

AIR QUALITY AND GREENHOUSE GAS IMPACT ANALYSIS

**COLTON TROPICA WAREHOUSES PROJECT
CITY OF COLTON
SAN BERNARDINO COUNTY, CALIFORNIA**

LSA

June 2018

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COLTON TROPICA WAREHOUSES PROJECT

CITY OF COLTON

SAN BERNARDINO COUNTY, CALIFORNIA

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EXECUTIVE SUMMARY

LSA has prepared an air quality and greenhouse gas (GHG) impact analysis for the Tropica Warehouses Project (project) to be located in Colton, San Bernardino County, California.

The air quality study provides a discussion of the proposed project, the physical setting of the project area, and the regulatory framework for air quality. The report provides data on existing air quality and evaluates potential air quality impacts associated with the proposed project.

Emissions with regional effects during project construction, calculated with the California Emissions Estimator Model (CalEEMod; Version 2016.3.2) (California Air Pollution Control Officers Association 2016), would not exceed criteria pollutant thresholds established by the South Coast Air Quality Management District (SCAQMD). Compliance with SCAQMD Rules and Regulations during construction will reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. Standard dust-suppression measures recommended by the SCAQMD have been identified for short-term construction to meet SCAQMD emissions thresholds. Construction emissions for the proposed project would not exceed the SCAQMD significance thresholds for any criteria pollutants. Construction-related carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter less than 10 microns in size (PM₁₀), and particulate matter less than 2.5 microns in size (PM_{2.5}) would not exceed the significance thresholds at the existing residential homes located southeast of the project site. Therefore, construction impacts would be less than significant.

Historical air quality data show that existing CO levels for the project area and the general vicinity do not exceed either federal or State ambient air quality standards (AAQS). Because the ambient CO concentrations in the project area are much lower than the federal and State CO standards, the proposed project would not result in significant increases in CO concentrations at intersections in the project vicinity that would result in the exceedance of federal or State CO concentration standards. Pollutant emissions from project operation, also calculated with CalEEMod, would not exceed the SCAQMD threshold for any criteria pollutants.

The proposed project is in San Bernardino County, which has been found to have serpentine and ultramafic rock in its soil (California Department of Conservation 2000). However, according to the California Geological Survey, no such rock has been identified in the project vicinity. Therefore, the potential risk for naturally occurring asbestos during project construction is small and less than significant.

This document also addresses the potential of the project to affect global climate change. Short-term construction and long-term operational emissions of the principal GHGs, including carbon dioxide and methane, are quantified, and their significance relative to the California Air Resources Board (ARB) Scoping Plan and City's Climate Action Plan (CAP) are discussed. The proposed project would garner more than 100 points on the Screening Table for implementation of GHG reduction measures for commercial development in Colton. Therefore, the operational GHG emissions related to the proposed project would be less than significant.

The evaluation was prepared in conformance with appropriate standards, using procedures and methodologies in the SCAQMD *CEQA Air Quality Handbook* (SCAQMD 1993) and associated updates. Air quality data posted on the ARB and United States Environmental Protection Agency (EPA) websites are included to document the local air quality environment.

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LIST OF ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
AAQS	ambient air quality standards
AB	Assembly Bill
AMSL	Above Mean Sea Level
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
Basin	South Coast Air Basin
BAU	Business As Usual
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CAT	Climate Action Team
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CCR	California Code of Regulations
CEC	California Energy Commission
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CH ₄	methane
City	City of Colton
CNG	compressed natural gas
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CPUC	California Public Utilities Commission

cy	cubic yard
DPM	Diesel Particulate Matter
DWR	California Department of Water Resources
EO	Executive Order
EPA	United States Environmental Protection Agency
GCC	global climate change
GHG	greenhouse gas
GWP	global warming potential
H ₂ S	hydrogen sulfide
HFCs	hydrofluorocarbons
HI	Hazard Index
HSC	Health and Safety Code
I-	Interstate
IPCC	Intergovernmental Panel on Climate Change
lbs/day	pounds per day
MATES	Multiple Air Toxics Exposure Study
mg/m ³	milligrams per cubic meter
MMT	million metric tons
MMT CO ₂ e	million metric tons of carbon dioxide equivalent
mpg	miles per gallon
MPO	Metropolitan Planning Organization
mph	miles per hour
MT	metric tons
MT CO ₂ e	metric tons of carbon dioxide equivalent
MT CO ₂ e/yr	metric tons of carbon dioxide equivalent per year
N ₂ O	nitrous oxide
NAAQS	national ambient air quality standards
NBio-CO ₂	nonbiologically generated carbon dioxide
NEPA	National Environmental Policy Act
NF ₃	Nitrogen trifluoride
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO ₂	nitrogen dioxide
NOx	nitrogen oxides
O ₃	ozone (or smog)
OEHHA	Office of Environmental Health Hazard Assessment
OMB	White House Office of Management and Budget

PFCs	perfluorocarbons
PM	particulate matter
PM ₁₀	particulate matter less than 10 microns in size
PM _{2.5}	particulate matter less than 2.5 microns in size
ppb	parts per billion
ppm	parts per million
project	Tropica Warehouses Project
REL	Reference Exposure Level
ROGs	reactive organic gases
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SIP	State Implementation Plan
SLCP	Short-Lived Climate Pollutant
SO ₂	sulfur dioxide
SOx	sulfur oxides
State	State of California
T-BACT	Toxics Best Available Control Technology
TAC	toxic air contaminant
UNFCCC	United Nations Framework Convention on Climate Change
VOCs	volatile organic compounds
ZEV	Zero Emissions Vehicle
ZNE	Zero Net Energy

INTRODUCTION

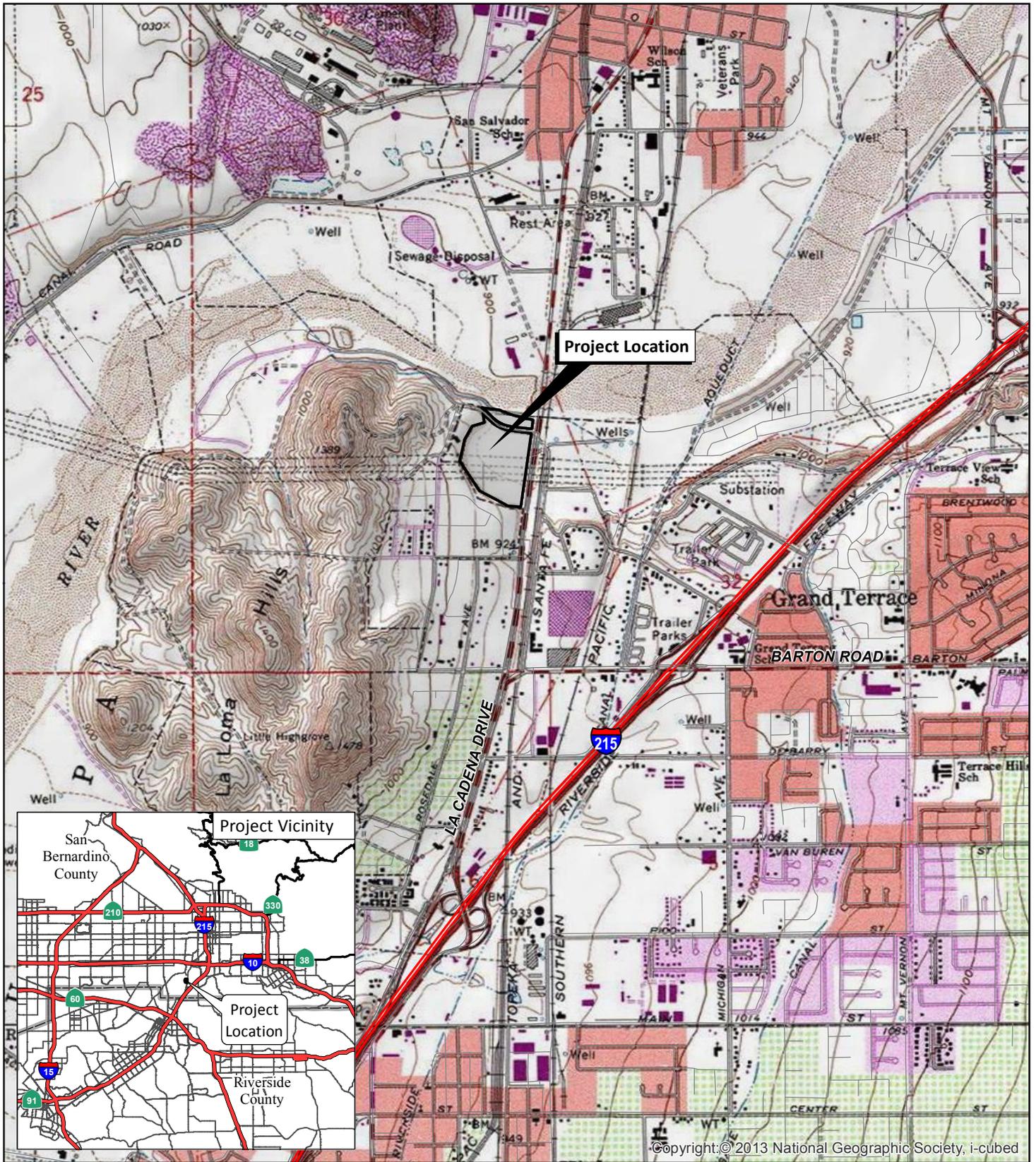
This air quality and greenhouse gas (GHG) impact analysis has been prepared to evaluate the potential air quality impacts and mitigation measures associated with the proposed Colton Tropica Warehouses Project (project), an industrial development project in Colton, San Bernardino County, California. This report provides a project-specific air quality and GHG impact analysis by examining the impacts of the proposed uses on adjacent sensitive uses as well as the impacts on the proposed uses on the project site, and evaluating the mitigation measures required as part of the project design. Guidelines identified by the South Coast Air Quality Management District (SCAQMD) in its *CEQA Air Quality Handbook* (SCAQMD 1993), and associated updates will be followed in this air quality impact analysis.

PROJECT LOCATION AND DESCRIPTION

The project site is located west of La Cadena Drive and south of the Santa Ana River in the City of Colton (City). The project is abutted by single-family residential uses to the south, a mix of single-family residential units and vacant undeveloped land to the west, and vacant undeveloped land to the north and east. Refer to Figures 1 and 2. The project site consists of four parcels, Assessor's Parcel Numbers (APNs) 0163-361-14, 0163-361-15, 0275-192-06, and 0275-192-07. The site is approximately 1.6 miles south of Interstate 10 (I-10) and Interstate 215 (I-215) is approximately 0.8 mile west of the project site. Two high voltage electrical easements currently run through the project site in an eastern to western direction. One electrical easement is located along the central portion of the site, while the other runs through the southern central portion of the site. There is a 60 to 70-foot elevation difference between the homes south of the proposed project and project site, with the residences at the higher elevation. The project site is relatively flat and gradually slopes down to the northwest. The proposed project site is currently vacant and undeveloped. Refer to Figure 3.

The project consists of the development of 266,030 industrial warehouse uses. This is broken down into three warehouse buildings: Building 1 is 190,100 square feet, Building 2 is 45,160 square feet, and Building 3 is 30,070 square feet. Because the warehouse buildings would be built for future tenants that may set up portions for refrigerated storage, for the purpose of this analysis LSA assumes that 50 percent of the warehouse buildings would be refrigerated and the other 50 percent would be unrefrigerated.

Access to Building 1 will be provided from one location on La Cadena Drive and two locations on Tropica Rancho Road. Building 2 will have two access points on La Cadena Drive. Access to Building 3 will be provided by two locations on Tropica Rancho Road. The project proposes a total of 241 auto parking stalls will be provided; 171 auto parking stalls at Building 1, 39 auto parking stalls located at Building 2, and 31 auto parking stalls at Building 3. Additionally, the project will provide a total of 212 trailer parking stalls consisting of 199 trailer parking stalls at Building 1 and 13 trailer parking stalls at Building 2. The existing ground slopes gradually in the northwest direction. The project site ranges from an elevation of 907 feet above mean sea level (AMSL) to the southeast and an elevation of 900 feet AMSL to the northwest, creating an existing downward slope of approximately 0.6 percent to the northwest.

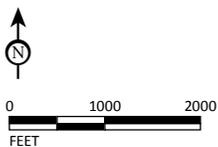


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 Project Location

FIGURE 1



SOURCE: USGS 7.5' Quad: San Bernardino South (1980), CA; ESRI Streetmap, 2013.

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Colton Tropa Warehouses Project
Air Quality Technical Report
Regional and Project Location



FIGURE 2

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 Project Boundary



0 100 200
FEET

SOURCE: Google Earth, 2016

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Colton Tropica Warehouses Project
Air Quality Technical Report
Aerial Project Study Area

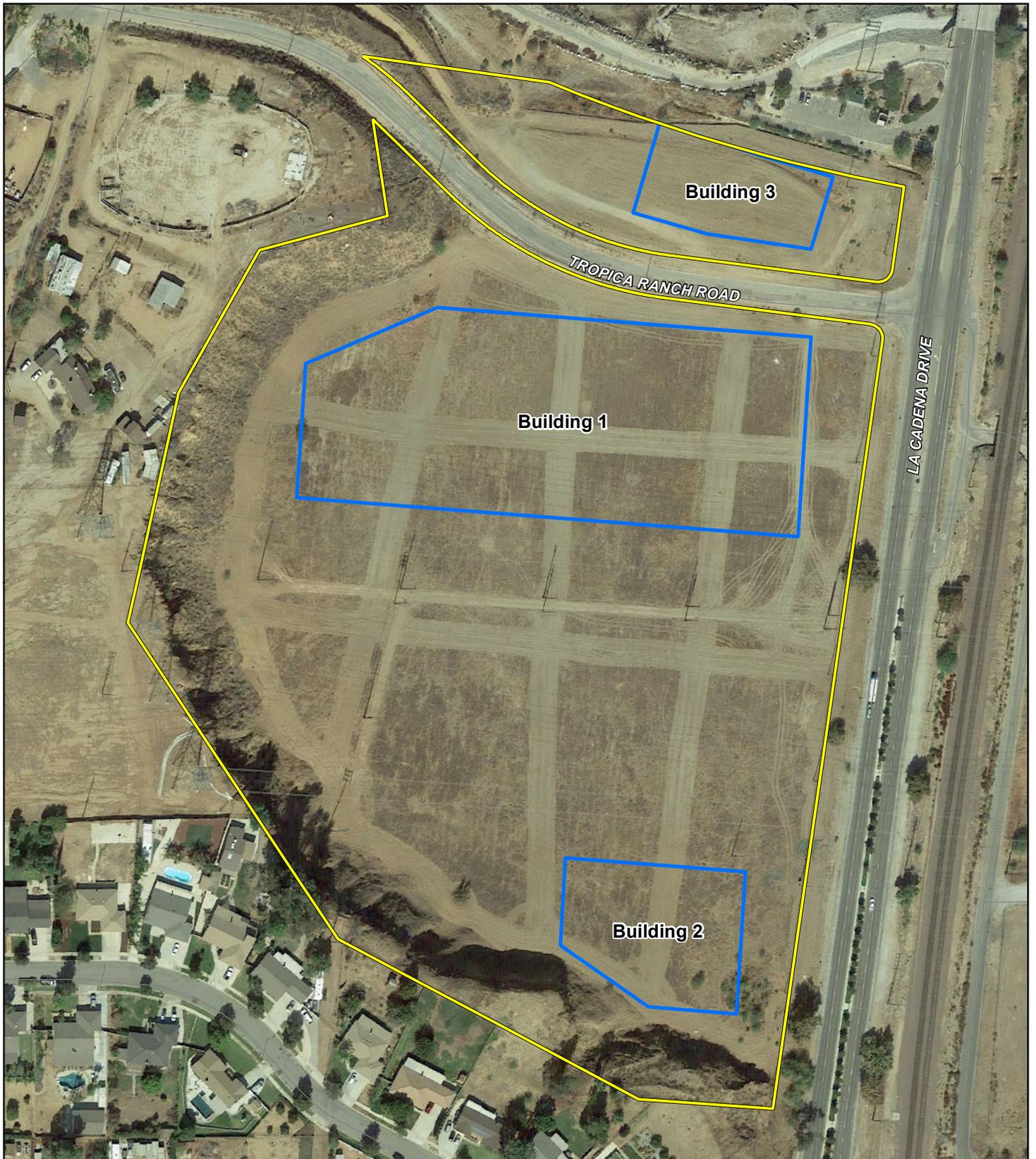


FIGURE 3

LSA

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- Project Boundary
- Project Site Plan



SOURCE: Google Earth, 2016

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Colton Tropica Warehouses Project
Air Quality Technical Report
Project Site Plan

Access to the project site is provided from La Cadena Drive and Tropica Rancho Road, which will also be used for emergency vehicle access vehicle. Two access points are provided, one on each of the streets (i.e., La Cadena Drive and Tropica Rancho Road).

Existing Sensitive Land Uses in the Project Area

Sensitive receptors include residences, schools, hospitals, and similar uses sensitive to air quality. Surrounding land uses consist of industrial and commercial uses to the north, and residential land uses to the southwest and southeast, with the nearest residential houses 150 feet (46 meters) to the west and south (Figure 3).

PROJECT SETTING

REGIONAL AIR QUALITY

The project site is in the non-desert portion of San Bernardino County, California, which is part of the South Coast Air Basin (Basin) and is under the jurisdiction of the SCAQMD. The air quality assessment for the proposed project includes estimating emissions associated with short-term construction and long-term operation of the proposed project.

A number of air quality modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts (e.g., SCAQMD) have created guidelines and requirements to conduct air quality analyses. SCAQMD's current guidelines, included in its *CEQA Air Quality Handbook* (1993) and associated updates, were adhered to in the assessment of air quality impacts for the proposed project.

Both the State of California (State) and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants. As detailed in Table A, these pollutants include ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter less than 10 microns in size (PM₁₀), particulate matter less than 2.5 microns in size (PM_{2.5}), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide (H₂S), 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.

In addition to setting out primary and secondary AAQS, the State has established a set of episode criteria for O₃, CO, NO₂, SO₂, and PM₁₀. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Health effects are progressively more severe as pollutant levels increase from Stage One to Stage Three. An alert level is that concentration of pollutants at which initial stage control actions are to begin. An alert will be declared when any one of the pollutant alert levels is reached at any monitoring site and when meteorological conditions are such that the pollutant concentrations can be expected to remain at these levels for 12 or more hours or to increase; or, in the case of oxidants, the situation is likely to recur within the next 24 hours unless control actions are taken.

Pollutant alert levels:

- O₃: 392 micrograms per cubic meter (µg/m³) (0.20 parts per million [ppm]), 1-hour average
- CO: 17 milligrams per cubic meter (mg/m³) (15 ppm), 8-hour average
- NO₂: 1,130 µg/m³ (0.6 ppm), 1-hour average; 282 µg/m³ (0.15 ppm), 24-hour average
- SO₂: 800 µg/m³ (0.3 ppm), 24-hour average
- Particulates measured as PM₁₀: 350 µg/m³, 24-hour average

Table A: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1-Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24-Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
Fine Particulate Matter (PM _{2.5}) ⁹	24-Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1-Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (for certain areas) ¹¹	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	24-Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	3-Hour	—		—	0.5 ppm (1300 µg/m ³)	
	1-Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)	—	
Lead ^{12,13}	30-Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹³	Same as Primary Standard	
	Rolling 3-Month Average ¹¹	—		0.15 µg/m ³		
Visibility-Reducing Particles ¹⁴	8-Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24-Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

Source: Ambient Air Quality Standards (ARB 2016). Website: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>, accessed June 2018.

Footnotes are provided on the following page.

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

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

°C = degrees Celsius

ARB = California Air Resources Board

EPA = United States Environmental Protection Agency

µg/m³ = micrograms per cubic meter

mg/m³ = milligrams per cubic meter

ppm = parts per million

ppb = parts per billion

Table B summarizes the primary health effects and sources of common air pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (United States Environmental Protection Agency [EPA]), these health effects will not occur unless the standards are exceeded by a large margin or for a prolonged period of time. State AAQS are more stringent than federal AAQS. Among the pollutants, O₃ and particulate matter (PM_{2.5} and PM₁₀) are considered pollutants with regional effects, while the others have more localized effects.

Table B: Summary of Health Effects of the Major Criteria Air Pollutants

Pollutant	Health Effects	Examples of Sources
Particulate Matter (PM _{2.5} and PM ₁₀ : less than or equal to 2.5 or 10 microns, respectively)	<ul style="list-style-type: none"> Hospitalizations for worsened heart diseases Emergency room visits for asthma Premature death 	<ul style="list-style-type: none"> Cars and trucks (especially diesels) Fireplaces, wood stoves Windblown dust from roadways, agriculture, and construction
Ozone (O ₃)	<ul style="list-style-type: none"> Cough, chest tightness Difficulty taking a deep breath Worsened asthma symptoms Lung inflammation 	<ul style="list-style-type: none"> Precursor sources¹: motor vehicles, industrial emissions, and consumer products
Carbon Monoxide (CO)	<ul style="list-style-type: none"> Chest pain in heart patients² Headaches, nausea² Reduced mental alertness² Death at very high levels² 	<ul style="list-style-type: none"> Any source that burns fuel, such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> Increased response to allergens 	<ul style="list-style-type: none"> See carbon monoxide sources
Toxic Air Contaminants	<ul style="list-style-type: none"> Cancer Chronic eye, lung, or skin irritation Neurological and reproductive disorders 	<ul style="list-style-type: none"> Cars and trucks (especially diesels) Industrial sources such as chrome platers Neighborhood businesses such as dry cleaners and service stations Building materials and products

Source: ARB Fact Sheet: Air Pollution and Health. Website: <http://www.arb.ca.gov/research/health/fs/fs1/fs1.htm>, accessed June 2018.

¹ Ozone is not generated directly by these sources. Rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere.

² Health effects from CO exposures occur at levels considerably higher than ambient.

ARB = California Air Resources Board

CO = carbon monoxide

The California Clean Air Act (CCAA) provides SCAQMD and other air districts with the authority to manage transportation activities at indirect sources. Indirect sources of pollution include any facility, building, structure, or installation, or combination thereof, that attracts or generates mobile source activity that results in emissions of any pollutant. In addition, area sources that are generated when minor sources collectively emit a substantial amount of pollution are also managed by the local air districts. Examples of this would be the commercial truck idle time at loading dock locations and the employee commute reduction program. SCAQMD also regulates stationary sources of pollution throughout its jurisdictional area. Direct emissions from motor vehicles are regulated by the ARB.

Climate/Meteorology

Air quality in the planning area is not only affected by various emission sources (e.g., mobile and industry), but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from

the second-largest urban area in the United States gives the Basin the worst air pollution problem in the nation.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the San Bernardino Station.¹ The monthly average maximum temperature recorded at this station from January 1893 to September 2004 ranged from 66.2°F in January to 96.2°F in July, with an annual average maximum of 79.9°F. The monthly average minimum temperature recorded at this station ranged from 38.5°F in January to 59.4°F in August, with an annual average minimum of 48.2°F. These levels are still representative of the project area. January is typically the coldest month, and August is typically the warmest month in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The San Bernardino Station monitored precipitation from January 1893 to September 2004. Average monthly rainfall during that period varied from 0.1 inches in January to 0 inch or less between May and October, with an annual total of 0.2 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and nitrogen oxides (NO_x) because of extremely low inversions and air stagnation during the night and early morning hours. In the

¹ Western Regional Climate Center. Website: <http://www.wrcc.dri.edu/summary/Climsmsca.html>, accessed June 2018.

summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_x to form photochemical smog.

Description of Global Climate Change and Its Sources

Global climate change (GCC) is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (e.g., precipitation or wind) that last for an extended period of time. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures.

Climate change refers to any change in measures of weather (e.g., temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from natural factors (e.g., changes in the sun's intensity), natural processes within the climate system (e.g., changes in ocean circulation), or human activities (e.g., the burning of fossil fuels, land clearing, or agriculture). The primary observed effect of GCC has been a rise in the average global tropospheric² temperature of 0.36°F per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling shows that further warming may occur, which may induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of the State could include higher sea levels, drier or wetter weather, changes in ocean salinity, changes in wind patterns, or more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones. Specific effects in the State might include a decline in the Sierra Nevada snowpack, erosion of the State's coastline, and seawater intrusion in the San Joaquin Delta.

Global surface temperatures have risen by 1.33°F ±0.32°F over the last 100 years (1906 to 2005). The rate of warming over the last 50 years is almost double that over the last 100 years (Intergovernmental Panel on Climate Change [IPCC] 2013). The latest projections, based on state-of-the-art climate models, indicate temperatures in the State are expected to rise 3–10.5°F by the end of the century (State of California 2013). The prevailing scientific opinion on climate change is that "most of the warming observed over the last 60 years is attributable to human activities" (IPCC 2013). Increased amounts of carbon dioxide (CO₂) and other GHGs are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as the greenhouse effect.³

² The troposphere is the zone of the atmosphere characterized by water vapor, weather, winds, and decreasing temperature with increasing altitude.

³ The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the amount of heat that escapes, GHGs like carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced GCC are:⁴

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous oxide (N₂O);
- Hydrofluorocarbons (HFCs);
- Perfluorocarbons (PFCs);
- Sulfur hexafluoride (SF₆); and
- Nitrogen trifluoride (NF₃).

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which some scientists believe is causing global warming. While GHGs produced by human activities include naturally occurring GHGs (e.g., CO₂, CH₄, and N₂O) some gases (e.g., HFCs, PFCs, and SF₆) are completely new to the atmosphere. Certain other gases (e.g., water vapor) are short-lived in the atmosphere compared to these GHGs that remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is generally excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes (e.g., oceanic evaporation). For the purposes of this air quality study, the term “GHGs” will refer collectively to the six gases identified in the bulleted list provided above.

These gases vary considerably in terms of global warming potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas in absorbing infrared radiation and the length of time that the gas remains in the atmosphere (“atmospheric lifetime”). The GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of metric tons⁵ of “CO₂ equivalents” (MT CO₂e). For example, N₂O is 298 times more potent at contributing to global warming than CO₂. Table C identifies the GWP for each type of GHG analyzed in this report. United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for national inventories require the use of GWP values from the *IPCC Fourth 9 Assessment Report (AR4)* (IPCC 2007).

The following discussion summarizes the characteristics of the six primary GHGs.

⁴ The GHGs listed are consistent with the definition in Assembly Bill 32 (Government Code 38505), as discussed later in this section.

⁵ A metric ton is equivalent to approximately 1.1 tons.

Table C: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO ₂)	~100	1
Methane (CH ₄)	12	25
Nitrous Oxide (N ₂ O)	121	298

Source: Table ES-1, GWP values from the *IPCC Fourth 9 Assessment Report (AR4)*.
 Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990 - 2016. Website: https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf, accessed June 2018.

Carbon Dioxide

In the atmosphere, carbon generally exists in its oxidized form, as CO₂. Natural sources of CO₂ include the respiration (breathing) of humans, animals, and plants; volcanic outgassing; decomposition of organic matter; and evaporation from the oceans. Human-caused sources of CO₂ include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. The Earth maintains a natural carbon balance and when concentrations of CO₂ are upset, the system gradually returns to its natural state through natural processes. Natural changes to the carbon cycle work slowly, especially compared to the rapid rate at which humans are adding CO₂ to the atmosphere. Natural removal processes (e.g., photosynthesis by land- and ocean-dwelling plant species) cannot keep pace with this extra input of human-made CO₂, and consequently the gas is building up in the atmosphere. The concentration of CO₂ in the atmosphere has risen from about 280 parts per million (ppm) prior to the Industrial Revolution to more than 400 ppm currently (NOAA 2016).

The transportation sector remains the largest source of GHG emissions in 2015 with 36 percent of the State’s GHG emission inventory (ARB 2017a). The largest emissions category within the transportation sector is on-road, which consists of passenger vehicles (cars, motorcycles, and light-duty trucks) and heavy-duty trucks and buses. Emissions from on-road sources constitute more than 92 percent of the transportation sector total. Industry and electricity generation were the State’s second- and third-largest categories of GHG emissions, respectively.

Methane

CH₄ is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources of CH₄ include fires, geologic processes, and bacteria that produce CH₄ in a variety of settings (most notably, wetlands) (EPA 2010). Anthropogenic sources include rice cultivation, livestock, landfills and waste treatment, biomass burning, and fossil fuel combustion (e.g., the burning of coal, oil, and natural gas). As with CO₂, the major removal process of atmospheric CH₄—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and CH₄ concentrations in the atmosphere are increasing.

Nitrous Oxide

N₂O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N₂O is also a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion sources emit N₂O. The quantity of N₂O emitted varies

according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N₂O emissions in the State.

Hydrofluorocarbons, Perfluorocarbons, Sulfur Hexafluoride, and Nitrogen Trifluoride

HFCs are primarily used as substitutes for O₃-depleting substances regulated under the Montreal Protocol.⁶ PFCs and SF₆ are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in the State; however, the rapid growth in the semiconductor industry, which is active in the State, has led to greater use of PFCs. NF₃ is used in a relatively small number of industrial processes. It is primarily produced in the manufacture of semiconductors and LCD (Liquid Crystal Display) panels, and certain types of solar panels and chemical lasers. However, there are no known project-related emissions of these three GHGs, and these substances are not discussed further in this analysis.

Emissions Sources and Inventories

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, national, State, and local GHG emission inventories. However, because GHGs persist for a long time in the atmosphere (previously referenced Table C), accumulate over time, and are generally well mixed, their impact on the atmosphere and climate cannot be tied to a specific point of emission.

Global Emissions

Worldwide emissions of GHGs in 2012 totaled 29 billion metric tons of carbon dioxide equivalent per year (MT CO₂e/yr).⁷ Global estimates are based on country inventories developed as part of the programs of the UNFCCC.

United States Emissions

In 2016, the United States emitted approximately 6.546 billion MT CO₂e, down from 7.4 billion MT in 2007. Total United States emissions increased by 2.8 percent from 1990 to 2016, and emissions increased from 2015 to 2016 by 2.0 percent. Of the six major sectors nationwide—electric power industry, transportation, industry, agriculture, commercial, and residential—the electric power industry and transportation sectors combined account for approximately 70 percent of the GHG emissions; the majority of the electric power industry and all of the transportation emissions are generated from direct fossil fuel combustion. In 2016, the total United States GHG emissions were approximately 11.6 percent less than 2005 levels (EPA 2018).

⁶ The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for O₃ depletion and which are also potent GHGs.

⁷ UNFCCC. GHG data from UNFCCC. Website: http://unfccc.int/ghg_data/ghg_data_unfccc/items/4146.php (accessed June 2018).

State of California Emissions

According to ARB GHG emission inventory estimates, the State emitted approximately 440.4 million metric tons of CO₂e (MMT CO₂e) emissions in 2015. This is a decrease of 1.5 MMT CO₂e from 2014 and a 10 percent decrease since 2004 (ARB 2017a).

The ARB estimates that transportation was the source of approximately 37 percent of the State’s GHG emissions in 2015, followed by electricity generation (both in-State and out-of-State) at 19 percent and industrial sources at 21 percent. The remaining sources of GHG emissions were residential and commercial activities at 9 percent, agriculture at 8 percent, high-GWP gases at 4.3 percent, and recycling and waste at 2 percent (ARB 2017a).

Air Pollution Constituents and Attainment Status

The ARB coordinates and oversees both State and federal air pollution control programs in the State. The ARB oversees the activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the EPA and local air districts. The ARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by the ARB and the EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent 3 calendar years compared with the AAQS.

Attainment areas may be:

- Attainment/Unclassified (“Unclassifiable” in some lists), which have never violated the air quality standard of interest or don’t have enough monitoring data to establish attainment or nonattainment status; or
- Attainment-Maintenance (national ambient air quality standards [NAAQS] only), which violated a NAAQS that is currently in use (was Nonattainment) in or after 1990, but now attains the standard and is officially redesignated to Attainment by the EPA with a Maintenance State Implementation Plan (SIP); or
- Attainment (usually only for California ambient air quality standards [CAAQS], but sometimes for NAAQS), which have adequate monitoring data to show attainment, have never been nonattainment, or, for NAAQS, have completed the official Maintenance period.

Nonattainment areas are imposed with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards. Table D lists the attainment status for the criteria pollutants in the Basin.

Table D: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O ₃ 1-hour	Nonattainment	N/A
O ₃ 8-hour	Nonattainment	Extreme Nonattainment
PM ₁₀	Nonattainment	Attainment/Maintenance
PM _{2.5}	Nonattainment	Nonattainment

Table D: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
CO	Attainment	Attainment/Maintenance
NO ₂	Nonattainment	Attainment/Maintenance
SO ₂	Attainment	Attainment
Lead	Attainment ¹	Attainment ¹
All others	Attainment/Unclassified	Attainment/Unclassified

Source: California Air Resources Board, *Air Quality Standards and Area Designations* (2017b). Website: <http://www.arb.ca.gov/design/design.htm>, accessed June 2018.

¹ Except in Los Angeles County.

CO = carbon monoxide
N/A = not applicable
NO₂ = nitrogen dioxide
O₃ = ozone

PM₁₀ = particulate matter less than 10 microns in size
PM_{2.5} = particulate matter less than 2.5 microns in size
SO₂ = sulfur dioxide

Ozone

O₃ (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases (ROGs) rather than being directly emitted. O₃ is a pungent, colorless gas typical of Southern California smog. Elevated O₃ concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. O₃ levels peak during summer and early fall. The entire Basin is designated as a nonattainment area for the State 1-hour and 8-hour O₃ standards. The EPA has officially designated the status for most of the Basin regarding the 8-hour O₃ standard as “Extreme Nonattainment,” which means the Basin has until 2024 to attain the federal 8-hour O₃ standard.

Carbon Monoxide

CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. CO is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. The entire Basin is in attainment for the State standards for CO. The Basin is designated as an “Attainment/Maintenance” area under the federal CO standards.

Nitrogen Oxides

NO₂, a reddish brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as NOx. NOx is a primary component of the photochemical smog reaction. NOx also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition (i.e., acid rain). NO₂ decreases lung function and may reduce resistance to infection. The entire Basin is designated as nonattainment for the State NO₂ standard and as an “Attainment/Maintenance” area under the federal NO₂ standard.

Sulfur Dioxide

SO₂ is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO₂ levels. SO₂ irritates the respiratory tract,

can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight. The entire Basin is in attainment with both federal and State SO₂ standards.

Lead

Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the blood stream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. The Los Angeles County portion of the Basin was redesignated as nonattainment for the State and federal standards for lead in 2010.

Particulate Matter

Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (PM₁₀) derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and resultant exhaust from power plants and diesel buses and trucks are primarily responsible for fine particle (PM_{2.5}) levels. Fine particles can also be formed in the atmosphere through chemical reactions. PM₁₀ can accumulate in the respiratory system and aggravate health problems (e.g., asthma). The EPA's scientific review concluded that PM_{2.5}, which penetrates deeply into the lungs, is more likely than coarse particles to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by the current PM₁₀ standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease), increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease [e.g., asthma]), decreased lung functions (particularly in children and individuals with asthma), and alterations in lung tissue and structure and in respiratory tract defense mechanisms. The Basin is designated nonattainment for the federal and State PM_{2.5} standards and State PM₁₀ standard, and attainment/maintenance for the federal PM₁₀ standard.

Volatile Organic Compounds

Volatile organic compounds (VOCs; also known as ROG, and reactive organic compounds) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants; however, because VOCs accumulate in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction. There are no attainment designations for VOCs.

Sulfates

Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO₂ during the combustion process and subsequently is converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of the State due to regional meteorological features. The entire Basin is in attainment for the State standard for sulfates.

Hydrogen Sulfide

H₂S is a colorless gas with the odor of rotten eggs. H₂S is formed during bacterial decomposition of sulfur-containing organic substances. In addition, H₂S can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. In 1984, an ARB committee concluded the ambient standard for H₂S is adequate to protect public health and to significantly reduce odor annoyance. The entire Basin is unclassified for the State standard for H₂S.

Visibility-Reducing Particles

Visibility-reducing particles consist of suspended PM, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials (e.g., metals, soot, soil, dust, and salt). The Statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. The entire Basin is unclassified for the State standard for visibility-reducing particles.

Hazardous Air Pollutants

The public's exposure to toxic air contaminants (TACs) is a significant environmental health issue in the State. In 1983, the State 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 Act (42 United States Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through the ARB, 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 an increase in serious illness, or which may pose a present or potential hazard to human health.

The State 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 the ARB to designate substances as TACs. Once a TAC is identified, the ARB adopts an "airborne toxics control measure" 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.

Air toxics from stationary sources are also regulated in the State 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.

To date, the ARB has designated nearly 200 compounds as TACs. Additionally, the ARB 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 PM from diesel-fueled engines.

LOCAL AIR QUALITY

SCAQMD, together with the ARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the site is the San Bernardino Station, which monitors most air pollutant data, except SO₂, which were obtained from the Fontana – Arrow Highway Station. The air quality trends from these two stations are used to represent the ambient air quality in the project area. The pollutants monitored are CO, O₃, PM₁₀, PM_{2.5}, NO₂, and SO₂.^{8,9} The ambient air quality data in Table E show that NO₂, SO₂, federal and State annual average PM_{2.5} standards, and CO levels are below the applicable State and federal standards.

The federal and State 24-hour PM₁₀ standard, and federal 24-hour PM_{2.5} standard, exceeded their corresponding standard at least two times in the past 3 years. The State 1-hour O₃ standard was exceeded 6 to 38 times per year in the past 3 years. The federal 8-hour O₃ standard was exceeded 51 to 106 days a year in the past 3 years, and the State 8-hour O₃ standard was exceeded 76 to 108 times per year in the past 3 years.

MULTIPLE AIR TOXICS EXPOSURE STUDY

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and estimated the potential health risks from air toxics in the Basin. The MATES was aimed at estimating the cancer risk from toxic air pollutant emissions throughout the Basin by conducting a comprehensive monitoring program, an updated emissions inventory of toxic air contaminants, and a modeling effort to fully characterize health risks for those living in the Basin. In 2008, the SCAQMD conducted its third update to the MATES (MATES III). The study concluded that the average carcinogenic risk from air pollution in the Basin is approximately 1,200 in 1 million. Mobile sources (e.g., cars, trucks, trains, ships, and aircraft) represent the greatest contributors. Approximately 85 percent of the risk is attributed to diesel particulate emissions, approximately 10 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 5 percent of all carcinogenic risk is attributed to stationary sources (which include industries and other businesses, such as dry cleaners and chrome plating operations).

In May 2015, the SCAQMD released the final report of the fourth update (MATES IV). The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the previous update released in 2008 (MATES III), monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources while 10 percent is attributed to

⁸ EPA. 2014–2016 Air Quality Data. Website: <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>, accessed June 2018.

⁹ ARB. iADAM: Air Quality Data Statistics. Website: <http://www.arb.ca.gov/adam>, accessed June 2018.

Table E: Ambient Air Quality Monitored in the Project Vicinity

Pollutant	Standard	2014	2015	2016
Carbon Monoxide (CO) – taken from San Bernardino Station				
Maximum 1-hour concentration (ppm)		4.1	2.3	2.2
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hour concentration (ppm)		2.4	1.8	1.7
Number of days exceeded:	State: ≥ 9.0 ppm	0	0	0
	Federal: ≥ 9 ppm	0	0	0
Ozone (O₃) – taken from San Bernardino Station				
Maximum 1-hour concentration (ppm)		0.121	0.134	0.158
Number of days exceeded:	State: > 0.09 ppm	38	6	10
Maximum 8-hour concentration (ppm)		0.099	0.117	0.118
Number of days exceeded:	State: > 0.07 ppm	76	79	108
	Federal: > 0.07 ppm	51	57	106
Coarse Particulates (PM₁₀) – taken from San Bernardino Station				
Maximum 24-hour concentration (µg/m ³)		131	180	ND
Number of days exceeded:	State: > 50 µg/m ³	2	3	ND
	Federal: > 150 µg/m ³	0	1	ND
Annual arithmetic average concentration (µg/m ³)		32.7	31.7	ND
Exceeded for the year:	State: > 20 µg/m ³	Yes	Yes	ND
Fine Particulates (PM_{2.5}) – taken from San Bernardino Station				
Maximum 24-hour concentration (µg/m ³)		32.2	53.5	32.5
Number of days exceeded:	Federal: > 35 µg/m ³	0	2	0
Annual arithmetic average concentration (µg/m ³)		11.3	10.7	10.8
Exceeded for the year:	State: > 12 µg/m ³	No	No	No
	Federal: > 15 µg/m ³	No	No	No
Nitrogen Dioxide (NO₂) – taken from San Bernardino Station				
Maximum 1-hour concentration (ppm)		0.073	0.071	0.059
Number of days exceeded:	State: > 0.18 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.026	0.023	0.016
Exceeded for the year:	State: > 0.030 ppm	No	No	No
	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO₂) – taken from Fontana – Arrow Highway Station				
Maximum 24-hour concentration (ppm)		0.001	0.001	0.008
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.0003	0.0003	0.0004
Exceeded for the year:	Federal: > 0.030 ppm	No	No	No

Sources: United States Environmental Protection Agency. 2014–2016 Air Quality Data. Website: <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>, accessed June 2018.

California Air Resources Board. iADAM Air Quality Data Statistics. Website: <http://www.arb.ca.gov/adam>, accessed June 2018.

¹ The exceedances of the federal 8-hour O₃ standard are based on the old 0.075 ppm standard. In 2015, the EPA revised the standard to 0.070 ppm.

µg/m³ = micrograms per cubic meter
ND = no data available

PM₁₀ = particulate matter less than 10 microns in size
ppm = parts per million

EPA = United States Environmental Protection Agency

O₃ = ozone

PM_{2.5} = particulate matter less than 2.5 microns in size

TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, accounting for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basin-wide population-weighted risk decreased by approximately 57 percent compared to the analysis done for the MATES III time period.

In the vicinity of Colton in San Bernardino County, MATES IV's estimated population-weighted average risk was 954 per million (SCAQMD 2015a).

It should be noted that the Office of Environmental Health Hazard Assessment (OEHHA) has updated the methods for estimating cancer risks. The new method includes utilizing higher estimates of cancer potency during early life exposures. There are also differences in the assumptions on breathing rates and length of residential exposures. When these two assumptions are combined, the SCAQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher using the proposed updated methods identified in MATES IV (SCAQMD 2015a).

Sensitive Receptors

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 also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods, resulting in sustained exposure to any pollutants present. There are several existing single-family residential homes located 150 feet (46 meters) southeast from the project site. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

REGULATORY SETTINGS

Federal Regulations/Standards

Pursuant to the Clean Air Act (CAA) of 1970, the EPA established the NAAQS. The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health.

Data collected at permanent monitoring stations are used by the EPA to classify regions as "attainment" or "nonattainment," depending on whether the regions met the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by

the EPA. The EPA has designated the Southern California Association of Governments (SCAG) as the Metropolitan Planning Organization (MPO) responsible for ensuring compliance with the requirements of the CAA for the Basin.

In an effort to help federal agencies ensure the integrity of their environmental reviews and promote sound governmental decision making, the Council on Environmental Quality (CEQ) issued on January 14, 2011, final guidance on the “Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact.” This guidance was developed as part of CEQ’s effort to modernize and reinvigorate federal agency implementation of the National Environmental Policy Act (NEPA). The EPA established new national air quality standards for ground-level O₃ and fine particulate matter in 1997. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the CAA, as applied in setting the new public health standards for O₃ and particulate matter, was unconstitutional as an improper delegation of legislative authority to the EPA. On February 27, 2001, the United States Supreme Court upheld the way the government sets air quality standards under the CAA. The court unanimously rejected industry arguments that the EPA must consider financial cost, as well as health benefits, in writing standards. The justices also rejected arguments that the EPA took too much lawmaking power from Congress when it set tougher standards for O₃ and soot in 1997. Nevertheless, the court threw out the EPA’s policy for implementing new O₃ rules, saying that the agency ignored a section of the law that restricts its authority to enforce such rules.

In April 2003, the EPA was cleared by the White House Office of Management and Budget (OMB) to implement the 8-hour ground-level O₃ standard. The EPA issued the proposed rule implementing the 8-hour O₃ standard in April 2003. The EPA completed final 8-hour nonattainment status on April 15, 2004. The EPA revoked the 1-hour O₃ standard on June 15, 2005, and lowered the 8-hour O₃ standard from 0.08 ppm to 0.075 ppm on April 1, 2008.

The EPA issued the final PM_{2.5} implementation rule in fall 2004. The EPA lowered the 24-hour PM_{2.5} standard from 65 to 35 µg/m³ and revoked the annual PM₁₀ standard on December 17, 2006. The EPA issued final designations for the 2006 24-hour PM_{2.5} standard on December 12, 2008.

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the EPA has the authority to regulate CO₂ emissions under the CAA. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the EPA commenced several actions in 2009 that are required to implement a regulatory approach to GCC.

On September 30, 2009, the EPA announced a proposal that focuses on large facilities emitting over 25,000 tons of GHG emissions per year. These facilities would be required to obtain permits that would demonstrate they are using the best practices and technologies to minimize GHG emissions.

On December 7, 2009, the EPA Administrator signed a final action under the CAA, finding that six GHGs (CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to GCC. This EPA action does not impose any requirements on industry or other entities. However, the findings are a prerequisite to finalizing the GHG emission standards for light-duty vehicles as described below.

On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a final joint rule to establish a national program consisting of new standards for model year 2012 through 2016 light-duty vehicles that will reduce GHG emissions and improve fuel economy. The EPA is finalizing the first-ever national GHG emissions standards under the CAA, and NHTSA is finalizing Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. The EPA GHG standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO₂ per mile in model year 2016, equivalent to 35.5 miles per gallon (mpg).

State Regulations/Standards

California adopted the CCAA in 1988. The ARB administers the CAAQS for the 10 air pollutants designated in the CCAA. These 10 State air pollutants are the six criteria pollutants designated by the federal CAA as well as four others: visibility-reducing particulates, H₂S, sulfates, and vinyl chloride.

In 1967, the State Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus, the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board, to establish the ARB. Since its formation, the ARB has worked with the public, the business sector, and local governments to find solutions to the State's air pollution problems.

The California Air Pollution Control Officers Association (CAPCOA) is a nonprofit association of the air pollution control officers from all 35 local air quality agencies throughout California. CAPCOA was formed in 1976 to promote clean air and to provide a forum for sharing knowledge, experience, and information among the air quality regulatory agencies around the State. CAPCOA meets regularly with federal and State air quality officials to develop statewide rules and to ensure consistent application of rules and regulations. CAPCOA works with specialized task forces (including regulated industry) by participating actively in the legislative process and continuing to coordinate local efforts with those of the State and federal air agencies. The goal is to protect public health while maintaining economic vitality.

California adopted the CCAA in 1988. The ARB administers CAAQS for the 10 air pollutants designated in the CCAA. The 10 State air pollutants are the six criteria pollutants designated by the CAA plus visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride.

The ARB identified Diesel Particulate Matter (DPM) as a TAC in August 1998. Following the identification process, the ARB was required by law to determine whether there was a need for further control. In September 2000, the ARB adopted the Diesel Risk Reduction Plan (ARB 2000), which recommends many control measures to reduce the risks associated with DPM and to achieve goals of 75 percent DPM reduction by 2010 and 85 percent by 2020.

The public's exposure to TACs is a significant environmental health issue in California. 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. Under State law, CalEPA, acting through the ARB, 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 an increase in serious illness, or that may pose a present or potential hazard to human health.

- **Cancer Risk:** One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no “safe” level of exposure to carcinogens; that is, any exposure to a carcinogen poses some risk of causing cancer. Health statistics show that one in four people will contract cancer over their lifetime, or 250,000 in 1 million, from all causes, including diet, genetic factors, and lifestyle choices.
- **Non-Cancer Health Risks:** Unlike carcinogens, it is believed that there is a threshold level of exposure to most non-carcinogens below which they will not pose a health risk. CalEPA and the OEHHA have developed reference exposure levels (RELs) for non-carcinogenic TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The non-cancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the Hazard Index.

California Climate Action Milestones

In 1988, AB 4420 directed the California Energy Commission (CEC) to report on “how global warming trends may affect the State’s energy supply and demand, economy, environment, agriculture, and water supplies” and offer “recommendations for avoiding, reducing and addressing the impacts.” This marked the first statutory direction to a State agency to address climate change.

The California Climate Action Registry (CCAR) was created to encourage voluntary reporting and early reductions of GHG emissions with the adoption of Senate Bill (SB) 1771 in 2000. The CEC was directed to assist by developing metrics and identifying and qualifying third-party organizations to provide technical assistance and advice to GHG emission reporters. The next year, SB 527 amended SB 1771 to emphasize third-party verification.

SB 1771 also contained several additional requirements for the CEC, including updating the State’s GHG inventory from an existing 1998 report and continuing to update it every 5 years; acquiring, developing, and distributing information on GHG to agencies and businesses; establishing a State interagency task force to ensure policy coordination; and establishing a climate change advisory committee to make recommendations on the most equitable and efficient ways to implement climate change requirements. In 2006, AB 1803 transferred preparation of the inventory from the CEC to the ARB. The ARB updates the inventory annually.

AB 1493, authored by Assembly Member Fran Pavley in 2002, directed the ARB to adopt regulations to achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles. The so-called “Pavley” regulations, or “Clean Car” regulations, were approved by the ARB in 2004. The ARB submitted a request to the EPA to implement the regulations in December 2005. After several years of requests to the federal government, and accompanying litigation, this waiver request was granted on June 30, 2009. The ARB has since combined the control of smog-causing pollutants and GHG emissions to develop a single coordinated package of standards known as Low Emission Vehicles III. These regulations were expected to reduce GHG emissions from State passenger vehicles by approximately 22 percent in 2012 and approximately 30 percent in 2016, all while improving fuel efficiency and reducing motorists’ costs. AB 1493 also directed the CCAR to

adopt protocols for reporting reductions in GHG emissions from mobile sources prior to the operative date of the regulations.

SB 812 added forest management practices to the CCAR members' reportable emissions actions. SB 812 also directed the CCAR to adopt forestry procedures and protocols to monitor, estimate, calculate, report, and certify CO stores and CO₂ emissions that resulted from the conservation and conservation-based management of forests in California.

The California Renewable Portfolio Standard (RPS) Program, which requires electric utilities and other entities under the jurisdiction of the California Public Utilities Commission (CPUC) to meet 20 percent of their retail sales with renewable power by 2017, was established by SB 1078 in 2002. In 2006, SB 107 accelerated the RPS to 20 percent by 2010. The program was subsequently expanded by the renewable electricity standard approved by the ARB in September 2010, requiring all utilities to meet a 33 percent target by 2020. The renewable electricity standard is projected to reduce GHG emissions from the electricity sector by at least 12 MMT CO₂e in 2020.

In December 2004, California Governor Arnold Schwarzenegger signed Executive Order (EO) S-20-04, which set a goal of reducing energy use in State-owned buildings by 20 percent by 2015 (from a 2003 baseline) and encouraged cities, counties, schools, and the private sector to take all cost-effective measures to reduce building electricity use. This action built upon the State's strong history of energy-efficiency efforts that have saved Californians and the State businesses energy and money for decades. They are a cornerstone of GHG reduction efforts.

EO S-3-05 (June 2005) established GHG targets for the State including returning to year 2000 emission levels by 2010; 1990 levels by 2020; and 80 percent below 1990 levels by 2050. EO S-3-05 directed the Secretary of CalEPA to coordinate efforts to meet the targets with the heads of other State agencies. This group became the Climate Action Team (CAT).

Assembly Bill 32 and the California Air Resources Board's Climate Change Scoping Plan. In 2006, the State Legislature passed the California Global Warming Solutions Act of 2006 (i.e., AB 32), which created a comprehensive, multiyear program to reduce GHG emissions in California. Under AB 32, the ARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. The ARB also is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 relatedly authorized the ARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, the ARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted. AB 32 required the ARB to develop a scoping plan that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. In 2007, the ARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO₂e). ARB's adoption of this limit is in accordance with Health and Safety Code (HSC) Section 38550.

Further, in 2008, ARB adopted the Climate Change Scoping Plan: A Framework for Change (Scoping Plan) in accordance with HSC Section 38561. The Scoping Plan establishes an overall framework for

the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all ARB and CAT early actions (CalEPA 2010) and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include the following (ARB 2008):

- Expanding and strengthening existing energy-efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's Clean Car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In the Scoping Plan, the ARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations) (referred to as "Business As Usual" [BAU]). For purposes of calculating this percentage reduction, the ARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would affect vehicle fuel efficiency, and building energy-efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the Scoping Plan's Functional Equivalent Document, the ARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, ARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from the BAU conditions. When the 2020 emissions level projection also was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the RPS (12 percent to 20 percent), the ARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.

More recently, in 2014, the ARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (First Update). The stated purpose of the First Update is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a

broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050.” The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32. It also noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the State realizes the expected benefits of existing policy goals (ARB 2014).

In conjunction with the First Update, the ARB identified “six key focus areas comprising major components of the state’s economy to evaluate and describe the larger transformative actions that will be needed to meet the state’s more expansive emission reduction needs by 2050.” Those six areas are (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05’s 2050 reduction goal.

Based on the ARB’s research efforts presented in the First Update, it has a “strong sense of the mix of technologies needed to reduce emissions through 2050.” Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonization of electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

As part of the First Update, the ARB recalculated the State’s 1990 emissions level using more recent GWPs identified by the Intergovernmental Panel on Climate Change (IPCC). Using the recalculated 1990 emissions level (431 MMT CO₂e) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, the ARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15 percent (instead of 28.5 percent or 16 percent) from the BAU conditions.

On December 14, 2017, the ARB adopted The *2017 Climate Change Scoping Plan Update (Second Update)* (ARB 2017c). This update proposes ARB’s strategy for achieving the State’s 2030 GHG target as established in SB 32 (discussed below), including continuing the Cap-and-Trade Program through 2030, and includes a new approach to reduce GHGs from refineries by 20 percent. The Second Update incorporates approaches to cutting short-lived climate pollutants (SLCPs) under the *Short-Lived Climate Pollutant Reduction Strategy (SLCP Reduction Strategy)* (a planning document that was adopted by the ARB in March 2017), and acknowledges the need for reducing emissions in agriculture and highlights the work underway to ensure that California’s natural and working lands increasingly sequester carbon. During development of the Second Update, the ARB held a number of public workshops in the natural and working lands, agriculture, energy, and transportation sectors to inform development of the 2030 Scoping Plan Update (ARB 2014). When discussing project-level GHG emissions reduction actions and thresholds, the Second Update states “achieving no net increase in GHG emissions is the correct overall objective, but it may not be appropriate or feasible for every development project. An inability to mitigate a project’s GHG emissions to zero does not necessarily imply a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA.”

Executive Order B-30-15. EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under EO S-3-05 and AB 32. EO B-30-15 sets an interim target goal of reducing statewide GHG emissions to 40 percent below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80 percent below 1990 levels by 2050, as set forth in EO S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to the ARB's Scoping Plan to express the 2030 target in terms of MMT CO₂e. The EO also calls for State agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. Sector-specific agencies in transportation, energy, water, and forestry were required to prepare GHG reduction plans by September 2015, followed by a report on action taken in relation to these plans in June 2016. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

Senate Bill 32 and Assembly Bill 197. SB 32 and AB 197 (enacted in 2016) are companion bills that set new statewide GHG reduction targets; made changes to ARB's membership; increased legislative oversight of the ARB's climate change-based activities; and expanded dissemination of GHG and other air quality-related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring the ARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the State's climate policies. AB 197 also added two members of the Legislature to the ARB as nonvoting members; required the ARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and TACs from reporting facilities; and required the ARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

Senate Bill 605 and Senate Bill 1383. SB 605 (2014) requires the ARB to complete a comprehensive strategy to reduce emissions of SLCPs in the State; and SB 1383 (2016) requires the ARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of SLCPs (40 percent below 2013 levels by 2030 for CH₄ and HFCs, and 50 percent below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, and as noted above, the ARB adopted its SLCP Reduction Strategy in March 2017. The SLCP Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, CH₄, and fluorinated gases. **Building Energy.**

24 CCR Part 6. Title 24 of the California Code of Regulations (CCR) was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. The CEC is required by law to adopt standards every three years that are cost effective for homeowners over the 30-year lifespan of a building. These standards are updated to consider and incorporate new energy-efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new

power plants, and help preserve the environment. The 2016 Title 24 standards are the currently applicable building energy-efficiency standards, and became effective on January 1, 2017. The 2016 Title 24 standards will further reduce energy used and associated GHG emissions. In general, multifamily homes built to the 2016 standards are anticipated to use about 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and nonresidential buildings built to the 2016 standards will use an estimated 5 percent less energy than those built to the 2013 standards (CEC 2015). It should be noted that the 2016 Title 24 energy data are included in the California Emissions Estimator Model (CalEEMod) Version 2016.3.2.

The project would be required to comply with 2016 Title 24 standards because its building construction phase would commence after January 1, 2017. This analysis quantifies the increased energy efficiency and corresponding GHG emissions savings associated with the more stringent 2016 Title 24 standards, which results in a conservative assessment of GHG emissions savings because the 2016 Title 24 standards have been documented to reduce energy usage (e.g., for lighting, heating, cooling, ventilation, and water heating) and associated GHG emissions. Instead, the project's GHG emissions estimates conservatively are in accordance with CalEEMod's default assumption that the 2013 Title 24 standards are the operative standards. This "pool" of required 2016 Title 24 GHG savings nonetheless will occur and represent additional GHG reductions in the CalEEMod.

24 CCR Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (CALGreen) (24 CCR, Part 11) establishes minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. CALGreen took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential and State-owned buildings and schools and hospitals. CALGreen became effective on January 1, 2017. The mandatory standards require the following (24 CCR Part 11): A reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings.

- A reduction in outdoor water use through compliance with a local water-efficient landscaping ordinance or the California Department of Water Resources' (DWR) Model.
- Water Efficient Landscape Ordinance.
- A diversion of at least 65 percent of construction and demolition waste from landfills.
- Inspections of energy systems to ensure optimal working efficiency.
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations.
- Low-pollutant emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle boards.

CALGreen includes voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen Tier 1 standards call for a 15 percent improvement in energy requirements, stricter water conservation, 65 percent diversion of construction and demolition waste, 10 percent recycled content in building materials, 20 percent permeable paving, 20 percent cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30 percent improvement in energy requirements, stricter water conservation, 75 percent diversion of construction and demolition waste, 15 percent recycled content in building materials, 30 percent permeable paving, 25 percent cement reduction, and cool/solar-reflective roofs.

The CPUC, CEC, and ARB also have a shared, established goal of achieving zero net energy (ZNE) for new construction in California. The key policy timelines include the following: (1) all new single-family and low-rise multifamily residential construction in California will be ZNE by 2020, and (2) all new commercial construction in California will be ZNE by 2030.¹⁰ As most recently defined by the CEC in its 2015 *Integrated Energy Policy Report* (CEC 2016), a ZNE-code building is "one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building" using the CEC's Time Dependent Valuation metric.

20 CCR. Title 20 of the CCR requires manufacturers of appliances to meet State and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery-charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and State standards for federally regulated appliances, State standards for federally regulated appliances, and State standards for non-federally regulated appliances. **Senate Bill 1.** SB 1 (2006) established a \$3 billion rebate program to support the goal of the State to install rooftop solar energy systems with a generation capacity of 3,000 megawatts (MW) through 2016. SB 1 added sections to the Public Resources Code (PRC), including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy-efficiency levels and performance requirements. Section 25780 established that it is a goal of the State to establish a self-sufficient solar industry in which solar-energy systems are a viable mainstream option for both homes and businesses

¹⁰ See, for example, CPUC's California's Zero Net Energy Policies and Initiatives (http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKewiZ-KDqzI_XAhXELmMKHZIUBBQQFggmMAA&url=http%3A%2F%2Fwww.cpuc.ca.gov%2FWorkArea%2FDownloadAsset.aspx%3Fid%3D10718&usg=AOvVaw21iHREtbzWNNwMMNhCT_zpZ). It is expected that achievement of the zero net energy goal will occur via revisions to the Title 24 standards.

within 10 years of adoption, and to place solar-energy systems on 50 percent of new homes within 13 years of adoption. SB 1, also termed “Go Solar California,” was previously titled “Million Solar Roofs.” **Assembly Bill 1470.** This bill established the Solar Water Heating and Efficiency Act of 2007. The bill makes findings and declarations of the Legislature relating to the promotion of solar water-heating systems and other technologies that reduce natural gas demand. AB 1470 defines several terms for purposes of the act. The bill requires the CEC to evaluate the data available from a specified pilot program and, if it makes a specified determination, to design and implement a program of incentives for the installation of 200,000 solar water-heating systems in homes and businesses throughout the State by 2017. **Assembly Bill 1109.** Enacted in 2007, AB 1109 required the CEC to adopt minimum energy-efficiency standards for general-purpose lighting in order to reduce electricity consumption by 50 percent for indoor residential lighting and 25 percent for indoor commercial lighting. **Mobile Sources.**

Assembly Bill 1493. In a response to the transportation sector accounting for more than half of California’s CO₂ emissions, AB 1493 was enacted in July 2002. AB 1493 required the ARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles determined by the ARB to be vehicles that are primarily used for noncommercial personal transportation in the State. The bill required the ARB to set GHG emission standards for motor vehicles manufactured in 2009 and all subsequent model years. The ARB adopted the standards in September 2004. When fully phased in, the 2009–2012 standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the 2013–2016 standards will result in a reduction of about 30 percent. **Executive Order S-1-07.** Issued on January 18, 2007, EO S-1-07 sets a declining Low Carbon Fuel Standard for GHG emissions measured in CO₂e grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020. The carbon intensity measures the amount of GHG emissions in the lifecycle of a fuel, including extraction/feedstock production, processing, transportation, and final consumption, per unit of energy delivered. The ARB adopted the implementing regulation in April 2009. The regulation is expected to increase the production of biofuels, including those from alternative sources, such as algae, wood, and agricultural waste. **Senate Bill 375.** SB 375 (2008) addresses GHG emissions associated with the transportation sector through regional transportation and sustainability plans. SB 375 required the ARB to adopt regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. Regional MPOs are then responsible for preparing a Sustainable Communities Strategy (SCS) within their Regional Transportation Plans (RTPs). The goal of the SCS is to establish a forecast development pattern for the region that, after considering transportation measures and policies, will achieve, if feasible, the GHG reduction targets. If an SCS is unable to achieve the GHG reduction target, an MPO must prepare an Alternative Planning Strategy demonstrating how the GHG reduction target would be achieved through alternative development patterns, infrastructure, or additional transportation measures or policies.

Pursuant to Government Code Section 65080(b)(2)(K), an SCS does not: (1) regulate the use of land; (2) supersede the land use authority of cities and counties; or (3) require that a city’s or county’s land use policies and regulations, including those in a general plan, be consistent with it. Nonetheless, SB 375 makes regional and local planning agencies responsible for developing

those strategies as part of the federally required metropolitan transportation planning process and the State-mandated housing element process.

In 2010, ARB adopted the SB 375 targets for the regional MPOs. The targets for SCAG are an 8 percent reduction in emissions per capita by 2020 and a 13 percent reduction by 2035. SCAG completed and adopted its 2016 RTP/SCS in April 2016.

Advanced Clean Cars Program. In January 2012, ARB approved the Advanced Clean Cars program, a new emissions-control program for model years 2015 through 2025. The program combines the control of smog- and soot-causing pollutants and GHG emissions into a single coordinated package. The package includes elements to reduce smog-forming pollution, reduce GHG emissions, promote clean cars, and provide the fuels for clean cars (ARB 2012). To improve air quality, ARB has implemented new emissions standards to reduce smog-forming emissions beginning with 2015 model year vehicles. It is estimated that in 2025 cars will emit 75 percent less smog-forming pollution than the average new car sold in 2012. To reduce GHG emissions, the ARB, in conjunction with the EPA and the NHTSA, has adopted new GHG standards for model year 2017 to 2025 vehicles; the new standards are estimated to reduce GHG emissions by 34 percent in 2025. The zero emissions vehicle (ZEV) program will act as the focused technology of the Advanced Clean Cars program by requiring manufacturers to produce increasing numbers of ZEVs and plug-in hybrid electric vehicles in the 2018 to 2025 model years. The Clean Fuels Outlet regulation will ensure that fuels such as electricity and hydrogen are available to meet the fueling needs of the new advanced-technology vehicles as they come to the market.

Off-Road Vehicle Regulation. The ARB's off-road vehicle regulation places restrictions on adding older vehicles to a construction fleet. The ARB received authorization from the EPA on September 13, 2013, to enforce the off-road regulation's restrictions on fleets adding equipment with older tier engines. Effective January 1, 2016, a fleet could not add equipment with a Tier 0 and Tier 1 engine to its fleet. Beginning January 1, 2018, for large and medium fleets, and January 1, 2023, for small fleets, a fleet may not add equipment with a Tier 2 engine to its fleet. The engine tier must be Tier 3 or higher.

Executive Order B-16-12. EO B-16-12 (2012) directs State entities under the Governor's direction and control to support and facilitate development and distribution ZEVs. This EO also sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. On a statewide basis, EO B-16-12 also establishes a GHG emissions reduction target from the transportation sector equaling 80 percent less than 1990 levels by 2050. In furtherance of this EO, the Governor convened an Interagency Working Group on ZEVs that has published multiple reports regarding the progress made on the penetration of ZEVs in the statewide vehicle fleet.

Assembly Bill 1236. AB 1236 (2015), as enacted in California's Planning and Zoning Law, requires local land use jurisdictions to approve applications for the installation of electric vehicle (EV) charging stations, as defined, through the issuance of specified permits unless there is substantial evidence in the record that the proposed installation would have a specific, adverse impact upon the public health or safety, and that there is no feasible method to satisfactorily mitigate or avoid the specific, adverse impact. The bill provides for appeal of that decision to the planning commission, as specified. The bill requires local land use jurisdictions with a population of 200,000 or more residents to adopt an ordinance, by September 30, 2016, that creates an expedited and streamlined permitting process for EV charging stations, as specified. Prior to this statutory deadline, in August 2016,

the Los Angeles County Board of Supervisors adopted Ordinance No. 2016-0043, adding a section to the County Code related to the expedited processing of EV charging station permits consistent with AB 1236. **Senate Bill 350.** In 2015, SB 350, the Clean Energy and Pollution Reduction Act, was enacted into law. As one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the State's 2030 and 2050 reduction targets (see Public Utilities Code Section 740.12). **Renewable Energy and Energy Procurement.**

Senate Bill 1078. SB 1078 (2002) established the RPS program, which requires an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently accelerated, requiring utilities to obtain 20 percent of their power from renewable sources by 2010. **Senate Bill 1368.** SB 1368 (2006) requires the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the CPUC. This effort will help protect energy customers from financial risks associated with investments in carbon-intensive generation by allowing new capital investments in power plants with GHG emissions as low as or lower than new combined-cycle natural gas plants; SB 1368 requires imported electricity to meet GHG performance standards in California and that such standards be developed and adopted in a public process. **Senate Bill X1 2.** SB X1 2 (2011) expanded the RPS by establishing that 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent by December 31, 2020, and in subsequent years be secured from qualifying renewable energy sources. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 MW or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current, as well as other specified requirements with respect to its location. In addition to the retail sellers previously covered by the RPS, SB X1 2 added local publicly owned electric utilities to the RPS. **Senate Bill 350.** SB 350 (2015) further expanded the RPS by establishing that 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030, be secured from qualifying renewable energy sources. In addition, SB 350 includes the goal of doubling the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the CPUC, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. **Water.**

Executive Order B-29-15. In response to the drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have since become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the State. In response to EO B-29-15, the California DWR has modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the

requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas. **Solid Waste.**

Assembly Bills 939 and 341. In 1989, AB 939, known as the Integrated Waste Management Act (PRC Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal-reporting system. AB 939 mandated a reduction of waste disposal where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by the year 2000. AB 341 (2011) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the State that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the State's policy goal. CalRecycle has conducted multiple workshops and published documents that identify priority strategies that CalRecycle believes would assist the State in reaching the 75 percent goal by 2020.

Increasing the amount of commercial solid waste that is recycled, reused, or composted will reduce GHG emissions primarily by (1) reducing the energy requirements associated with the extraction, harvest, and processing of raw materials, and (2) using recyclable materials that require less energy than raw materials to manufacture finished products (CalRecycle 2015). Increased diversion of organic materials (green and food waste) will also reduce GHG emissions (CO₂ and CH₄) resulting from decomposition in landfills by redirecting this material to processes that use the solid waste material to produce vehicle fuels, heat, electricity, or compost.

Other State Regulations and Goals

Executive Order S-13-08. EO S-13-08 (November 2008) is intended to hasten California's response to the impacts of GCC, particularly sea-level rise. Therefore, the EO directs State agencies to take specified actions to assess and plan for such impacts. The final 2009 *California Climate Adaptation Strategy* report was issued in December 2009 by the California Natural Resources Agency (CNRA 2009), and an update, *Safeguarding California: Reducing Climate Risk*, followed in July 2014 (CNRA 2014). To assess the State's vulnerability, the report summarizes key climate change impacts to the State for the following areas: agriculture, biodiversity and habitat, emergency management, energy, forestry, ocean and coastal ecosystems and resources, public health, transportation, and water. **2015 State of the State Address.** In January 2015, California Governor Jerry Brown in his inaugural address and annual report to the Legislature established supplementary goals that would further reduce GHG emissions over the next 15 years. These goals include an increase in California's renewable energy portfolio from 33 percent to 50 percent, a reduction in vehicle petroleum use for cars and trucks by up to 50 percent, measures to double the efficiency of existing buildings, and decreasing emissions associated with heating fuels. **2016 State of the State Address.** In his January 2016 address, Governor Brown established a statewide goal to bring per capita GHG emission down to 2 tons per person, which reflects the goal of the Global Climate Leadership Memorandum of Understanding (Under 2 MOU) to limit global warming to less than 2 degrees Celsius (°C) by

2050. The Under 2 MOU agreement pursues emission reductions of 80 percent to 95 percent below 1990 levels by 2050 and/or reach a per capita annual emissions goal of less than 2 metric tons by 2050. A total of 135 jurisdictions spanning 32 countries and 6 continents, including California, have signed or endorsed the Under 2 MOU (Under 2 MOU 2016). **Regional Air Quality Planning Framework**

The 1976 Lewis Air Quality Management Act established SCAQMD and other air districts throughout the State. The CAA Amendments of 1977 required each state to adopt an implementation plan outlining pollution control measures to attain the federal standards in nonattainment areas of the State.

The ARB is responsible for incorporating air quality management plans for local air basins into an SIP for EPA approval. Significant authority for air quality control within them has been given to local air districts that regulate stationary-source emissions and develop local nonattainment plans.

Regional Air Quality Management Plan

SCAQMD and SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. Every three years, SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The latest plan is the 2016 AQMP, which incorporates the latest scientific and technological information and planning assumptions, including the 2016 RTP/SCS and updated emission inventory methodologies for various source categories. The 2016 AQMP included the integrated strategies and measures needed to meet the NAAQS, implementation of new technology measures, and demonstrations of attainment of the 1-hour and 8-hour ozone NAAQS as well as the latest 24-hour and annual PM_{2.5} standards.

The 2016 AQMP seeks to achieve multiple goals in partnership with other entities promoting reductions in criteria pollutant, GHGs, and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP recognized the critical importance of working with other agencies to develop new regulations as well as secure funding and other incentives that encourage the accelerated transition of vehicles, buildings, and industrial facilities to cleaner technologies in a manner that benefits not only air quality, but also local businesses and the regional economy. The 2016 AQMP incorporates the latest scientific and technological information and planning assumptions, including the transportation control measures in the 2016 RTP/SCS and updated emission inventory methodologies for various source categories. The 2016 AQMP included the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

The SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules may apply to project construction or operation. For example, SCAQMD Rule 403 requires the implementation of best-available fugitive dust control measures during active construction periods that are capable of generating fugitive dust emissions from on-site earthmoving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads.

The following SCAQMD rules and regulations would be applicable to the proposed project.

- SCAQMD Rule 403 requires projects to incorporate fugitive dust control measures.
- SCAQMD Rule 1113 limits the VOC content of architectural coatings.

Regional Transportation Plan

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and State air quality requirements, including the Transportation Conformity Rule and other applicable federal, State, and air district laws and regulations. As the federally designated MPO for the six-county Southern California region, SCAG is required by law to ensure that transportation activities conform to, and are supportive of, the goals of regional and State air quality plans to attain NAAQS. In addition, SCAG is a co-producer with SCAQMD of the transportation strategy and transportation control measure sections of the AQMP for the Basin. With regard to future growth, SCAG adopted the 2016 RTP/SCS in April 2016, which provides population, housing, and employment projections for cities under its jurisdiction. The growth projections in the 2016 RTP/SCS are based in part on projections originating under county and city general plans. These growth projections were utilized in the preparation of the air quality forecasts and consistency analysis included in the 2016 AQMP.

Local Policies

San Bernardino County Regional Greenhouse Gas Reduction Plan

In 2006, the California legislature passed AB 32, the Global Warming Solutions Act of 2006. The law establishes a limit on GHG emissions for the State of California to reduce statewide emissions to 1990 levels by 2020. As a response, a project partnership led by the San Bernardino Associated Governments, the predecessor agency to the San Bernardino County Transportation Authority, has compiled an inventory of GHG emissions and developed reduction measures that could be adopted by the 21 Partnership Cities of San Bernardino County. Once adopted, the regional GHG reduction plan will serve as the basis for cities in San Bernardino County to develop more detailed community level climate action plans (CAPs). The City of Colton (City) is one of the partnership cities participating in this study.

The partnership cities committed to undertake the following actions that would reduce GHG emissions associated with regional (or countywide) activities as a whole.

- Prepare a current year (2008) GHG emissions inventory for each of the 21 partnership cities in the county
- Prepare a future year (2020) GHG emissions forecast for each of the cities
- Develop a tool for each city to develop its municipal inventory (i.e., emissions due only to the city's municipal operations and sometimes referred to as a municipal inventory) and municipal reduction plan
- Develop GHG reduction measures and city selection of measures appropriate for each jurisdiction

- Develop consistent baseline information for jurisdictions to use for their development of community CAPs meeting jurisdiction-identified reduction goals

City of Colton General Plan

The Model Air Quality Element of the City's General Plan was adopted in 1991 in an effort to comply with federal and State regulations and to improve air quality in the county and region. The following are the goals established in the Model Air Quality Element:

- **Goal 1.** Effective coordination of air quality improvement within the portion of the South Coast Air Basin in San Bernardino County and improved air quality through reductions in pollutants from Orange and Los Angeles Counties.
- **Goal 2.** A diverse and efficiently operated ground transportation system, which generates the minimum feasible pollutants.
- **Goal 3.** A pattern of land uses, which can be efficiently served by a diversified transportation system and land development projects which directly and indirectly generate the minimum feasible air pollutants.
- **Goal 4.** Reduce particulate emissions from roads, parking lots, construction sites, and agricultural lands.
- **Goal 5.** Reduced emissions through reduced energy consumption.
- **Goal 6.** Prepare a future year (2020) GHG emissions forecast for each of the cities.
- **Goal 7.** Develop a tool for each city to develop its municipal inventory (i.e., emissions due only to the city's municipal operations and sometimes referred to as municipal inventory) and municipal reduction plan.

City of Colton Climate Action Plan

The City adopted its CAP on November 3, 2015. The CAP presents the GHG inventories, identifies the effectiveness of California initiatives to reduce GHG emissions, and identifies local measures that were selected by the City to reduce GHG emissions under the City's jurisdictional control to achieve the City's identified GHG reduction target. The City participated in the San Bernardino County Regional GHG Reduction Plan (Plan) which presents the collective results of all local efforts to reduce GHG emissions consistent with Statewide GHG targets expressed in AB 32, the "Global Warming Solutions Act of 2006," and SB 375. The CAP builds on the regional work and refines it to provide City-specific information and to develop the local implementation plan for City-selected GHG reduction measures. The CAP identifies how the GHG reduction measures will be implemented and monitored by the City to ensure that progress is being made toward the GHG reduction target.

THRESHOLDS OF SIGNIFICANCE

A number of modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts (e.g., SCAQMD) have created guidelines and requirements to conduct air quality analysis. SCAQMD's current guidelines, the *CEQA Air Quality Handbook* (SCAQMD 1993) with associated updates, and the City guidelines were adhered to in the assessment of air quality impacts for the proposed project.

This air quality and GHG impact analysis includes estimated emissions associated with short-term construction and long-term operation of the proposed project. Criteria pollutants with regional impacts would be emitted by project-related vehicular trips, as well as by emissions associated with stationary sources used on site. Localized air quality impacts (i.e., higher CO concentrations [CO hot spots] near intersections or roadway segments in the project vicinity) would be small and less than significant due to the generally low ambient CO concentrations (maximum 2.2 ppm for the 1-hour period and 1.7 ppm for the 8-hour period) in the project area.

The net increase in pollutant emissions determines the significance and impact on regional air quality as a result of the proposed project. The results also allow the local government to determine whether the proposed project will deter the region from achieving the goal of reducing pollutants in accordance with the AQMP in order to comply with the NAAQS and CAAQS.

STATE GUIDELINES

Based on the *Guidelines for the Implementation of California Environmental Quality Act*, Appendix G, Public Resources Code Sections 15000–15387, a project would normally be considered to have a significant effect on air quality if the project would violate any CAAQS, contribute substantially to an existing air quality violation, expose sensitive receptors to substantial pollutant concentrations, or conflict with the adopted environmental plans and goals of the community in which it is located.

AIR QUALITY THRESHOLDS

In addition to the NAAQS and CAAQS, SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the Basin. The emissions thresholds were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (EPA), these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Regional Thresholds for Construction Emissions

The following California Environmental Quality Act (CEQA) significance thresholds for construction emissions have been established for the Basin (SCAQMD 2015b):

- 75 pounds per day (lbs/day) of VOC;
- 100 lbs/day of NOx;
- 550 lbs/day of CO;

- 150 lbs/day of PM₁₀;
- 55 lbs/day of PM_{2.5}; and/or
- 150 lbs/day of SO_x.

Projects in the Basin with construction-related emissions that exceed any of these emission thresholds are considered to be significant under the SCAQMD guidelines.

Regional Thresholds for Operational Emissions

The following CEQA significance thresholds for operational emissions have been established for the Basin (SCAQMD 2015b):

- 55 lbs/day of VOCs;
- 55 lbs/day of NO_x;
- 550 lbs/day of CO;
- 150 lbs/day of PM₁₀;
- 55 lbs/day of PM_{2.5}; and/or
- 150 lbs/day of SO_x.

Projects in the Basin with operational emissions that exceed any of these emission thresholds are considered to be significant under the SCAQMD guidelines.

Local Microscale Concentration Standards

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.00 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm; and
- California State 8-hour CO standard of 9.0 ppm

GREENHOUSE GAS THRESHOLDS

State CEQA Guidelines Section 15064(b) provides that the “determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data,” and further, states that an “ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting.”

The City has adopted Appendix G of the *State CEQA Guidelines* as the significance threshold for GHG emissions. A project would normally have a significant effect on the environment if the project would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

On December 30, 2009, the Natural Resources Agency adopted amendments to the *State CEQA Guidelines* that became effective on March 18, 2010. The amendments to the *State CEQA Guidelines* include new requirements to evaluate GHG emissions. Pursuant to the amended *State CEQA Guidelines*, a lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase (or reduce) GHG emissions compared to the existing environmental setting
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project
3. The extent to which the project complies with regulations or requirements adopted to implement an adopted Statewide, regional, or local plan for the reduction or mitigation of GHG emissions

Currently, there is no statewide GHG emissions threshold that has been used to determine the potential GHG emissions impacts of a project. Threshold methodology and thresholds are still being developed and revised by air districts in the State. Therefore, this environmental issue remains unsettled and must be evaluated on a case-by-case basis until such time SCAQMD adopts significance thresholds and GHG emissions impact methodology. The County of San Bernardino released an updated development review process document for GHG emissions in March 2014. This document includes screening tables for implementation of GHG reduction measures for residential development. The proposed project is required to garner 100 points using the screening tables to be considered consistent with the County of San Bernardino GHG Emissions Reduction Plan.¹¹ The proposed project's consistency with the County of San Bernardino GHG Emissions Reduction Plan has been used in this analysis as the measure of significance for GHG emissions.

¹¹ County of San Bernardino. Greenhouse Gas Emissions Development Review Processes. Updated March 2015. Website: <http://www.sbcounty.gov/Uploads/lus/GreenhouseGas/FinalGHGUpdate.pdf>, accessed June 2018.

IMPACTS AND MITIGATION

Air pollutant emissions associated with the project would occur over the short term from construction activities (e.g., fugitive dust from site preparation and grading) and emissions from equipment exhaust. There would be long-term regional emissions associated with project-related vehicular trips and due to energy consumption (e.g., electricity usage) by the proposed land uses.

CONSTRUCTION IMPACTS

Equipment Exhausts and Related Construction Activities

Construction activities produce combustion emissions from various sources such as earthmoving activities, on-site construction processes, utility engines, tenant improvements, and motor vehicles transporting the construction crew. The exhaust emissions from construction equipment envisioned on site would vary daily as construction activities change. On-site construction activities would result in localized on-site emissions. Table F lists the tentative project construction schedule for the proposed project based on a probable start date, and a planned opening in 2021. A default construction schedule was used for all phases in CalEEMod (Version 2016.3.2). Table G lists the potential construction equipment to be used during project construction under each project alternative.

Preliminary grading plans anticipate of large import soil fill for the proposed project site. A total of approximately 250,200 cubic yards (cy) of soil would be imported and stockpiled on-site. It is assumed that approximately 31,275 truck trips would occur to import the soil during a 160-day earthwork and grading period. As part of the assumptions for the proposed project, the location of the soil import is approximately 1 mile away, which will create a short truck trip between the pick-up and drop-off locations, a 2-mile haul truck trip distance was used in the CalEEMod.

The emissions shown in Table H combine the total of on-site and off-site emissions from the CalEEMod output tables. The only measures that have been applied to the analysis are the required construction emissions control measures under SCAQMD Rules 403 and 1113.

Because no exceedances of any criteria pollutants are expected, no significant impacts would occur for project construction. Details of the emission factors and other assumptions are included in Appendix A.

Table F: Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Site Preparation	1/1/2019	1/14/2019	5	10
2	Grading	2/15/2019	9/26/2019	5	160
3	Building Construction	9/27/2019	2/25/2021	5	370
4	Paving	2/25/2021	3/24/2021	5	20
5	Architectural Coating	3/25/2021	4/21/2021	5	20

Source: Estimated by LSA from the site plan (assuming a 2021 opening year) and using CalEEMod defaults (June 2018).
CalEEMod = California Emissions Estimator Model

Table G: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Site Preparation	Rubber-Tired Dozers	3	8	255	0.40
	Tractors/Loaders/Backhoes	4	8	97	0.37
Grading	Excavators	2	8	158	0.38
	Graders	1	8	187	0.41
	Rubber-Tired Dozers	1	8	247	0.40
	Scrapers	2	8	367	0.48
	Tractors/Loaders/Backhoes	2	8	97	0.37
Building Construction	Cranes	1	7	231	0.29
	Forklifts	3	8	89	0.20
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
Architectural Coating	Air Compressors	1	6	78	0.48
Paving	Pavers	2	8	130	0.42
	Paving Equipment	2	8	132	0.36
	Rollers	2	8	80	0.38

Source: Compiled by LSA using CalEEMod defaults (June 2018).
CalEEMod = California Emissions Estimator Model

Table H: Short-Term Regional Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (lbs/day)							
	VOC	NOx	CO	SOx	Fugitive PM ₁₀	Exhaust PM ₁₀	Fugitive PM _{2.5}	Exhaust PM _{2.5}
Site Preparation	4.44	45.65	22.96	0.04	7.25	0.71	3.93	0.71
Grading	5.46	80.27	38.07	0.11	3.04	1.03	1.46	1.03
Building Construction	5.10	39.24	39.05	0.11	5.08	0.83	1.37	0.83
Architectural Coating	1.87	12.97	15.27	0.02	0.17	0.50	0.04	0.50
Paving	49.26	1.77	4.88	0.01	0.83	0.10	0.22	0.10
Peak Daily	49.26	80.27	54.33	0.13	7.96		4.64	
SCAQMD Thresholds	75.00	100.00	550.00	150.00	150.00		55.00	
Significant Emissions?	No	No	No	No	No		No	

Source: Compiled by LSA (June 2018).

CO = carbon monoxide

NOx = nitrogen oxides

PM₁₀ = particulate matter less than 10 microns in size

SOx = sulfur oxides

lbs/day = pounds per day

PM_{2.5} = particulate matter less than 2.5 microns in size

SCAQMD = South Coast Air Quality Management District

VOC = volatile organic compounds

Fugitive Dust

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, as well as cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and the weather conditions at the time of construction. The proposed project will be required to comply with SCAQMD Rules 402 and 403 to control fugitive dust.

Previously referenced Table H lists total construction emissions (i.e., fugitive-dust emissions and construction-equipment exhausts) that have incorporated a number of feasible control measures that can be reasonably implemented to significantly reduce PM₁₀ emissions from construction.

Architectural Coatings

Architectural coatings contain VOCs that are part of the O₃ precursors. Based on the proposed project, application of the architectural coatings for the proposed peak construction day is estimated to result in a peak emission of 49.26 lbs/day of VOC. Therefore, VOC emissions from architectural coating applications would not exceed the SCAQMD VOC threshold of 75 lbs/day.

Toxic Air Contaminants

Mobile source TAC emissions would be generated by heavy-duty equipment during construction. DPM is known to contain high concentrations of carcinogenic compounds from diesel-fueled equipment. The risks associated with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure (i.e., 24 hours per day, 7 days per week, 365 days per year for 30 years). Because the construction-related emissions of diesel exhaust would occur for up to 580 days, the construction activities would not result in long-term chronic lifetime exposure to diesel exhaust from heavy-duty diesel equipment. Therefore, air quality impacts related to exposure of sensitive receptors to substantial TAC concentrations would be less than adverse.

Construction activities are sporadic, transitory, and short-term in nature, and once construction activities have ceased, so too have emissions from construction activities. DPM is not included as a criteria pollutant; however, it is recognized by the State of California as containing carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the OEHHA *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments* (OEHHA 2015) as 24 hours per day, 7 days per week, 365 days per year for 70 years. DPM would be emitted from heavy equipment used in the construction process. It is estimated that construction activities for the project would occur over approximately 580 days. Construction would be transitory and the geographic source of emissions would change every few weeks, as project construction would move from one area to another.

Due to the temporary operation of diesel engines in proximity to sensitive receptors, including schools, daycare facilities, and residences surrounding the site, the project's TAC emissions were quantified and incorporated into a health-risk analysis for project construction. For TACs, including DPM, which can cause cancer, a unit risk factor can be developed to evaluate cancer risk. For non-cancer health risks, a similar factor called a Hazard Index (HI) is used to evaluate risk. The HI is

calculated by summing the hazard quotients for substances that affect the same target organ or organ system (e.g., respiratory system). The hazard quotient is the ratio of potential exposure to the substance and the level at which no adverse health effects are expected.

An increased cancer risk of 1 in 1 million is considered potentially significant while an increased cancer risk of 10 in 1 million is considered significant. An HI of less than 1 indicates no adverse health effects are expected from exposure, while an HI greater than 1 indicates adverse health effects are possible.

Potential sources of DPM include exhaust emissions from on-road vehicles, off-road vehicles (such as trucks, loaders, backhoes, and excavators), and portable equipment (such as compressors, drills, and generators). The DPM of greatest health concern are those in the categories of fine (PM₁₀) and ultra-fine (PM_{2.5}). These fine and ultra-fine particles are respirable, which means that they can avoid many of the human respiratory system defense mechanisms and enter deeply into the lungs.

Therefore, and as discussed below, the use of diesel-powered engines for project construction could expose nearby sensitive receptors to substantial pollutant concentrations, potentially resulting in adverse health effects. A health risk screening analysis was conducted using the EPA’s AERSCREEN dispersion model to determine if elevated health risks would result from construction activities at these locations near the project area.

The annual screening analysis assumes that sensitive receptors are exposed to the approximately 28 months (580 working days) of construction exhaust for 9 hours per day, which is the ARB assumed total exposure limit for residences. Receptors were placed at distances ranging from 150 to 500 feet (46 to 152 meters) away from construction activities. These sensitive receptor locations were selected for the screening analysis to represent the locations where sensitive receptors at the residences could be exposed to the maximum levels of DPM from construction equipment activities. This analysis considers the total construction DPM emissions that would be emitted at the project site over the length of the construction period. Table I presents the DPM screening analysis results.

Table I: Potential Health Risk from Project Construction DPM Emissions

Estimated Health Impact for Receptors Distance Adjacent to Construction Activities	Cancer Risk (per 1,000,000)	Chronic Hazard Index
Maximum health impact (150 feet from construction activities)	1.91	0.085
SCAQMD Significance Threshold	10	1
Exceedance?	No	No

Source: Compiled by LSA (June 2018).

Note: AERSCREEN model outputs and health risk calculations are provided in Appendix B.

DPM = diesel particulate matter

Table I presents the modeled project-generated construction-related health risk (potential cancer and chronic health risks) from DPM at 150 feet distance from construction activities. This worst-case analysis assumes the nearest receptors are directly downwind of construction activities with 60 to 70 feet elevation difference between the source and the receptors.

The maximum health impact would occur at approximately 150 feet from construction activities, due to the downwind exhaust flow from the construction equipment tailpipes. This 150-foot distance represents the nearby residential area. DPM concentrations reduce significantly beyond 150 feet due to the dispersion that occurs with distance. As shown in Table I, construction-related DPM emissions would not exceed SCAQMD thresholds for increased cancer risk and chronic HI. DPM emissions would represent a minimal increase risk to receptors at the residences.

Therefore, construction of the proposed project is not anticipated to result in an elevated health risk to exposed persons given the short-term and transitory nature of construction-related diesel exposure. The project may create a nuisance for residences, school patrons, and visitors to nearby parks during hours of construction, but this impact is considered minimal because of the short-term and transitory nature of the construction period. Consequently, the human health impact of DPM risks associated with construction activities is considered to be less than significant.

Odors

Heavy-duty equipment in the project area during construction would emit odors, primarily from equipment exhaust. However, construction activity would cease to occur after individual construction is completed. No other sources of objectionable odors have been identified for the proposed project and no mitigation measures are required.

SCAQMD Rule 402 regarding nuisances states: "A person shall not 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." The proposed uses are not anticipated to emit any objectionable odors. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the proposed project.

Naturally Occurring Asbestos

The proposed project is in San Bernardino County, which is among the counties found to have serpentine and ultramafic rock in their soils (California Department of Conservation 2000). However, according to the California Geological Survey, no such rock has been identified in the project vicinity. Therefore, the potential risk for naturally occurring asbestos during project construction is small and less than significant.

Construction Emissions Conclusions

Previously referenced Table H shows that daily regional construction emissions would not exceed the daily thresholds of any criteria pollutant emission thresholds established by SCAQMD; therefore, there will be no significant impact during construction.

LONG-TERM REGIONAL AIR QUALITY IMPACTS

Long-Term Project Operational Emissions

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The proposed project would result in net increases in both stationary- and mobile-source emissions. The stationary-source emissions would come from many sources, including the use of consumer products, landscape equipment, general energy, and solid waste.

Mobile Source Emissions

The first step of an air quality analysis is to characterize the project-related emissions. According to the Traffic Impact Analysis (TRANSTECH 2017), the proposed project would generate a daily trip rate of 386 cars, 68 two- to three-axle trucks, 91 four-plus-axle trucks. The traffic study also characterized the routes and the percentage that the car and truck traffic would travel to and from the project site. The vehicles associated with the project were assumed to operate 24 hours per day, 7 days per week, and 52 weeks per year.

South Coast Air Quality Management District Recommendation

In the last five years, SCAQMD has provided numerous comments on the trip length for warehouse and industrial land use projects. SCAQMD asserts that the model-default trip length in CalEEMod would underestimate emissions. SCAQMD asserts that for warehouse, distribution center, and industrial land use projects, most of the heavy-duty trucks would be hauling consumer goods, often from the Ports of Long Beach and Los Angeles (POLB and POLA, respectively) and/or to destinations outside of California. SCAQMD states that for this reason, CalEEMod default trip length (approximately 16.6 miles) would not be representative of activities at like facilities. SCAQMD generally recommends the use of a 40-mile trip length. Most of the POLA and POLB tenants' CEQA projects in the last 10 years have already analyzed the 40-mile truck trips in their CEQA analyses, and therefore, repeating this 40-mile trip length for the proposed project would be considered double counting the truck emissions in the Basin.

Southern California Association of Governments Heavy Duty Truck Model

SCAG comprises six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 190 cities in Southern California, and is the organization charged with addressing and resolving short- and long-term regional policy issues. The SCAG region also consists of 14 subregional entities recognized by the Regional Council as partners in the regional policy planning process. The SCAG region has more than 19 million residents and encompasses more than 38,000 square miles, representing the largest and most diverse region in the country. SCAG maintains a regional transportation model. In its most recent (2016) transportation validation for the 2008 Regional Model, SCAG indicates the average internal truck trip length for the SCAG region is 24.11 miles for Heavy Duty Trucks.

Vehicle Trip Length Approach for Mobile Source Emission Analysis

The use of the average travel distance of 24.11 miles as the vehicle trip length for all vehicles is deemed to be the most applicable for the proposed project. This same methodology is employed in

analyses for similar projects in the City and other jurisdictions in the County of San Bernardino and is considered by the lead agency to be appropriate and accurate.

Based on the default trip generation factors provided in the *Traffic Impact Analysis* (TRANSTECH 2017) and assuming the average haul truck round trip would be 24.11 miles (the SCAG truck trip length), long-term operational emissions associated with the proposed project are shown in Table J. Because off-road equipment (e.g., forklifts) is typically used in daily operations of warehouses, it was assumed that six forklifts would be used for warehouse operations, and these were included in CalEEMod. While these forklifts could be electric- or compressed natural gas (CNG) powered, because diesel-powered forklifts produce the worst emissions, this analysis includes six diesel-powered forklifts operating 8 hours a day, to be conservative. The 5 percent improvement in energy efficiency achieved for commercial development built to the 2016 California Building Standards, as compared to the 2013 California Building Standards, were accounted for in CalEEMod.

Area sources include architectural coatings, consumer products, hearth, and landscaping. Energy sources include natural gas consumption for heating and cooking. Table J shows the emissions of all criteria pollutants as a result of the proposed project would not exceed the corresponding SCAQMD daily emission thresholds for any criteria pollutants. Therefore, project-related long-term air quality impacts would not be significant and no mitigation would be required.

Table J: Opening Year Regional Operational Emissions

Source	Pollutant Emissions, lbs/day					
	VOC	NOx	CO	SOx	PM ₁₀	PM _{2.5}
Area	5.76	<0.01	0.07	<0.01	<0.01	<0.01
Energy	0.21	1.92	1.61	0.01	0.15	0.15
Mobile	1.53	19.93	19.39	0.11	5.80	1.63
Warehouse Equipment	0.78	7.07	7.01	<0.01	0.50	0.46
Total Project Emissions	8.27	28.93	28.09	0.12	6.45	2.23
SCAQMD Thresholds	55.0	55.0	550.0	150.0	150.0	55.0
Significant?	No	No	No	No	No	No

Source: Compiled by LSA (June 2018).

Note: A representative amount of diesel-powered warehouse equipment (e.g., forklifts) was assumed.

CO = carbon monoxide

lbs/day = pounds per day

NOx = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SOx = sulfur oxides

VOC = volatile organic compounds

Table J shows the operational emission rates would not exceed the thresholds for the project area. Therefore, the proposed operational activity would result in a less than significant air quality impact.

Long-Term Microscale (Carbon Monoxide Hot Spot) Analysis

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic

flow conditions. CO transport is extremely limited; under normal meteorological conditions, CO disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the San Bernardino Station, the closest station with complete monitored CO data, showed a highest recorded 1-hour concentration of 4.1 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 2.4 ppm (the State standard is 9 ppm) during the past 3 years (previously referenced Table E). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

Reduced speeds and vehicular congestion at intersections result in increased CO emissions. As described in the *Traffic Impact Analysis* prepared for the proposed project (TRANSTECH 2017), with the addition of the proposed project in the existing setting and all future scenarios, vehicle speeds and vehicular congestion at all intersections surrounding the project site would stay the same.

Therefore, the project could be implemented in an existing setting with no significant peak-hour intersection impacts. Given the extremely low level of CO concentrations in the project area and the lack of traffic impacts at any surrounding intersections, project-related vehicles are not expected to contribute significantly to CO concentrations exceeding the State or federal CO standards. Because no CO hot spot would occur, there would be no project-related impacts on CO concentrations.

AIR QUALITY MANAGEMENT PLAN CONSISTENCY

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

The AQMP is based on regional growth projections developed by SCAG. The proposed project is an industrial development and is not defined as a regionally significant project under CEQA; therefore, the project does not meet SCAG's Intergovernmental Review criteria.

The proposed land uses require a General Plan amendment and zoning change. The City's General Plan is consistent with and, after the amendment, would continue to be consistent with the SCAG Regional Comprehensive Plan Guidelines and the SCAQMD AQMP. Pursuant to the methodology

provided in Chapter 12 of the 1993 SCAQMD *CEQA Air Quality Handbook*, consistency with the Basin 2016 AQMP is affirmed when a project (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation and (2) is consistent with the growth assumptions in the AQMP. Consistency review is presented below:

1. The project would result in short-term construction pollutant emissions that are all less than the CEQA significance emissions thresholds established by SCAQMD. Long-term operational pollutant emissions would be less than the SCAQMD significance thresholds, as demonstrated above; therefore, the project would not result in an increase in the frequency or severity of an air quality standards violation and would not cause a new air quality standard violation.
2. The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, the proposed project is not defined as significant.

The land use envisioned for the project site would not increase the frequency or severity of an air quality standards violation or cause a new violation, and thus is consistent with the growth assumptions in the AQMP. Based on the consistency analysis presented above, the proposed project would be consistent with the regional AQMP.

GREENHOUSE GAS EMISSIONS

This section evaluates potential significant impacts related to GCC that could result from implementation of the proposed project. Because it is not possible to tie specific GHG emissions to actual changes in climate, this evaluation focuses on the project's emission of GHGs. Mitigation measures are identified as appropriate.

Greenhouse Gas Emissions Background

Emissions estimates for the proposed project are discussed below. GHG emissions estimates are provided herein for informational purposes only because there is no established quantified GHG emissions threshold. Bearing in mind that CEQA does not require "perfection" but instead "adequacy, completeness, and a good faith effort at full disclosure," the analysis below is based on methodologies and information available to the City and the applicant at the time this analysis was prepared. Estimation of GHG emissions in the future does not account for all changes in technology that may reduce such emissions; therefore, the estimates are based on past performance and represent a scenario that is worse than that which is likely to be encountered (after energy-efficient technologies have been implemented). While information is presented below to assist the public and decision-makers in understanding the project's potential contribution to GCC impacts, the information available to the cities is not sufficiently detailed to allow a direct comparison between particular project characteristics and particular climate change impacts or between any particular proposed mitigation measure and any reduction in climate change impacts.

Construction and operation of project development would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during the

project's operation (as opposed to during its construction). Typically, more than 80 percent of the total energy consumption takes place during the use of buildings and less than 20 percent of energy is consumed during construction (United Nations Environment Programme 2007). As of yet, no study quantitatively assesses all of the GHG emissions associated with each phase of the construction and use of an individual development.

Overall, the following activities associated with the proposed project could directly or indirectly contribute to the generation of GHG emissions:

- **Construction Activities:** During project construction, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs (e.g., CO₂, CH₄, and N₂O). Furthermore, CH₄ is emitted during the fueling of heavy equipment.
- **Gas, Electricity, and Water Use:** Natural gas use results in the emission of two GHGs: CH₄ (the major component of natural gas) and CO₂ (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy-intensive. Preliminary estimates indicate that the total energy used to pump and treat this water exceeds 6.5 percent of the total electricity used in the State per year (State of California 2008). To be conservative, the analysis assumes 50 percent of the warehouse buildings would be configured to handle refrigerated products. Also, the proposed project would include indoor low-flow water appliances and outdoor water-efficient irrigation systems.
- **Solid Waste Disposal:** Solid waste generated by the project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and they produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH₄ from the anaerobic decomposition of organic materials. CH₄ is 25 times more potent a GHG than CO₂. However, landfill CH₄ can also be a source of energy. In addition, many materials in landfills do not decompose fully and the carbon that remains is sequestered in the landfill and is not released into the atmosphere.
- **Motor Vehicle Use:** Transportation associated with the proposed project would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips.

GHG emissions associated with the project would occur over the short term from construction activities and would consist primarily of emissions from equipment exhaust. Table K lists the annual CO₂ emissions for each of the planned construction phases. The CalEEMod output in Appendix A provides details.

Long-term operation of the proposed project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with on-site facilities and customers/visitors to the project site. Area-source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, natural gas for heating, and other sources. Increases in stationary-source emissions would also

occur at off-site utility providers as a result of demand for electricity, natural gas, and water by the proposed uses.

Table K: Short-Term Regional Construction Emissions

Construction Phase	Peak Annual Emissions (MT/yr)				Total Emissions per Phase (MT CO ₂ e)
	CO ₂	CH ₄	N ₂ O	CO ₂ e	
2019	—	—	—	—	1,135.26
Site Preparation	17.96	<0.01	0	18.09	—
Grading	782.58	0.19	0	787.31	—
Building Construction	329.04	0.03	0	329.86	—
Architectural Coatings	0	0	0	0	—
Paving	0	0	0	0	—
2020	—	—	—	—	1,248.18
Site Preparation	0	0	0	0	—
Grading	0	0	0	0	—
Building Construction	1,245.15	0.12	0	1,248.18	—
Architectural Coatings	0	0	0	0	—
Paving	0	0	0	0	—
2021	—	—	—	—	218.79
Site Preparation	0	0	0	0	—
Grading	0	0	0	0	—
Building Construction	187.49	0.02	0	187.94	—
Architectural Coatings	21.39	<0.01	0	21.55	—
Paving	9.29	<0.01	0	9.30	—
Total Construction Emissions					2,602.23
Total Construction Emissions Amortized over 30 years					86.74

Source: Compiled by LSA (June 2018).

CH₄ = methane
CO₂ = carbon dioxide
CO₂e = carbon dioxide equivalent
MT CO₂e = metric tons of carbon dioxide equivalent
MT/yr = metric tons per year
N₂O = nitrous oxide

The GHG emission estimates presented in Table L show the emissions associated with the level of development allowed by the current General Plan zoning and envisioned by the proposed project. Appendix A includes the CalEEMod Annual for the annual GHG emissions.

As Table L shows, the proposed project would generate 4,619 MT CO₂e per year. The largest contributors to the total GHG emissions are the emissions from off-site power plants producing the electricity used by the proposed project via Southern California Edison grid power system. This electricity would provide power for building heating, cooling, office equipment, and lighting.

Table L: Long-Term Operational Greenhouse Gas Emissions

Source	Pollutant Emissions (MT/yr)					
	Bio-CO ₂	NBio-CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction Emissions Amortized over 30 Years	0	86.43	86.43	0.01	0	86.74
Operational Emissions						
Area	0	0.02	0.02	<0.01	0	0.02
Energy	0	2,195.18	2,195.18	0.08	0.02	2,203.93
Mobile	0	1,755.39	1,755.39	0.08	0	1,757.32
Warehouse Equipment	0	104.75	104.75	0.03	0	105.59
Waste	50.76	0	50.76	3.00	0	125.76
Water	19.52	255.22	274.74	2.02	0.05	339.87
Total Project Emissions	70.28	4,396.98	4,467.26	5.22	0.07	4,619.23

Source: Compiled by LSA (June 2018).

Bio-CO₂ = biologically generated CO₂
 CH₄ = methane
 CO₂ = carbon dioxide
 CO₂e = carbon dioxide equivalent

MT/yr = metric tons per year
 N₂O = nitrous oxide
 NBio-CO₂ = nonbiologically generated CO₂

The proposed project includes several measures from the City’s CAP that would reduce GHG operational emissions. Table M provides a GHG checklist of the project design features and the effectiveness of GHG emissions reductions. The project proposes sustainability and efficiency measures consistent with the CALGreen Building Code and City’s CAP. These measures would be included as building permit conditions and verified prior to the issuance of final certificate of occupancy. These include, but are not limited to, the project points in Table M.

Table M: Screening for Implementation of Greenhouse Gas Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Reduction Measure PS E3: Commercial/Industrial Energy Efficiency Development			
Building Envelope			
Insulation	2008 baseline (walls R-13; roof/attic R-30)	0 points	—
	Modestly Enhanced Insulation (walls R-13, roof/attic R-38)	15 points	—
	Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38)	18 points	—
	Greatly Enhanced Insulation (spray foam insulated walls R-15 or higher, roof/attic R-38 or higher)	20 points	—
Windows	2008 Baseline Windows (0.57 U-factor, 0.4 solar heat gain coefficient [SHGC])	0 points	0
	Modestly Enhanced Window Insulation (0.4 U-factor, 0.32 SHGC)	7 points	7
	Enhanced Window Insulation (0.32 U-factor, 0.25 SHGC)	8 points	—
	Greatly Enhanced Window Insulation (0.28 or less U-factor, 0.22 or less SHGC)	12 points	—

Table M: Screening for Implementation of Greenhouse Gas Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Cool Roof	Modest Cool Roof (CRRC Rated 0.15 aged solar reflectance, 0.75 thermal emittance)	12 points	—
	Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance)	14 points	—
	Greatly Enhanced Cool Roof (CRRC Rated 0.35 aged solar reflectance, 0.75 thermal emittance)	16 points	—
Air Infiltration	Minimizing leaks in the building envelope is as important as the insulation properties of the building. Insulation does not work effectively if there is excess air leakage.		
	Air barrier applied to exterior walls, caulking, and visual inspection, such as the HERS Verified Quality Insulation Installation (QII or equivalent)	12 points	—
	Blower Door HERS Verified Envelope Leakage or equivalent	10 points	—
Thermal Storage of Building	Thermal storage is a design characteristic that helps keep a constant temperature in the building. Common thermal storage devices include strategically placed water filled columns, water storage tanks, and thick masonry walls.		
	Modest Thermal Mass (10% of floor or 10% of walls 12” or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	4 points	—
	Enhanced Thermal Mass (20% of floor or 20% of walls 12” or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	6 points	—
	Enhanced Thermal Mass (80% of floor or 80% of walls 12” or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	24 points	—
Indoor Space Efficiencies			
Heating/Cooling Distribution System	Minimum Duct Insulation (R-4.2 required)	0 points	—
	Modest Duct insulation (R-6)	8 points	8
	Enhanced Duct Insulation (R-8)	10 points	—
	Distribution loss reduction with inspection (HERS Verified Duct Leakage or equivalent)	14 points	—

Table M: Screening for Implementation of Greenhouse Gas Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Space Heating/ Cooling Equipment	2008 Minimum HVAC Efficiency (EER 13/75% AFUE or 7.7 HSPF)	0 points	—
	Improved Efficiency HVAC (EER 14/78% AFUE or 8 HSPF)	7 points	7
	High Efficiency HVAC (EER 15/80% AFUE or 8.5 HSPF)	8 points	—
	Very High Efficiency HVAC (EER 16/82% AFUE or 9 HSPF)	12 points	—
Commercial Heat Recovery Systems	Heat recovery strategies employed with commercial laundry, cooking equipment, and other commercial heat sources for reuse in HVAC air intake or other appropriate heat recovery technology. Point values for these types of systems will be determined based on design and engineering data documenting the energy savings.	TBD	—
Water Heaters	2008 Minimum Efficiency (0.57 Energy Factor)	0 points	—
	Improved Efficiency Water Heater (0.675 Energy Factor)	14 points	—
	High Efficiency Water Heater (0.72 Energy Factor)	16 points	16
	Very High Efficiency Water Heater (0.92 Energy Factor)	19 points	—
	Solar Preheat System (0.2 Net Solar Fraction)	4 points	—
	Enhanced Solar Preheat System (0.35 Net Solar Fraction)	8 points	—
Daylighting	Daylighting is the ability of each room in the building to provide outside light during the day, reducing the need for artificial lighting during daylight hours.		
	All peripheral rooms in the building have at least one window or skylight	1 points	—
	All rooms in the building have daylight (e.g., through use of windows, solar tubes, and skylights)	5 points	5
	All rooms daylighted	7 points	—
Artificial Lighting	2008 Minimum (required)	0 points	—
	Efficient Lights (25% of in-unit fixtures considered high efficacy. High efficacy is defined as 40 lumens/watt for 15 watt or less fixtures, 50 lumens/watt for 15–40 watt fixtures, and 60 lumens/watt for fixtures > 40 watt)	9 points	—
	High Efficiency Lights (50% of in-unit fixtures are high efficacy)	12 points	12
	Very High Efficiency Lights (100% of in-unit fixtures are high efficacy)	14 points	—
Appliances	Star Commercial Refrigerator (new)	4 points	4
	Energy Star Commercial Dish Washer (new)	4 points	—
	Energy Star Commercial Cloths Washing	4 points	—

Table M: Screening for Implementation of Greenhouse Gas Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Miscellaneous Commercial/Industrial Building Efficiencies			
Building Placement	North/south alignment of building or other building placement such that the orientation of the buildings optimizes conditions for natural heating, cooling, and lighting.	6 point	—
Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on June 21.	6 Points	—
Other	This allows innovation by the applicant to provide design features that increases the energy efficiency of the project not provided in the table. Note that engineering data will be required documenting the energy efficiency of innovative designs and point values given based upon the proven efficiency beyond Title 24 Energy Efficiency Standards.	TBD	None
Existing Commercial Building Retrofits	The applicant may wish to provide energy efficiency retrofit projects to existing commercial buildings to further the point value of their project. Retrofitting existing commercial buildings in the City is a key reduction measure that is needed to reach the reduction goal. The potential for an applicant to take advantage of this program will be decided on a case-by-case basis and must have the approval of the City Planning Department. The decision to allow applicants to ability to participate in this program will be evaluated based on, but not limited to, the following:	TBD	None
	Will the energy efficiency retrofit project benefit low income or disadvantaged communities?		
	Does the energy efficiency retrofit project fit within the overall assumptions in the reduction measure associated with commercial building energy efficiency retrofits?		
	Does the energy efficiency retrofit project provide co-benefits important to the City?		
	Point value will be determined based on the engineering and design criteria of the energy efficiency retrofit project.		
Reduction Measure PS E4: Commercial/Industrial Renewable Energy			
Photovoltaic	Solar photovoltaic panels installed on commercial buildings or in collective arrangements in a commercial development such that the total power provided augments:		

Table M: Screening for Implementation of Greenhouse Gas Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
	Solar Ready Roofs (sturdy roof and electric hookups) 10 percent of the power needs of the project 20 percent of the power needs of the project 30 percent of the power needs of the project 40 percent of the power needs of the project 50 percent of the power needs of the project 60 percent of the power needs of the project 70 percent of the power needs of the project 80 percent of the power needs of the project 90 percent of the power needs of the project 100 percent of the power needs of the project	2 points 8 points 14 points 20 points 26 points 32 points 38 points 44 points 50 points 56 points 60 points	2 — — — — — — — — —
Wind Turbines	Some areas of the City lend themselves to wind turbine applications. Analysis of the area’s capability to support wind turbines should be evaluated prior to choosing this feature. Wind turbines as part of the commercial development such that the total power provided augments: 10 percent of the power needs of the project 20 percent of the power needs of the project 30 percent of the power needs of the project 40 percent of the power needs of the project 50 percent of the power needs of the project 60 percent of the power needs of the project 70 percent of the power needs of the project 80 percent of the power needs of the project 90 percent of the power needs of the project 100 percent of the power needs of the project	8 points 14 points 20 points 26 points 32 points 38 points 44 points 50 points 56 points 60 points	None
Off-Site Renewable Energy Project	The applicant may submit a proposal to supply an off-site renewable energy project such as renewable energy retrofits of existing commercial/industrial that will help implement reduction measures associated with existing buildings. These off-site renewable energy retrofit project proposals will be determined on a case-by-case basis accompanied by a detailed plan documenting the quantity of renewable energy the proposal will generate. Point values will be based on the energy generated by the proposal.	TBD	None

Table M: Screening for Implementation of Greenhouse Gas Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Other Renewable Energy Generation	The applicant may have innovative designs or unique site circumstances (e.g., geothermal) that allow the project to generate electricity from renewable energy not provided in the table. The ability to supply other renewable energy and the point values allowed will be decided based on engineering data documenting the ability to generate electricity.	TBD	None
Reduction Measure PS W2: Commercial/Industrial Water Conservation			
Irrigation and Landscaping			
Water Efficient Landscaping	Eliminate conventional turf from landscaping	0 points	—
	Only moderate water using plants	3 points	—
	Only low water using plants	4 points	4
	Only California Native landscape that requires no or only supplemental irrigation	8 points	—
Trees	Increase tree planting in parking areas 50% beyond City Code requirements	TBD	None
Water Efficient Irrigation Systems	Low precipitation spray heads < 0.75"/hour or drip irrigation	1 point	—
	Weather-based irrigation control systems combined with drip irrigation (demonstrate 20 reduced water use)	5 points	5
Recycled Water	Recycled water connection (purple pipe) to irrigation system on site	5 points	—
Storm Water Reuse Systems	Innovative on-site storm water collection, filtration, and reuse systems are being developed that provide supplemental irrigation water and provide vector control. These systems can greatly reduce the irrigation needs of a project. Point values for these types of systems will be determined based on design and engineering data documenting the water savings.	TBD	None
Potable Water			
Showers	Water Efficient Showerheads (2.0 gpm)	3 points	—
Toilets	Water Efficient Toilets/Urinals (1.5 gpm)	3 points	3
	Waterless Urinals (note that commercial buildings having both waterless urinals and high efficiency toilets will have a combined point value of 6 points)	4 points	—
Faucets	Water Efficient faucets (1.28 gpm)	3 points	3
Commercial Dishwashers	Water Efficient dishwashers (20% water savings)	4 points	—

Table M: Screening for Implementation of Greenhouse Gas Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Commercial Laundry Washers	Water Efficient laundry (15% water savings)	3 points	—
	High Efficiency laundry equipment that captures and reuses rinse water (30% water savings)	6 points	—
Commercial Water Operations Program	Establish an operational program to reduce water loss from pools, water features, etc., by covering pools, adjusting fountain operational hours, and using water treatment to reduce draw down and replacement of water. Point values for these types of plans will be determined based on design and engineering data documenting the water savings.	TBD	—
Reduction Measure PS T1: Land Use Based Trips and VMT Reduction			
Mixed Use	Mixes of land uses that complement one another in a way that reduces the need for vehicle trips can greatly reduce GHG emissions. The point value of mixed-use projects will be determined based on traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled.	TBD	None
Local Retail Near Residential (Commercial-Only Projects)	Having residential developments within walking and biking distance of local retail helps to reduce vehicle trips and/or vehicle miles traveled. The point value of residential projects in close proximity to local retail will be determined based on traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled	TBD	None
Reduction Measure PS T2: Bicycle Infrastructure			
Bicycle Infrastructure	Provide bicycle paths within project boundaries.	TBD	—
	Provide bicycle path linkages between project site and other land uses.	2 points	2
	Provide bicycle path linkages between project site and transit.	5 points	—
Reduction Measure PS T3: Electric Vehicle Infrastructure			
Electric Vehicles	Provide public charging station for use by an electric vehicle (10 points for each charging station in the facility).	10 points	40 2×Bldg 1 1×Bldg 2 1×Bldg 3

Table M: Screening for Implementation of Greenhouse Gas Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Reduction Measure PS T4: Employee Based Trip and VMT Reduction Policy			
Compressed Work Week	Reducing the number of days per week that employees need to be on site will reduce the number of vehicle trips associated with commercial/industrial development. Compressed work week such that full-time employees are on site: 5 days per week 4 days per week 3 days per week	TBD	None
Car/Vanpools	Car/vanpool program Car/vanpool program with preferred parking Car/vanpool with guaranteed ride home program Subsidized employee incentive car/vanpool program Combination of all the above	TBD	None
Employee Bicycle/ Pedestrian Programs	Complete sidewalk to residential within 0.5 mile Complete bike path to residential within 3 miles Bike lockers and secure racks Showers and changing facilities Subsidized employee walk/bike program (Note: combine all applicable points for total value)	TBD	—
Shuttle/Transit Programs	Local transit within 0.25 mile Light rail transit within 0.5 mile Shuttle service to light rail transit station Guaranteed ride home program Subsidized transit passes Note: combine all applicable points for total value	TBD	—
CRT	Employer-based Commute Trip Reduction (CRT). CRTs apply to commercial, offices, or industrial projects that include a reduction of vehicle trip or VMT goals using a variety of employee commute trip reduction methods. The point value will be determined based upon a TIA that demonstrates the trip/VMT reductions. Suggested point ranges: Incentive-based CRT Programs (1–8 points) Mandatory CRT programs (5–20 points)	TBD	—

Table M: Screening for Implementation of Greenhouse Gas Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Other Trip Reductions	Other trip or VMT reduction measures not listed above with TIA and/or other traffic data supporting the trip and/or VMT for the project.	TBD	—
Total Points from Commercial/Industrial Project:			118

AFUE = Annual Fuel Utilization Efficiency
 CRRC = Cool Roof Rating Council
 City = City of Colton
 CRT = Commute Trip Reduction
 EER = Energy Efficient Ratio
 GHG = greenhouse gas
 gpm = gallons per minute
 HERS = Home Energy Rating System

hr = hour
 HSPF = Heating Seasonal Performance Factor
 HVAC = heating, ventilation, and air conditioning
 lumens/watt = lumens per watt
 SHGC = solar heat gain coefficient
 TBD = to be determined
 TIA = Traffic Impact Analysis
 VMT = vehicle miles traveled

As Table M shows, the proposed project would garner more than 100 points on the Screening Table for implementation of GHG reduction measures for commercial development in Colton. Hence, the proposed project’s operational GHG emissions would be less than significant.

STANDARD CONDITIONS

Construction

The project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and, thus, the PM₁₀ component). Compliance with these rules would reduce impacts on nearby sensitive receptors (SCAQMD Rule 403).¹² As shown in previously referenced Table H, implementation of Rule 403 measures results in dust emissions below SCAQMD thresholds.

The applicable Rule 403 measures are as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers’ specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least twice daily (locations where grading is to occur will be thoroughly watered prior to earthmoving).
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meter (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.

¹² SCAQMD. Rule 403. Website: <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf>, accessed September 2017.

- Pave construction access roads at least 30 meters (100 feet) onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.

The applicable California Department of Resources Recycling and Recovery Sustainable (Green) Building Program Measures are:

- Recycle/reuse at least 50 percent of the construction material (including, but not limited to, soil, mulch, vegetation, concrete, lumber, metal, and cardboard).¹³
- Use “green building materials” such as those materials that are rapidly renewable or resource-efficient, and recycled and manufactured in an environmentally friendly way, for at least 10 percent of the project.

These construction measures would be included in the building plans as a project design feature.

Operations

The proposed project is required to comply with Title 24 of the California Code of Regulations established by the CEC regarding energy conservation and green building standards. The project applicant shall incorporate the following in building plans as project design features:

Energy Efficiency Measures

- Design all project buildings to meet or exceed the California Building Code’s (CBC) Title 24 energy standard, including, but not limited to, any combination of the following:
 - Increase insulation such that heat transfer and thermal bridging is minimized;
 - Limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption; and
 - Incorporate ENERGY STAR® or better rated windows, space heating and cooling equipment, light fixtures, appliances, or other applicable electrical equipment.
- Install efficient lighting and lighting control systems. Use daylight as an integral part of the lighting systems in buildings.

Electric Vehicle Supply Equipment and Parking Spaces Measures

Consistent with the City’s Discretionary Approval process, the following measure will be implemented.

- Electric Vehicle Supply Equipment and Parking Spaces:¹⁴

¹³ California Department of Resources Recycling and Recovery. Construction and Demolition Debris Recycling. Website: <http://www.calrecycle.ca.gov/ConDemo>, accessed September 2017.

¹⁴ CALGreen Code Sections 5.106.5.3 and A5.106.5.3 contains the EV Charging Infrastructure Provisions. Also, Davis-Stirling Common Interest Development Act, which includes the requirements to promote, encourage, and remove obstacles to the use of EVSE in multi-unit dwelling units.

- A minimum of 4 parking spaces for the project shall be capable of supporting future electric vehicle supply equipment (EVSE). Project plans indicate the proposed type and locations of EVSE and also include wiring schematics and electrical calculations verify that the electric system has sufficient capacity to simultaneously charge all electric vehicles (EVs) at all designated EV-charging locations at their full rated amperage. Plan designs are based upon Level 2 or greater EVSE at maximum operating capacity. A label stating “EV Capable” will be posted in a conspicuous place at the service panel or subpanel.
- The EV charging stations would be installed in a minimum of four parking spaces, two at warehouse Building 1 and one each at warehouse Buildings 2 and 3.
- Require all new warehouse buildings with the use of refrigerated trucks and with more than 50 truck trips per day shall provide electrical hookups for the refrigerated units to reduce idling and its associated air quality pollutants.
- Require signage (posted inside and outside of the warehouse facility) to inform truck drivers of ARB regulations, idling limits, authorized truck routes, and designated truck parking locations. Post signs requesting truck drivers to turn off engines when not in use and restrict idling within facilities to less than 5 minutes.

In addition, the project would be subject to all applicable regulatory requirements and City’s CAP measures, which would also reduce the criteria pollutant and GHG emissions of the project.

CUMULATIVE IMPACTS

The project would contribute criteria pollutants to the area during project construction. A number of individual projects in the area may be under construction simultaneously with the proposed project. Depending on construction schedules and actual implementation of projects in the area, generation of fugitive dust and pollutant emissions during construction could result in substantial short-term increases in air pollutants. However, each project would be required to comply with SCAQMD’s standard construction measures. The proposed project’s short-term construction emissions would not exceed the significance thresholds. Therefore, the project will not have a significant short-term cumulative impact.

The project’s long-term operational emissions would not exceed SCAQMD’s criteria pollutant thresholds. Because climate change impacts are cumulative in nature, no typical single project can result in emissions of such a magnitude that it, in and of itself, would be significant on a project basis. Because the project would garner more than 100 points on the City GHG screening table, the proposed project would result in less than significant cumulative impacts related to global climate change. Therefore, the proposed project would not result in a significant long-term cumulative impact.

REFERENCES

- California Air Resources Board (ARB). 2017a. California Greenhouse Gas Inventory for 2017. Webpage last reviewed by ARB on June 6, 2017. Website: <https://www.arb.ca.gov/cc/inventory/data/data.htm>, accessed June 2018.
- . 2017b. Air Quality Standards and Area Designations. Webpage last reviewed by the ARB on October 18, 2017. Website: <http://www.arb.ca.gov/desig/desig.htm>, accessed June 2018.
- . 2017c. Second Update to the California's 2017 Climate Change Scoping Plan. Website: <https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm>, accessed June 2018.
- . 2016. Ambient Air Quality Standards. Website: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>, accessed June 2018.
- . 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework Pursuant to AB 32, the California Global Warming Solutions Act of 2006*. May. Website: <http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm>, accessed June 2018.
- . 2012. Advanced Clean Cars Program. Website: <https://www.arb.ca.gov/msprog/acc/acc.htm>, accessed in June 2018.
- . 2008. *AB 32 Climate Change Scoping Plan Document*. December. Available at: <https://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm>, accessed June 2018.
- . 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.
- . ARB Fact Sheet: Air Pollution and Health. Webpage last reviewed by the ARB on December 2, 2009. Website: <http://www.arb.ca.gov/research/health/fs/fs1/fs1.htm>, accessed June 2018.
- . iADAM: Air Quality Data Statistics. Website: <http://www.arb.ca.gov/adam>, accessed June 2018.
- California Building Standards Commission. 2016. California Building Standards Code (California Code of Regulations, Title 24). Website: <http://www.bsc.ca.gov/codes.aspx>, accessed June 2018.
- California Department of Conservation. California Geological Survey. Asbestos. Website: http://www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos/Pages/index.aspx, accessed June 2018.
- . 2000. A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos. August. Website: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf, accessed June 2018.

California Department of Resources Recycling and Recovery (CalRecycle). Construction and Demolition Debris Recycling. Website: <http://www.calrecycle.ca.gov/ConDemo>, accessed June 2018.

California Energy Commission (CEC). 2015. Existing Buildings Energy Efficiency Action Plan. September. Website: http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-05/TN206015_20150904T153548_Existing_Buildings_Energy_Efficiency_Action_Plan.pdf, accessed June 2018.

California Environmental Protection Agency. 2010. Climate Action Team Report to Governor Schwarzenegger and the California Legislature. December. Website: <http://www.energy.ca.gov/2010publications/CAT-1000-2010-005/CAT-1000-2010-005.PDF>, accessed June 2018.

City of Colton. 2015. Climate Action Plan. November 3.

———. 1991. *General Plan*. Air Quality Element.

County of San Bernardino. 2014. *Regional Greenhouse Gas Reduction Plan*. March. Website: <http://www.gosbcta.com/plans-projects/plans/greenhouse-gas/SBC-RegionalGreenHouseGasReduction-Final.pdf>, accessed June 2018.

———. Greenhouse Gas Emissions Development Review Processes. Updated March 2015. Website: <http://www.sbcounty.gov/Uploads/lus/GreenhouseGas/FinalGHGUpdate.pdf>, accessed June 2018.

Intergovernmental Panel on Climate Change (IPCC). 2013. Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC. Website: <http://www.ipcc.ch/report/ar5/wg1/>, accessed June 2018.

———. IPCC. 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth 26 Assessment Report of the Intergovernmental Panel on Climate Change*. [S. Solomon, D. Qin, M. Manning, Z. Chen, 27 M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press. Cambridge, United Kingdom 996 pp. Website: https://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm, accessed in June 2018.

San Bernardino Associated Governments (SANBAG). 2015. *SANBAG CAP Implementation Tools Final Report: CAP Implementation Strategies*. October. Website: <http://www.gosbcta.com/plans-projects/plans/greenhouse-gas/CAP-ImplementationStrategiesReport.pdf>, accessed June 2018.

South Coast Air Quality Management District (SCAQMD). 2017. Final 2016 Air Quality Management Plan. March. Website: <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>, accessed June 2018.

-
- _____. 2015a. May. Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV). Website: <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iv>, accessed June 2018.
- _____. 2015b. SCAQMD Air Quality Significance Thresholds. Website: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>, accessed June 2018.
- _____. 2008, September. Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III). Website: <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iii>, accessed June 2018.
- _____. 2006. *Final – Methodology to Calculate Particulate Matter (PM)_{2.5} and PM_{2.5} Significance Thresholds*. October. Website: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/particulate-matter-\(pm\)-2.5-significance-thresholds-and-calculation-methodology/final_pm2_5methodology.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/particulate-matter-(pm)-2.5-significance-thresholds-and-calculation-methodology/final_pm2_5methodology.pdf), accessed June 2018.
- _____. 2005. Rule 403: Fugitive Dust. Website: <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf?sfvrsn=4>, accessed June 2018.
- _____. 1977 (amended). Rule 1113: Architectural Coatings. Website: <http://www.aqmd.gov/home/rules-compliance/compliance/vocs/architectural-coatings>, accessed June 2018.
- _____. 1993. *CEQA Air Quality Handbook*. April. Website: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook>, accessed June 2018.
- _____. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. Website: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2), accessed June 2018.
- TRANSTECH Engineers, Inc. 2017. *Traffic Impact Analysis for the Proposed Tropica Warehouse Project*. August 23, 2017.
- United Nations Environment Programme. 2007. *Buildings and Climate Change: Status, Challenges and Opportunities*. Paris, France. Website: <http://www.unep.fr/shared/publications/pdf/DTIx0916xPA-BuildingsClimate.pdf>, accessed June 2018.
- United Nations Framework Convention on Climate Change (UNFCCC). 2015. Combined Total of Annex I and Non-Annex I Country CO₂e emissions. Greenhouse Gas Inventory Data. Website: http://unfccc.int/ghg_data/ghg_data_unfccc/items/4146.php, accessed June 2018.
- United States Environmental Protection Agency (EPA). 2017. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2014*. EPA 430-R-16-002. April 15. Washington, D.C. Website: <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>, accessed June 2018.
-

———. 2010. *Methane and Nitrous Oxide Emissions from Natural Sources*. April.

———. 2014–2016 Air Quality Data. Website: <https://www.epa.gov/outdoor-air-quality-data/monitor-values-report>, accessed June 2018.

Western Regional Climate Center. Website: <http://www.wrcc.dri.edu>, accessed June 2018.

APPENDIX A

CALEEMOD MODEL PRINTOUTS

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

Colton Tropica Warehouse
San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	133.02	1000sqft	3.05	133,015.00	0
Unrefrigerated Warehouse-No Rail	133.02	1000sqft	3.05	133,015.00	0
Other Non-Asphalt Surfaces	10.02	Acre	10.02	436,471.20	0
Parking Lot	241.00	Space	2.17	96,400.00	0
Parking Lot	212.00	Space	1.91	84,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

tblConstEquipMitigation	DPF	No Change	Level 1
tblConstEquipMitigation	DPF	No Change	Level 1
tblConstEquipMitigation	DPF	No Change	Level 1
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	35.00	160.00
tblConstructionPhase	PhaseEndDate	4/12/2019	1/14/2019

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

tblConstructionPhase	PhaseEndDate	5/31/2019	9/26/2019
tblConstructionPhase	PhaseEndDate	10/30/2020	2/25/2021
tblConstructionPhase	PhaseEndDate	11/27/2020	3/24/2021
tblConstructionPhase	PhaseEndDate	12/25/2020	4/21/2021
tblConstructionPhase	PhaseStartDate	4/1/2019	1/1/2019
tblConstructionPhase	PhaseStartDate	4/13/2019	2/15/2019
tblConstructionPhase	PhaseStartDate	6/1/2019	9/27/2019
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tblConstructionPhase	PhaseStartDate	11/28/2020	3/25/2021
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tblFleetMix	HHD	0.06	0.17
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tblFleetMix	HHD	0.06	0.17
tblFleetMix	LDA	0.55	0.35
tblFleetMix	LDA	0.55	0.35
tblFleetMix	LDA	0.55	0.35
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tblFleetMix	LDT1	0.04	0.17
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Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

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tblFleetMix	LHD1	0.02	0.00
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tblFleetMix	MHD	0.02	0.13
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tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
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Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

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tblFleetMix	UBUS	1.6070e-003	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
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tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblVehicleTrips	CW_TL	16.60	24.11
tblVehicleTrips	CW_TL	16.60	24.11

2.0 Emissions Summary

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

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					
2019	5.4606	79.4039	38.0668	0.1040	18.2675	2.4139	20.6592	9.9840	2.2219	12.1844	0.0000	10,532.3889	10,532.3889	2.6478	0.0000	10,598.5844
2020	4.6100	35.7310	34.0178	0.1025	5.0756	1.2155	6.2911	1.3672	1.1436	2.5108	0.0000	10,301.5764	10,301.5764	1.0331	0.0000	10,327.4027
2021	49.2586	45.4608	47.4132	0.1254	5.2433	1.6886	6.9318	1.4117	1.5738	2.9854	0.0000	12,515.4152	12,515.4152	1.7244	0.0000	12,558.5245
Maximum	49.2586	79.4039	47.4132	0.1254	18.2675	2.4139	20.6592	9.9840	2.2219	12.1844	0.0000	12,515.4152	12,515.4152	2.6478	0.0000	12,558.5245

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					
2019	4.1024	76.1224	41.4126	0.1040	7.2470	1.0313	7.9580	3.9263	1.0299	4.6372	0.0000	10,532.3889	10,532.3889	2.6478	0.0000	10,598.5844
2020	3.8073	39.9804	35.3133	0.1025	5.0756	0.7864	5.8620	1.3672	0.7811	2.1483	0.0000	10,301.5764	10,301.5764	1.0331	0.0000	10,327.4027
2021	49.2586	58.5972	51.5762	0.1254	5.2433	1.2276	6.4708	1.4117	1.2243	2.6360	0.0000	12,515.4152	12,515.4152	1.7244	0.0000	12,558.5245
Maximum	49.2586	76.1224	51.5762	0.1254	7.2470	1.2276	7.9580	3.9263	1.2243	4.6372	0.0000	12,515.4152	12,515.4152	2.6478	0.0000	12,558.5245

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

	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
Percent Reduction	3.64	-8.78	-7.37	0.00	38.55	42.74	40.11	47.46	38.55	46.71	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	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702
Energy	0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694
Mobile	1.3988	19.9346	17.2115	0.1011	5.7247	0.0744	5.7990	1.5563	0.0703	1.6266		10,476.8051	10,476.8051	0.4816		10,488.8453
Offroad	0.7760	7.0748	7.0071	9.1700e-003		0.5022	0.5022		0.4620	0.4620		888.1850	888.1850	0.2873		895.3664
Total	8.1460	28.9318	25.9076	0.1219	5.7247	0.7229	6.4475	1.5563	0.6786	2.2349		13,671.3146	13,671.3146	0.8135	0.0423	13,704.2512

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

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	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702
Energy	0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694
Mobile	1.3988	19.9346	17.2115	0.1011	5.7247	0.0744	5.7990	1.5563	0.0703	1.6266		10,476.8051	10,476.8051	0.4816		10,488.8453
Offroad	0.7760	7.0748	7.0071	9.1700e-003		0.5022	0.5022		0.4620	0.4620		888.1850	888.1850	0.2873		895.3664
Total	8.1460	28.9318	25.9076	0.1219	5.7247	0.7229	6.4475	1.5563	0.6786	2.2349		13,671.3146	13,671.3146	0.8135	0.0423	13,704.2512

	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
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

Colton Tropica Warehouse - 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	1/1/2019	1/14/2019	5	10	
2	Grading	Grading	2/15/2019	9/26/2019	5	160	
3	Building Construction	Building Construction	9/27/2019	2/25/2021	5	370	
4	Paving	Paving	2/25/2021	3/24/2021	5	20	
5	Architectural Coating	Architectural Coating	3/25/2021	4/21/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20.2

Acres of Paving: 14.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 39,905; Non-Residential Outdoor: 133,015; Striped Parking Area: 37,060 (Architectural Coating – sqft)

OffRoad Equipment

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	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	8	20.00	0.00	31,275.00	14.70	6.90	2.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	371.00	145.00	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	74.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298		3,766.4529	3,766.4529	1.1917		3,796.2445

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.2 Site Preparation - 2019

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	0.1066	0.0747	0.7388	1.8900e-003	0.2012	1.3500e-003	0.2026	0.0534	1.2500e-003	0.0546		188.3485	188.3485	6.1800e-003		188.5030
Total	0.1066	0.0747	0.7388	1.8900e-003	0.2012	1.3500e-003	0.2026	0.0534	1.2500e-003	0.0546		188.3485	188.3485	6.1800e-003		188.5030

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0380		0.7096	0.7096		0.7096	0.7096	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	1.2097	33.7214	22.9600	0.0380	7.0458	0.7096	7.7555	3.8730	0.7096	4.5826	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.2 Site Preparation - 2019

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	0.1066	0.0747	0.7388	1.8900e-003	0.2012	1.3500e-003	0.2026	0.0534	1.2500e-003	0.0546		188.3485	188.3485	6.1800e-003		188.5030
Total	0.1066	0.0747	0.7388	1.8900e-003	0.2012	1.3500e-003	0.2026	0.0534	1.2500e-003	0.0546		188.3485	188.3485	6.1800e-003		188.5030

3.3 Grading - 2019

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					6.3328	0.0000	6.3328	3.3515	0.0000	3.3515			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	4.7389	54.5202	33.3768	0.0620	6.3328	2.3827	8.7155	3.3515	2.1920	5.5435		6,140.0195	6,140.0195	1.9426		6,188.5854

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.3 Grading - 2019

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	0.6033	24.8007	3.8691	0.0395	0.3458	0.0298	0.3756	0.0952	0.0285	0.1237		4,183.0933	4,183.0933	0.6983		4,200.5512
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	0.1184	0.0830	0.8209	2.1000e-003	0.2236	1.5000e-003	0.2251	0.0593	1.3800e-003	0.0607		209.2761	209.2761	6.8700e-003		209.4478
Total	0.7217	24.8837	4.6901	0.0416	0.5694	0.0313	0.6007	0.1544	0.0299	0.1843		4,392.3695	4,392.3695	0.7052		4,409.9990

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					2.4698	0.0000	2.4698	1.3071	0.0000	1.3071			0.0000			0.0000
Off-Road	1.8106	51.2386	36.7226	0.0620		1.0000	1.0000		1.0000	1.0000	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	1.8106	51.2386	36.7226	0.0620	2.4698	1.0000	3.4698	1.3071	1.0000	2.3071	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.3 Grading - 2019

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	0.6033	24.8007	3.8691	0.0395	0.3458	0.0298	0.3756	0.0952	0.0285	0.1237		4,183.093 3	4,183.093 3	0.6983		4,200.551 2
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	0.1184	0.0830	0.8209	2.1000e-003	0.2236	1.5000e-003	0.2251	0.0593	1.3800e-003	0.0607		209.2761	209.2761	6.8700e-003		209.4478
Total	0.7217	24.8837	4.6901	0.0416	0.5694	0.0313	0.6007	0.1544	0.0299	0.1843		4,392.369 5	4,392.369 5	0.7052		4,409.999 0

3.4 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.4 Building Construction - 2019

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	0.5461	16.6005	3.9040	0.0381	0.9287	0.1058	1.0345	0.2674	0.1012	0.3686		4,015.761 1	4,015.761 1	0.3115		4,023.549 5
Worker	2.1962	1.5405	15.2281	0.0390	4.1469	0.0279	4.1748	1.0998	0.0257	1.1255		3,882.071 9	3,882.071 9	0.1274		3,885.255 8
Total	2.7422	18.1409	19.1321	0.0771	5.0756	0.1337	5.2093	1.3672	0.1269	1.4941		7,897.833 0	7,897.833 0	0.4389		7,908.805 3

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	1.3602	23.4883	18.1841	0.0269		0.7007	0.7007		0.7007	0.7007	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	1.3602	23.4883	18.1841	0.0269		0.7007	0.7007		0.7007	0.7007	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.4 Building Construction - 2019

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	0.5461	16.6005	3.9040	0.0381	0.9287	0.1058	1.0345	0.2674	0.1012	0.3686		4,015.761 1	4,015.761 1	0.3115		4,023.549 5
Worker	2.1962	1.5405	15.2281	0.0390	4.1469	0.0279	4.1748	1.0998	0.0257	1.1255		3,882.071 9	3,882.071 9	0.1274		3,885.255 8
Total	2.7422	18.1409	19.1321	0.0771	5.0756	0.1337	5.2093	1.3672	0.1269	1.4941		7,897.833 0	7,897.833 0	0.4389		7,908.805 3

3.4 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.4 Building Construction - 2020

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	0.4642	15.1776	3.4563	0.0378	0.9287	0.0713	1.0000	0.2674	0.0682	0.3356		3,987.5016	3,987.5016	0.2979		3,994.9496
Worker	2.0259	1.3674	13.7130	0.0378	4.1469	0.0272	4.1741	1.0998	0.0250	1.1248		3,761.0117	3,761.0117	0.1123		3,763.8186
Total	2.4902	16.5450	17.1693	0.0756	5.0756	0.0985	5.1741	1.3672	0.0932	1.4604		7,748.5133	7,748.5133	0.4102		7,758.7682

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	1.3171	23.4354	18.1439	0.0269		0.6879	0.6879		0.6879	0.6879	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	1.3171	23.4354	18.1439	0.0269		0.6879	0.6879		0.6879	0.6879	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.4 Building Construction - 2020

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	0.4642	15.1776	3.4563	0.0378	0.9287	0.0713	1.0000	0.2674	0.0682	0.3356		3,987.5016	3,987.5016	0.2979		3,994.9496
Worker	2.0259	1.3674	13.7130	0.0378	4.1469	0.0272	4.1741	1.0998	0.0250	1.1248		3,761.0117	3,761.0117	0.1123		3,763.8186
Total	2.4902	16.5450	17.1693	0.0756	5.0756	0.0985	5.1741	1.3672	0.0932	1.4604		7,748.5133	7,748.5133	0.4102		7,758.7682

3.4 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.4 Building Construction - 2021

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	0.3980	13.8346	3.0778	0.0376	0.9287	0.0247	0.9533	0.2674	0.0236	0.2910		3,966.2594	3,966.2594	0.2891		3,973.4855
Worker	1.8892	1.2255	12.5976	0.0366	4.1469	0.0265	4.1734	1.0998	0.0244	1.1242		3,641.3564	3,641.3564	0.1014		3,643.8903
Total	2.2872	15.0601	15.6754	0.0742	5.0756	0.0512	5.1268	1.3672	0.0480	1.4152		7,607.6158	7,607.6158	0.3904		7,617.3759

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	1.2777	23.3730	18.0957	0.0269		0.6751	0.6751		0.6751	0.6751	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.2777	23.3730	18.0957	0.0269		0.6751	0.6751		0.6751	0.6751	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.4 Building Construction - 2021

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	0.3980	13.8346	3.0778	0.0376	0.9287	0.0247	0.9533	0.2674	0.0236	0.2910		3,966.2594	3,966.2594	0.2891		3,973.4855
Worker	1.8892	1.2255	12.5976	0.0366	4.1469	0.0265	4.1734	1.0998	0.0244	1.1242		3,641.3564	3,641.3564	0.1014		3,643.8903
Total	2.2872	15.0601	15.6754	0.0742	5.0756	0.0512	5.1268	1.3672	0.0480	1.4152		7,607.6158	7,607.6158	0.3904		7,617.3759

3.5 Paving - 2021

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.5345					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7900	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.5 Paving - 2021

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	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271
Total	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9311	20.1146	17.2957	0.0228		0.5002	0.5002		0.5002	0.5002	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.5345					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4655	20.1146	17.2957	0.0228		0.5002	0.5002		0.5002	0.5002	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.5 Paving - 2021

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	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271
Total	0.0764	0.0496	0.5093	1.4800e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		147.2247	147.2247	4.1000e-003		147.3271

3.6 Architectural Coating - 2021

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	48.6629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	48.8818	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.6 Architectural Coating - 2021

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	0.3768	0.2444	2.5127	7.2900e-003	0.8272	5.2900e-003	0.8324	0.2194	4.8700e-003	0.2242		726.3083	726.3083	0.0202		726.8137
Total	0.3768	0.2444	2.5127	7.2900e-003	0.8272	5.2900e-003	0.8324	0.2194	4.8700e-003	0.2242		726.3083	726.3083	0.0202		726.8137

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	48.6629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	48.8818	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

3.6 Architectural Coating - 2021

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	0.3768	0.2444	2.5127	7.2900e-003	0.8272	5.2900e-003	0.8324	0.2194	4.8700e-003	0.2242		726.3083	726.3083	0.0202		726.8137
Total	0.3768	0.2444	2.5127	7.2900e-003	0.8272	5.2900e-003	0.8324	0.2194	4.8700e-003	0.2242		726.3083	726.3083	0.0202		726.8137

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

	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	1.3988	19.9346	17.2115	0.1011	5.7247	0.0744	5.7990	1.5563	0.0703	1.6266		10,476.80 51	10,476.80 51	0.4816		10,488.84 53
Unmitigated	1.3988	19.9346	17.2115	0.1011	5.7247	0.0744	5.7990	1.5563	0.0703	1.6266		10,476.80 51	10,476.80 51	0.4816		10,488.84 53

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	223.47	223.47	223.47	1,293,796	1,293,796
Unrefrigerated Warehouse-No Rail	223.47	223.47	223.47	1,293,796	1,293,796
Total	446.93	446.93	446.93	2,587,592	2,587,592

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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 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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	24.11	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	24.11	8.40	6.90	59.00	0.00	41.00	92	5	3

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000
Parking Lot	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000
Refrigerated Warehouse-No Rail	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000

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	0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694
NaturalGas Unmitigated	0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

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 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
Refrigerated Warehouse-No Rail	18862.6	0.2034	1.8493	1.5534	0.0111		0.1406	0.1406		0.1406	0.1406		2,219.1318	2,219.1318	0.0425	0.0407	2,232.3190
Unrefrigerated Warehouse-No Rail	739.782	7.9800e-003	0.0725	0.0609	4.4000e-004		5.5100e-003	5.5100e-003		5.5100e-003	5.5100e-003		87.0332	87.0332	1.6700e-003	1.6000e-003	87.5504
Total		0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

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 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
Refrigerated Warehouse-No Rail	18.8626	0.2034	1.8493	1.5534	0.0111		0.1406	0.1406		0.1406	0.1406		2,219.1318	2,219.1318	0.0425	0.0407	2,232.3190
Unrefrigerated Warehouse-No Rail	0.739782	7.9800e-003	0.0725	0.0609	4.4000e-004		5.5100e-003	5.5100e-003		5.5100e-003	5.5100e-003		87.0332	87.0332	1.6700e-003	1.6000e-003	87.5504
Total		0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

	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	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702
Unmitigated	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702

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	0.2667					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.4862					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9800e-003	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702
Total	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

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	0.2667					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.4862					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9800e-003	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702
Total	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	6	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	0.7760	7.0748	7.0071	9.1700e-003		0.5022	0.5022		0.4620	0.4620		888.1850	888.1850	0.2873		895.3664
Total	0.7760	7.0748	7.0071	9.1700e-003		0.5022	0.5022		0.4620	0.4620		888.1850	888.1850	0.2873		895.3664

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Colton Tropica Warehouse - San Bernardino-South Coast County, Winter

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

Colton Tropica Warehouse
San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	133.02	1000sqft	3.05	133,015.00	0
Unrefrigerated Warehouse-No Rail	133.02	1000sqft	3.05	133,015.00	0
Other Non-Asphalt Surfaces	10.02	Acre	10.02	436,471.20	0
Parking Lot	241.00	Space	2.17	96,400.00	0
Parking Lot	212.00	Space	1.91	84,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

tblConstEquipMitigation	DPF	No Change	Level 1
tblConstEquipMitigation	DPF	No Change	Level 1
tblConstEquipMitigation	DPF	No Change	Level 1
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	35.00	160.00
tblConstructionPhase	PhaseEndDate	4/12/2019	1/14/2019

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

tblConstructionPhase	PhaseEndDate	5/31/2019	9/26/2019
tblConstructionPhase	PhaseEndDate	10/30/2020	2/25/2021
tblConstructionPhase	PhaseEndDate	11/27/2020	3/24/2021
tblConstructionPhase	PhaseEndDate	12/25/2020	4/21/2021
tblConstructionPhase	PhaseStartDate	4/1/2019	1/1/2019
tblConstructionPhase	PhaseStartDate	4/13/2019	2/15/2019
tblConstructionPhase	PhaseStartDate	6/1/2019	9/27/2019
tblConstructionPhase	PhaseStartDate	10/31/2020	2/25/2021
tblConstructionPhase	PhaseStartDate	11/28/2020	3/25/2021
tblFleetMix	HHD	0.06	0.17
tblFleetMix	HHD	0.06	0.17
tblFleetMix	HHD	0.06	0.17
tblFleetMix	HHD	0.06	0.17
tblFleetMix	LDA	0.55	0.35
tblFleetMix	LDA	0.55	0.35
tblFleetMix	LDA	0.55	0.35
tblFleetMix	LDA	0.55	0.35
tblFleetMix	LDT1	0.04	0.17
tblFleetMix	LDT1	0.04	0.17
tblFleetMix	LDT1	0.04	0.17
tblFleetMix	LDT1	0.04	0.17
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MHD	0.02	0.13
tblFleetMix	MHD	0.02	0.13
tblFleetMix	MHD	0.02	0.13
tblFleetMix	MHD	0.02	0.13
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	UBUS	1.6070e-003	0.00

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

tblFleetMix	UBUS	1.6070e-003	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblGrading	AcresOfGrading	400.00	20.20
tblGrading	MaterialImported	0.00	250,200.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	6.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblVehicleTrips	CW_TL	16.60	24.11
tblVehicleTrips	CW_TL	16.60	24.11

2.0 Emissions Summary

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

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					
2019	5.4012	80.2743	39.0526	0.1100	18.2675	2.4110	20.6592	9.9840	2.2191	12.1844	0.0000	11,095.6750	11,095.6750	2.5721	0.0000	11,122.1464
2020	4.5849	35.7872	36.5155	0.1084	5.0756	1.2146	6.2902	1.3672	1.1427	2.5099	0.0000	10,894.1452	10,894.1452	1.0203	0.0000	10,919.6528
2021	49.2578	45.5469	49.8394	0.1313	5.2433	1.6879	6.9312	1.4117	1.5731	2.9848	0.0000	13,110.2705	13,110.2705	1.7109	0.0000	13,153.0417
Maximum	49.2578	80.2743	49.8394	0.1313	18.2675	2.4110	20.6592	9.9840	2.2191	12.1844	0.0000	13,110.2705	13,110.2705	2.5721	0.0000	13,153.0417

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					
2019	4.0799	76.9928	40.4631	0.1100	7.2470	1.0283	7.9580	3.9263	1.0270	4.6372	0.0000	11,095.6750	11,095.6750	2.5721	0.0000	11,122.1464
2020	3.7821	40.0366	37.8109	0.1084	5.0756	0.7855	5.8611	1.3672	0.7803	2.1475	0.0000	10,894.1452	10,894.1452	1.0203	0.0000	10,919.6528
2021	49.2578	58.6833	54.0024	0.1313	5.2433	1.2269	6.4702	1.4117	1.2237	2.6353	0.0000	13,110.2705	13,110.2705	1.7109	0.0000	13,153.0417
Maximum	49.2578	76.9928	54.0024	0.1313	7.2470	1.2269	7.9580	3.9263	1.2237	4.6372	0.0000	13,110.2705	13,110.2705	2.5721	0.0000	13,153.0417

Colton Tropic Warehouse - San Bernardino-South Coast County, Summer

	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
Percent Reduction	3.59	-8.73	-5.48	0.00	38.55	42.77	40.12	47.46	38.58	46.72	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	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702
Energy	0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694
Mobile	1.5273	19.7984	19.3922	0.1065	5.7247	0.0737	5.7984	1.5563	0.0696	1.6259		11,020.4082	11,020.4082	0.4653		11,032.0406
Offroad	0.7760	7.0748	7.0071	9.1700e-003		0.5022	0.5022		0.4620	0.4620		888.1850	888.1850	0.2873		895.3664
Total	8.2745	28.7957	28.0884	0.1272	5.7247	0.7222	6.4469	1.5563	0.6779	2.2343		14,214.9177	14,214.9177	0.7972	0.0423	14,247.4465

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

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	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702
Energy	0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694
Mobile	1.5273	19.7984	19.3922	0.1065	5.7247	0.0737	5.7984	1.5563	0.0696	1.6259		11,020.4082	11,020.4082	0.4653		11,032.0406
Offroad	0.7760	7.0748	7.0071	9.1700e-003		0.5022	0.5022		0.4620	0.4620		888.1850	888.1850	0.2873		895.3664
Total	8.2745	28.7957	28.0884	0.1272	5.7247	0.7222	6.4469	1.5563	0.6779	2.2343		14,214.9177	14,214.9177	0.7972	0.0423	14,247.4465

	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
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

Colton Tropica Warehouse - 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	1/1/2019	1/14/2019	5	10	
2	Grading	Grading	2/15/2019	9/26/2019	5	160	
3	Building Construction	Building Construction	9/27/2019	2/25/2021	5	370	
4	Paving	Paving	2/25/2021	3/24/2021	5	20	
5	Architectural Coating	Architectural Coating	3/25/2021	4/21/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20.2

Acres of Paving: 14.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 39,905; Non-Residential Outdoor: 133,015; Striped Parking Area: 37,060 (Architectural Coating – sqft)

OffRoad Equipment

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	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	8	20.00	0.00	31,275.00	14.70	6.90	2.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	371.00	145.00	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	74.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	4.3350	45.5727	22.0630	0.0380	18.0663	2.3904	20.4566	9.9307	2.1991	12.1298		3,766.4529	3,766.4529	1.1917		3,796.2445

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.2 Site Preparation - 2019

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	0.1067	0.0710	0.8973	2.1100e-003	0.2012	1.3500e-003	0.2026	0.0534	1.2500e-003	0.0546		209.9549	209.9549	7.0400e-003		210.1309
Total	0.1067	0.0710	0.8973	2.1100e-003	0.2012	1.3500e-003	0.2026	0.0534	1.2500e-003	0.0546		209.9549	209.9549	7.0400e-003		210.1309

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					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	1.2097	33.7214	22.9600	0.0380		0.7096	0.7096		0.7096	0.7096	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	1.2097	33.7214	22.9600	0.0380	7.0458	0.7096	7.7555	3.8730	0.7096	4.5826	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.2 Site Preparation - 2019

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	0.1067	0.0710	0.8973	2.1100e-003	0.2012	1.3500e-003	0.2026	0.0534	1.2500e-003	0.0546		209.9549	209.9549	7.0400e-003		210.1309
Total	0.1067	0.0710	0.8973	2.1100e-003	0.2012	1.3500e-003	0.2026	0.0534	1.2500e-003	0.0546		209.9549	209.9549	7.0400e-003		210.1309

3.3 Grading - 2019

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					6.3328	0.0000	6.3328	3.3515	0.0000	3.3515			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	4.7389	54.5202	33.3768	0.0620	6.3328	2.3827	8.7155	3.3515	2.1920	5.5435		6,140.0195	6,140.0195	1.9426		6,188.5854

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.3 Grading - 2019

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	0.5437	25.6753	2.7435	0.0435	0.3458	0.0268	0.3727	0.0952	0.0257	0.1208		4,607.4044	4,607.4044	0.6216		4,622.9443
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	0.1186	0.0789	0.9970	2.3400e-003	0.2236	1.5000e-003	0.2251	0.0593	1.3800e-003	0.0607		233.2832	233.2832	7.8200e-003		233.4787
Total	0.6623	25.7541	3.7405	0.0459	0.5694	0.0283	0.5977	0.1544	0.0271	0.1815		4,840.6876	4,840.6876	0.6294		4,856.4230

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					2.4698	0.0000	2.4698	1.3071	0.0000	1.3071			0.0000			0.0000
Off-Road	1.8106	51.2386	36.7226	0.0620		1.0000	1.0000		1.0000	1.0000	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	1.8106	51.2386	36.7226	0.0620	2.4698	1.0000	3.4698	1.3071	1.0000	2.3071	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.3 Grading - 2019

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	0.5437	25.6753	2.7435	0.0435	0.3458	0.0268	0.3727	0.0952	0.0257	0.1208		4,607.404 4	4,607.404 4	0.6216		4,622.944 3
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	0.1186	0.0789	0.9970	2.3400e-003	0.2236	1.5000e-003	0.2251	0.0593	1.3800e-003	0.0607		233.2832	233.2832	7.8200e-003		233.4787
Total	0.6623	25.7541	3.7405	0.0459	0.5694	0.0283	0.5977	0.1544	0.0271	0.1815		4,840.687 6	4,840.687 6	0.6294		4,856.423 0

3.4 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.4 Building Construction - 2019

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	0.5201	16.6964	3.3952	0.0396	0.9287	0.1044	1.0331	0.2674	0.0999	0.3673		4,176.6918	4,176.6918	0.2824		4,183.7523
Worker	2.1996	1.4631	18.4936	0.0435	4.1469	0.0279	4.1748	1.0998	0.0257	1.1255		4,327.4030	4,327.4030	0.1451		4,331.0306
Total	2.7197	18.1594	21.8888	0.0831	5.0756	0.1323	5.2079	1.3672	0.1256	1.4928		8,504.0948	8,504.0948	0.4275		8,514.7829

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	1.3602	23.4883	18.1841	0.0269		0.7007	0.7007		0.7007	0.7007	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	1.3602	23.4883	18.1841	0.0269		0.7007	0.7007		0.7007	0.7007	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.4 Building Construction - 2019

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	0.5201	16.6964	3.3952	0.0396	0.9287	0.1044	1.0331	0.2674	0.0999	0.3673		4,176.6918	4,176.6918	0.2824		4,183.7523
Worker	2.1996	1.4631	18.4936	0.0435	4.1469	0.0279	4.1748	1.0998	0.0257	1.1255		4,327.4030	4,327.4030	0.1451		4,331.0306
Total	2.7197	18.1594	21.8888	0.0831	5.0756	0.1323	5.2079	1.3672	0.1256	1.4928		8,504.0948	8,504.0948	0.4275		8,514.7829

3.4 Building Construction - 2020

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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.4 Building Construction - 2020

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	0.4402	15.3017	2.9821	0.0393	0.9287	0.0704	0.9991	0.2674	0.0674	0.3348		4,148.470 1	4,148.470 1	0.2695		4,155.206 5
Worker	2.0249	1.2995	16.6849	0.0421	4.1469	0.0272	4.1741	1.0998	0.0250	1.1248		4,192.612 1	4,192.612 1	0.1280		4,195.811 9
Total	2.4650	16.6012	19.6670	0.0815	5.0756	0.0976	5.1732	1.3672	0.0924	1.4596		8,341.082 2	8,341.082 2	0.3975		8,351.018 4

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	1.3171	23.4354	18.1439	0.0269		0.6879	0.6879		0.6879	0.6879	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	1.3171	23.4354	18.1439	0.0269		0.6879	0.6879		0.6879	0.6879	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.4 Building Construction - 2020

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	0.4402	15.3017	2.9821	0.0393	0.9287	0.0704	0.9991	0.2674	0.0674	0.3348		4,148.470 1	4,148.470 1	0.2695		4,155.206 5
Worker	2.0249	1.2995	16.6849	0.0421	4.1469	0.0272	4.1741	1.0998	0.0250	1.1248		4,192.612 1	4,192.612 1	0.1280		4,195.811 9
Total	2.4650	16.6012	19.6670	0.0815	5.0756	0.0976	5.1732	1.3672	0.0924	1.4596		8,341.082 2	8,341.082 2	0.3975		8,351.018 4

3.4 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.4 Building Construction - 2021

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	0.3752	13.9834	2.6312	0.0391	0.9287	0.0240	0.9527	0.2674	0.0229	0.2903		4,126.5450	4,126.5450	0.2608		4,133.0644
Worker	1.8850	1.1652	15.3588	0.0408	4.1469	0.0265	4.1734	1.0998	0.0244	1.1242		4,059.0387	4,059.0387	0.1155		4,061.9269
Total	2.2603	15.1486	17.9900	0.0799	5.0756	0.0505	5.1261	1.3672	0.0474	1.4145		8,185.5837	8,185.5837	0.3763		8,194.9913

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	1.2777	23.3730	18.0957	0.0269		0.6751	0.6751		0.6751	0.6751	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.2777	23.3730	18.0957	0.0269		0.6751	0.6751		0.6751	0.6751	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.4 Building Construction - 2021

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	0.3752	13.9834	2.6312	0.0391	0.9287	0.0240	0.9527	0.2674	0.0229	0.2903		4,126.5450	4,126.5450	0.2608		4,133.0644
Worker	1.8850	1.1652	15.3588	0.0408	4.1469	0.0265	4.1734	1.0998	0.0244	1.1242		4,059.0387	4,059.0387	0.1155		4,061.9269
Total	2.2603	15.1486	17.9900	0.0799	5.0756	0.0505	5.1261	1.3672	0.0474	1.4145		8,185.5837	8,185.5837	0.3763		8,194.9913

3.5 Paving - 2021

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.5345					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7900	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.5 Paving - 2021

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	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9311	20.1146	17.2957	0.0228		0.5002	0.5002		0.5002	0.5002	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.5345					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4655	20.1146	17.2957	0.0228		0.5002	0.5002		0.5002	0.5002	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.5 Paving - 2021

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	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289
Total	0.0762	0.0471	0.6210	1.6500e-003	0.1677	1.0700e-003	0.1687	0.0445	9.9000e-004	0.0455		164.1121	164.1121	4.6700e-003		164.2289

3.6 Architectural Coating - 2021

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	48.6629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	48.8818	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.6 Architectural Coating - 2021

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	0.3760	0.2324	3.0635	8.1300e-003	0.8272	5.2900e-003	0.8324	0.2194	4.8700e-003	0.2242		809.6196	809.6196	0.0230		810.1957
Total	0.3760	0.2324	3.0635	8.1300e-003	0.8272	5.2900e-003	0.8324	0.2194	4.8700e-003	0.2242		809.6196	809.6196	0.0230		810.1957

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	48.6629					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	48.8818	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

3.6 Architectural Coating - 2021

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	0.3760	0.2324	3.0635	8.1300e-003	0.8272	5.2900e-003	0.8324	0.2194	4.8700e-003	0.2242		809.6196	809.6196	0.0230		810.1957
Total	0.3760	0.2324	3.0635	8.1300e-003	0.8272	5.2900e-003	0.8324	0.2194	4.8700e-003	0.2242		809.6196	809.6196	0.0230		810.1957

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

	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	1.5273	19.7984	19.3922	0.1065	5.7247	0.0737	5.7984	1.5563	0.0696	1.6259		11,020.4082	11,020.4082	0.4653		11,032.0406
Unmitigated	1.5273	19.7984	19.3922	0.1065	5.7247	0.0737	5.7984	1.5563	0.0696	1.6259		11,020.4082	11,020.4082	0.4653		11,032.0406

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	223.47	223.47	223.47	1,293,796	1,293,796
Unrefrigerated Warehouse-No Rail	223.47	223.47	223.47	1,293,796	1,293,796
Total	446.93	446.93	446.93	2,587,592	2,587,592

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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 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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	24.11	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	24.11	8.40	6.90	59.00	0.00	41.00	92	5	3

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000
Parking Lot	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000
Refrigerated Warehouse-No Rail	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000

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	0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694
NaturalGas Unmitigated	0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

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 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	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	0.0000
Refrigerated Warehouse-No Rail	18862.6	0.2034	1.8493	1.5534	0.0111		0.1406	0.1406		0.1406	0.1406		2,219.1318	2,219.1318	0.0425	0.0407	2,232.3190	
Unrefrigerated Warehouse-No Rail	739.782	7.9800e-003	0.0725	0.0609	4.4000e-004		5.5100e-003	5.5100e-003		5.5100e-003	5.5100e-003		87.0332	87.0332	1.6700e-003	1.6000e-003	87.5504	
Total		0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694	

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

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 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
Refrigerated Warehouse-No Rail	18.8626	0.2034	1.8493	1.5534	0.0111		0.1406	0.1406		0.1406	0.1406		2,219.1318	2,219.1318	0.0425	0.0407	2,232.3190
Unrefrigerated Warehouse-No Rail	0.739782	7.9800e-003	0.0725	0.0609	4.4000e-004		5.5100e-003	5.5100e-003		5.5100e-003	5.5100e-003		87.0332	87.0332	1.6700e-003	1.6000e-003	87.5504
Total		0.2114	1.9218	1.6143	0.0115		0.1461	0.1461		0.1461	0.1461		2,306.1650	2,306.1650	0.0442	0.0423	2,319.8694

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

	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	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702
Unmitigated	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702

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	0.2667					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.4862					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9800e-003	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702
Total	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702

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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	0.2667					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	5.4862					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.9800e-003	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702
Total	5.7598	6.9000e-004	0.0747	1.0000e-005		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004		0.1596	0.1596	4.2000e-004		0.1702

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

Colton Tropica Warehouse - San Bernardino-South Coast County, Summer

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	6	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	0.7760	7.0748	7.0071	9.1700e-003		0.5022	0.5022		0.4620	0.4620		888.1850	888.1850	0.2873		895.3664
Total	0.7760	7.0748	7.0071	9.1700e-003		0.5022	0.5022		0.4620	0.4620		888.1850	888.1850	0.2873		895.3664

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Refrigerated Warehouse-No Rail	133.02	1000sqft	3.05	133,015.00	0
Unrefrigerated Warehouse-No Rail	133.02	1000sqft	3.05	133,015.00	0
Other Non-Asphalt Surfaces	10.02	Acre	10.02	436,471.20	0
Parking Lot	241.00	Space	2.17	96,400.00	0
Parking Lot	212.00	Space	1.91	84,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	32
Climate Zone	10			Operational Year	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	702.44	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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tblConstEquipMitigation	DPF	No Change	Level 1
tblConstEquipMitigation	DPF	No Change	Level 1
tblConstEquipMitigation	DPF	No Change	Level 1
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	35.00	160.00
tblConstructionPhase	PhaseEndDate	4/12/2019	1/14/2019

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tblConstructionPhase	PhaseEndDate	5/31/2019	9/26/2019
tblConstructionPhase	PhaseEndDate	10/30/2020	2/25/2021
tblConstructionPhase	PhaseEndDate	11/27/2020	3/24/2021
tblConstructionPhase	PhaseEndDate	12/25/2020	4/21/2021
tblConstructionPhase	PhaseStartDate	4/1/2019	1/1/2019
tblConstructionPhase	PhaseStartDate	4/13/2019	2/15/2019
tblConstructionPhase	PhaseStartDate	6/1/2019	9/27/2019
tblConstructionPhase	PhaseStartDate	10/31/2020	2/25/2021
tblConstructionPhase	PhaseStartDate	11/28/2020	3/25/2021
tblFleetMix	HHD	0.06	0.17
tblFleetMix	HHD	0.06	0.17
tblFleetMix	HHD	0.06	0.17
tblFleetMix	HHD	0.06	0.17
tblFleetMix	LDA	0.55	0.35
tblFleetMix	LDA	0.55	0.35
tblFleetMix	LDA	0.55	0.35
tblFleetMix	LDA	0.55	0.35
tblFleetMix	LDT1	0.04	0.17
tblFleetMix	LDT1	0.04	0.17
tblFleetMix	LDT1	0.04	0.17
tblFleetMix	LDT1	0.04	0.17
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00

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tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	LHD2	5.2670e-003	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MH	1.0100e-003	0.00
tblFleetMix	MHD	0.02	0.13
tblFleetMix	MHD	0.02	0.13
tblFleetMix	MHD	0.02	0.13
tblFleetMix	MHD	0.02	0.13
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	OBUS	1.3480e-003	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	SBUS	8.1200e-004	0.00
tblFleetMix	UBUS	1.6070e-003	0.00

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tblFleetMix	UBUS	1.6070e-003	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblFleetMix	UBUS	1.6070e-003	0.00
tblGrading	AcresOfGrading	400.00	20.20
tblGrading	MaterialImported	0.00	250,200.00
tblOperationalOffRoadEquipment	OperFuelType	Diesel	CNG
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	6.00
tblTripsAndVMT	HaulingTripLength	20.00	2.00
tblVehicleTrips	CW_TL	16.60	24.11
tblVehicleTrips	CW_TL	16.60	24.11

2.0 Emissions Summary

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2.1 Overall Construction

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	tons/yr										MT/yr					
2019	0.6214	7.9796	4.3654	0.0123	0.8121	0.2533	1.0654	0.3759	0.2342	0.6100	0.0000	1,129.5785	1,129.5785	0.2272	0.0000	1,135.2580
2020	0.5767	4.7298	4.5162	0.0137	0.6527	0.1592	0.8118	0.1761	0.1497	0.3258	0.0000	1,245.1459	1,245.1459	0.1213	0.0000	1,248.1782
2021	0.5907	0.8042	0.8497	2.4000e-003	0.1094	0.0280	0.1374	0.0295	0.0262	0.0557	0.0000	218.1663	218.1663	0.0249	0.0000	218.7889
Maximum	0.6214	7.9796	4.5162	0.0137	0.8121	0.2533	1.0654	0.3759	0.2342	0.6100	0.0000	1,245.1459	1,245.1459	0.2272	0.0000	1,248.1782

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	tons/yr										MT/yr					
2019	0.3375	7.7398	4.6722	0.0123	0.4480	0.1143	0.5622	0.1821	0.1139	0.2960	0.0000	1,129.5779	1,129.5779	0.2272	0.0000	1,135.2573
2020	0.4716	5.2865	4.6859	0.0137	0.6527	0.1030	0.7556	0.1761	0.1023	0.2784	0.0000	1,245.1455	1,245.1455	0.1213	0.0000	1,248.1779
2021	0.5750	0.9949	0.9066	2.4000e-003	0.1094	0.0205	0.1299	0.0295	0.0205	0.0499	0.0000	218.1662	218.1662	0.0249	0.0000	218.7889
Maximum	0.5750	7.7398	4.6859	0.0137	0.6527	0.1143	0.7556	0.1821	0.1139	0.2960	0.0000	1,245.1455	1,245.1455	0.2272	0.0000	1,248.1779

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	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
Percent Reduction	22.63	-3.76	-5.48	0.00	23.13	46.03	28.14	33.34	42.30	37.04	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2019	6-30-2019	2.7845	2.5826
2	7-1-2019	9-30-2019	2.7560	2.5628
3	10-1-2019	12-31-2019	1.4563	1.5026
4	1-1-2020	3-31-2020	1.3111	1.4231
5	4-1-2020	6-30-2020	1.3121	1.4241
6	7-1-2020	9-30-2020	1.3265	1.4398
7	10-1-2020	12-31-2020	1.3255	1.4387
8	1-1-2021	3-31-2021	1.0095	1.1846
9	4-1-2021	6-30-2021	0.3826	0.3826
		Highest	2.7845	2.5826

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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	tons/yr										MT/yr					
Area	1.0508	9.0000e-005	9.3400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0181	0.0181	5.0000e-005	0.0000	0.0193
Energy	0.0386	0.3507	0.2946	2.1000e-003		0.0267	0.0267		0.0267	0.0267	0.0000	2,195.1767	2,195.1767	0.0822	0.0225	2,203.9330
Mobile	0.2494	3.6997	3.2084	0.0187	1.0232	0.0134	1.0366	0.2787	0.0127	0.2914	0.0000	1,755.3886	1,755.3886	0.0773	0.0000	1,757.3211
Offroad	0.1009	0.9197	0.9109	1.1900e-003		0.0653	0.0653		0.0601	0.0601	0.0000	104.7472	104.7472	0.0339	0.0000	105.5942
Waste						0.0000	0.0000		0.0000	0.0000	50.7599	0.0000	50.7599	2.9998	0.0000	125.7556
Water						0.0000	0.0000		0.0000	0.0000	19.5166	255.2204	274.7369	2.0151	0.0495	339.8682
Total	1.4396	4.9703	4.4233	0.0220	1.0232	0.1054	1.1286	0.2787	0.0995	0.3781	70.2765	4,310.5510	4,380.8274	5.2083	0.0720	4,532.4912

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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	tons/yr										MT/yr					
Area	1.0508	9.0000e-005	9.3400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0181	0.0181	5.0000e-005	0.0000	0.0193
Energy	0.0386	0.3507	0.2946	2.1000e-003		0.0267	0.0267		0.0267	0.0267	0.0000	2,195.1767	2,195.1767	0.0822	0.0225	2,203.9330
Mobile	0.2494	3.6997	3.2084	0.0187	1.0232	0.0134	1.0366	0.2787	0.0127	0.2914	0.0000	1,755.3886	1,755.3886	0.0773	0.0000	1,757.3211
Offroad	0.1009	0.9197	0.9109	1.1900e-003		0.0653	0.0653		0.0601	0.0601	0.0000	104.7472	104.7472	0.0339	0.0000	105.5942
Waste						0.0000	0.0000		0.0000	0.0000	12.6900	0.0000	12.6900	0.7500	0.0000	31.4389
Water						0.0000	0.0000		0.0000	0.0000	15.6132	204.1763	219.7895	1.6121	0.0396	271.8945
Total	1.4396	4.9703	4.4233	0.0220	1.0232	0.1054	1.1286	0.2787	0.0995	0.3781	28.3032	4,259.5069	4,287.8101	2.5554	0.0621	4,370.2009

	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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	59.73	1.18	2.12	50.94	13.75	3.58

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2019	1/14/2019	5	10	
2	Grading	Grading	2/15/2019	9/26/2019	5	160	
3	Building Construction	Building Construction	9/27/2019	2/25/2021	5	370	
4	Paving	Paving	2/25/2021	3/24/2021	5	20	
5	Architectural Coating	Architectural Coating	3/25/2021	4/21/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 20.2

Acres of Paving: 14.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 39,905; Non-Residential Outdoor: 133,015; Striped Parking Area: 37,060 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	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	8	20.00	0.00	31,275.00	14.70	6.90	2.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	371.00	145.00	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	74.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

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3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Site Preparation - 2019

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	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0217	0.2279	0.1103	1.9000e-004		0.0120	0.0120		0.0110	0.0110	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	0.0217	0.2279	0.1103	1.9000e-004	0.0903	0.0120	0.1023	0.0497	0.0110	0.0607	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

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3.2 Site Preparation - 2019

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	tons/yr										MT/yr					
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	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	0.0000	0.0000
Worker	4.8000e-004	3.9000e-004	3.8800e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8731	0.8731	3.0000e-005	0.0000	0.8738
Total	4.8000e-004	3.9000e-004	3.8800e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8731	0.8731	3.0000e-005	0.0000	0.8738

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	tons/yr										MT/yr					
Fugitive Dust					0.0352	0.0000	0.0352	0.0194	0.0000	0.0194	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0500e-003	0.1686	0.1148	1.9000e-004		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195
Total	6.0500e-003	0.1686	0.1148	1.9000e-004	0.0352	3.5500e-003	0.0388	0.0194	3.5500e-003	0.0229	0.0000	17.0843	17.0843	5.4100e-003	0.0000	17.2195

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3.2 Site Preparation - 2019

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	tons/yr										MT/yr					
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	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	0.0000	0.0000
Worker	4.8000e-004	3.9000e-004	3.8800e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8731	0.8731	3.0000e-005	0.0000	0.8738
Total	4.8000e-004	3.9000e-004	3.8800e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8731	0.8731	3.0000e-005	0.0000	0.8738

3.3 Grading - 2019

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	tons/yr										MT/yr					
Fugitive Dust					0.5066	0.0000	0.5066	0.2681	0.0000	0.2681	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3791	4.3616	2.6701	4.9600e-003		0.1906	0.1906		0.1754	0.1754	0.0000	445.6106	445.6106	0.1410	0.0000	449.1352
Total	0.3791	4.3616	2.6701	4.9600e-003	0.5066	0.1906	0.6972	0.2681	0.1754	0.4435	0.0000	445.6106	445.6106	0.1410	0.0000	449.1352

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3.3 Grading - 2019

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	tons/yr										MT/yr					
Hauling	0.0456	2.0352	0.2604	3.3500e-003	0.0272	2.2500e-003	0.0295	7.5000e-003	2.1500e-003	9.6500e-003	0.0000	321.4478	321.4478	0.0476	0.0000	322.6380
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	0.0000	0.0000
Worker	8.5800e-003	7.0000e-003	0.0689	1.7000e-004	0.0175	1.2000e-004	0.0177	4.6600e-003	1.1000e-004	4.7700e-003	0.0000	15.5210	15.5210	5.1000e-004	0.0000	15.5339
Total	0.0541	2.0422	0.3293	3.5200e-003	0.0448	2.3700e-003	0.0471	0.0122	2.2600e-003	0.0144	0.0000	336.9688	336.9688	0.0481	0.0000	338.1719

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	tons/yr										MT/yr					
Fugitive Dust					0.1976	0.0000	0.1976	0.1046	0.0000	0.1046	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1449	4.0991	2.9378	4.9600e-003		0.0800	0.0800		0.0800	0.0800	0.0000	445.6100	445.6100	0.1410	0.0000	449.1347
Total	0.1449	4.0991	2.9378	4.9600e-003	0.1976	0.0800	0.2776	0.1046	0.0800	0.1846	0.0000	445.6100	445.6100	0.1410	0.0000	449.1347

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3.3 Grading - 2019

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	tons/yr										MT/yr					
Hauling	0.0456	2.0352	0.2604	3.3500e-003	0.0272	2.2500e-003	0.0295	7.5000e-003	2.1500e-003	9.6500e-003	0.0000	321.4478	321.4478	0.0476	0.0000	322.6380
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	0.0000	0.0000
Worker	8.5800e-003	7.0000e-003	0.0689	1.7000e-004	0.0175	1.2000e-004	0.0177	4.6600e-003	1.1000e-004	4.7700e-003	0.0000	15.5210	15.5210	5.1000e-004	0.0000	15.5339
Total	0.0541	2.0422	0.3293	3.5200e-003	0.0448	2.3700e-003	0.0471	0.0122	2.2600e-003	0.0144	0.0000	336.9688	336.9688	0.0481	0.0000	338.1719

3.4 Building Construction - 2019

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	tons/yr										MT/yr					
Off-Road	0.0803	0.7167	0.5836	9.2000e-004		0.0439	0.0439		0.0412	0.0412	0.0000	79.9354	79.9354	0.0195	0.0000	80.4223
Total	0.0803	0.7167	0.5836	9.2000e-004		0.0439	0.0439		0.0412	0.0412	0.0000	79.9354	79.9354	0.0195	0.0000	80.4223

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3.4 Building Construction - 2019

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	tons/yr										MT/yr					
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	0.0000	0.0000
Vendor	0.0180	0.5758	0.1248	1.3300e-003	0.0311	3.5700e-003	0.0347	8.9700e-003	3.4200e-003	0.0124	0.0000	126.7423	126.7423	9.1200e-003	0.0000	126.9703
Worker	0.0677	0.0552	0.5434	1.3600e-003	0.1383	9.5000e-004	0.1393	0.0367	8.7000e-004	0.0376	0.0000	122.3640	122.3640	4.0400e-003	0.0000	122.4650
Total	0.0857	0.6309	0.6681	2.6900e-003	0.1694	4.5200e-003	0.1739	0.0457	4.2900e-003	0.0500	0.0000	249.1063	249.1063	0.0132	0.0000	249.4354

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	tons/yr										MT/yr					
Off-Road	0.0463	0.7986	0.6183	9.2000e-004		0.0238	0.0238		0.0238	0.0238	0.0000	79.9353	79.9353	0.0195	0.0000	80.4222
Total	0.0463	0.7986	0.6183	9.2000e-004		0.0238	0.0238		0.0238	0.0238	0.0000	79.9353	79.9353	0.0195	0.0000	80.4222

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3.4 Building Construction - 2019

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	tons/yr										MT/yr					
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	0.0000	0.0000
Vendor	0.0180	0.5758	0.1248	1.3300e-003	0.0311	3.5700e-003	0.0347	8.9700e-003	3.4200e-003	0.0124	0.0000	126.7423	126.7423	9.1200e-003	0.0000	126.9703
Worker	0.0677	0.0552	0.5434	1.3600e-003	0.1383	9.5000e-004	0.1393	0.0367	8.7000e-004	0.0376	0.0000	122.3640	122.3640	4.0400e-003	0.0000	122.4650
Total	0.0857	0.6309	0.6681	2.6900e-003	0.1694	4.5200e-003	0.1739	0.0457	4.2900e-003	0.0500	0.0000	249.1063	249.1063	0.0132	0.0000	249.4354

3.4 Building Construction - 2020

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	tons/yr										MT/yr					
Off-Road	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596
Total	0.2777	2.5134	2.2072	3.5300e-003		0.1463	0.1463		0.1376	0.1376	0.0000	303.4091	303.4091	0.0740	0.0000	305.2596

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3.4 Building Construction - 2020

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	tons/yr										MT/yr					
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	0.0000	0.0000
Vendor	0.0589	2.0278	0.4241	5.0700e-003	0.1198	9.2700e-003	0.1290	0.0346	8.8700e-003	0.0434	0.0000	484.9748	484.9748	0.0336	0.0000	485.8137
Worker	0.2401	0.1887	1.8850	5.0600e-003	0.5329	3.5600e-003	0.5365	0.1415	3.2800e-003	0.1448	0.0000	456.7620	456.7620	0.0137	0.0000	457.1049
Total	0.2990	2.2165	2.3090	0.0101	0.6527	0.0128	0.6655	0.1761	0.0122	0.1882	0.0000	941.7368	941.7368	0.0473	0.0000	942.9186

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	tons/yr										MT/yr					
Off-Road	0.1725	3.0700	2.3769	3.5300e-003		0.0901	0.0901		0.0901	0.0901	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592
Total	0.1725	3.0700	2.3769	3.5300e-003		0.0901	0.0901		0.0901	0.0901	0.0000	303.4087	303.4087	0.0740	0.0000	305.2592

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3.4 Building Construction - 2020

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	tons/yr										MT/yr					
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	0.0000	0.0000
Vendor	0.0589	2.0278	0.4241	5.0700e-003	0.1198	9.2700e-003	0.1290	0.0346	8.8700e-003	0.0434	0.0000	484.9748	484.9748	0.0336	0.0000	485.8137
Worker	0.2401	0.1887	1.8850	5.0600e-003	0.5329	3.5600e-003	0.5365	0.1415	3.2800e-003	0.1448	0.0000	456.7620	456.7620	0.0137	0.0000	457.1049
Total	0.2990	2.2165	2.3090	0.0101	0.6527	0.0128	0.6655	0.1761	0.0122	0.1882	0.0000	941.7368	941.7368	0.0473	0.0000	942.9186

3.4 Building Construction - 2021

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	tons/yr										MT/yr					
Off-Road	0.0380	0.3486	0.3315	5.4000e-004		0.0192	0.0192		0.0180	0.0180	0.0000	46.3275	46.3275	0.0112	0.0000	46.6069
Total	0.0380	0.3486	0.3315	5.4000e-004		0.0192	0.0192		0.0180	0.0180	0.0000	46.3275	46.3275	0.0112	0.0000	46.6069

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3.4 Building Construction - 2021

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	tons/yr										MT/yr					
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	0.0000	0.0000
Vendor	7.6900e-003	0.2821	0.0574	7.7000e-004	0.0183	4.9000e-004	0.0188	5.2800e-003	4.6000e-004	5.7400e-003	0.0000	73.6494	73.6494	4.9600e-003	0.0000	73.7734
Worker	0.0342	0.0258	0.2644	7.5000e-004	0.0814	5.3000e-004	0.0819	0.0216	4.9000e-004	0.0221	0.0000	67.5146	67.5146	1.8900e-003	0.0000	67.5619
Total	0.0418	0.3080	0.3218	1.5200e-003	0.0996	1.0200e-003	0.1007	0.0269	9.5000e-004	0.0278	0.0000	141.1640	141.1640	6.8500e-003	0.0000	141.3353

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	tons/yr										MT/yr					
Off-Road	0.0256	0.4675	0.3619	5.4000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	46.3274	46.3274	0.0112	0.0000	46.6068
Total	0.0256	0.4675	0.3619	5.4000e-004		0.0135	0.0135		0.0135	0.0135	0.0000	46.3274	46.3274	0.0112	0.0000	46.6068

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3.4 Building Construction - 2021

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	tons/yr										MT/yr					
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	0.0000	0.0000
Vendor	7.6900e-003	0.2821	0.0574	7.7000e-004	0.0183	4.9000e-004	0.0188	5.2800e-003	4.6000e-004	5.7400e-003	0.0000	73.6494	73.6494	4.9600e-003	0.0000	73.7734
Worker	0.0342	0.0258	0.2644	7.5000e-004	0.0814	5.3000e-004	0.0819	0.0216	4.9000e-004	0.0221	0.0000	67.5146	67.5146	1.8900e-003	0.0000	67.5619
Total	0.0418	0.3080	0.3218	1.5200e-003	0.0996	1.0200e-003	0.1007	0.0269	9.5000e-004	0.0278	0.0000	141.1640	141.1640	6.8500e-003	0.0000	141.3353

3.5 Paving - 2021

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	tons/yr										MT/yr					
Off-Road	0.0126	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	5.3400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0179	0.1292	0.1465	2.3000e-004		6.7800e-003	6.7800e-003		6.2400e-003	6.2400e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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3.5 Paving - 2021

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	tons/yr										MT/yr					
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	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	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658

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	tons/yr										MT/yr					
Off-Road	9.3100e-003	0.2012	0.1730	2.3000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854
Paving	5.3400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0147	0.2012	0.1730	2.3000e-004		5.0000e-003	5.0000e-003		5.0000e-003	5.0000e-003	0.0000	20.0235	20.0235	6.4800e-003	0.0000	20.1854

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3.5 Paving - 2021

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	tons/yr										MT/yr					
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	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	0.0000	0.0000
Worker	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658
Total	6.9000e-004	5.2000e-004	5.3400e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3649	1.3649	4.0000e-005	0.0000	1.3658

3.6 Architectural Coating - 2021

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	tons/yr										MT/yr					
Archit. Coating	0.4866					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	0.4888	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

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3.6 Architectural Coating - 2021

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	tons/yr										MT/yr					
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	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	0.0000	0.0000
Worker	3.4100e-003	2.5700e-003	0.0264	7.0000e-005	8.1100e-003	5.0000e-005	8.1700e-003	2.1500e-003	5.0000e-005	2.2000e-003	0.0000	6.7333	6.7333	1.9000e-004	0.0000	6.7380
Total	3.4100e-003	2.5700e-003	0.0264	7.0000e-005	8.1100e-003	5.0000e-005	8.1700e-003	2.1500e-003	5.0000e-005	2.2000e-003	0.0000	6.7333	6.7333	1.9000e-004	0.0000	6.7380

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	tons/yr										MT/yr					
Archit. Coating	0.4866					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	0.4888	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576

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3.6 Architectural Coating - 2021

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	tons/yr										MT/yr					
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	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	0.0000	0.0000
Worker	3.4100e-003	2.5700e-003	0.0264	7.0000e-005	8.1100e-003	5.0000e-005	8.1700e-003	2.1500e-003	5.0000e-005	2.2000e-003	0.0000	6.7333	6.7333	1.9000e-004	0.0000	6.7380
Total	3.4100e-003	2.5700e-003	0.0264	7.0000e-005	8.1100e-003	5.0000e-005	8.1700e-003	2.1500e-003	5.0000e-005	2.2000e-003	0.0000	6.7333	6.7333	1.9000e-004	0.0000	6.7380

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	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	tons/yr										MT/yr					
Mitigated	0.2494	3.6997	3.2084	0.0187	1.0232	0.0134	1.0366	0.2787	0.0127	0.2914	0.0000	1,755.3886	1,755.3886	0.0773	0.0000	1,757.3211
Unmitigated	0.2494	3.6997	3.2084	0.0187	1.0232	0.0134	1.0366	0.2787	0.0127	0.2914	0.0000	1,755.3886	1,755.3886	0.0773	0.0000	1,757.3211

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Refrigerated Warehouse-No Rail	223.47	223.47	223.47	1,293,796	1,293,796
Unrefrigerated Warehouse-No Rail	223.47	223.47	223.47	1,293,796	1,293,796
Total	446.93	446.93	446.93	2,587,592	2,587,592

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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 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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Refrigerated Warehouse-No	24.11	8.40	6.90	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	24.11	8.40	6.90	59.00	0.00	41.00	92	5	3

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4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000
Parking Lot	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000
Refrigerated Warehouse-No Rail	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.354000	0.171000	0.177000	0.000000	0.000000	0.000000	0.125000	0.167000	0.000000	0.000000	0.006000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	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
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,813.3652	1,813.3652	0.0749	0.0155	1,819.8526
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,813.3652	1,813.3652	0.0749	0.0155	1,819.8526
NaturalGas Mitigated	0.0386	0.3507	0.2946	2.1000e-003		0.0267	0.0267		0.0267	0.0267	0.0000	381.8115	381.8115	7.3200e-003	7.0000e-003	384.0804
NaturalGas Unmitigated	0.0386	0.3507	0.2946	2.1000e-003		0.0267	0.0267		0.0267	0.0267	0.0000	381.8115	381.8115	7.3200e-003	7.0000e-003	384.0804

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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	tons/yr										MT/yr					
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	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	0.0000
Refrigerated Warehouse-No Rail	6.88486e+006	0.0371	0.3375	0.2835	2.0200e-003		0.0257	0.0257		0.0257	0.0257	0.0000	367.4022	367.4022	7.0400e-003	6.7400e-003	369.5854
Unrefrigerated Warehouse-No Rail	270020	1.4600e-003	0.0132	0.0111	8.0000e-005		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003	0.0000	14.4093	14.4093	2.8000e-004	2.6000e-004	14.4950
Total		0.0386	0.3507	0.2946	2.1000e-003		0.0267	0.0267		0.0267	0.0267	0.0000	381.8115	381.8115	7.3200e-003	7.0000e-003	384.0804

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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	tons/yr										MT/yr					
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	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	0.0000
Refrigerated Warehouse-No Rail	6.88486e+006	0.0371	0.3375	0.2835	2.0200e-003		0.0257	0.0257		0.0257	0.0257	0.0000	367.4022	367.4022	7.0400e-003	6.7400e-003	369.5854
Unrefrigerated Warehouse-No Rail	270020	1.4600e-003	0.0132	0.0111	8.0000e-005		1.0100e-003	1.0100e-003		1.0100e-003	1.0100e-003	0.0000	14.4093	14.4093	2.8000e-004	2.6000e-004	14.4950
Total		0.0386	0.3507	0.2946	2.1000e-003		0.0267	0.0267		0.0267	0.0267	0.0000	381.8115	381.8115	7.3200e-003	7.0000e-003	384.0804

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5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	29680	9.4567	3.9000e-004	8.0000e-005	9.4905
Parking Lot	33740	10.7503	4.4000e-004	9.0000e-005	10.7888
Refrigerated Warehouse-No Rail	5.31395e+006	1,693.1381	0.0699	0.0145	1,699.1953
Unrefrigerated Warehouse-No Rail	313915	100.0202	4.1300e-003	8.5000e-004	100.3780
Total		1,813.3652	0.0749	0.0155	1,819.8526

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	29680	9.4567	3.9000e-004	8.0000e-005	9.4905
Parking Lot	33740	10.7503	4.4000e-004	9.0000e-005	10.7888
Refrigerated Warehouse-No Rail	5.31395e+006	1,693.1381	0.0699	0.0145	1,699.1953
Unrefrigerated Warehouse-No Rail	313915	100.0202	4.1300e-003	8.5000e-004	100.3780
Total		1,813.3652	0.0749	0.0155	1,819.8526

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Colton Tropica Warehouse - San Bernardino-South Coast County, Annual

	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	tons/yr										MT/yr					
Mitigated	1.0508	9.0000e-005	9.3400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0181	0.0181	5.0000e-005	0.0000	0.0193
Unmitigated	1.0508	9.0000e-005	9.3400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0181	0.0181	5.0000e-005	0.0000	0.0193

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	tons/yr										MT/yr					
Architectural Coating	0.0487					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0012					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7000e-004	9.0000e-005	9.3400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0181	0.0181	5.0000e-005	0.0000	0.0193
Total	1.0508	9.0000e-005	9.3400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0181	0.0181	5.0000e-005	0.0000	0.0193

Colton Tropica Warehouse - San Bernardino-South Coast County, Annual

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	tons/yr										MT/yr					
Architectural Coating	0.0487					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.0012					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.7000e-004	9.0000e-005	9.3400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0181	0.0181	5.0000e-005	0.0000	0.0193
Total	1.0508	9.0000e-005	9.3400e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0181	0.0181	5.0000e-005	0.0000	0.0193

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

Colton Tropica Warehouse - San Bernardino-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	219.7895	1.6121	0.0396	271.8945
Unmitigated	274.7369	2.0151	0.0495	339.8682

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	30.7586 / 0	137.3685	1.0075	0.0248	169.9341
Unrefrigerated Warehouse-No Rail	30.7586 / 0	137.3685	1.0075	0.0248	169.9341
Total		274.7369	2.0151	0.0495	339.8682

Colton Tropica Warehouse - San Bernardino-South Coast County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	24.6069 / 0	109.8948	0.8060	0.0198	135.9473
Unrefrigerated Warehouse-No Rail	24.6069 / 0	109.8948	0.8060	0.0198	135.9473
Total		219.7895	1.6121	0.0396	271.8945

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Colton Tropica Warehouse - San Bernardino-South Coast County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.6900	0.7500	0.0000	31.4389
Unmitigated	50.7599	2.9998	0.0000	125.7556

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	125.03	25.3800	1.4999	0.0000	62.8778
Unrefrigerated Warehouse-No Rail	125.03	25.3800	1.4999	0.0000	62.8778
Total		50.7599	2.9998	0.0000	125.7556

Colton Tropica Warehouse - San Bernardino-South Coast County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Refrigerated Warehouse-No Rail	31.2575	6.3450	0.3750	0.0000	15.7194
Unrefrigerated Warehouse-No Rail	31.2575	6.3450	0.3750	0.0000	15.7194
Total		12.6900	0.7500	0.0000	31.4389

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	6	8.00	260	89	0.20	CNG

Colton Tropica Warehouse - San Bernardino-South Coast County, Annual

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	tons/yr										MT/yr					
Forklifts	0.1009	0.9197	0.9109	1.1900e-003		0.0653	0.0653		0.0601	0.0601	0.0000	104.7472	104.7472	0.0339	0.0000	105.5942
Total	0.1009	0.9197	0.9109	1.1900e-003		0.0653	0.0653		0.0601	0.0601	0.0000	104.7472	104.7472	0.0339	0.0000	105.5942

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

AERSCREEN MODEL PRINTOUTS

```

**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 9.6.1
** Lakes Environmental Software Inc.
** Date: 6/20/2018
** File: C:\Lakes\AERMOD View\Tropica Construction Screening HRA\Tropica
Construction Screening HRA.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE C:\Lakes\AERMOD View\Tropica Construction Screening
HRA\Tropica Cons
  MODELOPT CONC FLAT ELEV SCREEN
  AVERTIME 1
  URBANOPT 54712 City_of_Colton
  POLLUTID PM_10
  RUNORNOT RUN
  ERRORFIL "Tropica Construction Screening HRA.err"
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION PAREAL      AREAPOLY    469303.624  3766721.954      277.130
** DESCRSRC Construction Area
** Source Parameters **
  SRCPARAM PAREAL      1.7746E-07      1.000      9
  AREAVERT PAREAL      469303.624  3766721.954  469253.745  3766728.460
  AREAVERT PAREAL      469203.866  3766756.653  469130.131  3766826.050
  AREAVERT PAREAL      469093.264  3766914.965  469088.927  3766964.844
  AREAVERT PAREAL      469099.770  3767025.566  469262.420  3767116.650
  AREAVERT PAREAL      469344.828  3767094.964
  URBANSRC ALL

** Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"
** Variable Emission Scenario: "Scenario 2"

```

**
**

OU STARTING
RECTABLE ALLAVE 1ST
RECTABLE 1 1ST
** Auto-Generated Plotfiles
PLOTFILE 1 ALL 1ST "TROPICA CONSTRUCTION SCREENING
HRA.AD\01H1GALL.PLT" 31
PLOTFILE 1 PAREAL 1ST "TROPICA CONSTRUCTION SCREENING
HRA.AD\01H1G001.PLT" 32
SUMMFILE "Tropica Construction Screening HRA.sum"
OU FINISHED

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

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

A Total of	0 Fatal Error Message(s)
A Total of	3 Warning Message(s)
A Total of	0 Informational Message(s)

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

***** WARNING MESSAGES *****
ME W186 95 MEOPEN: THRESH_1MIN 1-min ASOS wind speed
threshold used 0.50
ME W187 95 MEOPEN: ADJ_U* Option for Stable Low Winds used in
AERMET
ME W397 95 MEOPEN: SCREEN option used without use of SCREEN
Met Data 16216

*** SETUP Finishes Successfully ***

*** AERMOD - VERSION 18081 *** *** C:\Lakes\AERMOD View\Tropica
Construction Screening HRA\Tropica Cons *** 06/20/18
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*** 18:26:41

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
ADJ_U*

*** MODEL SETUP OPTIONS
SUMMARY ***

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

-- DEPOSITION LOGIC --

**NO GAS DEPOSITION Data Provided.

**NO PARTICLE DEPOSITION Data Provided.

**Model Uses NO DRY DEPLETION. DRYDPLT = F

**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses URBAN Dispersion Algorithm for the SBL for 1 Source(s),
for Total of 1 Urban Area(s):

Urban Population = 54712.0 ; Urban Roughness Length = 1.000 m

**Model Allows User-Specified Options:

1. Stack-tip Downwash.
2. Allow FLAT/ELEV Terrain Option by Source,
with 0 FLAT and 1 ELEV Source(s).
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.
6. Full Conversion Assumed for NO2.
6. Urban Roughness Length of 1.0 Meter Used.

**Other Options Specified:

NOCHKD - Suppresses checking of date sequence in meteorology
files

SCREEN - Use screening option

which forces calculation of centerline values

ADJ_U* - Use ADJ_U* option for SBL in AERMET

TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM₁₀

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

**This Run Includes: 1 Source(s); 2 Source Group(s); and
271 Receptor(s)

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

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

**The AERMET Input Meteorological Data Version Date: 16216

**Output Options Selected:

Model Outputs Tables of Highest Short Term Values by Receptor
(RECTABLE Keyword)

Model Outputs External File(s) of High Values for Plotting
(PLOTFILE Keyword)

Model Outputs Separate Summary File of High Ranked Values
(SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for
Calm Hours

m for
Missing Hours

b for
Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 367.00 ;
Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC
; Emission Rate Unit Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

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

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

**Detailed Error/Message File: Tropica Construction Screening HRA.err

**File for Summary of Results: Tropica Construction Screening HRA.sum

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
 ADJ_U*

*** AREAPOLY SOURCE DATA

NUMBER SOURCE OF VERTS. ID (METERS)	INIT. PART. SZ CATS.	EMISSION RATE		LOCATION OF AREA		BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)
		URBAN SOURCE /METER**2)	EMISSION SCALAR VARY	X (METERS)	Y (METERS)		
PAREA1 9	0 0.00	0 YES	0.17746E-06 HRDOW7	469303.6	3766722.0	277.1	1.00

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
ADJ_U*

*** SOURCE IDs DEFINING SOURCE

GROUPS ***

SRCGROUP ID

SOURCE IDs

PAREA1	PAREA1	,
ALL	PAREA1	,

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
ADJ_U*

*** SOURCE IDs DEFINED AS URBAN

SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
-----	-----	-----
	54712.	PAREA1 ,

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 Construction Screening HRA\Tropica Cons *** 06/20/18
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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
 ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY
 AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = PAREA1 ; SOURCE TYPE = AREAPOLY :
 HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR HOUR
 SCALAR HOUR SCALAR HOUR SCALAR HOUR SCALAR

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

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21
.0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5
.0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13
.0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21
.0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5
.0000E+00 6 .0000E+00 7 .0000E+00 8 .0000E+00

9 .0000E+00 10 .0000E+00 11 .0000E+00 12 .0000E+00 13
.0000E+00 14 .0000E+00 15 .0000E+00 16 .0000E+00

17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21
.0000E+00 22 .0000E+00 23 .0000E+00 24 .0000E+00

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 Construction Screening HRA\Tropica Cons *** 06/20/18
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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
 ADJ_U*

*** DISCRETE CARTESIAN

RECEPTORS ***

(X-COORD, Y-COORD, ZELEV,

ZHILL, ZFLAG)

(METERS)

(469026.7, 3767008.7,	299.7,	451.0,	0.0);	(
468776.3, 3766782.8,	322.1,	451.0,	0.0);	(
(468807.3, 3766782.8,	319.5,	451.0,	0.0);	(
468839.5, 3766781.5,	316.8,	451.0,	0.0);	(
(468869.2, 3766782.8,	313.2,	451.0,	0.0);	(
468897.6, 3766786.7,	310.9,	451.0,	0.0);	(
(468950.5, 3766780.2,	307.4,	451.0,	0.0);	(
468988.0, 3766781.5,	304.4,	451.0,	0.0);	(
(469024.1, 3766781.5,	301.1,	451.0,	0.0);	(
469056.4, 3766773.8,	299.5,	451.0,	0.0);	(
(469078.3, 3766763.5,	298.7,	451.0,	0.0);	(
469101.5, 3766751.8,	298.1,	451.0,	0.0);	(
(469133.8, 3766728.6,	296.8,	451.0,	0.0);	(
469157.0, 3766705.4,	296.2,	451.0,	0.0);	(
(469182.8, 3766688.6,	295.2,	451.0,	0.0);	(
469221.6, 3766669.2,	294.8,	451.0,	0.0);	(
(469251.2, 3766635.7,	294.4,	451.0,	0.0);	(
469259.0, 3766609.9,	293.9,	451.0,	0.0);	(
(469264.1, 3766578.9,	293.4,	451.0,	0.0);	(
469261.6, 3766551.8,	293.1,	451.0,	0.0);	(
(469262.9, 3766510.5,	291.9,	451.0,	0.0);	(
468749.2, 3766754.4,	327.7,	451.0,	0.0);	(
(468751.8, 3766729.9,	324.7,	451.0,	0.0);	(
468777.6, 3766715.7,	322.9,	451.0,	0.0);	(
(468806.0, 3766723.5,	320.4,	451.0,	0.0);	(
468834.4, 3766724.8,	316.8,	451.0,	0.0);	(
(468858.9, 3766723.5,	314.9,	451.0,	0.0);	(
468889.9, 3766724.8,	311.0,	451.0,	0.0);	(
(468950.5, 3766726.0,	307.7,	451.0,	0.0);	(
468984.1, 3766726.0,	305.0,	451.0,	0.0);	(
(469012.5, 3766727.3,	302.3,	451.0,	0.0);	(
469042.2, 3766724.8,	299.9,	451.0,	0.0);	(
(469100.2, 3766684.7,	297.8,	451.0,	0.0);	(
469100.2, 3766638.3,	296.9,	451.0,	0.0);	(

(469139.0, 3766655.1, 295.6, 451.0, 0.0); (

469188.0, 3766622.8, 294.8, 451.0, 0.0); (

(469203.5, 3766591.8, 294.3, 451.0, 0.0); (

469202.2, 3766544.1, 293.4, 451.0, 0.0); (

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468923.4, 3766293.7, 309.4, 451.0, 0.0);

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
ADJ_U*

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

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(468962.2, 3766279.5, 304.6, 451.0, 0.0);	(
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470107.9, 3766352.9, 303.5, 303.5, 0.0);

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
ADJ_U*

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

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(470176.5, 3766232.1,	304.7,	304.7,	0.0);	(
470194.4, 3766233.2,	304.7,	304.7,	0.0);	(
(470153.0, 3766216.8,	304.3,	304.3,	0.0);	(
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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
ADJ_U*

RECEPTORS *** *** DISCRETE CARTESIAN
(X-COORD, Y-COORD, ZELEV,
ZHILL, ZFLAG) (METERS)
(469824.1, 3767879.0, 279.9, 279.9, 0.0);

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
 ADJ_U*

*** UP TO THE FIRST 24 HOURS OF

METEOROLOGICAL DATA ***

Surface file: FONT_v9.SFC
 Met Version: 16216
 Profile file: FONT_v9.PFL
 Surface format: FREE
 Profile format: FREE
 Surface station no.: 3102 Upper air station no.:
 3190
 Name: FONTANA Name:
 UNKNOWN Year: 2011 Year:
 2011

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					
11	01	01	1	01	-18.5	0.194	-9.000	-9.000	-999.	204.		41.2	0.25
2.82	1.00		1.80	69.	9.1	276.4	5.5						
11	01	01	1	02	-23.8	0.239	-9.000	-9.000	-999.	281.		63.0	0.25
2.82	1.00		2.20	52.	9.1	275.4	5.5						
11	01	01	1	03	-18.5	0.194	-9.000	-9.000	-999.	205.		41.2	0.25
2.82	1.00		1.80	32.	9.1	275.4	5.5						
11	01	01	1	04	-1.4	0.067	-9.000	-9.000	-999.	57.		18.3	0.25
2.82	1.00		0.40	27.	9.1	274.2	5.5						
11	01	01	1	05	-18.6	0.194	-9.000	-9.000	-999.	204.		41.2	0.25
2.82	1.00		1.80	51.	9.1	274.2	5.5						
11	01	01	1	06	-29.7	0.296	-9.000	-9.000	-999.	387.		96.6	0.25
2.82	1.00		2.70	53.	9.1	274.2	5.5						
11	01	01	1	07	-24.0	0.239	-9.000	-9.000	-999.	282.		63.0	0.25
2.82	1.00		2.20	70.	9.1	274.2	5.5						
11	01	01	1	08	-8.4	0.138	-9.000	-9.000	-999.	127.		27.3	0.25
2.82	0.54		1.30	72.	9.1	275.4	5.5						
11	01	01	1	09	44.3	0.280	0.571	0.005	147.	356.		-43.5	0.25
2.82	0.32		2.20	67.	9.1	277.5	5.5						
11	01	01	1	10	122.7	0.264	0.952	0.005	247.	326.		-13.2	0.25
2.82	0.25		1.80	83.	9.1	279.9	5.5						

11	01	01	1	11	179.8	0.316	1.733	0.005	1017.	426.	-15.4	0.25
2.82	0.22	2.20	58.	9.1	282.0	5.5						
11	01	01	1	12	206.0	0.320	1.940	0.008	1244.	435.	-14.0	0.25
2.82	0.21	2.20	115.	9.1	283.1	5.5						
11	01	01	1	13	132.6	0.214	1.733	0.009	1377.	243.	-6.5	0.25
2.82	0.21	1.30	147.	9.1	284.2	5.5						
11	01	01	1	14	147.0	0.216	1.818	0.009	1431.	242.	-6.0	0.25
2.82	0.23	1.30	219.	9.1	284.9	5.5						
11	01	01	1	15	104.0	0.208	1.633	0.009	1468.	228.	-7.6	0.25
2.82	0.26	1.30	126.	9.1	285.4	5.5						
11	01	01	1	16	26.4	0.140	1.037	0.009	1477.	127.	-9.1	0.25
2.82	0.35	0.90	151.	9.1	284.9	5.5						
11	01	01	1	17	-9.0	0.137	-9.000	-9.000	-999.	121.	24.9	0.25
2.82	0.63	1.30	69.	9.1	283.1	5.5						
11	01	01	1	18	-33.4	0.342	-9.000	-9.000	-999.	481.	129.0	0.25
2.82	1.00	3.10	81.	9.1	281.4	5.5						
11	01	01	1	19	-33.6	0.342	-9.000	-9.000	-999.	481.	128.9	0.25
2.82	1.00	3.10	51.	9.1	279.9	5.5						
11	01	01	1	20	-23.6	0.239	-9.000	-9.000	-999.	287.	63.1	0.25
2.82	1.00	2.20	77.	9.1	278.8	5.5						
11	01	01	1	21	-18.5	0.194	-9.000	-9.000	-999.	205.	41.2	0.25
2.82	1.00	1.80	53.	9.1	277.5	5.5						
11	01	01	1	22	-23.7	0.239	-9.000	-9.000	-999.	281.	63.0	0.25
2.82	1.00	2.20	58.	9.1	277.5	5.5						
11	01	01	1	23	-18.5	0.194	-9.000	-9.000	-999.	205.	41.2	0.25
2.82	1.00	1.80	64.	9.1	277.5	5.5						
11	01	01	1	24	-4.5	0.094	-9.000	-9.000	-999.	74.	16.3	0.25
2.82	1.00	0.90	52.	9.1	277.0	5.5						

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
11	01	01	01	5.5	0	-999.	-99.00	276.5	99.0	-99.00	-99.00
11	01	01	01	9.1	1	69.	1.80	-999.0	99.0	-99.00	-99.00

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

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
 ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
 CONCENTRATION VALUES FOR SOURCE GROUP: PAREAL ***
 INCLUDING SOURCE(S): PAREAL ,

*** DISCRETE CARTESIAN
 RECEPTOR POINTS ***

** CONC OF PM_10 IN
 ** MICROGRAMS/M**3

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-
COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	
469026.68	3767008.67	3.01950	(13062606)	
468776.31	3766782.82	1.43250	(16100407)	
468807.29	3766782.82	1.51860	(15071306)	
468839.55	3766781.53	1.64491	(15071306)	
468869.24	3766782.82	1.78138	(15071306)	
468897.63	3766786.70	1.97260	(15061806)	
468950.54	3766780.24	2.29238	(13071606)	
468987.97	3766781.53	2.52595	(13071606)	
469024.10	3766781.53	2.84535	(12052806)	
469056.37	3766773.79	3.21647	(13052906)	
469078.31	3766763.46	3.49132	(16052706)	
469101.54	3766751.85	3.65203	(16052706)	
469133.80	3766728.62	3.78595	(12112008)	
469157.03	3766705.39	3.86178	(12070906)	
469182.84	3766688.61	4.06006	(11113008)	
469221.56	3766669.25	4.25041	(15071406)	
469251.24	3766635.70	4.09942	(13051406)	
469258.99	3766609.89	3.85315	(13051406)	
469264.15	3766578.91	3.53505	(13051406)	
469261.57	3766551.81	3.30897	(13051406)	
469262.86	3766510.51	2.98725	(13051406)	
468749.21	3766754.43	1.28097	(15071306)	
468751.79	3766729.91	1.34922	(15071306)	
468777.61	3766715.71	1.40749	(15061806)	
468806.00	3766723.46	1.53105	(15061806)	
468834.39	3766724.75	1.67452	(15061806)	

468858.91	3766723.46	1.77322	(13071606)
468889.88	3766724.75	1.95606	(13071606)
468950.54	3766726.04	2.16521	(12052806)
468984.10	3766726.04	2.39660	(13052906)
469012.49	3766727.33	2.68057	(13052906)
469042.17	3766724.75	2.97870	(15033007)
469100.25	3766684.74	3.23522	(12112008)
469100.25	3766638.28	2.95850	(16072106)
469138.96	3766655.06	3.37589	(12070906)
469188.01	3766622.79	3.44193	(15071406)
469203.49	3766591.82	3.40457	(15071406)
469202.20	3766544.07	3.09724	(15071406)
469202.20	3766506.64	2.87432	(15071406)
469150.58	3766510.51	2.59065	(11113008)
469146.71	3766577.62	2.97427	(11113008)
469089.92	3766586.66	2.58862	(12070906)
469091.21	3766531.16	2.45983	(12070906)
469046.04	3766639.57	2.70751	(12112008)
469012.49	3766638.28	2.56628	(15033007)
468978.93	3766638.28	2.32150	(16052706)
468950.54	3766640.86	2.13577	(13052906)
469074.44	3766710.55	3.25205	(15033007)
469070.56	3766639.57	2.85336	(12112008)
469145.42	3766547.94	2.80009	(11113008)
469089.92	3766496.32	2.34490	(12070906)
469058.95	3766496.32	2.11715	(12070906)
469029.27	3766498.90	2.10024	(16072106)
468997.00	3766501.48	2.07367	(12112008)
468966.03	3766498.90	1.96855	(12112008)
468935.05	3766496.32	1.91100	(15033007)
469060.24	3766585.37	2.54401	(16072106)
469033.14	3766589.24	2.48292	(12112008)
469007.33	3766586.66	2.31483	(15033007)
468972.48	3766587.95	2.22131	(16052706)
468941.51	3766587.95	2.03573	(16052706)
468888.59	3766594.40	1.86905	(13052906)
468891.18	3766567.30	1.84926	(13052906)
468891.18	3766536.33	1.76424	(16052706)
468891.18	3766516.97	1.79992	(15033007)
468892.47	3766491.16	1.81178	(15033007)
468838.26	3766590.53	1.58706	(12052806)
468838.26	3766564.72	1.62920	(13052906)
468839.55	3766537.62	1.65145	(13052906)
468836.97	3766516.97	1.63231	(13052906)
468834.39	3766496.32	1.59613	(13052906)
468784.06	3766590.53	1.44864	(12052806)
468782.77	3766560.85	1.44121	(12052806)
468784.06	3766526.00	1.39459	(13052906)
468782.77	3766492.45	1.45705	(13052906)
468751.79	3766595.69	1.40287	(13071606)

	468750.50	3766563.43		1.37209	(12052806)
468746.63	3766529.87		1.35656	(12052806)	
	468746.63	3766497.61		1.30683	(12052806)
469518.39	3766568.59		1.94540	(12122508)	

469043.46	3766337.58	1.84734	(12070906)
469035.72	3766313.06	1.78903	(12070906)
469025.39	3766288.54	1.73132	(12070906)
469013.78	3766271.76	1.68307	(12070906)
469009.91	3766248.53	1.64450	(12070906)
468994.42	3766226.59	1.58763	(12070906)
469046.04	3766225.30	1.65427	(11113008)
469066.69	3766242.08	1.69098	(11113008)
469069.27	3766269.18	1.75801	(11113008)
469074.44	3766288.54	1.80532	(11113008)
469077.02	3766316.93	1.87545	(11113008)
469083.47	3766344.03	1.94865	(11113008)
469088.63	3766368.55	2.01642	(11113008)
469087.34	3766393.07	2.06864	(11113008)
469087.34	3766416.30	2.10928	(11113008)
469095.08	3766445.99	2.20957	(11113008)
469137.67	3766442.11	2.24843	(11113008)
469141.55	3766407.27	2.12490	(13050706)
469145.42	3766369.84	2.04173	(11051106)
469129.93	3766245.95	1.72456	(11051106)
469118.32	3766213.68	1.63159	(11051106)
468976.35	3766173.68	1.49672	(12070906)
469000.87	3766172.39	1.51838	(12070906)
469027.98	3766171.09	1.54420	(11113008)
469060.24	3766172.39	1.51586	(11113008)
469109.28	3766177.55	1.54311	(11051106)
469228.01	3766244.66	1.88565	(13051406)
469218.98	3766222.72	1.81067	(13051406)
469216.40	3766189.16	1.72892	(13051406)
469209.95	3766151.74	1.61496	(13051406)
469206.07	3766084.63	1.46711	(13051406)
469202.20	3766048.49	1.38166	(13051406)
469107.99	3766096.24	1.41931	(11051106)
469091.21	3766023.97	1.29250	(11051106)
469025.39	3766054.94	1.31714	(11113008)
469013.78	3766008.48	1.25310	(11113008)
468968.61	3766013.65	1.26495	(11113008)
468928.60	3766011.06	1.26719	(12070906)
468882.14	3766012.35	1.10955	(12070906)
468892.47	3766110.44	1.14764	(11123008)
469741.44	3766040.43	1.12229	(13032607)
469745.79	3766069.83	1.19761	(13032607)
469756.14	3766117.20	1.22500	(13032607)
469727.28	3766089.43	1.22012	(13032607)
469767.03	3766143.88	1.16578	(13032607)
469770.84	3766176.00	1.08893	(13032607)
469775.74	3766206.49	1.03182	(15122308)
469779.55	3766233.17	1.04196	(15081006)
469785.54	3766256.58	1.07138	(15081006)
469791.53	3766272.92	1.07165	(15081006)

	469792.62	3766293.06		1.08232	(12122508)
469792.62	3766315.93		1.12666	(12122508)	
	469810.58	3766364.93		1.12509	(13102207)
469815.48	3766397.06		1.29144	(13061806)	

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
 ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
 CONCENTRATION VALUES FOR SOURCE GROUP: PAREAL ***
 INCLUDING SOURCE(S): PAREAL ,

*** DISCRETE CARTESIAN
 RECEPTOR POINTS ***

*** CONC OF PM_10 IN
 MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-
COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	
469818.75	3766430.81	1.37770	(13061806)	
469818.75	3766456.40	1.39093	(13061806)	
469780.64	3766470.01	1.46122	(13061806)	
469900.42	3766461.30	1.21324	(11062806)	
469880.28	3766399.23	1.28658	(13061806)	
469874.29	3766356.77	1.20721	(13061806)	
469867.75	3766317.02	1.03421	(13102207)	
469920.02	3766389.98	1.22706	(13061806)	
469942.34	3766376.91	1.19516	(13061806)	
469968.48	3766346.97	1.16534	(13061806)	
470007.68	3766340.98	1.10600	(13061806)	
470045.79	3766321.92	1.05488	(13061806)	
470070.29	3766307.76	1.02489	(13061806)	
470090.98	3766293.61	1.00372	(13061806)	
469945.61	3766434.62	1.15177	(11062806)	
469977.19	3766414.48	1.11244	(11062806)	
470007.68	3766399.78	1.07308	(11062806)	
470032.73	3766385.08	1.04592	(11062806)	
470067.03	3766370.92	1.00390	(11062806)	
470107.86	3766352.95	0.95551	(11062806)	
470136.17	3766334.99	0.92878	(11062806)	
470164.49	3766323.55	0.89769	(11062806)	
470194.43	3766303.95	0.87437	(11062806)	
470231.45	3766278.91	0.84751	(11062806)	
470176.46	3766232.08	0.92633	(13061806)	
470194.43	3766233.17	0.89264	(13061806)	

	470153.05	3766216.84		0.96963	(13061806)
469955.85	3766581.98		1.11644		(15073006)
	469990.27	3766587.19		1.03297	(15073006)
470014.26	3766574.68		1.00866		(15073006)
	470083.10	3766933.48		1.04472	(16053106)
470090.40	3766958.51		1.03226		(16053106)
	470099.79	3766974.16		1.00555	(16053106)
470109.18	3766990.85		0.96612		(16053106)
	470115.43	3767008.58		0.91537	(16053106)
470127.95	3767032.57		0.83947		(15072806)
	470119.61	3766937.65		1.00740	(16053106)
470131.08	3766962.69		0.98629		(16053106)
	470142.55	3766978.33		0.95577	(16053106)
470155.07	3767000.23		0.90031		(16053106)
	470170.71	3767013.79		0.85042	(16053106)
470184.27	3767016.92		0.82998		(16053106)
	470199.92	3767020.05		0.80819	(16053106)
470214.52	3767025.27		0.78116		(16053106)
	470230.17	3767030.48		0.75917	(15072806)
470145.68	3766931.39		0.97988		(16053106)
	470150.90	3766949.13		0.97497	(16053106)
470159.24	3766965.81		0.95559		(16053106)
	470174.89	3766985.63		0.91297	(16053106)
470190.53	3766993.98		0.88278		(16053106)
	470205.13	3766997.11		0.86356	(16053106)
470218.69	3767001.28		0.84302		(16053106)
	470234.34	3767006.49		0.81826	(16053106)
470180.10	3766931.39		0.94747		(16053106)
	470187.40	3766943.91		0.94188	(16053106)
470202.01	3766959.56		0.92157		(16053106)
	470217.65	3766966.86		0.90134	(16053106)
470230.17	3766972.07		0.88480		(16053106)
	470246.86	3766975.20		0.86696	(16053106)
470206.18	3766938.70		0.92528		(16053106)
	470228.08	3766942.87		0.90601	(16053106)
470246.86	3766951.21		0.88785		(16053106)
	470151.94	3767040.91		0.81007	(15072806)
470171.76	3767045.09		0.78931		(15072806)
	470188.45	3767052.39		0.76719	(15072806)
470210.35	3767060.73		0.74423		(16070106)
	470228.08	3767064.90		0.73354	(16070106)
470246.86	3767071.16		0.72811		(16070106)
	470011.13	3766618.49		0.89401	(15073006)
470049.72	3766604.93		0.84035		(15073006)
	470071.63	3766593.45		0.82530	(15073006)
470094.57	3766579.89		0.81677		(15073006)
	470049.72	3766649.78		0.93977	(12071206)
470086.23	3766633.09		0.88937		(12071206)
	470108.13	3766621.61		0.85742	(12071206)
470131.08	3766608.05		0.82117		(12071206)

	470101.87	3766710.27		0.95547	(13032707)
470162.37	3766683.15		0.90042	(12071206)	
	470057.02	3766467.25		1.02447	(15073006)
470071.63	3766484.98		1.02404	(15073006)	

	470257.29	3766370.24		0.86110	(15073006)
469778.52	3767872.68		0.71029	(12121308)	
	469756.50	3767894.70		0.73735	(12121308)
469820.99	3767912.00		0.63894	(12121308)	
	469824.14	3767878.97		0.64803	(16011506)

468858.91	3766723.46	1.77322	(13071606)
468889.88	3766724.75	1.95606	(13071606)
468950.54	3766726.04	2.16521	(12052806)
468984.10	3766726.04	2.39660	(13052906)
469012.49	3766727.33	2.68057	(13052906)
469042.17	3766724.75	2.97870	(15033007)
469100.25	3766684.74	3.23522	(12112008)
469100.25	3766638.28	2.95850	(16072106)
469138.96	3766655.06	3.37589	(12070906)
469188.01	3766622.79	3.44193	(15071406)
469203.49	3766591.82	3.40457	(15071406)
469202.20	3766544.07	3.09724	(15071406)
469202.20	3766506.64	2.87432	(15071406)
469150.58	3766510.51	2.59065	(11113008)
469146.71	3766577.62	2.97427	(11113008)
469089.92	3766586.66	2.58862	(12070906)
469091.21	3766531.16	2.45983	(12070906)
469046.04	3766639.57	2.70751	(12112008)
469012.49	3766638.28	2.56628	(15033007)
468978.93	3766638.28	2.32150	(16052706)
468950.54	3766640.86	2.13577	(13052906)
469074.44	3766710.55	3.25205	(15033007)
469070.56	3766639.57	2.85336	(12112008)
469145.42	3766547.94	2.80009	(11113008)
469089.92	3766496.32	2.34490	(12070906)
469058.95	3766496.32	2.11715	(12070906)
469029.27	3766498.90	2.10024	(16072106)
468997.00	3766501.48	2.07367	(12112008)
468966.03	3766498.90	1.96855	(12112008)
468935.05	3766496.32	1.91100	(15033007)
469060.24	3766585.37	2.54401	(16072106)
469033.14	3766589.24	2.48292	(12112008)
469007.33	3766586.66	2.31483	(15033007)
468972.48	3766587.95	2.22131	(16052706)
468941.51	3766587.95	2.03573	(16052706)
468888.59	3766594.40	1.86905	(13052906)
468891.18	3766567.30	1.84926	(13052906)
468891.18	3766536.33	1.76424	(16052706)
468891.18	3766516.97	1.79992	(15033007)
468892.47	3766491.16	1.81178	(15033007)
468838.26	3766590.53	1.58706	(12052806)
468838.26	3766564.72	1.62920	(13052906)
468839.55	3766537.62	1.65145	(13052906)
468836.97	3766516.97	1.63231	(13052906)
468834.39	3766496.32	1.59613	(13052906)
468784.06	3766590.53	1.44864	(12052806)
468782.77	3766560.85	1.44121	(12052806)
468784.06	3766526.00	1.39459	(13052906)
468782.77	3766492.45	1.45705	(13052906)
468751.79	3766595.69	1.40287	(13071606)

	468750.50	3766563.43		1.37209	(12052806)
468746.63	3766529.87		1.35656	(12052806)	
	468746.63	3766497.61		1.30683	(12052806)
469518.39	3766568.59		1.94540	(12122508)	

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
 ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
 CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): PAREAL ,

*** DISCRETE CARTESIAN
 RECEPTOR POINTS ***

** CONC OF PM_10 IN
 **
 MICROGRAMS/M**3

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-
COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	
469526.13	3766540.20	1.86654	(15081006)	
469582.92	3766587.95	1.97708	(13061806)	
469549.36	3766593.11	2.05329	(13061806)	
469619.06	3766582.79	1.87401	(13061806)	
469650.03	3766559.56	1.77461	(13061806)	
469675.84	3766541.49	1.70310	(13061806)	
468941.51	3766398.23	1.75374	(12112008)	
468933.76	3766360.81	1.65548	(12112008)	
468932.47	3766324.67	1.58289	(16072106)	
468923.44	3766293.70	1.51810	(16072106)	
468916.99	3766266.60	1.45873	(16072106)	
468920.86	3766214.97	1.29108	(16072106)	
468946.67	3766182.71	1.36990	(12070906)	
468942.80	3766443.40	1.83316	(12112008)	
469002.16	3766436.95	1.90451	(16072106)	
468998.29	3766402.11	1.77742	(16072106)	
468990.55	3766375.00	1.69000	(16072106)	
468984.10	3766349.19	1.60045	(16072106)	
468981.52	3766323.38	1.52311	(12070906)	
468969.90	3766301.44	1.45958	(11123008)	
468962.16	3766279.50	1.41876	(11123008)	
468956.99	3766257.56	1.38943	(12070906)	
469056.37	3766443.40	2.05421	(12070906)	
469055.08	3766413.72	2.00887	(12070906)	
469051.21	3766387.91	1.95388	(12070906)	
469044.75	3766364.68	1.89785	(12070906)	

469043.46	3766337.58	1.84734	(12070906)
469035.72	3766313.06	1.78903	(12070906)
469025.39	3766288.54	1.73132	(12070906)
469013.78	3766271.76	1.68307	(12070906)
469009.91	3766248.53	1.64450	(12070906)
468994.42	3766226.59	1.58763	(12070906)
469046.04	3766225.30	1.65427	(11113008)
469066.69	3766242.08	1.69098	(11113008)
469069.27	3766269.18	1.75801	(11113008)
469074.44	3766288.54	1.80532	(11113008)
469077.02	3766316.93	1.87545	(11113008)
469083.47	3766344.03	1.94865	(11113008)
469088.63	3766368.55	2.01642	(11113008)
469087.34	3766393.07	2.06864	(11113008)
469087.34	3766416.30	2.10928	(11113008)
469095.08	3766445.99	2.20957	(11113008)
469137.67	3766442.11	2.24843	(11113008)
469141.55	3766407.27	2.12490	(13050706)
469145.42	3766369.84	2.04173	(11051106)
469129.93	3766245.95	1.72456	(11051106)
469118.32	3766213.68	1.63159	(11051106)
468976.35	3766173.68	1.49672	(12070906)
469000.87	3766172.39	1.51838	(12070906)
469027.98	3766171.09	1.54420	(11113008)
469060.24	3766172.39	1.51586	(11113008)
469109.28	3766177.55	1.54311	(11051106)
469228.01	3766244.66	1.88565	(13051406)
469218.98	3766222.72	1.81067	(13051406)
469216.40	3766189.16	1.72892	(13051406)
469209.95	3766151.74	1.61496	(13051406)
469206.07	3766084.63	1.46711	(13051406)
469202.20	3766048.49	1.38166	(13051406)
469107.99	3766096.24	1.41931	(11051106)
469091.21	3766023.97	1.29250	(11051106)
469025.39	3766054.94	1.31714	(11113008)
469013.78	3766008.48	1.25310	(11113008)
468968.61	3766013.65	1.26495	(11113008)
468928.60	3766011.06	1.26719	(12070906)
468882.14	3766012.35	1.10955	(12070906)
468892.47	3766110.44	1.14764	(11123008)
469741.44	3766040.43	1.12229	(13032607)
469745.79	3766069.83	1.19761	(13032607)
469756.14	3766117.20	1.22500	(13032607)
469727.28	3766089.43	1.22012	(13032607)
469767.03	3766143.88	1.16578	(13032607)
469770.84	3766176.00	1.08893	(13032607)
469775.74	3766206.49	1.03182	(15122308)
469779.55	3766233.17	1.04196	(15081006)
469785.54	3766256.58	1.07138	(15081006)
469791.53	3766272.92	1.07165	(15081006)

	469792.62	3766293.06		1.08232	(12122508)
469792.62	3766315.93		1.12666	(12122508)	
	469810.58	3766364.93		1.12509	(13102207)
469815.48	3766397.06		1.29144	(13061806)	

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
 ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
 CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): PAREAL ,

*** DISCRETE CARTESIAN
 RECEPTOR POINTS ***

MICROGRAMS/M**3			** CONC OF PM_10	IN
			**	
X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-
COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	
469818.75	3766430.81	1.37770	(13061806)	
469818.75	3766456.40	1.39093	(13061806)	
469780.64	3766470.01	1.46122	(13061806)	
469900.42	3766461.30	1.21324	(11062806)	
469880.28	3766399.23	1.28658	(13061806)	
469874.29	3766356.77	1.20721	(13061806)	
469867.75	3766317.02	1.03421	(13102207)	
469920.02	3766389.98	1.22706	(13061806)	
469942.34	3766376.91	1.19516	(13061806)	
469968.48	3766346.97	1.16534	(13061806)	
470007.68	3766340.98	1.10600	(13061806)	
470045.79	3766321.92	1.05488	(13061806)	
470070.29	3766307.76	1.02489	(13061806)	
470090.98	3766293.61	1.00372	(13061806)	
469945.61	3766434.62	1.15177	(11062806)	
469977.19	3766414.48	1.11244	(11062806)	
470007.68	3766399.78	1.07308	(11062806)	
470032.73	3766385.08	1.04592	(11062806)	
470067.03	3766370.92	1.00390	(11062806)	
470107.86	3766352.95	0.95551	(11062806)	
470136.17	3766334.99	0.92878	(11062806)	
470164.49	3766323.55	0.89769	(11062806)	
470194.43	3766303.95	0.87437	(11062806)	
470231.45	3766278.91	0.84751	(11062806)	
470176.46	3766232.08	0.92633	(13061806)	
470194.43	3766233.17	0.89264	(13061806)	

	470153.05	3766216.84		0.96963	(13061806)
469955.85	3766581.98		1.11644		(15073006)
	469990.27	3766587.19		1.03297	(15073006)
470014.26	3766574.68		1.00866		(15073006)
	470083.10	3766933.48		1.04472	(16053106)
470090.40	3766958.51		1.03226		(16053106)
	470099.79	3766974.16		1.00555	(16053106)
470109.18	3766990.85		0.96612		(16053106)
	470115.43	3767008.58		0.91537	(16053106)
470127.95	3767032.57		0.83947		(15072806)
	470119.61	3766937.65		1.00740	(16053106)
470131.08	3766962.69		0.98629		(16053106)
	470142.55	3766978.33		0.95577	(16053106)
470155.07	3767000.23		0.90031		(16053106)
	470170.71	3767013.79		0.85042	(16053106)
470184.27	3767016.92		0.82998		(16053106)
	470199.92	3767020.05		0.80819	(16053106)
470214.52	3767025.27		0.78116		(16053106)
	470230.17	3767030.48		0.75917	(15072806)
470145.68	3766931.39		0.97988		(16053106)
	470150.90	3766949.13		0.97497	(16053106)
470159.24	3766965.81		0.95559		(16053106)
	470174.89	3766985.63		0.91297	(16053106)
470190.53	3766993.98		0.88278		(16053106)
	470205.13	3766997.11		0.86356	(16053106)
470218.69	3767001.28		0.84302		(16053106)
	470234.34	3767006.49		0.81826	(16053106)
470180.10	3766931.39		0.94747		(16053106)
	470187.40	3766943.91		0.94188	(16053106)
470202.01	3766959.56		0.92157		(16053106)
	470217.65	3766966.86		0.90134	(16053106)
470230.17	3766972.07		0.88480		(16053106)
	470246.86	3766975.20		0.86696	(16053106)
470206.18	3766938.70		0.92528		(16053106)
	470228.08	3766942.87		0.90601	(16053106)
470246.86	3766951.21		0.88785		(16053106)
	470151.94	3767040.91		0.81007	(15072806)
470171.76	3767045.09		0.78931		(15072806)
	470188.45	3767052.39		0.76719	(15072806)
470210.35	3767060.73		0.74423		(16070106)
	470228.08	3767064.90		0.73354	(16070106)
470246.86	3767071.16		0.72811		(16070106)
	470011.13	3766618.49		0.89401	(15073006)
470049.72	3766604.93		0.84035		(15073006)
	470071.63	3766593.45		0.82530	(15073006)
470094.57	3766579.89		0.81677		(15073006)
	470049.72	3766649.78		0.93977	(12071206)
470086.23	3766633.09		0.88937		(12071206)
	470108.13	3766621.61		0.85742	(12071206)
470131.08	3766608.05		0.82117		(12071206)

	470101.87	3766710.27		0.95547	(13032707)
470162.37	3766683.15		0.90042	(12071206)	
	470057.02	3766467.25		1.02447	(15073006)
470071.63	3766484.98		1.02404	(15073006)	

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
 ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE
 CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
 INCLUDING SOURCE(S): PAREAL ,

*** DISCRETE CARTESIAN
 RECEPTOR POINTS ***

** CONC OF PM_10 IN
 **
 MICROGRAMS/M**3

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-
COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	
470081.01	3766501.67	1.00711	(15073006)	
470087.27	3766515.22	0.98375	(15073006)	
470092.49	3766531.91	0.94772	(15073006)	
470099.79	3766548.60	0.89679	(15073006)	
470111.26	3766559.03	0.84474	(15073006)	
470118.56	3766572.59	0.78640	(15073006)	
470134.21	3766578.85	0.73138	(12071206)	
470148.81	3766593.45	0.78148	(12071206)	
470163.41	3766601.80	0.80500	(12071206)	
470176.97	3766610.14	0.82345	(12071206)	
470187.40	3766621.61	0.84306	(12071206)	
470198.88	3766627.87	0.84860	(12071206)	
470211.39	3766636.22	0.85260	(12071206)	
470221.82	3766646.65	0.85465	(12071206)	
470084.14	3766455.77	1.00026	(15073006)	
470092.49	3766473.50	1.00407	(15073006)	
470106.05	3766491.24	0.98253	(15073006)	
470105.00	3766452.64	0.98721	(15073006)	
470130.04	3766440.13	0.96490	(15073006)	
470152.98	3766428.65	0.94533	(15073006)	
470174.89	3766420.31	0.92873	(15073006)	
470194.70	3766406.75	0.91102	(15073006)	
470209.31	3766398.41	0.89906	(15073006)	
470224.95	3766389.02	0.88628	(15073006)	
470234.34	3766382.76	0.87826	(15073006)	
470246.86	3766376.50	0.86924	(15073006)	

	470257.29	3766370.24		0.86110	(15073006)
469778.52	3767872.68		0.71029	(12121308)	
	469756.50	3767894.70		0.73735	(12121308)
469820.99	3767912.00		0.63894	(12121308)	
	469824.14	3767878.97		0.64803	(16011506)

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*** MODELOPTs: NonDEFAULT CONC FLAT and ELEV NOCHKD SCREEN URBAN
ADJ_U*

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

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

A Total of 0 Fatal Error Message(s)
A Total of 6 Warning Message(s)
A Total of 838 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 40 Calm Hours Identified

A Total of 798 Missing Hours Identified (1.82 Percent)

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

***** WARNING MESSAGES *****
ME W186 95 MEOPEN: THRESH_1MIN 1-min ASOS wind speed
threshold used 0.50
ME W187 95 MEOPEN: ADJ_U* Option for Stable Low Winds used in
AERMET
ME W397 95 MEOPEN: SCREEN option used without use of SCREEN
Met Data 16216
MX W438 8800 METQA: Convective Velocity Data Out-of-Range.
KURDAT = 12010216
MX W438 11536 METQA: Convective Velocity Data Out-of-Range.
KURDAT = 12042516
MX W420 16779 METQA: Wind Speed Out-of-Range. KURDAT =
12113003

*** AERMOD Finishes Successfully ***

Construction HRA Screening Heath Risk Inputs and Calculations

0.375 9 hrs/24 hrs

Emission Calcs	
0.2465	CalEEMod PM10 tons/yr (x) construction exhaust at site 9hrs/day
907184.7	grams/ton
3600	seconds/hour
24	hours/day
1.00	percent of day
260	days/yr
0.00995464	grams/second

Area Calcs	
17.53	Max area disturbed (acres)
3200	meters ² /acre
56096	meters ²
236.8459415	meters x meters

AERSCREEN Emission Rate	
1.77457E-07	grams/second*meter ²
0.00000017746	

*assume all PM10 exhaust is DPM
 *assumption is that emissions are constant over the acres disturbed

AERSCREEN assumptions
 1.2m receptor height
 1 m release height
 use discrete distances as well as array from 0 to 1500 m
 Urban setting

0.3048 AERSCREEN Distances		
ft	m	
10	3.048	receptor 1
25	7.62	receptor 2
65	19.812	receptor 3
100	30.48	receptor 4
250	76.2	receptor 5
500	152.4	receptor 6
150.262	45.8	highest concentration

0.3048 Sensitive Receptor

Highest Concentration (150 ft)			
HRA Calcs			
4.3	AERSCREEN 1-hour concentration (micrograms/meter ³)		
0.1	1-hour --> annual conversion		From June 2007 BAAQMD PERMIT MODELING GUIDANCE, pg. 4
4.25E-01	AERSCREEN annual concentration (micrograms/meter ³)		
1.74E-06	Calculated dose (mg/kg-day)		
1.9100	Cancer risk (per million)		
0.0850	Hazard Index		
5	Chronic inhalation REL (micrograms/meter ³)		
580	days of construction		
0.375	hours at residences (% of day)		
217.5	Exposure frequency (EF)	days/year	# of construction days
1.589041096	Exposure duration (ED)	Years	# of days/365
2550	Averaging time (AT)	days	
302	Daily breathing rate (DBR)	L/kg body weight	
1	Inhalation absorption factor (A)	None	
1.00E-03	Micrograms to milligrams conversion	1 microgram	
1.00E-03	liters to cubic meters conversion	liters	
1.1	Cancer potency factor	mg/kg-day	
1.00E+06	risk per million people	None	