent chromium can include burns, effects on the respiratory tract such as perforations and ulcerations of the septum, bronchitis, decreased pulmonary function, pneumonia, asthma, and nasal itching and soreness. Chronic human exposure to high levels of hexavalent chromium by inhalation or oral exposure may adversely affect the liver, kidney, and gastrointestinal and immune system.

Para-Dichlorobenzene. The primary sources of para-dichlorobenzene include consumer products such as non-aerosol insect repellents and solid air fresheners. These sources contribute 99 percent of statewide para-dichlorobenzene emissions. In California, para-dichlorobenzene has been identified as a carcinogen. Acute exposure to 1,4-dichlorobenzene via inhalation in humans results in irritation to the eyes, skin, and throat. In addition, long-term inhalation exposure may affect the liver, skin, and central nervous system.

Formaldehyde. Formaldehyde is both directly emitted into the atmosphere and formed in the atmosphere as a result of photochemical oxidation. Formaldehyde is a product of incomplete combustion, and one of the primary sources of formaldehyde is vehicular exhaust. Formaldehyde can also be found in many consumer products as an antimicrobial agent and is used in fumigants and soil disinfectants.

Acute formaldehyde inhalation exposure can result in eye, nose, and throat irritation and effects on the nasal cavity. Other effects seen from exposure to high levels of formaldehyde in humans are coughing, wheezing, chest pains, and bronchitis. Chronic inhalation exposure to formaldehyde has been associated with respiratory symptoms and eye, nose, and throat irritation. In California, formaldehyde has been identified as a carcinogen, and occupational studies have shown associations between exposure to formaldehyde and increased incidence of lung and nasopharyngeal cancer.

Methylene Chloride. Methylene chloride is a solvent used in paint stripping operations and as a blowing and cleaning agent in the manufacture of polyurethane foam and plastic. Paint removers account for the largest use of methylene chloride in California. Inhalation exposure to extremely high levels of methylene chloride can be fatal to humans. Acute inhalation exposure to high levels of methylene chloride can result in decreased visual, auditory, and psychomotor functions, but these effects are reversible once exposure ceases. Methylene chloride also irritates the nose and throat at high concentrations. The major effects from chronic inhalation exposure to methylene chloride are headaches, dizziness, nausea, and memory loss. Chronic exposure can also lead to bone marrow, hepatic, and renal toxicity. California considers methylene chloride to be carcinogenic.

Perchloroethylene. Perchloroethylene is used as a solvent, primarily in dry cleaning operations. Perchloroethylene is also used in degreasing operations, paints and coatings, adhesives, aerosols, specialty chemical production, printing inks, silicones, rug shampoos and laboratory solvents. Perchloroethylene vapors are irritating to the eyes and respiratory tract and chronic exposure can result in liver toxicity, kidney dysfunction, and neurological disorders. California identifies perchloroethylene as a carcinogen.

Diesel Particulate Matter. DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled engines contribute approximately 24 percent of the statewide total, with an additional 71 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources contribute about 5 percent of total DPM. It should be noted that CARB has developed several plans and programs to reduce diesel emissions such as the Diesel Risk Reduction Plan (DRRP), the Statewide Portable Equipment Registration Program (PERP), and the Diesel Off-Road Reporting System (DOORS). The PERP and DOORS programs allow owners or operators of portable engines and certain other types of equipment can register their units in order to operate their equipment throughout California without having to obtain individual permits from local air districts.

Diesel exhaust and many individual substances contained in it (including arsenic, benzene, formaldehyde, and nickel) have the potential to contribute to mutations in cells that can lead to cancer. Long-term exposure to diesel exhaust particles poses the highest cancer risk of any TAC evaluated by OEHHA. CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

In its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung

cancer. Using information from OEHHA's assessment, CARB estimates that diesel particle levels measured in California's air in 2000 could cause 540 "excess" cancers in a population of 1 million people over a 70-year lifetime. Other researchers and scientific organizations, including the National Institute for Occupational Safety and Health, have calculated cancer risks from diesel exhaust similar to those developed by OEHHA and CARB.

Exposure to diesel exhaust can have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Diesel engines are a major source of fine particulate pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Numerous studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of childhood illnesses and can also reduce lung function in children. In California, diesel exhaust particles have been identified as a carcinogen.

Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Table 1, *Sensitive Receptors*, lists the distances and locations of sensitive receptors within the Project vicinity. The distances depicted in Table 1 are based on the distance from the Project site to the sensitive receptor.

TABLE 1: SENSITIVE RECEPTORS

Type	Distance from Project Site (feet)[1]	Direction from Project Site	Location
Residential	300	Southwest	Across Cedar Avenue
	750	South	South of School Campus and Slover Avenue
	770	North	Across Interstate 10
Schools	60	South	Slover Mountain High School (Continuation) across Orange Street

Source: Google Earth 2016.

2.2 REGULATORY FRAMEWORK

FEDERAL

Federal Clean Air Act

The Federal Clean Air Act (FCAA) was amended in 1990 to address a large number of air pollutants that are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects. 188 specific pollutants and chemical groups were initially identified as HAPs, and the list has been modified over time. The FCAA Amendments included new regulatory programs to control acid deposition and for the issuance of stationary source operating permits.

In 2001, the U.S. Environmental Protection Agency (EPA) issued its first Mobile Source Air Toxics Rule, which identified 21 mobile source air toxic (MSAT) compounds as being HAPs that required regulation. A subset of six of these MSAT compounds were identified as having the greatest influence on health and included benzene, 1,3-butadiene, formaldehyde, acrolein, acetaldehyde, and DPM. More recently, the EPA issued a second MSAT Rule in February 2007, which generally supported the findings in the first rule and provided additional recommendations of compounds having the greatest impact on health. The rule also identified several engine emission certification standards that must be implemented. Unlike the criteria pollutants, toxics do not have National Ambient Air Quality Standards (NAAQS) making evaluation of their impacts more subjective.

National Emissions Standards for Hazardous Air Pollutants (NESHAPs) were incorporated into a greatly expanded program for controlling toxic air pollutants. The provisions for attainment and maintenance of the NAAQS were substantially modified and expanded. Other revisions included provisions regarding stratospheric ozone protection, increased enforcement authority, and expanded research programs.

Section 112 of the FCAA Amendments governs the federal control program for HAPs. NESHAPs are issued to limit the release of specified HAPs from specific industrial sectors. These standards are technology-based, meaning that they represent the best available control technology an industrial sector could afford. The level of emissions controls required by NESHAPs are not based on health risk considerations because allowable releases and resulting concentrations have not been determined to be safe for the general public. The FCAA does not establish air quality

standards for HAPs that define legally acceptable concentrations of these pollutants in ambient air.

STATE

California Air Resources Board

CARB's statewide comprehensive air toxics program was established in 1983 with AB 1807 the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by Senate Bill (SB) 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Diesel Risk Reduction Plan

The identification of DPM as a TAC in 1998 led CARB to adopt the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (Risk Reduction Plan) in October 2000. The Risk Reduction Plan's goals include an 85 percent reduction in DPM by 2020 from the 2000 baseline.[1] The Risk Reduction Plan includes regulations to establish cleaner new diesel engines, cleaner in-use diesel engines (retrofits), and cleaner diesel fuel.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen (NO_X) emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California

[1] California Air Resources Board, *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, October 2000.

to be upgraded to reduce emissions. Heavier trucks must be retrofitted with PM filters beginning January 1, 2012, and older trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses would need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks by reporting and there are a number of extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of the CARB Air Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling is to reduce public exposure to diesel particulate matter and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles.[2] The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system (APS) for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, Requirements to Reduce Idling Emissions from New and In-Use Trucks, beginning in 2008, would require that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of continuous idling operation once the vehicle is stopped, the transmission is set to "neutral" or "park", and the parking brake is engaged.

REGIONAL

South Coast Air Quality Management District

The California Clean Air Act (CCAA) provides the South Coast Air Quality Management District (SCAQMD) with the authority to manage transportation activities at indirect sources and regulate stationary source emissions. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. An example of this would be the motor vehicles at an intersection, a mall, and on highways. As a State agency, CARB regulates motor vehicles and fuels for their emissions.

[2] The ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is codified in Title 13 of the California Code of Regulations, Chapter 10, Section 2485.

The Air Toxics Control Plan (March 2000, revised March 26, 2004) is a planning document designed to examine the overall direction of the SCAQMD's air toxics control program. It includes development and implementation of strategic initiatives to monitor and control air toxics emissions. Control strategies that are deemed viable and are within the SCAQMD's jurisdiction will each be brought to the SCAQMD Board for further consideration through the normal public review process. Strategies that are to be implemented by other agencies will be developed in a cooperative effort, and the progress will be reported back to the Board periodically.

The SCAQMD has conducted an in-depth analysis of the toxic air contaminants and their resulting health risks for all of Southern California. This study, the *Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES IV,"* shows that cancer risk has decreased more than 50 percent between MATES III (2008) and MATES IV (2015).

MATES-IV is the most comprehensive dataset documenting the ambient air toxic levels and health risks associated with the South Coast Air Basin emissions. Therefore, MATES-IV study represents the baseline health risk for a cumulative analysis. MATES-IV estimates the average excess cancer risk level from exposure to TACs is less than 400 in one million basin-wide. These model estimates were based on monitoring data collected at ten fixed sites within the South Coast Air Basin. None of the fixed monitoring sites are within the local area of the Project site. However, MATES-IV has extrapolated the excess cancer risk levels throughout the basin by modeling the specific grids. MATES-IV modeling predicted an excess cancer risk of 427 in one million for the Project area. DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 68 percent of the total risk shown in MATES-IV. Cumulative Project generated TACs are limited to DPM.

2.3 SIGNIFICANCE CRITERIA AND METHODOLOGY

HEALTH RISK ANALYSIS THRESHOLDS

In order to determine whether or not a proposed project would cause a significant effect on the environment, the impact of the project must be determined by examining the types and levels of air toxics generated and the associated impacts on factors that affect air quality. While the final determination of significance thresholds is within the purview of the lead agency pursuant to the State CEQA Guidelines, the SCAQMD recommends that the following air pollution thresholds be used by lead agencies in determining whether the proposed project is significant. If the lead agency finds that the proposed project has the potential to exceed the air pollution thresholds, the project should be considered significant. The thresholds for air toxic emissions are as follows.

- Cancer Risk: Emit carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million.
- Non-Cancer Risk: Emit toxic contaminants that exceed the maximum hazard quotient of

1 in one million.

Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of 10 persons per million as the maximum acceptable incremental cancer risk due to DPM exposure. This threshold serves to determine whether or not a given project has a potentially significant development-specific and cumulative impact. The 10 in one million standard is a very health-protective significance threshold. A risk level of 10 in one million implies a likelihood that up to 10 persons, out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million which is 100 times more than the SCAQMD's threshold of 10 in one million.

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

METHODOLOGY

HEALTH RISK ASSESSMENT

The air dispersion modeling for the HRA was performed using the U.S. EPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Surface and upper air meteorological data provided by the SCAQMD for San Bernardino County was selected as being the most representative meteorology.

Emissions sources in the model include one area source for the loading dock area on the east side of the proposed warehouse. Additionally, emissions sources in the model include a line source (comprised of 2 volume sources) representing the truck delivery route at the Project site, and a separate line source (comprised of 10 volume sources) representing the truck delivery route between the Project site and Interstate 10. The maximum daily exhaust emissions for all diesel equipment was used to produce an emission rate in terms of grams per second per square meter. Emissions from heavy trucks were assigned a release height of three meters.

The model was run to obtain the peak 24-hour and annual average concentration in micrograms per cubic meter [$\mu g/m^3$] at nearby sensitive receptors. Receptors used included the nearby

sensitive receptors depicted in Table 1 with 50 meter (164 feet) spacing. Note that the concentration estimate developed using this methodology is considered conservative, and is not a specific prediction of the actual concentrations that would occur as a result of the project any one point in time. Actual 24-hour and annual average and concentrations are dependent on many variables, particularly the number and type of equipment working at specific distances during time periods of adverse meteorology.

A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 70-year lifetime basis, 30-year, and 9-year exposure scenarios. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the U.S. EPA Human Health Evaluation Manual (1991) and the OEHHA Guidance Manual. Only the risk associated with operations of the proposed Project was assessed as construction emissions would be negligible.

Risk and Hazard Assessment

Cancer Risk

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average DPM concentrations is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home (for residents only), and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. It is important to note that exposure duration is based on approximately 350 days of heavy truck operation at the project site. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kg body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function of the function of the breathing rate, the exposure frequency, and the concentration of a substance in the air. For residential exposure, the breathing rates are determined for specific age groups, so Dose-air is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

$$\text{Dose-air} = (C_{air} * \{BR/BW\} * A * EF * 10^{-6}$$

Where:

Dose-air = dose through inhalation (mg/kg/day)

C_{air} = air concentration ($\mu g/m^3$) from air dispersion model

{BR/BW}	=	daily breathing rate normalized to body weight (L/kg body weight – day) (225 L\kg BW-day for 3rd Trimester, 658 L/kg BW-day for 0<2 years, 535 L/kg BW-day for 2<9 years, 452 L/kg BW-day for 2<16 years, 210 L/kg BW-day for 16<30 years, and 185 L/kg BW-day 16<70 years)
A	=	Inhalation absorption factor (unitless [1])
EF	=	exposure frequency (unitless), days/365 days (0.96 [approximately 350 days per year])
10^{-6}	=	conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to take into account the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. OEHHA recommends the following FAH values: from the third trimester to age <2 years, 85 percent of time is spent at home; from age 2 through <16 years, 72 percent of time is spent at home; from age 16 years and greater, 73 percent of time is spent at home.

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$$Risk_{inh\text{-}res} = (Dose_{air} * CPH * ASF * ED/AT * FAH)$$

Where:

$Risk_{inh\text{-}res}$	=	residential inhalation cancer risk (potential chances per million)
$Dose_{air}$	=	daily dose through inhalation (mg/kg-day)
CPF	=	inhalation cancer potency factor (mg/kg-day^{-1})
ASF	=	age sensitivity factor for a specified age group (unitless)
ED	=	exposure duration (in years) for a specified age group (0.25 years for 3rd trimester, 2 years for 0<2, 7 years for 2<9, 14 years for 2<16, 14 years for 16<30, 54 years for 16-70)
AT	=	averaging time of lifetime cancer risk (years)
FAH	=	fraction of time spent at home (unitless)

Chronic Non-Cancer Hazard

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

$$\text{Hazard Quotient} = Ci/RELi$$

Where:

Ci	=	Concentration in the air of substance i (annual average concentration in $\mu g/m^3$)
RELi	=	Chronic noncancer Reference Exposure Level for substance i ($\mu g/m^3$)

Acute Non-Cancer Hazard

The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts. The equation is as follows:

$$\text{Acute HQ} = \text{Maximum Hourly Air Concentration } (\mu g/m^3) / \text{Acute REL } (\mu g/m^3)$$

2.4 IMPACT ASSESSMENT

CARB identified DPM as a TAC in 1998. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Diesel exhaust is composed of two phases, either gas or particulate – both contribute to the risk. The gas phase is composed of many of the urban HAPs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particulate phase has many different types that can be classified by size or composition. The sizes of diesel particulates of greatest health concern are fine and ultrafine particles. These particles may be composed of elemental carbon with adsorbed[3] compounds such as organics, sulfates, nitrates, metals, and other trace elements. Diesel exhaust is emitted from a broad range of on- and off-road diesel engines. As the project is proposing an industrial warehouse requiring daily visits from heavy-duty diesel trucks during operations, an analysis was performed using the EPA-approved AERMOD model.

[3] This term is specifically used for gases.

NON-CARCINOGENIC HAZARDS

The significance thresholds for TAC exposure also require an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the Reference Exposure Level (REL) for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index associated with the emissions from the Project would be 0.006 and 0.158, respectively. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits and a less than significant impact would occur.

CARCINOGENIC RISK

Vehicle DPM emissions were estimated using emission factors for particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) generated with the 2014 version of the EMission FACtor model (EMFAC) developed by CARB. EMFAC 2014 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to project changes in future emissions from on-road mobile sources. The most recent version of this model, EMFAC 2014, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day.

The most important improvement in EMFAC 2014 is the integration of the new data and methods to estimate emissions from diesel trucks and buses. The model includes the emissions benefits of the truck and bus rule and the previously adopted rules for other on-road diesel equipment. Finally, the impacts of the recession on emissions that were quantified as part of the truck and bus rulemaking are included.

For this project, annual average $PM_{2.5}$ emission factors were generated by running EMFAC 2014 in EMFAC Mode for vehicles in the SCAQMD within San Bernardino County. The EMFAC Mode generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of vehicle speed, temperature, and relative humidity. The model was run for speeds traveled on and within the vicinity of the project site. The vehicle travel speeds for each segment modeled are summarized below.

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

The average $PM_{2.5}$ emission factors for heavy trucks were calculated based on the annual average emission factors for various exposure periods associated with assumptions for evaluating exposure over three different periods (i.e., 70-, 30-, and 9-year exposure scenarios).

Based on the AERMOD outputs, the expected annual average diesel $PM_{2.5}$ emission concentrations at a sensitive receptor resulting from operation of the project (135 daily heavy truck deliveries) would be 0.03 $\mu g/m^3$ at the greatest. This level of concentration would be experienced at the school campuses directly south of the project site across Orange Street. These are the closest sensitive receptors to the Project site. The calculations conservatively assume no cleaner technology with lower emissions in future years. Cancer risk calculations for schools are based on a 9-year exposure period. The calculated carcinogenic risk at these locations, directly south of the site, as a result of the Project is depicted in Table 2, *Maximum Operational Health Risk at the Southern School Campus*. It should be noted that the risk level based on a 9-year exposure period is conservative as Slover Mountain High School is a continuation school and sensitive receptors would have a shorter exposure period, resulting in lower risk levels. As shown, impacts related to cancer risk and $PM_{2.5}$ concentrations from heavy trucks would be less than significant at the school campus.

TABLE 2: MAXIMUM OPERATIONAL HEALTH RISK AT THE SOUTHERLY SCHOOL CAMPUS

Exposure Scenario	Maximum Cancer Risk (Risk per Million)[1]	Significance Threshold (Risk per Million)	Exceeds SCAQMD Significance Threshold?
Slover Mountain High School (Continuation), across Orange Street (9-Year Exposure)	8.93	10	No

Notes:
1. Refer to Appendix A, *Modeling Data*.

As noted in Table 1 above, there are also residential land uses in the Project vicinity. There are residential neighborhoods in the Project vicinity located approximately 300 feet to the southwest across Cedar Avenue, approximately 750 feet to the south beyond the school campus, as well as approximately 770 feet to the north, across I-10. Based on the AERMOD outputs, the expected annual average diesel $PM_{2.5}$ emission concentrations at the residential neighborhoods to the north and southwest resulting from operation of the project (135 daily heavy truck deliveries) would be 0.002 $\mu g/m^3$ and 0.005 $\mu g/m^3$, respectively. The expected annual average diesel $PM_{2.5}$ emission concentrations at the residential neighborhood to the south resulting from operation of the project (135 daily heavy truck deliveries) would be 0.006 $\mu g/m^3$ at the greatest. Cancer risk calculations for residences are based on 70-, 30-, and 9-year exposure periods. The calculated carcinogenic risk at these residential neighborhoods, as a result of the Project is depicted in Table

3, *Maximum Operational Health Risk at Project Vicinity Residences*. As shown, impacts related to cancer risk and $PM_{2.5}$ concentrations from heavy trucks would be less than significant at these sensitive receptors.

TABLE 3: MAXIMUM OPERATIONAL HEALTH RISK AT PROJECT VICINITY RESIDENCES

Exposure Scenario	Maximum Cancer Risk (Risk per Million)[1]	Significance Threshold (Risk per Million)	Exceeds SCAQMD Significance Threshold?
Residential Neighborhood to the North across I-10			
70-Year Exposure	0.98	10	No
30-Year Exposure	0.83	10	No
9-Year Exposure	0.60	10	No
Residential Neighborhood to the Southwest across Cedar Avenue			
70-Year Exposure	2.46	10	No
30-Year Exposure	2.07	10	No
9-Year Exposure	1.49	10	No
Residential Neighborhood to the South beyond School Campus			
70-Year Exposure	2.95	10	No
30-Year Exposure	2.48	10	No
9-Year Exposure	1.79	10	No

Notes:
1. Refer to Appendix A, *Modeling Data*.

CONCLUSION

As described, non-carcinogenic hazards resulting from the proposed Project are calculated to be within acceptable limits. Additionally, impacts related to cancer risk and $PM_{2.5}$ concentrations from heavy trucks would be less than significant at the school campus, would be less than significant at the nearest residential neighborhoods. Therefore, impacts related to health risk from heavy trucks would be less than significant.

However, as identified in Table 1 the school facilities south of the Project site are 60 feet away. Therefore, while the increased cancer risk from heavy trucks would be below the applicable significance threshold **Mitigation Measure HRA-1** is recommended in order to enforce existing regulation and reduce the generation of diesel particulate matter.

Mitigation Measures:

HRA-1 Prior to the certificate of occupancy issuance, the project Applicant shall demonstrate to the satisfaction of the San Bernardino County Land Use Services Director that the following measures would be implemented during project operations. These measures shall be enforced and maintained through Covenants, Codes, and Restrictions (CC&Rs), or other means acceptable to the San Bernardino County Land Use Services Director.

- 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 (5) minutes; and 3) telephone numbers of the building facilities manager and CARB to report violations.

- All service equipment (i.e., forklifts) used within the site shall be electric or compressed natural gas-powered.

Level of Significance: Less than significant impact.

APPENDIX A
Modeling Data

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** AERMOD Input Produced by:
** AERMOD View Ver. 9.2.0
** Lakes Environmental Software Inc.
** Date: 10/27/2016
** File: C:\Emissions Models\San Bernardino County\Cedar Avenue Technology
Park\AERMOD\Cedar Avenue\Cedar Avenue.ADI
**
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**************************************
** AERMOD Control Pathway
**************************************
**
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Pa
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   AVERTIME 1 24 ANNUAL
   URBANOPT 23851
   POLLUTID PM_2.5
   RUNORNOT RUN
   ERRORFIL "Cedar Avenue.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
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** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION AREA1         AREA       463251.000  3769262.000          0.0
** DESCRSRC On-Site Idling
** ------------------------------------------------------------------------
** Line Source Represented by Separated Volume Sources (2W)
** LINE VOLUME Source ID = SLINE1
** DESCRSRC On-Site Circulation
** PREFIX
** Length of Side = 22.15
** Configuration = Separated 2W
** Emission Rate = 6.65E-07
** Vertical Dimension = 5.10
** SZINIT = 2.37
** Nodes = 2
** 463267.000, 3769353.000, 0.00, 2.55, 20.60
** 463267.000, 3769278.000, 0.00, 2.55, 20.60
** ------------------------------------------------------------------------
   LOCATION L0000071     VOLUME   463267.000 3769341.925 0.0
   LOCATION L0000072     VOLUME   463267.000 3769297.625 0.0
** End of LINE VOLUME Source ID = SLINE1
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** Line Source Represented by Separated Volume Sources (2W)
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Off-Site Circulation
** PREFIX
** Length of Side = 22.15
** Configuration = Separated 2W
** Emission Rate = 3.44E-07
** Vertical Dimension = 5.10
** SZINIT = 2.37
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** Nodes = 2
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** 463275.000, 3769241.000, 0.00, 2.55, 20.60
** ------------------------------------------------------------------------
   LOCATION L0000073     VOLUME   463275.000 3769330.925 0.0
   LOCATION L0000074     VOLUME   463275.000 3769286.625 0.0
   LOCATION L0000075     VOLUME   463275.000 3769242.325 0.0
** End of LINE VOLUME Source ID = SLINE2
** ------------------------------------------------------------------------
** Line Source Represented by Separated Volume Sources (2W)
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Off-Site Circulation
** PREFIX
** Length of Side = 22.15
** Configuration = Separated 2W
** Emission Rate = 3.44E-07
** Vertical Dimension = 5.10
** SZINIT = 2.37
** Nodes = 2
** 463269.000, 3769242.000, 0.00, 2.55, 20.60
** 463151.000, 3769242.000, 0.00, 2.55, 20.60
** ------------------------------------------------------------------------
   LOCATION L0000076     VOLUME   463257.925 3769242.000 0.0
   LOCATION L0000077     VOLUME   463213.625 3769242.000 0.0
   LOCATION L0000078     VOLUME   463169.325 3769242.000 0.0
** End of LINE VOLUME Source ID = SLINE3
** ------------------------------------------------------------------------
** Line Source Represented by Separated Volume Sources (2W)
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Off-Site Circulation
** PREFIX
** Length of Side = 22.15
** Configuration = Separated 2W
** Emission Rate = 3.44E-07
** Vertical Dimension = 5.10
** SZINIT = 2.37
** Nodes = 2
** 463151.000, 3769246.000, 0.00, 2.55, 20.60
** 463167.000, 3769420.000, 0.00, 2.55, 20.60
** ------------------------------------------------------------------------
   LOCATION L0000079     VOLUME   463152.014 3769257.028 0.0
   LOCATION L0000080     VOLUME   463156.071 3769301.142 0.0
   LOCATION L0000081     VOLUME   463160.127 3769345.256 0.0
   LOCATION L0000082     VOLUME   463164.183 3769389.370 0.0
** End of LINE VOLUME Source ID = SLINE4
** Source Parameters **
   SRCPARAM AREA1         6.31E-08     3.000    18.000    80.000     0.000
3.010
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   SRCPARAM L0000071     0.0000003325      2.55     20.60      2.37
   SRCPARAM L0000072     0.0000003325      2.55     20.60      2.37
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   SRCPARAM L0000075     0.0000001147      2.55     20.60      2.37
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   SRCPARAM L0000081     0.000000086      2.55     20.60      2.37
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   SRCPARAM L0000082     0.000000086      2.55     20.60      2.37
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   SRCGROUP ALL
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DISCCART	463128.00	3769503.00
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DISCCART	463228.00	3769503.00
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DISCCART	463178.00	3769553.00

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DISCCART	463028.00	3769603.00
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DISCCART	463328.00	3769753.00
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   DISCCART    463328.00   3769903.00
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   DISCCART    463428.00   3769903.00
   DISCCART    463478.00   3769903.00
   DISCCART    463528.00   3769903.00
   DISCCART    463578.00   3769903.00
   DISCCART    463628.00   3769903.00
** Discrete Cartesian Plant Boundary - Primary Receptors
** Plant Boundary Name PLBN2
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
   DISCCART    463178.00   3769382.00
   DISCCART    463177.00   3769326.00
   DISCCART    463160.00   3769249.00
   DISCCART    463272.00   3769246.00
   DISCCART    463271.00   3769366.00
   DISCCART    463210.00   3769380.00
RE FINISHED
**
**********************************
** AERMOD Meteorology Pathway
**********************************
**
**
ME STARTING
   SURFFILE ..\snbo8.sfc
   PROFFILE ..\snbo8.PFL
   SURFDATA 0 2007
   UAIRDATA 3190 2007
   SITEDATA 99999 2007
   PROFBASE 330.0 METERS
ME FINISHED
**
**********************************
** AERMOD Output Pathway
**********************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "Cedar Avenue.AD\01H1GALL.PLT" 31
   PLOTFILE 24 ALL 1ST "Cedar Avenue.AD\24H1GALL.PLT" 32
   PLOTFILE ANNUAL ALL "Cedar Avenue.AD\AN00GALL.PLT" 33
   SUMMFILE "Cedar Avenue.sum"
OU FINISHED

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

♀ *** AERMOD - VERSION  15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***        10/27/16
 *** AERMET - VERSION  14134 ***   ***
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 **MODELOPTs:   NonDFAULT CONC      FLAT      URBAN

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

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

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

 **Model Uses URBAN Dispersion Algorithm for the SBL for    13 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =     23851.0 ;  Urban Roughness Length =  1.000 m

 **Model Allows User-Specified Options:
         1. Stack-tip Downwash.
         2. Model Assumes Receptors on FLAT Terrain.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay.
         6. Urban Roughness Length of 1.0 Meter Used.

 **Other Options Specified:
         TEMP_Sub - Meteorological data includes TEMP substitutions

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM_2.5

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
     and Calculates ANNUAL Averages

 **This Run Includes:     13 Source(s);       1 Source Group(s); and     406
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:     12 VOLUME source(s)
                 and:      1 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 OPENPIT source(s)


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

 **The AERMET Input Meteorological Data Version Date:  14134

 **Output Options Selected:
          Model Outputs Tables of ANNUAL Averages by Receptor
          Model Outputs 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) = 330.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ;
Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.6 MB of RAM.

**Detailed Error/Message File: Cedar Avenue.err

**File for Summary of Results: Cedar Avenue.sum

**MODELOPTs: NonDFAULT CONC FLAT URBAN

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC) SCALAR VARY BY	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE
L0000071	0	0.33250E-06	463267.0	3769341.9	330.0	2.55	20.60	2.37	YES
L0000072	0	0.33250E-06	463267.0	3769297.6	330.0	2.55	20.60	2.37	YES
L0000073	0	0.11470E-06	463275.0	3769330.9	330.0	2.55	20.60	2.37	YES
L0000074	0	0.11470E-06	463275.0	3769286.6	330.0	2.55	20.60	2.37	YES
L0000075	0	0.11470E-06	463275.0	3769242.3	330.0	2.55	20.60	2.37	YES
L0000076	0	0.11470E-06	463257.9	3769242.0	330.0	2.55	20.60	2.37	YES
L0000077	0	0.11470E-06	463213.6	3769242.0	330.0	2.55	20.60	2.37	YES
L0000078	0	0.11470E-06	463169.3	3769242.0	330.0	2.55	20.60	2.37	YES
L0000079	0	0.86000E-07	463152.0	3769257.0	330.0	2.55	20.60	2.37	YES
L0000080	0	0.86000E-07	463156.1	3769301.1	330.0	2.55	20.60	2.37	YES
L0000081	0	0.86000E-07	463160.1	3769345.3	330.0	2.55	20.60	2.37	YES
L0000082	0	0.86000E-07	463164.2	3769389.4	330.0	2.55	20.60	2.37	YES

 **MODELOPTs: NonDFAULT CONC FLAT URBAN

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	COORD (SW CORNER) X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. OF AREA (DEG.)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
AREA1	0	0.63100E-07	463251.0	3769262.0	330.0	3.00	18.00	80.00	0.00	3.01	YES	

 **MODELOPTs: NonDFAULT CONC FLAT URBAN

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	AREA1 , L0000071 , L0000072 , L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 , L0000079 , L0000080 , L0000081 , L0000082 ,

 **MODELOPTs: NonDFAULT CONC FLAT URBAN

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

URBAN ID	URBAN POP	SOURCE IDs
23851.	AREA1 , L0000071 , L0000072 , L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 , L0000079 , L0000080 , L0000081 , L0000082 ,

 **MODELOPTs: NonDFAULT CONC FLAT URBAN

*** DISCRETE CARTESIAN RECEPTORS ***

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)

(METERS)

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♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
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                                                   PAGE   7
 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

*** DISCRETE CARTESIAN RECEPTORS ***

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)

(METERS)

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     ( 463178.0, 3769253.0,     330.0,     330.0,       0.0);         (
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     ( 463178.0, 3769353.0,     330.0,     330.0,       0.0);         (
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♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
                                ***   16:50:33

                                           PAGE   8
 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

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

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     (463178.0, 3769453.0,   330.0,   330.0,   0.0);   (
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♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
                                ***   16:50:33

                                           PAGE   9
 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

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

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     ( 462878.0, 3769803.0,     330.0,     330.0,       0.0);         (
462928.0, 3769803.0,     330.0,     330.0,       0.0);
     ( 462978.0, 3769803.0,     330.0,     330.0,       0.0);         (
```

463028.0, 3769803.0,   330.0,   330.0,   0.0);
     (463078.0, 3769803.0,   330.0,   330.0,   0.0);   (
463128.0, 3769803.0,   330.0,   330.0,   0.0);
     (463178.0, 3769803.0,   330.0,   330.0,   0.0);   (
463228.0, 3769803.0,   330.0,   330.0,   0.0);
     (463278.0, 3769803.0,   330.0,   330.0,   0.0);   (
463328.0, 3769803.0,   330.0,   330.0,   0.0);
     (463378.0, 3769803.0,   330.0,   330.0,   0.0);   (
463428.0, 3769803.0,   330.0,   330.0,   0.0);
     (463478.0, 3769803.0,   330.0,   330.0,   0.0);   (
463528.0, 3769803.0,   330.0,   330.0,   0.0);
     (463578.0, 3769803.0,   330.0,   330.0,   0.0);   (
463628.0, 3769803.0,   330.0,   330.0,   0.0);
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
                           ***   16:50:33

                                     PAGE 10
 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

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

     (462678.0, 3769853.0,   330.0,   330.0,   0.0);   (
462728.0, 3769853.0,   330.0,   330.0,   0.0);
     (462778.0, 3769853.0,   330.0,   330.0,   0.0);   (
462828.0, 3769853.0,   330.0,   330.0,   0.0);
     (462878.0, 3769853.0,   330.0,   330.0,   0.0);   (
462928.0, 3769853.0,   330.0,   330.0,   0.0);
     (462978.0, 3769853.0,   330.0,   330.0,   0.0);   (
463028.0, 3769853.0,   330.0,   330.0,   0.0);
     (463078.0, 3769853.0,   330.0,   330.0,   0.0);   (
463128.0, 3769853.0,   330.0,   330.0,   0.0);
     (463178.0, 3769853.0,   330.0,   330.0,   0.0);   (
463228.0, 3769853.0,   330.0,   330.0,   0.0);
     (463278.0, 3769853.0,   330.0,   330.0,   0.0);   (
463328.0, 3769853.0,   330.0,   330.0,   0.0);
     (463378.0, 3769853.0,   330.0,   330.0,   0.0);   (
463428.0, 3769853.0,   330.0,   330.0,   0.0);
     (463478.0, 3769853.0,   330.0,   330.0,   0.0);   (
463528.0, 3769853.0,   330.0,   330.0,   0.0);
     (463578.0, 3769853.0,   330.0,   330.0,   0.0);   (
463628.0, 3769853.0,   330.0,   330.0,   0.0);
     (462678.0, 3769903.0,   330.0,   330.0,   0.0);   (
462728.0, 3769903.0,   330.0,   330.0,   0.0);
     (462778.0, 3769903.0,   330.0,   330.0,   0.0);   (
462828.0, 3769903.0,   330.0,   330.0,   0.0);
     (462878.0, 3769903.0,   330.0,   330.0,   0.0);   (
462928.0, 3769903.0,   330.0,   330.0,   0.0);
     (462978.0, 3769903.0,   330.0,   330.0,   0.0);   (
463028.0, 3769903.0,   330.0,   330.0,   0.0);
     (463078.0, 3769903.0,   330.0,   330.0,   0.0);   (
463128.0, 3769903.0,   330.0,   330.0,   0.0);
     (463178.0, 3769903.0,   330.0,   330.0,   0.0);   (
463228.0, 3769903.0,   330.0,   330.0,   0.0);
     (463278.0, 3769903.0,   330.0,   330.0,   0.0);   (
463328.0, 3769903.0,   330.0,   330.0,   0.0);
     (463378.0, 3769903.0,   330.0,   330.0,   0.0);   (
463428.0, 3769903.0,   330.0,   330.0,   0.0);
     (463478.0, 3769903.0,   330.0,   330.0,   0.0);   (
463528.0, 3769903.0,   330.0,   330.0,   0.0);
     (463578.0, 3769903.0,   330.0,   330.0,   0.0);   (

463628.0, 3769903.0, 330.0, 330.0, 0.0);
  (463178.0, 3769382.0, 330.0, 330.0, 0.0); (
463177.0, 3769326.0, 330.0, 330.0, 0.0);
  (463160.0, 3769249.0, 330.0, 330.0, 0.0); (
463272.0, 3769246.0, 330.0, 330.0, 0.0);
  (463271.0, 3769366.0, 330.0, 330.0, 0.0); (
463210.0, 3769380.0, 330.0, 330.0, 0.0);

 **MODELOPTs: NonDFAULT CONC FLAT URBAN

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

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
L0000071	463278.0	3769303.0	-3.84
L0000071	463228.0	3769353.0	-3.75
L0000071	463278.0	3769353.0	-28.68
L0000071	463271.0	3769366.0	-19.88
L0000072	463228.0	3769303.0	-4.92
L0000072	463278.0	3769303.0	-32.05
L0000073	463278.0	3769303.0	-16.20
L0000073	463278.0	3769353.0	-22.01
L0000073	463271.0	3769366.0	-8.99
L0000074	463278.0	3769253.0	-10.53
L0000074	463278.0	3769303.0	-27.64
L0000074	463272.0	3769246.0	-3.55
L0000075	463278.0	3769203.0	-4.85
L0000075	463278.0	3769253.0	-33.20
L0000075	463272.0	3769246.0	-39.55
L0000076	463278.0	3769203.0	-0.43
L0000076	463228.0	3769253.0	-12.41
L0000076	463278.0	3769253.0	-21.40
L0000076	463272.0	3769246.0	-29.66

```
                                          L0000077             463228.0     3769203.0
    -2.73
                                          L0000077             463178.0     3769253.0
    -7.01
                                          L0000077             463228.0     3769253.0
   -26.19
                                          L0000078             463178.0     3769203.0
    -4.34
                                          L0000078             463128.0     3769253.0
    -1.53
                                          L0000078             463178.0     3769253.0
   -30.28
                                          L0000078             463160.0     3769249.0
   -32.63
                                          L0000079             463128.0     3769253.0
   -19.94
                                          L0000079             463178.0     3769253.0
   -17.99
                                          L0000079             463160.0     3769249.0
   -32.97
                                          L0000080             463128.0     3769303.0
   -16.16
                                          L0000080             463178.0     3769303.0
   -22.28
                                          L0000080             463177.0     3769326.0
   -11.79
                                          L0000081             463128.0     3769353.0
   -11.24
                                          L0000081             463178.0     3769353.0
   -24.81
                                          L0000081             463178.0     3769382.0
    -3.43
                                          L0000081             463177.0     3769326.0
   -18.69
                                          L0000082             463178.0     3769353.0
    -5.38
                                          L0000082             463128.0     3769403.0
    -5.62
                                          L0000082             463178.0     3769403.0
   -24.88
                                          L0000082             463178.0     3769382.0
   -28.63
♀ *** AERMOD - VERSION  15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***        10/27/16
 *** AERMET - VERSION  14134 ***   ***
                                          ***        16:50:33

                                                     PAGE  12
 **MODELOPTs:   NonDFAULT CONC      FLAT      URBAN

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

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

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

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

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

1.54,   3.09,   5.14,   8.23,
10.80,

♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa ***   10/27/16
*** AERMET - VERSION 14134 ***   ***
***   16:50:33

PAGE 13
**MODELOPTs: NonDFAULT CONC   FLAT   URBAN

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

Surface file: ..\snbo8.sfc
Met Version: 14134
Profile file: ..\snbo8.PFL

Surface format: FREE

Profile format: FREE

Surface station no.:   0   Upper air station no.: 3190
Name: UNKNOWN   Name: UNKNOWN
Year: 2007   Year: 2007

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
07	01	01	1	01	-0.5	0.030	-9.000	-9.000	-999.	12.	4.4	0.32	1.00	1.00	0.50	27.	9.1	279.9	5.5
07	01	01	1	02	-0.5	0.030	-9.000	-9.000	-999.	12.	4.3	0.32	1.00	1.00	0.50	7.	9.1	279.2	5.5
07	01	01	1	03	-0.5	0.030	-9.000	-9.000	-999.	12.	4.3	0.32	1.00	1.00	0.50	97.	9.1	278.8	5.5
07	01	01	1	04	-0.7	0.030	-9.000	-9.000	-999.	12.	3.1	0.32	1.00	1.00	0.50	148.	9.1	278.1	5.5
07	01	01	1	05	-2.4	0.054	-9.000	-9.000	-999.	30.	5.5	0.32	1.00	1.00	0.90	87.	9.1	278.1	5.5
07	01	01	1	06	-1.7	0.054	-9.000	-9.000	-999.	30.	7.8	0.32	1.00	1.00	0.90	208.	9.1	277.0	5.5
07	01	01	1	07	-1.7	0.054	-9.000	-9.000	-999.	30.	7.8	0.32	1.00	1.00	0.90	156.	9.1	277.5	5.5
07	01	01	1	08	-1.7	0.054	-9.000	-9.000	-999.	30.	7.8	0.32	1.00	0.52	0.90	60.	9.1	277.5	5.5
07	01	01	1	09	34.6	0.390	0.621	0.005	241.	585.	-149.6	0.32	1.00	0.31	3.10	264.	9.1	282.5	5.5
07	01	01	1	10	78.0	0.267	1.066	0.005	541.	341.	-21.3	0.32	1.00	0.24	1.80	242.	9.1	289.2	5.5

```
 07 01 01   1 11  112.9  0.612  1.395  0.019  839. 1149.   -176.9  0.32   1.00
  0.21    4.90   82.    9.1  290.4    5.5
 07 01 01   1 12  130.3  0.615  1.611  0.020 1120. 1158.   -155.8  0.32   1.00
  0.20    4.90   74.    9.1  290.9    5.5
 07 01 01   1 13  128.2  0.671  1.662  0.015 1250. 1315.   -204.9  0.32   1.00
  0.20    5.40   59.    9.1  290.9    5.5
 07 01 01   1 14  107.5  0.712  1.575  0.007 1267. 1439.   -292.1  0.32   1.00
  0.22    5.80   58.    9.1  291.4    5.5
 07 01 01   1 15   68.1  0.602  1.356  0.021 1277. 1137.   -279.3  0.32   1.00
  0.25    4.90   40.    9.1  291.4    5.5
 07 01 01   1 16   18.1  0.438  0.872  0.021 1278.  724.   -405.7  0.32   1.00
  0.34    3.60  312.    9.1  292.0    5.5
 07 01 01   1 17  -25.8  0.263 -9.000 -9.000 -999.  353.     61.6  0.32   1.00
  0.63    2.70  342.    9.1  290.9    5.5
 07 01 01   1 18   -4.9  0.077 -9.000 -9.000 -999.  114.      8.1  0.32   1.00
  1.00    1.30  256.    9.1  289.2    5.5
 07 01 01   1 19   -4.9  0.077 -9.000 -9.000 -999.   52.      8.1  0.32   1.00
  1.00    1.30  191.    9.1  289.9    5.5
 07 01 01   1 20   -4.9  0.077 -9.000 -9.000 -999.   52.      8.1  0.32   1.00
  1.00    1.30  197.    9.1  289.9    5.5
 07 01 01   1 21   -4.9  0.077 -9.000 -9.000 -999.   52.      8.1  0.32   1.00
  1.00    1.30  190.    9.1  289.9    5.5
 07 01 01   1 22   -2.4  0.054 -9.000 -9.000 -999.   30.      5.6  0.32   1.00
  1.00    0.90  188.    9.1  289.2    5.5
 07 01 01   1 23   -9.5  0.107 -9.000 -9.000 -999.   84.     11.3  0.32   1.00
  1.00    1.80  162.    9.1  289.9    5.5
 07 01 01   1 24   -9.5  0.107 -9.000 -9.000 -999.   84.     11.3  0.32   1.00
  1.00    1.80   42.    9.1  289.2    5.5


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 07 01 01 01    5.5 0 -999.  -99.00   279.9   99.0  -99.00  -99.00
 07 01 01 01    9.1 1   27.    0.50  -999.0   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
♀ *** AERMOD - VERSION  15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***        10/27/16
 *** AERMET - VERSION  14134 ***   ***
                                ***        16:50:33

                                           PAGE  14
 **MODELOPTs:   NonDFAULT CONC      FLAT      URBAN

                    *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED
OVER   5 YEARS FOR SOURCE GROUP: ALL      ***
                                   INCLUDING SOURCE(S):     AREA1       ,
L0000071    , L0000072    , L0000073    , L0000074    ,
               L0000075    , L0000076    , L0000077    , L0000078    ,
L0000079    , L0000080    , L0000081    , L0000082    ,

                                              *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                           ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                           **

       X-COORD (M)   Y-COORD (M)        CONC                         X-COORD (M)
  Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - - - - - -
         462678.00    3768953.00        0.00051                      462728.00
   3768953.00        0.00059
         462778.00    3768953.00        0.00068                      462828.00
   3768953.00        0.00078
         462878.00    3768953.00        0.00090                      462928.00
```

```
3768953.00        0.00104
      462978.00    3768953.00        0.00121                    463028.00
3768953.00        0.00141
      463078.00    3768953.00        0.00160                    463128.00
3768953.00        0.00170
      463178.00    3768953.00        0.00164                    463228.00
3768953.00        0.00139
      463278.00    3768953.00        0.00109                    463328.00
3768953.00        0.00083
      463378.00    3768953.00        0.00065                    463428.00
3768953.00        0.00053
      463478.00    3768953.00        0.00044                    463528.00
3768953.00        0.00038
      463578.00    3768953.00        0.00032                    463628.00
3768953.00        0.00028
      462678.00    3769003.00        0.00052                    462728.00
3769003.00        0.00060
      462778.00    3769003.00        0.00070                    462828.00
3769003.00        0.00082
      462878.00    3769003.00        0.00097                    462928.00
3769003.00        0.00115
      462978.00    3769003.00        0.00136                    463028.00
3769003.00        0.00162
      463078.00    3769003.00        0.00192                    463128.00
3769003.00        0.00216
      463178.00    3769003.00        0.00217                    463228.00
3769003.00        0.00186
      463278.00    3769003.00        0.00140                    463328.00
3769003.00        0.00102
      463378.00    3769003.00        0.00078                    463428.00
3769003.00        0.00063
      463478.00    3769003.00        0.00051                    463528.00
3769003.00        0.00042
      463578.00    3769003.00        0.00035                    463628.00
3769003.00        0.00030
      462678.00    3769053.00        0.00051                    462728.00
3769053.00        0.00060
      462778.00    3769053.00        0.00071                    462828.00
3769053.00        0.00084
      462878.00    3769053.00        0.00102                    462928.00
3769053.00        0.00125
      462978.00    3769053.00        0.00152                    463028.00
3769053.00        0.00187
      463078.00    3769053.00        0.00232                    463128.00
3769053.00        0.00279
      463178.00    3769053.00        0.00300                    463228.00
3769053.00        0.00262
      463278.00    3769053.00        0.00189                    463328.00
3769053.00        0.00130
      463378.00    3769053.00        0.00097                    463428.00
3769053.00        0.00075
      463478.00    3769053.00        0.00059                    463528.00
3769053.00        0.00048
      463578.00    3769053.00        0.00039                    463628.00
3769053.00        0.00032
      462678.00    3769103.00        0.00051                    462728.00
3769103.00        0.00060
      462778.00    3769103.00        0.00070                    462828.00
3769103.00        0.00085
      462878.00    3769103.00        0.00104                    462928.00
3769103.00        0.00130
      462978.00    3769103.00        0.00166                    463028.00
3769103.00        0.00214
      463078.00    3769103.00        0.00279                    463128.00
3769103.00        0.00362
      463178.00    3769103.00        0.00434                    463228.00
```

3769103.00 0.00402
463278.00 3769103.00 0.00272 463328.00
3769103.00 0.00174
463378.00 3769103.00 0.00123 463428.00
3769103.00 0.00091
463478.00 3769103.00 0.00069 463528.00
3769103.00 0.00054
463578.00 3769103.00 0.00042 463628.00
3769103.00 0.00034
♀ *** AERMOD - VERSION 15181 *** *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa *** 10/27/16
*** AERMET - VERSION 14134 *** ***
*** 16:50:33

PAGE 15
**MODELOPTs: NonDFAULT CONC FLAT URBAN

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 ,
L0000071 , L0000072 , L0000073 , L0000074 ,
L0000075 , L0000076 , L0000077 , L0000078 ,
L0000079 , L0000080 , L0000081 , L0000082 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
- -
462678.00 3769153.00 0.00051 462728.00
3769153.00 0.00059
462778.00 3769153.00 0.00070 462828.00
3769153.00 0.00084
462878.00 3769153.00 0.00104 462928.00
3769153.00 0.00132
462978.00 3769153.00 0.00173 463028.00
3769153.00 0.00235
463078.00 3769153.00 0.00329 463128.00
3769153.00 0.00471
463178.00 3769153.00 0.00658 463228.00
3769153.00 0.00704
463278.00 3769153.00 0.00438 463328.00
3769153.00 0.00249
463378.00 3769153.00 0.00160 463428.00
3769153.00 0.00110
463478.00 3769153.00 0.00079 463528.00
3769153.00 0.00059
463578.00 3769153.00 0.00045 463628.00
3769153.00 0.00036
462678.00 3769203.00 0.00049 462728.00
3769203.00 0.00057
462778.00 3769203.00 0.00068 462828.00
3769203.00 0.00082
462878.00 3769203.00 0.00102 462928.00
3769203.00 0.00130
462978.00 3769203.00 0.00173 463028.00
3769203.00 0.00242
463078.00 3769203.00 0.00362 463128.00
3769203.00 0.00586
463178.00 3769203.00 0.01010 463228.00
3769203.00 0.01532

```
       463278.00    3769203.00         0.00853                    463328.00
   3769203.00         0.00385
       463378.00    3769203.00         0.00213                    463428.00
   3769203.00         0.00133
       463478.00    3769203.00         0.00089                    463528.00
   3769203.00         0.00064
       463578.00    3769203.00         0.00049                    463628.00
   3769203.00         0.00038
       462678.00    3769253.00         0.00047                    462728.00
   3769253.00         0.00055
       462778.00    3769253.00         0.00066                    462828.00
   3769253.00         0.00079
       462878.00    3769253.00         0.00098                    462928.00
   3769253.00         0.00125
       462978.00    3769253.00         0.00167                    463028.00
   3769253.00         0.00235
       463078.00    3769253.00         0.00362                    463128.00
   3769253.00         0.00628
       463178.00    3769253.00         0.01349                    463228.00
   3769253.00         0.04242
       463278.00    3769253.00         0.02687                    463328.00
   3769253.00         0.00653
       463378.00    3769253.00         0.00289                    463428.00
   3769253.00         0.00162
       463478.00    3769253.00         0.00105                    463528.00
   3769253.00         0.00074
       463578.00    3769253.00         0.00055                    463628.00
   3769253.00         0.00043
       462678.00    3769303.00         0.00046                    462728.00
   3769303.00         0.00053
       462778.00    3769303.00         0.00063                    462828.00
   3769303.00         0.00076
       462878.00    3769303.00         0.00093                    462928.00
   3769303.00         0.00118
       462978.00    3769303.00         0.00156                    463028.00
   3769303.00         0.00219
       463078.00    3769303.00         0.00332                    463128.00
   3769303.00         0.00577
       463178.00    3769303.00         0.01283                    463228.00
   3769303.00         0.05380
       463278.00    3769303.00         0.10904                    463328.00
   3769303.00         0.01407
       463378.00    3769303.00         0.00466                    463428.00
   3769303.00         0.00231
       463478.00    3769303.00         0.00138                    463528.00
   3769303.00         0.00093
       463578.00    3769303.00         0.00067                    463628.00
   3769303.00         0.00051
♀ *** AERMOD - VERSION  15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***        10/27/16
 *** AERMET - VERSION  14134 ***   ***
                              ***        16:50:33

                                         PAGE  16
 **MODELOPTs:    NonDFAULT CONC      FLAT      URBAN

                  *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED
OVER   5 YEARS FOR SOURCE GROUP: ALL      ***
                                  INCLUDING SOURCE(S):     AREA1       ,
L0000071    , L0000072    , L0000073    , L0000074    ,
               L0000075    , L0000076    , L0000077    , L0000078    ,
L0000079    , L0000080    , L0000081    , L0000082    ,

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

** CONC OF PM_2.5 IN MICROGRAMS/M**3

**

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
462678.00	3769353.00	0.00044	462728.00	3769353.00	0.00051
462778.00	3769353.00	0.00060	462828.00	3769353.00	0.00072
462878.00	3769353.00	0.00088	462928.00	3769353.00	0.00110
462978.00	3769353.00	0.00143	463028.00	3769353.00	0.00194
463078.00	3769353.00	0.00280	463128.00	3769353.00	0.00441
463178.00	3769353.00	0.00794	463228.00	3769353.00	0.01993
463278.00	3769353.00	0.07965	463328.00	3769353.00	0.02188
463378.00	3769353.00	0.00775	463428.00	3769353.00	0.00357
463478.00	3769353.00	0.00199	463528.00	3769353.00	0.00126
463578.00	3769353.00	0.00087	463628.00	3769353.00	0.00063
462678.00	3769403.00	0.00043	462728.00	3769403.00	0.00049
462778.00	3769403.00	0.00057	462828.00	3769403.00	0.00067
462878.00	3769403.00	0.00081	462928.00	3769403.00	0.00099
462978.00	3769403.00	0.00124	463028.00	3769403.00	0.00159
463078.00	3769403.00	0.00210	463128.00	3769403.00	0.00285
463178.00	3769403.00	0.00404	463228.00	3769403.00	0.00684
463278.00	3769403.00	0.01874	463328.00	3769403.00	0.01718
463378.00	3769403.00	0.00918	463428.00	3769403.00	0.00479
463478.00	3769403.00	0.00272	463528.00	3769403.00	0.00169
463578.00	3769403.00	0.00113	463628.00	3769403.00	0.00081
462678.00	3769453.00	0.00040	462728.00	3769453.00	0.00046
462778.00	3769453.00	0.00053	462828.00	3769453.00	0.00061
462878.00	3769453.00	0.00071	462928.00	3769453.00	0.00084
462978.00	3769453.00	0.00101	463028.00	3769453.00	0.00121
463078.00	3769453.00	0.00148	463128.00	3769453.00	0.00184
463178.00	3769453.00	0.00237	463228.00	3769453.00	0.00371
463278.00	3769453.00	0.00783	463328.00	3769453.00	0.01000
463378.00	3769453.00	0.00786	463428.00	3769453.00	0.00513
463478.00	3769453.00	0.00322	463528.00	3769453.00	0.00208
463578.00	3769453.00	0.00141	463628.00		

3769453.00 0.00100
462678.00 3769503.00 0.00037 462728.00
3769503.00 0.00042
462778.00 3769503.00 0.00047 462828.00
3769503.00 0.00054
462878.00 3769503.00 0.00061 462928.00
3769503.00 0.00070
462978.00 3769503.00 0.00080 463028.00
3769503.00 0.00092
463078.00 3769503.00 0.00108 463128.00
3769503.00 0.00127
463178.00 3769503.00 0.00158 463228.00
3769503.00 0.00240
463278.00 3769503.00 0.00434 463328.00
3769503.00 0.00597
463378.00 3769503.00 0.00580 463428.00
3769503.00 0.00461
463478.00 3769503.00 0.00333 463528.00
3769503.00 0.00232
463578.00 3769503.00 0.00164 463628.00
3769503.00 0.00118

♀ *** AERMOD - VERSION 15181 *** *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa *** 10/27/16
*** AERMET - VERSION 14134 *** *** *** 16:50:33

PAGE 17
**MODELOPTs: NonDFAULT CONC FLAT URBAN

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 , L0000071 , L0000072 , L0000073 , L0000074 ,
L0000075 , L0000076 , L0000077 , L0000078 , L0000079 , L0000080 , L0000081 , L0000082 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

X-COORD (M) Y-COORD (M) CONC X-COORD (M) Y-COORD (M) CONC
- -
462678.00 3769553.00 0.00034 462728.00
3769553.00 0.00038
462778.00 3769553.00 0.00042 462828.00
3769553.00 0.00046
462878.00 3769553.00 0.00051 462928.00
3769553.00 0.00057
462978.00 3769553.00 0.00064 463028.00
3769553.00 0.00072
463078.00 3769553.00 0.00081 463128.00
3769553.00 0.00094
463178.00 3769553.00 0.00115 463228.00
3769553.00 0.00170
463278.00 3769553.00 0.00279 463328.00
3769553.00 0.00385
463378.00 3769553.00 0.00416 463428.00
3769553.00 0.00377
463478.00 3769553.00 0.00308 463528.00
3769553.00 0.00236
463578.00 3769553.00 0.00176 463628.00
3769553.00 0.00132

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      462678.00    3769603.00        0.00030                    462728.00
   3769603.00        0.00033
      462778.00    3769603.00        0.00036                    462828.00
   3769603.00        0.00039
      462878.00    3769603.00        0.00043                    462928.00
   3769603.00        0.00047
      462978.00    3769603.00        0.00052                    463028.00
   3769603.00        0.00058
      463078.00    3769603.00        0.00064                    463128.00
   3769603.00        0.00073
      463178.00    3769603.00        0.00090                    463228.00
   3769603.00        0.00128
      463278.00    3769603.00        0.00196                    463328.00
   3769603.00        0.00266
      463378.00    3769603.00        0.00304                    463428.00
   3769603.00        0.00299
      463478.00    3769603.00        0.00266                    463528.00
   3769603.00        0.00222
      463578.00    3769603.00        0.00178                    463628.00
   3769603.00        0.00139
      462678.00    3769653.00        0.00027                    462728.00
   3769653.00        0.00029
      462778.00    3769653.00        0.00031                    462828.00
   3769653.00        0.00034
      462878.00    3769653.00        0.00037                    462928.00
   3769653.00        0.00040
      462978.00    3769653.00        0.00043                    463028.00
   3769653.00        0.00047
      463078.00    3769653.00        0.00052                    463128.00
   3769653.00        0.00059
      463178.00    3769653.00        0.00072                    463228.00
   3769653.00        0.00100
      463278.00    3769653.00        0.00146                    463328.00
   3769653.00        0.00194
      463378.00    3769653.00        0.00228                    463428.00
   3769653.00        0.00236
      463478.00    3769653.00        0.00223                    463528.00
   3769653.00        0.00199
      463578.00    3769653.00        0.00169                    463628.00
   3769653.00        0.00139
      462678.00    3769703.00        0.00024                    462728.00
   3769703.00        0.00026
      462778.00    3769703.00        0.00027                    462828.00
   3769703.00        0.00029
      462878.00    3769703.00        0.00032                    462928.00
   3769703.00        0.00034
      462978.00    3769703.00        0.00036                    463028.00
   3769703.00        0.00039
      463078.00    3769703.00        0.00043                    463128.00
   3769703.00        0.00049
      463178.00    3769703.00        0.00060                    463228.00
   3769703.00        0.00081
      463278.00    3769703.00        0.00113                    463328.00
   3769703.00        0.00148
      463378.00    3769703.00        0.00176                    463428.00
   3769703.00        0.00188
      463478.00    3769703.00        0.00186                    463528.00
   3769703.00        0.00173
      463578.00    3769703.00        0.00155                    463628.00
   3769703.00        0.00134
♀ *** AERMOD - VERSION  15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***       10/27/16
 *** AERMET - VERSION  14134 ***   ***
                                   ***       16:50:33
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**MODELOPTs: NonDFAULT CONC FLAT URBAN

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 5 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 , L0000071 , L0000072 , L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 , L0000079 , L0000080 , L0000081 , L0000082 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
462678.00	3769753.00	0.00021	462728.00	3769753.00	0.00023
462778.00	3769753.00	0.00024	462828.00	3769753.00	0.00026
462878.00	3769753.00	0.00028	462928.00	3769753.00	0.00029
462978.00	3769753.00	0.00031	463028.00	3769753.00	0.00034
463078.00	3769753.00	0.00037	463128.00	3769753.00	0.00042
463178.00	3769753.00	0.00051	463228.00	3769753.00	0.00067
463278.00	3769753.00	0.00091	463328.00	3769753.00	0.00117
463378.00	3769753.00	0.00139	463428.00	3769753.00	0.00152
463478.00	3769753.00	0.00155	463528.00	3769753.00	0.00149
463578.00	3769753.00	0.00139	463628.00	3769753.00	0.00125
462678.00	3769803.00	0.00019	462728.00	3769803.00	0.00020
462778.00	3769803.00	0.00022	462828.00	3769803.00	0.00023
462878.00	3769803.00	0.00024	462928.00	3769803.00	0.00025
462978.00	3769803.00	0.00027	463028.00	3769803.00	0.00029
463078.00	3769803.00	0.00032	463128.00	3769803.00	0.00036
463178.00	3769803.00	0.00044	463228.00	3769803.00	0.00057
463278.00	3769803.00	0.00075	463328.00	3769803.00	0.00094
463378.00	3769803.00	0.00112	463428.00	3769803.00	0.00124
463478.00	3769803.00	0.00130	463528.00	3769803.00	0.00128
463578.00	3769803.00	0.00123	463628.00	3769803.00	0.00114
462678.00	3769853.00	0.00017	462728.00	3769853.00	0.00018
462778.00	3769853.00	0.00019	462828.00	3769853.00	0.00020
462878.00	3769853.00	0.00021	462928.00	3769853.00	0.00022
462978.00	3769853.00	0.00024	463028.00		

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   3769853.00        0.00026
        463078.00    3769853.00        0.00028                        463128.00
   3769853.00        0.00032
        463178.00    3769853.00        0.00038                        463228.00
   3769853.00        0.00049
        463278.00    3769853.00        0.00063                        463328.00
   3769853.00        0.00078
        463378.00    3769853.00        0.00092                        463428.00
   3769853.00        0.00103
        463478.00    3769853.00        0.00109                        463528.00
   3769853.00        0.00110
        463578.00    3769853.00        0.00108                        463628.00
   3769853.00        0.00102
        462678.00    3769903.00        0.00016                        462728.00
   3769903.00        0.00017
        462778.00    3769903.00        0.00017                        462828.00
   3769903.00        0.00018
        462878.00    3769903.00        0.00019                        462928.00
   3769903.00        0.00020
        462978.00    3769903.00        0.00021                        463028.00
   3769903.00        0.00023
        463078.00    3769903.00        0.00025                        463128.00
   3769903.00        0.00028
        463178.00    3769903.00        0.00034                        463228.00
   3769903.00        0.00042
        463278.00    3769903.00        0.00054                        463328.00
   3769903.00        0.00066
        463378.00    3769903.00        0.00077                        463428.00
   3769903.00        0.00087
        463478.00    3769903.00        0.00093                        463528.00
   3769903.00        0.00096
        463578.00    3769903.00        0.00095                        463628.00
   3769903.00        0.00092
♀ *** AERMOD - VERSION  15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***       10/27/16
 *** AERMET - VERSION  14134 ***   ***
                                 ***        16:50:33

                                            PAGE  19
 **MODELOPTs:   NonDFAULT CONC      FLAT      URBAN

                    *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED
OVER   5 YEARS FOR SOURCE GROUP: ALL       ***
                                 INCLUDING SOURCE(S):     AREA1       ,
L0000071    , L0000072    , L0000073    , L0000074    ,
                 L0000075    , L0000076    , L0000077    , L0000078    ,
L0000079    , L0000080    , L0000081    , L0000082    ,

                                             *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                        ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                          **

       X-COORD (M)   Y-COORD (M)        CONC                        X-COORD (M)
  Y-COORD (M)        CONC
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
        463178.00    3769382.00        0.00532                        463177.00
   3769326.00        0.01055
        463160.00    3769249.00        0.00989                        463272.00
   3769246.00        0.02789
        463271.00    3769366.00        0.05006                        463210.00
   3769380.00        0.00785
♀ *** AERMOD - VERSION  15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***       10/27/16
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 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   AREA1   , L0000071   , L0000072   , L0000073   , L0000074   ,
L0000075   , L0000076   , L0000077   , L0000078   , L0000079   , L0000080   , L0000081   , L0000082   ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_2.5   IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
462678.00	3768953.00	0.01900	(09082824)	462728.00	3768953.00	0.02060	(10092424)
462778.00	3768953.00	0.02273	(07090103)	462828.00	3768953.00	0.02502	(07090101)
462878.00	3768953.00	0.02738	(09090324)	462928.00	3768953.00	0.03029	(08041222)
462978.00	3768953.00	0.03350	(11090705)	463028.00	3768953.00	0.03717	(07090204)
463078.00	3768953.00	0.04072	(11090701)	463128.00	3768953.00	0.04422	(09082924)
463178.00	3768953.00	0.04707	(08062202)	463228.00	3768953.00	0.04883	(07083105)
463278.00	3768953.00	0.04898	(07020422)	463328.00	3768953.00	0.04772	(08041223)
463378.00	3768953.00	0.04468	(09092006)	463428.00	3768953.00	0.04188	(07090303)
463478.00	3768953.00	0.03778	(11092701)	463528.00	3768953.00	0.03440	(09071803)
463578.00	3768953.00	0.03112	(11082606)	463628.00	3768953.00	0.02834	(07090124)
462678.00	3769003.00	0.01984	(11090802)	462728.00	3769003.00	0.02175	(09080324)
462778.00	3769003.00	0.02407	(09090101)	462828.00	3769003.00	0.02662	(11090703)
462878.00	3769003.00	0.02984	(09082823)	462928.00	3769003.00	0.03322	(10092703)
462978.00	3769003.00	0.03749	(08041222)	463028.00	3769003.00	0.04239	(10082524)
463078.00	3769003.00	0.04749	(07090102)	463128.00	3769003.00	0.05289	(11090520)
463178.00	3769003.00	0.05730	(08041224)	463228.00	3769003.00	0.06054	(08093022)
463278.00	3769003.00	0.06057	(08062204)	463328.00	3769003.00	0.05829	(09083006)
463378.00	3769003.00	0.05396	(08042703)	463428.00	3769003.00	0.04884	(07102222)
463478.00	3769003.00	0.04373	(11082701)	463528.00	3769003.00	0.03853	(09071205)
463578.00	3769003.00	0.03460	(07090124)	463628.00	3769003.00	0.03063	(07090122)
462678.00	3769053.00	0.02070	(11080224)	462728.00	3769053.00	0.02280	(09091101)
462778.00	3769053.00	0.02538	(11090802)				

462828.00   3769053.00   0.02841 (10082401)
        462878.00   3769053.00   0.03194 (10092424)
462928.00   3769053.00   0.03652 (10092723)
        462978.00   3769053.00   0.04166 (10092803)
463028.00   3769053.00   0.04816 (08041222)
        463078.00   3769053.00   0.05542 (10082504)
463128.00   3769053.00   0.06392 (11090701)
        463178.00   3769053.00   0.07178 (07111502)
463228.00   3769053.00   0.07718 (07082102)
        463278.00   3769053.00   0.07824 (08062204)
463328.00   3769053.00   0.07366 (10082201)
        463378.00   3769053.00   0.06642 (07090303)
463428.00   3769053.00   0.05810 (08062022)
        463478.00   3769053.00   0.05003 (07111319)
463528.00   3769053.00   0.04357 (07090124)
        463578.00   3769053.00   0.03753 (09042023)
463628.00   3769053.00   0.03318 (09071224)
        462678.00   3769103.00   0.02149 (09082923)
462728.00   3769103.00   0.02372 (08041124)
        462778.00   3769103.00   0.02671 (07090304)
462828.00   3769103.00   0.02998 (09091101)
        462878.00   3769103.00   0.03423 (11090802)
462928.00   3769103.00   0.03959 (09082824)
        462978.00   3769103.00   0.04605 (11090703)
463028.00   3769103.00   0.05457 (09083022)
        463078.00   3769103.00   0.06524 (08041222)
463128.00   3769103.00   0.07862 (07090204)
        463178.00   3769103.00   0.09346 (11090624)
463228.00   3769103.00   0.10551 (10090422)
        463278.00   3769103.00   0.10733 (09082722)
463328.00   3769103.00   0.09646 (09092705)
        463378.00   3769103.00   0.08200 (07102222)
463428.00   3769103.00   0.06866 (08062124)
        463478.00   3769103.00   0.05717 (07090124)
463528.00   3769103.00   0.04805 (09042023)
        463578.00   3769103.00   0.04113 (10092806)
463628.00   3769103.00   0.03558 (09090501)
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
                                ***   16:50:33

                                           PAGE 21
 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

                                *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
                                           INCLUDING SOURCE(S):   AREA1   ,
L0000071   , L0000072   , L0000073   , L0000074   ,
               L0000075   , L0000076   , L0000077   , L0000078   ,
L0000079   , L0000080   , L0000081   , L0000082   ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                           ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                           **

      X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)   X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)
- -
        462678.00   3769153.00   0.02199 (11082502)
462728.00   3769153.00   0.02454 (09090103)
        462778.00   3769153.00   0.02764 (10090224)
462828.00   3769153.00   0.03161 (09082923)

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        462878.00   3769153.00        0.03623  (08041124)
462928.00   3769153.00        0.04223  (10081702)
        462978.00   3769153.00        0.05026  (09090106)
463028.00   3769153.00        0.06085  (09090101)
        463078.00   3769153.00        0.07578  (07090101)
463128.00   3769153.00        0.09641  (07090402)
        463178.00   3769153.00        0.12447  (08051801)
463228.00   3769153.00        0.15523  (11090521)
        463278.00   3769153.00        0.16062  (09101606)
463328.00   3769153.00        0.13402  (07090303)
        463378.00   3769153.00        0.10319  (08062124)
463428.00   3769153.00        0.08058  (07090122)
        463478.00   3769153.00        0.06450  (07090224)
463528.00   3769153.00        0.05273  (10082404)
        463578.00   3769153.00        0.04404  (11070605)
463628.00   3769153.00        0.03763  (07081304)
        462678.00   3769203.00        0.02243  (07071404)
462728.00   3769203.00        0.02513  (10082224)
        462778.00   3769203.00        0.02860  (07102324)
462828.00   3769203.00        0.03266  (10092623)
        462878.00   3769203.00        0.03778  (09090103)
462928.00   3769203.00        0.04443  (10090224)
        462978.00   3769203.00        0.05385  (09082923)
463028.00   3769203.00        0.06637  (11080224)
        463078.00   3769203.00        0.08493  (09090106)
463128.00   3769203.00        0.11445  (07090103)
        463178.00   3769203.00        0.16569  (08062101)
463228.00   3769203.00        0.25866  (08062024)
        463278.00   3769203.00        0.28448  (08093023)
463328.00   3769203.00        0.18744  (11082701)
        463378.00   3769203.00        0.12572  (07090122)
463428.00   3769203.00        0.09136  (11093022)
        463478.00   3769203.00        0.07070  (11070605)
463528.00   3769203.00        0.05661  (08032303)
        463578.00   3769203.00        0.04676  (09090123)
463628.00   3769203.00        0.03944  (09090205)
        462678.00   3769253.00        0.02273  (09090206)
462728.00   3769253.00        0.02551  (09090206)
        462778.00   3769253.00        0.02897  (09090306)
462828.00   3769253.00        0.03323  (10082503)
        462878.00   3769253.00        0.03878  (10082503)
462928.00   3769253.00        0.04606  (08091522)
        462978.00   3769253.00        0.05581  (07071404)
463028.00   3769253.00        0.07027  (07102324)
        463078.00   3769253.00        0.09116  (09090103)
463128.00   3769253.00        0.12589  (09082923)
        463178.00   3769253.00        0.19242  (09090106)
463228.00   3769253.00        0.41230  (10082524)
        463278.00   3769253.00        0.62486  (07090303)
463328.00   3769253.00        0.22547  (07090224)
        463378.00   3769253.00        0.13910  (07071403)
463428.00   3769253.00        0.09865  (07091224)
        463478.00   3769253.00        0.07469  (07081703)
463528.00   3769253.00        0.05885  (07112620)
        463578.00   3769253.00        0.04849  (07083004)
463628.00   3769253.00        0.04066  (07083004)
        462678.00   3769303.00        0.02284  (08092501)
462728.00   3769303.00        0.02565  (08092501)
        462778.00   3769303.00        0.02911  (08092501)
462828.00   3769303.00        0.03346  (08092501)
        462878.00   3769303.00        0.03905  (08092501)
462928.00   3769303.00        0.04644  (08092501)
        462978.00   3769303.00        0.05654  (08092501)
463028.00   3769303.00        0.07104  (08062203)
        463078.00   3769303.00        0.09300  (08062203)
463128.00   3769303.00        0.12874  (08062203)
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        463178.00   3769303.00        0.19420  (10092822)
463228.00   3769303.00        0.37864  (07090201)
        463278.00   3769303.00        0.55792  (08062122)
463328.00   3769303.00        0.22397  (08042701)
        463378.00   3769303.00        0.14285  (08051723)
463428.00   3769303.00        0.10117  (08051723)
        463478.00   3769303.00        0.07626  (08051723)
463528.00   3769303.00        0.06009  (08051723)
        463578.00   3769303.00        0.04894  (08051723)
463628.00   3769303.00        0.04086  (08051723)
♀ *** AERMOD - VERSION  15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***        10/27/16
 *** AERMET - VERSION  14134 ***   ***
                                ***        16:50:33

                                           PAGE  22
 **MODELOPTs:   NonDFAULT CONC      FLAT      URBAN

                                *** THE   1ST HIGHEST  1-HR AVERAGE
CONCENTRATION   VALUES FOR SOURCE GROUP:  ALL      ***
                                     INCLUDING SOURCE(S):     AREA1       ,
L0000071    , L0000072    , L0000073    , L0000074    ,
               L0000075    , L0000076    , L0000077    , L0000078    ,
L0000079    , L0000080    , L0000081    , L0000082    ,

                                                *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                           ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                          **

      X-COORD (M)  Y-COORD (M)         CONC      (YYMMDDHH)               X-COORD
(M)  Y-COORD (M)         CONC      (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
        462678.00   3769353.00        0.02273  (08070402)
462728.00   3769353.00        0.02547  (10082706)
        462778.00   3769353.00        0.02896  (10082706)
462828.00   3769353.00        0.03331  (07031101)
        462878.00   3769353.00        0.03879  (10090423)
462928.00   3769353.00        0.04606  (08051823)
        462978.00   3769353.00        0.05592  (09090423)
463028.00   3769353.00        0.06985  (11080201)
        463078.00   3769353.00        0.09113  (10082424)
463128.00   3769353.00        0.12579  (10082423)
        463178.00   3769353.00        0.19202  (11082705)
463228.00   3769353.00        0.40949  (08100721)
        463278.00   3769353.00        0.61069  (10071701)
463328.00   3769353.00        0.22562  (07082922)
        463378.00   3769353.00        0.13907  (11082903)
463428.00   3769353.00        0.09840  (07090401)
        463478.00   3769353.00        0.07454  (11082802)
463528.00   3769353.00        0.05871  (07072004)
        463578.00   3769353.00        0.04800  (07042803)
463628.00   3769353.00        0.04033  (11090406)
        462678.00   3769403.00        0.02252  (09090423)
462728.00   3769403.00        0.02520  (09083023)
        462778.00   3769403.00        0.02848  (11080201)
462828.00   3769403.00        0.03261  (07102224)
        462878.00   3769403.00        0.03786  (10082424)
462928.00   3769403.00        0.04452  (08100123)
        462978.00   3769403.00        0.05371  (10082423)
463028.00   3769403.00        0.06627  (07090201)
        463078.00   3769403.00        0.08445  (11082803)
463128.00   3769403.00        0.11303  (08062302)
        463178.00   3769403.00        0.16371  (10071504)
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463228.00   3769403.00   0.25240 (08051724)
        463278.00   3769403.00   0.27824 (07090123)
463328.00   3769403.00   0.18460 (11070702)
        463378.00   3769403.00   0.12456 (08051722)
463428.00   3769403.00   0.09139 (11082723)
        463478.00   3769403.00   0.07063 (09090122)
463528.00   3769403.00   0.05645 (07070201)
        463578.00   3769403.00   0.04690 (07090401)
463628.00   3769403.00   0.03938 (09091024)
        462678.00   3769453.00   0.02205 (10082322)
462728.00   3769453.00   0.02456 (09072003)
        462778.00   3769453.00   0.02764 (08100123)
462828.00   3769453.00   0.03140 (10082423)
        462878.00   3769453.00   0.03610 (08082501)
462928.00   3769453.00   0.04241 (07090201)
        462978.00   3769453.00   0.05006 (07082824)
463028.00   3769453.00   0.06057 (07031105)
        463078.00   3769453.00   0.07508 (10071503)
463128.00   3769453.00   0.09589 (10092621)
        463178.00   3769453.00   0.12302 (10092823)
463228.00   3769453.00   0.15311 (07083123)
        463278.00   3769453.00   0.15877 (07090322)
463328.00   3769453.00   0.13195 (11082804)
        463378.00   3769453.00   0.10271 (07090301)
463428.00   3769453.00   0.08040 (08062122)
        463478.00   3769453.00   0.06439 (07082922)
463528.00   3769453.00   0.05265 (11082723)
        463578.00   3769453.00   0.04431 (09090122)
463628.00   3769453.00   0.03763 (07081604)
        462678.00   3769503.00   0.02132 (07102822)
462728.00   3769503.00   0.02376 (10082423)
        462778.00   3769503.00   0.02655 (10082324)
462828.00   3769503.00   0.03005 (11082801)
        462878.00   3769503.00   0.03415 (07082824)
462928.00   3769503.00   0.03938 (09090403)
        462978.00   3769503.00   0.04577 (09091724)
463028.00   3769503.00   0.05410 (11082604)
        463078.00   3769503.00   0.06498 (10092621)
463128.00   3769503.00   0.07736 (07021706)
        463178.00   3769503.00   0.09297 (07090321)
463228.00   3769503.00   0.10376 (07083005)
        463278.00   3769503.00   0.10565 (11070701)
463328.00   3769503.00   0.09587 (08090624)
        463378.00   3769503.00   0.08162 (07083002)
463428.00   3769503.00   0.06838 (11082523)
        463478.00   3769503.00   0.05689 (07082823)
463528.00   3769503.00   0.04797 (07031022)
        463578.00   3769503.00   0.04110 (07102302)
463628.00   3769503.00   0.03544 (08070424)
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***   ***   16:50:33

                                                          PAGE 23
 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

                                *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
                                    INCLUDING SOURCE(S):   AREA1   ,
L0000071   , L0000072   , L0000073   , L0000074   ,
               L0000075   , L0000076   , L0000077   , L0000078   ,
L0000079   , L0000080   , L0000081   , L0000082   ,

                                                        *** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3
**

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
462678.00	3769553.00	0.02064	(07090201)	462728.00	3769553.00	0.02283	(11082801)
462778.00	3769553.00	0.02528	(08092523)	462828.00	3769553.00	0.02837	(11082705)
462878.00	3769553.00	0.03197	(07031105)	462928.00	3769553.00	0.03623	(08062302)
462978.00	3769553.00	0.04153	(07083104)	463028.00	3769553.00	0.04786	(10081924)
463078.00	3769553.00	0.05502	(09091103)	463128.00	3769553.00	0.06328	(11070504)
463178.00	3769553.00	0.07100	(08051724)	463228.00	3769553.00	0.07658	(10071703)
463278.00	3769553.00	0.07762	(07083101)	463328.00	3769553.00	0.07305	(09080322)
463378.00	3769553.00	0.06556	(11082804)	463428.00	3769553.00	0.05728	(11062623)
463478.00	3769553.00	0.04982	(11082901)	463528.00	3769553.00	0.04322	(10081902)
463578.00	3769553.00	0.03757	(08080802)	463628.00	3769553.00	0.03311	(07082922)
462678.00	3769603.00	0.01978	(08092523)	462728.00	3769603.00	0.02172	(11082803)
462778.00	3769603.00	0.02395	(08061824)	462828.00	3769603.00	0.02653	(09091724)
462878.00	3769603.00	0.02963	(10081904)	462928.00	3769603.00	0.03326	(07083104)
462978.00	3769603.00	0.03733	(10081924)	463028.00	3769603.00	0.04181	(08100721)
463078.00	3769603.00	0.04698	(10090123)	463128.00	3769603.00	0.05249	(07090321)
463178.00	3769603.00	0.05688	(07102419)	463228.00	3769603.00	0.05977	(07090221)
463278.00	3769603.00	0.06020	(10071502)	463328.00	3769603.00	0.05784	(07081923)
463378.00	3769603.00	0.05361	(11082602)	463428.00	3769603.00	0.04853	(07083002)
463478.00	3769603.00	0.04327	(09072103)	463528.00	3769603.00	0.03847	(08061523)
463578.00	3769603.00	0.03431	(10081902)	463628.00	3769603.00	0.03063	(08051722)
462678.00	3769653.00	0.01892	(09090403)	462728.00	3769653.00	0.02062	(07031105)
462778.00	3769653.00	0.02249	(08090303)	462828.00	3769653.00	0.02487	(10071503)
462878.00	3769653.00	0.02737	(10071702)	462928.00	3769653.00	0.03019	(10081924)
462978.00	3769653.00	0.03331	(08071706)	463028.00	3769653.00	0.03667	(07021706)
463078.00	3769653.00	0.04035	(11070504)	463128.00	3769653.00	0.04394	(09090224)
463178.00	3769653.00	0.04697	(07083123)	463228.00	3769653.00	0.04883	(07090221)
463278.00	3769653.00	0.04875	(10071502)	463328.00	3769653.00	0.04760	(07090123)
463378.00	3769653.00	0.04469	(09090223)	463428.00	3769653.00	0.04134	(07072701)
463478.00	3769653.00	0.03786	(07082023)	463528.00	3769653.00	0.03448	(07090301)

        463578.00   3769653.00   0.03109 (08062123)
463628.00   3769653.00   0.02809 (11082424)
        462678.00   3769703.00   0.01798 (10071604)
462728.00   3769703.00   0.01947 (08062302)
        462778.00   3769703.00   0.02122 (11082604)
462828.00   3769703.00   0.02314 (10071702)
        462878.00   3769703.00   0.02510 (10081924)
462928.00   3769703.00   0.02726 (08071706)
        462978.00   3769703.00   0.02981 (07070103)
463028.00   3769703.00   0.03255 (10092823)
        463078.00   3769703.00   0.03508 (11080123)
463128.00   3769703.00   0.03725 (08051724)
        463178.00   3769703.00   0.03922 (10071704)
463228.00   3769703.00   0.04062 (07090221)
        463278.00   3769703.00   0.04047 (10071502)
463328.00   3769703.00   0.03967 (08062201)
        463378.00   3769703.00   0.03800 (07090305)
463428.00   3769703.00   0.03569 (11090424)
        463478.00   3769703.00   0.03320 (07072723)
463528.00   3769703.00   0.03060 (11062623)
        463578.00   3769703.00   0.02826 (07090301)
463628.00   3769703.00   0.02590 (08062123)
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
                              ***   16:50:33

                                         PAGE 24
 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

                               *** THE   1ST HIGHEST 1-HR AVERAGE
CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
                                  INCLUDING SOURCE(S):   AREA1   ,
L0000071   , L0000072   , L0000073   , L0000074   ,
                L0000075   , L0000076   , L0000077   , L0000078   ,
L0000079   , L0000080   , L0000081   , L0000082   ,

                                              *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                         ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                          **

      X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)   X-COORD
(M) Y-COORD (M)   CONC   (YYMMDDHH)
 -
- -
        462678.00   3769753.00   0.01706 (10081904)
462728.00   3769753.00   0.01841 (11082604)
        462778.00   3769753.00   0.01990 (10071702)
462828.00   3769753.00   0.02136 (09090505)
        462878.00   3769753.00   0.02307 (10071504)
462928.00   3769753.00   0.02495 (08100721)
        462978.00   3769753.00   0.02695 (10082502)
463028.00   3769753.00   0.02875 (08083006)
        463078.00   3769753.00   0.03096 (07090222)
463128.00   3769753.00   0.03240 (10082523)
        463178.00   3769753.00   0.03363 (07083005)
463228.00   3769753.00   0.03434 (07090221)
        463278.00   3769753.00   0.03429 (10071502)
463328.00   3769753.00   0.03383 (10081723)
        463378.00   3769753.00   0.03271 (09080322)
463428.00   3769753.00   0.03116 (11082602)
        463478.00   3769753.00   0.02934 (07072701)
463528.00   3769753.00   0.02741 (11071901)
        463578.00   3769753.00   0.02555 (11070702)

463628.00 3769753.00 0.02371 (10071603)
462678.00 3769803.00 0.01611 (08082605)
462728.00 3769803.00 0.01735 (10071702)
462778.00 3769803.00 0.01849 (09090505)
462828.00 3769803.00 0.01990 (10071504)
462878.00 3769803.00 0.02130 (08100721)
462928.00 3769803.00 0.02266 (07021706)
462978.00 3769803.00 0.02424 (10092823)
463028.00 3769803.00 0.02582 (11080123)
463078.00 3769803.00 0.02721 (11082702)
463128.00 3769803.00 0.02823 (08070501)
463178.00 3769803.00 0.02914 (07083005)
463228.00 3769803.00 0.02969 (10071323)
463278.00 3769803.00 0.02966 (08091422)
463328.00 3769803.00 0.02945 (10081723)
463378.00 3769803.00 0.02855 (07081923)
463428.00 3769803.00 0.02747 (09090223)
463478.00 3769803.00 0.02620 (10071701)
463528.00 3769803.00 0.02471 (11081724)
463578.00 3769803.00 0.02315 (07082023)
463628.00 3769803.00 0.02166 (11082603)
462678.00 3769853.00 0.01531 (07083124)
462728.00 3769853.00 0.01623 (09090505)
462778.00 3769853.00 0.01735 (10071504)
462828.00 3769853.00 0.01839 (08080706)
462878.00 3769853.00 0.01954 (07070103)
462928.00 3769853.00 0.02079 (10090123)
462978.00 3769853.00 0.02195 (08083006)
463028.00 3769853.00 0.02336 (07090321)
463078.00 3769853.00 0.02407 (08051724)
463128.00 3769853.00 0.02514 (07083123)
463178.00 3769853.00 0.02566 (10071703)
463228.00 3769853.00 0.02606 (10081801)
463278.00 3769853.00 0.02601 (08091422)
463328.00 3769853.00 0.02604 (07090322)
463378.00 3769853.00 0.02529 (10092922)
463428.00 3769853.00 0.02453 (07090305)
463478.00 3769853.00 0.02338 (11082602)
463528.00 3769853.00 0.02230 (07072701)
463578.00 3769853.00 0.02122 (07083002)
463628.00 3769853.00 0.01991 (11062623)
462678.00 3769903.00 0.01440 (09090505)
462728.00 3769903.00 0.01537 (10092621)
462778.00 3769903.00 0.01616 (08071706)
462828.00 3769903.00 0.01710 (09091103)
462878.00 3769903.00 0.01809 (10082502)
462928.00 3769903.00 0.01906 (10071401)
462978.00 3769903.00 0.02007 (11080123)
463028.00 3769903.00 0.02097 (09090224)
463078.00 3769903.00 0.02184 (10082523)
463128.00 3769903.00 0.02244 (07083123)
463178.00 3769903.00 0.02288 (10071703)
463228.00 3769903.00 0.02315 (10081801)
463278.00 3769903.00 0.02309 (07083024)
463328.00 3769903.00 0.02307 (07090322)
463378.00 3769903.00 0.02267 (07090123)
463428.00 3769903.00 0.02187 (11082401)
463478.00 3769903.00 0.02110 (07082124)
463528.00 3769903.00 0.02036 (10071701)
463578.00 3769903.00 0.01936 (11081724)
463628.00 3769903.00 0.01834 (07082023)
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
***   16:50:33

**MODELOPTs: NonDFAULT CONC FLAT URBAN

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 ,
L0000071 , L0000072 , L0000073 , L0000074 ,
L0000075 , L0000076 , L0000077 , L0000078 ,
L0000079 , L0000080 , L0000081 , L0000082 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
463178.00	3769382.00	0.17959	(10071702)	463177.00	3769326.00	0.19296	(10082322)
463160.00	3769249.00	0.16167	(10071602)	463272.00	3769246.00	0.65840	(10082201)
463271.00	3769366.00	0.55999	(07090123)	463210.00	3769380.00	0.25798	(09091103)

♀ *** AERMOD - VERSION 15181 *** *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa *** 10/27/16
*** AERMET - VERSION 14134 *** ***
*** 16:50:33

**MODELOPTs: NonDFAULT CONC FLAT URBAN

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): AREA1 ,
L0000071 , L0000072 , L0000073 , L0000074 ,
L0000075 , L0000076 , L0000077 , L0000078 ,
L0000079 , L0000080 , L0000081 , L0000082 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
462678.00	3768953.00	0.00385	(11121924)	462728.00	3768953.00	0.00432	(11121924)
462778.00	3768953.00	0.00455	(11121924)	462828.00	3768953.00	0.00535m	(08020624)
462878.00	3768953.00	0.00636m	(08020624)	462928.00	3768953.00	0.00725	(11112724)
462978.00	3768953.00	0.00820	(11112724)	463028.00	3768953.00	0.00978	(11122624)
463078.00	3768953.00	0.01154	(11122624)	463128.00	3768953.00	0.01081	(07020324)
463178.00	3768953.00	0.01387	(08102724)	463228.00	3768953.00	0.01395	(08121924)
463278.00	3768953.00	0.01120	(08121924)	463328.00	3768953.00	0.00790	(09110124)
463378.00	3768953.00	0.00611	(09022224)				

463428.00   3768953.00   0.00542 (08041424)
        463478.00   3768953.00   0.00521 (09102824)
463528.00   3768953.00   0.00474 (09102824)
        463578.00   3768953.00   0.00378 (09102824)
463628.00   3768953.00   0.00353 (08050324)
        462678.00   3769003.00   0.00404 (10121324)
462728.00   3769003.00   0.00435 (10121324)
        462778.00   3769003.00   0.00511 (11121924)
462828.00   3769003.00   0.00568 (11121924)
        462878.00   3769003.00   0.00639 (07122924)
462928.00   3769003.00   0.00787m (08020624)
        462978.00   3769003.00   0.00925 (11112724)
463028.00   3769003.00   0.01056 (11112724)
        463078.00   3769003.00   0.01360 (11122624)
463128.00   3769003.00   0.01423 (11122624)
        463178.00   3769003.00   0.01570 (08102724)
463228.00   3769003.00   0.01794 (08102724)
        463278.00   3769003.00   0.01396 (08121924)
463328.00   3769003.00   0.00944 (09110124)
        463378.00   3769003.00   0.00748 (09022224)
463428.00   3769003.00   0.00662 (09102824)
        463478.00   3769003.00   0.00626 (09102824)
463528.00   3769003.00   0.00495 (09102824)
        463578.00   3769003.00   0.00438 (08050324)
463628.00   3769003.00   0.00402 (08011124)
        462678.00   3769053.00   0.00394 (10121324)
462728.00   3769053.00   0.00466 (10121324)
        462778.00   3769053.00   0.00533 (10121324)
462828.00   3769053.00   0.00594 (11121924)
        462878.00   3769053.00   0.00712 (11121924)
462928.00   3769053.00   0.00798 (07122924)
        462978.00   3769053.00   0.01004m (08020624)
463028.00   3769053.00   0.01235 (11112724)
        463078.00   3769053.00   0.01429 (11122624)
463128.00   3769053.00   0.01923 (11122624)
        463178.00   3769053.00   0.01839 (07020324)
463228.00   3769053.00   0.02442 (08102724)
        463278.00   3769053.00   0.01801 (08121924)
463328.00   3769053.00   0.01110 (09110124)
        463378.00   3769053.00   0.00905 (08041424)
463428.00   3769053.00   0.00864 (09102824)
        463478.00   3769053.00   0.00680 (09102824)
463528.00   3769053.00   0.00560 (08050324)
        463578.00   3769053.00   0.00518 (08011124)
463628.00   3769053.00   0.00441 (08011124)
        462678.00   3769103.00   0.00317m (10110924)
462728.00   3769103.00   0.00400 (10121324)
        462778.00   3769103.00   0.00508 (10121324)
462828.00   3769103.00   0.00629 (10121324)
        462878.00   3769103.00   0.00747 (10121324)
462928.00   3769103.00   0.00884 (11121924)
        462978.00   3769103.00   0.01058 (11121924)
463028.00   3769103.00   0.01339m (08020624)
        463078.00   3769103.00   0.01760 (11112724)
463128.00   3769103.00   0.02317 (11122624)
        463178.00   3769103.00   0.02642 (11122624)
463228.00   3769103.00   0.03476 (08102724)
        463278.00   3769103.00   0.02434 (08121924)
463328.00   3769103.00   0.01518 (09022224)
        463378.00   3769103.00   0.01264 (09102824)
463428.00   3769103.00   0.01007 (09102824)
        463478.00   3769103.00   0.00749 (08050324)
463528.00   3769103.00   0.00679 (08011124)
        463578.00   3769103.00   0.00510 (08011124)
463628.00   3769103.00   0.00423 (08013024)
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino

 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

*** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   AREA1   , L0000071   , L0000072   , L0000073   , L0000074   ,
L0000075   , L0000076   , L0000077   , L0000078   ,
L0000079   , L0000080   , L0000081   , L0000082   ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_2.5   IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
462678.00	3769153.00	0.00372	(11013024)	462728.00	3769153.00	0.00407	(11013024)
462778.00	3769153.00	0.00443	(11013024)	462828.00	3769153.00	0.00502	(10121324)
462878.00	3769153.00	0.00687	(10121324)	462928.00	3769153.00	0.00913	(10121324)
462978.00	3769153.00	0.01157	(10121324)	463028.00	3769153.00	0.01477	(11121924)
463078.00	3769153.00	0.01968	(07122924)	463128.00	3769153.00	0.02787	(11112724)
463178.00	3769153.00	0.04135	(11122624)	463228.00	3769153.00	0.05153	(08102724)
463278.00	3769153.00	0.03503	(08121924)	463328.00	3769153.00	0.02125	(09022224)
463378.00	3769153.00	0.01669	(09102824)	463428.00	3769153.00	0.01093	(08011124)
463478.00	3769153.00	0.00898	(08011124)	463528.00	3769153.00	0.00673	(08013024)
463578.00	3769153.00	0.00566m	(07112324)	463628.00	3769153.00	0.00480m	(07112324)
462678.00	3769203.00	0.00397	(11013024)	462728.00	3769203.00	0.00456	(11013024)
462778.00	3769203.00	0.00526	(11013024)	462828.00	3769203.00	0.00609	(11013024)
462878.00	3769203.00	0.00706	(11013024)	462928.00	3769203.00	0.00819	(11013024)
462978.00	3769203.00	0.00990	(10121324)	463028.00	3769203.00	0.01490	(10121324)
463078.00	3769203.00	0.02149	(10121324)	463128.00	3769203.00	0.03192	(07122924)
463178.00	3769203.00	0.05352	(11112724)	463228.00	3769203.00	0.08167	(08121924)
463278.00	3769203.00	0.05860	(09110124)	463328.00	3769203.00	0.03433	(09102824)
463378.00	3769203.00	0.01889	(08011124)	463428.00	3769203.00	0.01316	(08013024)
463478.00	3769203.00	0.00992m	(07112324)	463528.00	3769203.00	0.00751m	(07112324)
463578.00	3769203.00	0.00559m	(07112324)	463628.00	3769203.00	0.00455	(11111224)
462678.00	3769253.00	0.00369	(11013024)	462728.00	3769253.00	0.00432	(11013024)

462778.00 3769253.00 0.00511 (11013024)
462828.00 3769253.00 0.00615 (11013024)
462878.00 3769253.00 0.00753 (11013024)
462928.00 3769253.00 0.00940 (11013024)
462978.00 3769253.00 0.01201 (11013024)
463028.00 3769253.00 0.01579 (11013024)
463078.00 3769253.00 0.02159 (11013024)
463128.00 3769253.00 0.03106 (11013024)
463178.00 3769253.00 0.06432 (11121924)
463228.00 3769253.00 0.17093 (11112724)
463278.00 3769253.00 0.17173 (09022224)
463328.00 3769253.00 0.04547 (08013024)
463378.00 3769253.00 0.02270m (07112324)
463428.00 3769253.00 0.01350 (11051024)
463478.00 3769253.00 0.00890 (11051024)
463528.00 3769253.00 0.00672m (10102124)
463578.00 3769253.00 0.00545m (10102124)
463628.00 3769253.00 0.00450m (10102124)
462678.00 3769303.00 0.00332 (07121224)
462728.00 3769303.00 0.00376 (07121224)
462778.00 3769303.00 0.00431 (07121224)
462828.00 3769303.00 0.00513 (11013024)
462878.00 3769303.00 0.00628 (11013024)
462928.00 3769303.00 0.00790 (11013024)
462978.00 3769303.00 0.01031 (11013024)
463028.00 3769303.00 0.01415 (11013024)
463078.00 3769303.00 0.02094 (11013024)
463128.00 3769303.00 0.03492 (11013024)
463178.00 3769303.00 0.07289m (10121824)
463228.00 3769303.00 0.20911 (11013024)
463278.00 3769303.00 0.25017m (07031924)
463328.00 3769303.00 0.05395 (11051024)
463378.00 3769303.00 0.02576m (10102124)
463428.00 3769303.00 0.01550m (10102124)
463478.00 3769303.00 0.01046m (10102124)
463528.00 3769303.00 0.00759m (10102124)
463578.00 3769303.00 0.00578m (10102124)
463628.00 3769303.00 0.00456m (10102124)

**MODELOPTs: NonDFAULT CONC FLAT URBAN

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL *** INCLUDING SOURCE(S): AREA1 , L0000071 , L0000072 , L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 , L0000079 , L0000080 , L0000081 , L0000082 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
462678.00	3769353.00	0.00345	(08052324)				
462728.00	3769353.00	0.00406	(08052324)				
462778.00	3769353.00	0.00484	(08052324)				

462828.00 3769353.00 0.00589 (08052324)
462878.00 3769353.00 0.00730 (08052324)
462928.00 3769353.00 0.00927 (08052324)
462978.00 3769353.00 0.01211 (08052324)
463028.00 3769353.00 0.01635 (08052324)
463078.00 3769353.00 0.02449m (10121824)
463128.00 3769353.00 0.03882m (10121824)
463178.00 3769353.00 0.06041m (10121824)
463228.00 3769353.00 0.11526 (07042024)
463278.00 3769353.00 0.22238 (07081124)
463328.00 3769353.00 0.08366m (11081424)
463378.00 3769353.00 0.03618m (11081424)
463428.00 3769353.00 0.01766 (10101724)
463478.00 3769353.00 0.01155m (11111524)
463528.00 3769353.00 0.00838m (11111524)
463578.00 3769353.00 0.00628m (11111524)
463628.00 3769353.00 0.00485 (11061224)
462678.00 3769403.00 0.00387 (08052324)
462728.00 3769403.00 0.00451 (08052324)
462778.00 3769403.00 0.00529 (08052324)
462828.00 3769403.00 0.00627 (08052324)
462878.00 3769403.00 0.00749 (08052324)
462928.00 3769403.00 0.00975m (10121824)
462978.00 3769403.00 0.01284m (10121824)
463028.00 3769403.00 0.01673m (10121824)
463078.00 3769403.00 0.02059m (10121824)
463128.00 3769403.00 0.02466 (07042024)
463178.00 3769403.00 0.03283 (07042024)
463228.00 3769403.00 0.04738 (07120724)
463278.00 3769403.00 0.08243 (07090824)
463328.00 3769403.00 0.05981m (11081524)
463378.00 3769403.00 0.04015m (11081524)
463428.00 3769403.00 0.02351m (11081424)
463478.00 3769403.00 0.01374m (11081424)
463528.00 3769403.00 0.00896m (11081624)
463578.00 3769403.00 0.00671m (11081624)
463628.00 3769403.00 0.00535m (11111524)
462678.00 3769453.00 0.00386 (08052324)
462728.00 3769453.00 0.00451m (10121824)
462778.00 3769453.00 0.00548m (10121824)
462828.00 3769453.00 0.00668m (10121824)
462878.00 3769453.00 0.00810m (10121824)
462928.00 3769453.00 0.00964m (10121824)
462978.00 3769453.00 0.01097m (10121824)
463028.00 3769453.00 0.01132m (10121824)
463078.00 3769453.00 0.01478 (07042024)
463128.00 3769453.00 0.01685 (07042024)
463178.00 3769453.00 0.01690m (11022524)
463228.00 3769453.00 0.02624 (07120724)
463278.00 3769453.00 0.04200m (07090724)
463328.00 3769453.00 0.03962 (07081124)
463378.00 3769453.00 0.03201m (11081524)
463428.00 3769453.00 0.02355m (11081524)
463478.00 3769453.00 0.01631m (11081424)
463528.00 3769453.00 0.01060m (11081424)
463578.00 3769453.00 0.00725m (11081424)
463628.00 3769453.00 0.00559m (11081624)
462678.00 3769503.00 0.00420m (10121824)
462728.00 3769503.00 0.00489m (10121824)
462778.00 3769503.00 0.00563m (10121824)
462828.00 3769503.00 0.00638m (10121824)
462878.00 3769503.00 0.00699m (10121824)
462928.00 3769503.00 0.00721m (10121824)
462978.00 3769503.00 0.00779 (07042024)
463028.00 3769503.00 0.00992 (07042024)
463078.00 3769503.00 0.01054 (07042024)

463128.00   3769503.00   0.01079 (07100524)
        463178.00   3769503.00   0.01392 (07120724)
463228.00   3769503.00   0.01563 (07120724)
        463278.00   3769503.00   0.02628m (07090724)
463328.00   3769503.00   0.02879 (07081124)
        463378.00   3769503.00   0.02179 (11090124)
463428.00   3769503.00   0.02021m (11081524)
        463478.00   3769503.00   0.01547m (11081524)
463528.00   3769503.00   0.01212m (11081424)
        463578.00   3769503.00   0.00852m (11081424)
463628.00   3769503.00   0.00604m (11081424)
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***   ***   16:50:33

 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
                                    INCLUDING SOURCE(S):   AREA1   ,
L0000071   , L0000072   , L0000073   , L0000074   ,
               L0000075   , L0000076   , L0000077   , L0000078   ,
L0000079   , L0000080   , L0000081   , L0000082   ,

                                                *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                                    ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                          **

      X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)   X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)
 -
        462678.00   3769553.00   0.00418m (10121824)
462728.00   3769553.00   0.00459m (10121824)
        462778.00   3769553.00   0.00492m (10121824)
462828.00   3769553.00   0.00505m (10121824)
        462878.00   3769553.00   0.00487m (10121824)
462928.00   3769553.00   0.00606 (07042024)
        462978.00   3769553.00   0.00717 (07042024)
463028.00   3769553.00   0.00742 (10111524)
        463078.00   3769553.00   0.00760 (07100524)
463128.00   3769553.00   0.00730 (08012724)
        463178.00   3769553.00   0.01131 (07120724)
463228.00   3769553.00   0.01045m (07070724)
        463278.00   3769553.00   0.01814m (07090724)
463328.00   3769553.00   0.01969 (07090824)
        463378.00   3769553.00   0.01789 (07081124)
463428.00   3769553.00   0.01479 (11090124)
        463478.00   3769553.00   0.01397m (11081524)
463528.00   3769553.00   0.01114m (11081424)
        463578.00   3769553.00   0.00942m (11081424)
463628.00   3769553.00   0.00705m (11081424)
        462678.00   3769603.00   0.00368m (10121824)
462728.00   3769603.00   0.00377m (10121824)
        462778.00   3769603.00   0.00371m (10121824)
462828.00   3769603.00   0.00395 (07042024)
        462878.00   3769603.00   0.00485 (07042024)
462928.00   3769603.00   0.00545 (07042024)
        462978.00   3769603.00   0.00575 (10111524)
463028.00   3769603.00   0.00559 (07100524)
        463078.00   3769603.00   0.00583 (07100524)
463128.00   3769603.00   0.00684 (07120724)

        463178.00   3769603.00   0.00875 (07120724)
463228.00   3769603.00   0.00810m (07070724)
        463278.00   3769603.00   0.01335m (07090724)
463328.00   3769603.00   0.01430 (07090824)
        463378.00   3769603.00   0.01561 (07081124)
463428.00   3769603.00   0.01206m (07110624)
        463478.00   3769603.00   0.01123m (11081524)
463528.00   3769603.00   0.01025m (11081524)
        463578.00   3769603.00   0.00858m (11081424)
463628.00   3769603.00   0.00757m (11081424)
        462678.00   3769653.00   0.00292m (10121824)
462728.00   3769653.00   0.00277m (10121824)
        462778.00   3769653.00   0.00337 (07042024)
462828.00   3769653.00   0.00397 (07042024)
        462878.00   3769653.00   0.00430 (07042024)
462928.00   3769653.00   0.00464 (10111524)
        462978.00   3769653.00   0.00427 (07100524)
463028.00   3769653.00   0.00475 (07100524)
        463078.00   3769653.00   0.00440 (08012724)
463128.00   3769653.00   0.00631 (07120724)
        463178.00   3769653.00   0.00673 (07120724)
463228.00   3769653.00   0.00648m (07070724)
        463278.00   3769653.00   0.01028m (07090724)
463328.00   3769653.00   0.01114m (07090724)
        463378.00   3769653.00   0.01256 (07081124)
463428.00   3769653.00   0.01051 (07081124)
        463478.00   3769653.00   0.00922 (11090124)
463528.00   3769653.00   0.00895m (11081524)
        463578.00   3769653.00   0.00785m (11081524)
463628.00   3769653.00   0.00686m (11081424)
        462678.00   3769703.00   0.00243 (07042024)
462728.00   3769703.00   0.00291 (07042024)
        462778.00   3769703.00   0.00331 (07042024)
462828.00   3769703.00   0.00349 (07042024)
        462878.00   3769703.00   0.00385 (10111524)
462928.00   3769703.00   0.00346 (10112024)
        462978.00   3769703.00   0.00388 (07100524)
463028.00   3769703.00   0.00366 (07100524)
        463078.00   3769703.00   0.00412 (07120724)
463128.00   3769703.00   0.00550 (07120724)
        463178.00   3769703.00   0.00525 (07120724)
463228.00   3769703.00   0.00531m (07070724)
        463278.00   3769703.00   0.00819m (07090724)
463328.00   3769703.00   0.00936m (07090724)
        463378.00   3769703.00   0.00969 (07081124)
463428.00   3769703.00   0.00988 (07081124)
        463478.00   3769703.00   0.00801m (07110624)
463528.00   3769703.00   0.00728 (11090124)
        463578.00   3769703.00   0.00724m (11081524)
463628.00   3769703.00   0.00621m (11081524)
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
                                ***   16:50:33

                                           PAGE 30
 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

                                *** THE   1ST HIGHEST 24-HR AVERAGE
CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
                                      INCLUDING SOURCE(S):   AREA1   ,
L0000071   , L0000072   , L0000073   , L0000074   ,
               L0000075   , L0000076   , L0000077   , L0000078   ,
L0000079   , L0000080   , L0000081   , L0000082   ,

                                                *** DISCRETE CARTESIAN RECEPTOR

POINTS ***

** CONC OF PM_2.5 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
462678.00	3769753.00	0.00254	(07042024)	462728.00	3769753.00	0.00281	(07042024)
462778.00	3769753.00	0.00290	(07042024)	462828.00	3769753.00	0.00326	(10111524)
462878.00	3769753.00	0.00298	(10111524)	462928.00	3769753.00	0.00320	(07100524)
462978.00	3769753.00	0.00323	(07100524)	463028.00	3769753.00	0.00301	(08012724)
463078.00	3769753.00	0.00403	(07120724)	463128.00	3769753.00	0.00468	(07120724)
463178.00	3769753.00	0.00416	(07120724)	463228.00	3769753.00	0.00444m	(07070724)
463278.00	3769753.00	0.00670m	(07090724)	463328.00	3769753.00	0.00792m	(07090724)
463378.00	3769753.00	0.00798	(07090924)	463428.00	3769753.00	0.00873	(07081124)
463478.00	3769753.00	0.00704	(07081124)	463528.00	3769753.00	0.00633	(11090124)
463578.00	3769753.00	0.00603m	(11081524)	463628.00	3769753.00	0.00594m	(11081524)
462678.00	3769803.00	0.00241	(07042024)	462728.00	3769803.00	0.00253	(10111524)
462778.00	3769803.00	0.00281	(10111524)	462828.00	3769803.00	0.00261	(10111524)
462878.00	3769803.00	0.00266	(07100524)	462928.00	3769803.00	0.00281	(07100524)
462978.00	3769803.00	0.00253	(07100524)	463028.00	3769803.00	0.00281	(08012724)
463078.00	3769803.00	0.00375	(07120724)	463128.00	3769803.00	0.00395	(07120724)
463178.00	3769803.00	0.00335	(07120724)	463228.00	3769803.00	0.00378m	(07070724)
463278.00	3769803.00	0.00559m	(07090724)	463328.00	3769803.00	0.00677m	(07090724)
463378.00	3769803.00	0.00657	(07090924)	463428.00	3769803.00	0.00741	(07081124)
463478.00	3769803.00	0.00687	(07081124)	463528.00	3769803.00	0.00580m	(07110624)
463578.00	3769803.00	0.00532	(11090124)	463628.00	3769803.00	0.00525m	(11081524)
462678.00	3769853.00	0.00223	(10111524)	462728.00	3769853.00	0.00246	(10111524)
462778.00	3769853.00	0.00231	(10111524)	462828.00	3769853.00	0.00224	(07100524)
462878.00	3769853.00	0.00244	(07100524)	462928.00	3769853.00	0.00233	(07100524)
462978.00	3769853.00	0.00222	(08012724)	463028.00	3769853.00	0.00279	(07120724)
463078.00	3769853.00	0.00338	(07120724)	463128.00	3769853.00	0.00332	(07120724)
463178.00	3769853.00	0.00288	(09092924)	463228.00	3769853.00	0.00327m	(07070724)
463278.00	3769853.00	0.00476m	(07090724)	463328.00	3769853.00	0.00584m	(07090724)
463378.00	3769853.00	0.00542	(09081324)	463428.00	3769853.00	0.00612	(07081124)
463478.00	3769853.00	0.00639	(07081124)				

463528.00   3769853.00   0.00509 (07081124)
        463578.00   3769853.00   0.00479m (07110624)
463628.00   3769853.00   0.00449 (11090124)
        462678.00   3769903.00   0.00217 (10111524)
462728.00   3769903.00   0.00207 (10111524)
        462778.00   3769903.00   0.00192 (08092224)
462828.00   3769903.00   0.00212 (07100524)
        462878.00   3769903.00   0.00212 (07100524)
462928.00   3769903.00   0.00186 (07100524)
        462978.00   3769903.00   0.00211 (08012724)
463028.00   3769903.00   0.00270 (07120724)
        463078.00   3769903.00   0.00301 (07120724)
463128.00   3769903.00   0.00281 (07120724)
        463178.00   3769903.00   0.00255 (09092924)
463228.00   3769903.00   0.00288 (07092324)
        463278.00   3769903.00   0.00409m (07090724)
463328.00   3769903.00   0.00508m (07090724)
        463378.00   3769903.00   0.00487m (07090724)
463428.00   3769903.00   0.00524 (07090924)
        463478.00   3769903.00   0.00574 (07081124)
463528.00   3769903.00   0.00507 (07081124)
        463578.00   3769903.00   0.00445m (07110624)
463628.00   3769903.00   0.00407 (11090124)
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
                              ***   16:50:33

                                         PAGE 31
 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

                              *** THE   1ST HIGHEST 24-HR AVERAGE
CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
                                 INCLUDING SOURCE(S):   AREA1   ,
L0000071   , L0000072   , L0000073   , L0000074   ,
                L0000075   , L0000076   , L0000077   , L0000078   ,
L0000079   , L0000080   , L0000081   , L0000082   ,

                                              *** DISCRETE CARTESIAN RECEPTOR
POINTS ***

                                         ** CONC OF PM_2.5   IN MICROGRAMS/M**3
                        **

      X-COORD (M) Y-COORD (M)   CONC   (YYMMDDHH)   X-COORD
(M) Y-COORD (M)   CONC   (YYMMDDHH)
 -
- -
        463178.00   3769382.00   0.04382 (07042024)
463177.00   3769326.00   0.07591m (10121824)
        463160.00   3769249.00   0.04874 (11121924)
463272.00   3769246.00   0.17653 (09022224)
        463271.00   3769366.00   0.18732 (07090824)
463210.00   3769380.00   0.05108 (07042024)
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino
County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
                              ***   16:50:33

                                         PAGE 32
 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

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

** CONC OF PM_2.5 IN MICROGRAMS/M**3
**

GROUP ID		NETWORK AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.10904	AT (463278.00, 3769303.00, 330.00, 330.00, 0.00)	DC	
	2ND HIGHEST VALUE IS	0.07965	AT (463278.00, 3769353.00, 330.00, 330.00, 0.00)	DC	
	3RD HIGHEST VALUE IS	0.05380	AT (463228.00, 3769303.00, 330.00, 330.00, 0.00)	DC	
	4TH HIGHEST VALUE IS	0.05006	AT (463271.00, 3769366.00, 330.00, 330.00, 0.00)	DC	
	5TH HIGHEST VALUE IS	0.04242	AT (463228.00, 3769253.00, 330.00, 330.00, 0.00)	DC	
	6TH HIGHEST VALUE IS	0.02789	AT (463272.00, 3769246.00, 330.00, 330.00, 0.00)	DC	
	7TH HIGHEST VALUE IS	0.02687	AT (463278.00, 3769253.00, 330.00, 330.00, 0.00)	DC	
	8TH HIGHEST VALUE IS	0.02188	AT (463328.00, 3769353.00, 330.00, 330.00, 0.00)	DC	
	9TH HIGHEST VALUE IS	0.01993	AT (463228.00, 3769353.00, 330.00, 330.00, 0.00)	DC	
	10TH HIGHEST VALUE IS	0.01874	AT (463278.00, 3769403.00, 330.00, 330.00, 0.00)	DC	

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

♀ *** AERMOD - VERSION 15181 *** *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa *** 10/27/16
*** AERMET - VERSION 14134 *** ***
*** 16:50:33

**MODELOPTs: NonDFAULT CONC FLAT URBAN

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

** CONC OF PM_2.5 IN MICROGRAMS/M**3
**

GROUP ID		AVERAGE CONC	DATE NETWORK (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	HIGH 1ST HIGH VALUE IS	0.65840	ON 10082201:	AT (463272.00, 3769246.00, 330.00, 330.00, 0.00)	DC	

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

♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
                                ***   16:50:33

 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

** CONC OF PM_2.5   IN MICROGRAMS/M**3 **

GROUP ID RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK OF TYPE	GRID-ID
ALL HIGH 1ST HIGH VALUE IS 0.25017m ON 07031924: AT (463278.00, 3769303.00, 330.00, 330.00, 0.00)			DC	

 *** RECEPTOR TYPES: GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
♀ *** AERMOD - VERSION 15181 ***   *** C:\Emissions Models\San Bernardino County\Cedar Avenue Technology Pa ***   10/27/16
 *** AERMET - VERSION 14134 ***   ***
                                ***   16:50:33

 **MODELOPTs: NonDFAULT CONC   FLAT   URBAN

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

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

 A Total of   0 Fatal Error Message(s)
 A Total of   0 Warning Message(s)
 A Total of   1086 Informational Message(s)

 A Total of   43824 Hours Were Processed

 A Total of   37 Calm Hours Identified

 A Total of   1049 Missing Hours Identified (2.39 Percent)

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

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

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