Appendix A:
Air Quality and Greenhouse Gases Supporting Information

A.1 - Air Quality Report

Central Commerce Center

AIR QUALITY IMPACT ANALYSIS

CITY OF SAN BERNARDINO

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LIST OF ABBREVIATED TERMS

(1)	Reference
µg/m3	Microgram per Cubic Meter
AADT	Annual Average Daily Trips
AQIA	Air Quality Impact Analysis
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BACMs	Best Available Control Measures
BMPs	Best Management Practices
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
DPM	Diesel Particulate Matter
EPA	Environmental Protection Agency
LST	Localized Significance Threshold
MMs	Mitigation Measures
NAAQS	National Ambient Air Quality Standards
NO2	Nitrogen Dioxide
NOx	Oxides of Nitrogen
Pb	Lead
PM10	Particulate Matter 10 microns in diameter or less
PM2.5	Particulate Matter 2.5 microns in diameter or less
PPM	Parts Per Million
Project	Central Commerce Center
ROG	Reactive Organic Gases
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SIPs	State Implementation Plans
SRA	Source Receptor Area

TAC	Toxic Air Contaminant
TIA	Traffic Impact Analysis
TOG	Total Organic Gases
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds

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EXECUTIVE SUMMARY

Short-Term Construction

REGIONAL IMPACTS

Emissions resulting from Project construction activity will not exceed the numerical regional thresholds of significance established by the South Coast Air Quality Management District (SCAQMD) for any criteria pollutant. Therefore, Project construction-source emissions are considered to be less than significant and no mitigation measures are required.

LOCALIZED IMPACTS

Additionally, emissions resulting from Project construction activity will not exceed the SCAQMD's localized significance thresholds. Therefore, a less than significant impact will occur.

Project construction-source emissions would not conflict with the applicable Air Quality Management Plan (AQMP) as shown in Section 3.9 of this report.

ODOR IMPACTS

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

Long-Term Operational

REGIONAL IMPACTS

Emissions resulting from Project operational activity will not exceed the numerical regional thresholds of significance established by the SCAQMD for any criteria pollutant. Therefore, a less than significant impact will occur and no mitigation measures are required.

LOCALIZED IMPACTS

Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the operational LSTs section of this report. The proposed Project would not result in a significant CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in Section 3.8, thus a less than significant impact to sensitive receptors during operational activity is expected. Lastly, project operational-source emissions would not have the potential to conflict with the applicable AQMP during operational activity as shown in Section 3.9 of this report.

ODOR IMPACTS

Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or heavy manufacturing uses. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous refuse. Moreover, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances (1). Consistent with City requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations. Potential operational-source odor impacts are therefore considered less-than-significant.

1 INTRODUCTION

This report presents the results of the air quality impact analysis (AQIA) for the proposed Central Commerce Center ("Project").

The purpose of this AQIA is to evaluate the potential net new impacts to air quality associated with construction and operation of the proposed Project, and recommend measures to mitigate impacts considered potentially significant in comparison to established regulatory thresholds.

1.1 SITE LOCATION

The proposed Central Commerce Center site is located on 270 E. Central Ave in the City of San Bernardino, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of approximately 126,995 square feet of distribution warehouse/warehousing use, as shown on Exhibit 1-B. For the purposes of this analysis, it is assumed that the Project will be developed in a single phase with an Opening Year of 2017.

1.3 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES (BACMS)

Measures listed below (or equivalent language) shall appear on all Project grading plans, construction specifications and bid documents, and the City shall ensure such language is incorporated prior to issuance of any development permits.

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) (27); Rule 431.2 (Low Sulfur Fuel); Rule 403 (Fugitive Dust) (28); and Rule 1186 / 1186.1 (Street Sweepers) (29). It should be noted that BACMs are not mitigation as they are standard regulatory requirements.

BACM AQ-1

The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403 (4):

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

BACM AQ-2

The following measures shall be incorporated into Project plans and specifications as implementation of Rule 1113 (2):

- In order to limit the VOC content of architectural coatings used in the SCAB, architectural coatings shall have a low VOC default level of 50 g/L unless otherwise specified in the SCAQMD Table of Standards (pg. 32-33).

1.4 CONSTRUCTION-SOURCE/OPERATIONAL-SOURCE MITIGATION MEASURES

No significant impacts will occur, therefore no mitigation measure are required.

EXHIBIT 1-A: LOCATION MAP

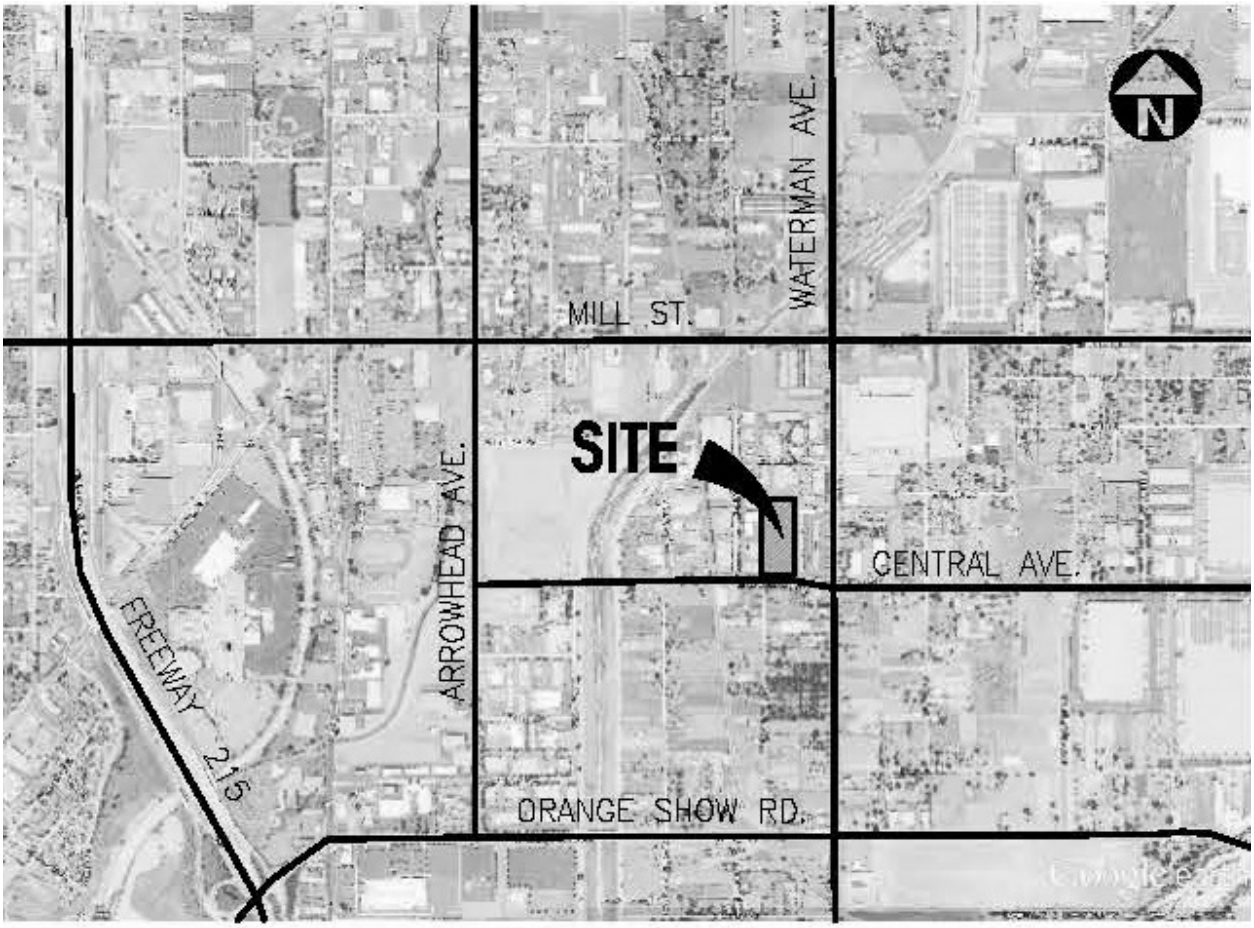
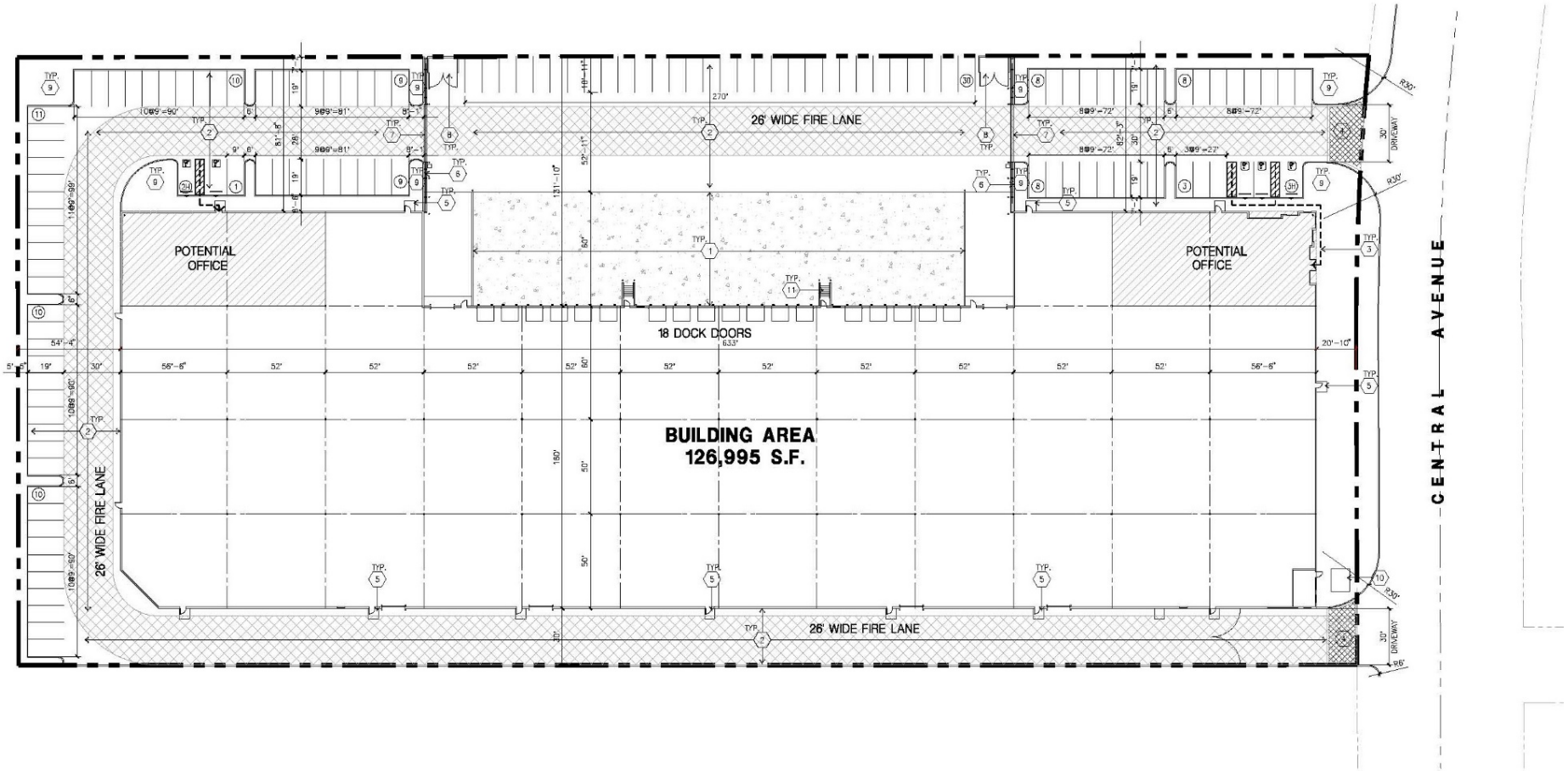


EXHIBIT 1-B: SITE PLAN



2 AIR QUALITY SETTING

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

2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (2). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As discussed above, the Project site is located within the South Coast Air Basin, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County. The larger South Coast district boundary includes 10,743 square miles.

The SCAB is bound by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bound by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bound by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

2.2 REGIONAL CLIMATE

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

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

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

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

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14 1/2 hours of possible sunshine.

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

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

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

2.3 WIND PATTERNS AND PROJECT LOCATION

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

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

2.4 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated and in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect, as well health effects of each pollutant regulated under these standards are shown in Table 2-1 (3) (4).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in Table 2-1. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O3, CO, SO2, NO2, PM10, and PM2.5 are not equaled or exceeded at any time in any consecutive three-year period; and the federal standards (other than O3, PM10, PM2.5, and those based on annual averages or arithmetic mean) are not exceeded more than once per year. The O3 standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

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

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[10]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (10/1/15)**

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

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11. On June 2, 2010, a new 1-hour SO_2 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 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 $\mu g/m^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (10/1/15)**

2.5 REGIONAL AIR QUALITY

The SCAQMD monitors levels of various criteria pollutants at 30 monitoring stations throughout the air district. In 2013, the most recent year for which reported SCAQMD monitoring data is available, the federal and state ambient air quality standards (NAAQS and CAAQS) were exceeded on one or more days for ozone, PM10, and PM2.5 at most monitoring locations (5). See Table 2-2 for attainment designations for the SCAB (6) (7). Appendix 3.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

2.6 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site for Ozone (O_3), Carbon Monoxide (CO), and Nitrogen Dioxide (NO_2), Inhalable Particulates (PM_{10}), and Ultra-Fine Particulates ($PM_{2.5}$) is the South Coast Air Quality Management District Central San Bernardino Valley 2 monitoring station, located approximately 1.9 miles north of the Project site in San Bernardino (SRA 34).

The most recent three (3) years of published data available is shown on Table 2-3 and identifies the number of days ambient air quality standards were exceeded for the study area, which is was considered to be representative of the local air quality at the Project site (5) (8). Additionally, data for SO2 has been omitted as attainment is regularly met in the South Coast Air Basin and few monitoring stations measure SO2 concentrations.

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

- Carbon Monoxide (CO): Is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- Sulfur Dioxide (SO2): Is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO2 oxidizes in the atmosphere, it forms sulfates (SO4). Collectively, these pollutants are referred to as sulfur oxides (SOX).

  Nitrogen Oxides (Oxides of Nitrogen, or NOx): Nitrogen oxides (NOx) consist of nitric oxide (NO), nitrogen dioxide (NO2) and nitrous oxide (N2O) and are formed when nitrogen (N2) combines with oxygen (O2). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO2 is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of

TABLE 2-2: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SOUTH COAST AIR BASIN (SCAB)

Criteria Pollutant	State Designation	Federal Designation
Ozone - 1hour standard	Nonattainment	No Standard
Ozone - 8 hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Attainment
Lead[1]	Attainment	Attainment

Source: State/Federal designations were taken from http://www.arb.ca.gov/desig/adm/adm.htm
Note: See Appendix 3.1 for a detailed map of State/National Area Designations within the South Coast Air Basin

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

TABLE 2-3: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2012-2014

POLLUTANT	STANDARD	YEAR		
		2012	2013	2014
Ozone (O_3)				
Maximum 1-Hour Concentration (ppm)		0.124	0.139	0.121
Maximum 8-Hour Concentration (ppm)		0.109	0.112	0.099
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	41	22	38
Number of Days Exceeding State 8-Hour Standard	> 0.07 ppm	74	53	76
Number of Days Exceeding Federal 1-Hour Standard	> 0.12 ppm	0	2	0
Number of Days Exceeding Federal 8-Hour Standard	> 0.075 ppm	54	36	51
Number of Days Exceeding Health Advisory	≥ 0.15 ppm	0	0	0
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration (ppm)		--	--	4.0
Maximum 8-Hour Concentration (ppm)		1.7	1.7	2.4
Number of Days Exceeding State 1-Hour Standard	> 20 ppm	--	0	0
Number of Days Exceeding Federal / State 8-Hour Standard	> 9.0 ppm	0	0	0
Number of Days Exceeding Federal 1-Hour Standard	> 35 ppm	0	0	0
Nitrogen Dioxide (NO_2)				
Maximum 1-Hour Concentration (ppm)		0.067	0.072	.073
Annual Arithmetic Mean Concentration (ppm)		0.019	0.018	0.18
Number of Days Exceeding State 1-Hour Standard	> 0.18 ppm	0	0	0
Particulate Matter ≤ 10 Microns (PM_{10})				
Maximum 24-Hour Concentration (µg/m^3)		53	102	136
Number of Samples		55	60	60
Number of Samples Exceeding State Standard	> 50 µg/m^3	1	3	4
Number of Samples Exceeding Federal Standard	> 150 µg/m^3	0	0	0
Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)				
Maximum 24-Hour Concentration (µg/m^3)		34.8	55.3	73.9
Annual Arithmetic Mean (µg/m^3)		11.8	11.4	--
Number of Samples Exceeding Federal 24-Hour Standard	> 35 µg/m^3	0	1	1

-- = data not available from SCAQMD or ARB

the seven types of nitrogen oxide compounds, NO2 is the most abundant in the atmosphere. As ambient concentrations of NO2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO2 than those indicated by regional monitors.

- Ozone (O3): Is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOX), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
- PM10 (Particulate Matter less than 10 microns): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM10 also causes visibility reduction and is a criteria air pollutant.
- PM2.5 (Particulate Matter less than 2.5 microns): A similar air pollutant consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO2 release from power plants and industrial facilities and nitrates that are formed from NOX release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. PM2.5 is a criteria air pollutant.
- Volatile Organic Compounds (VOC): Volatile organic compounds are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O3, which is a criteria pollutant. The SCAQMD uses the terms VOC and ROG (see below) interchangeably.
- Reactive Organic Gases (ROG): Similar to VOC, Reactive Organic Gases (ROG) are also precursors in forming ozone and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O3, which is a criteria pollutant. The SCAQMD uses the terms ROG and VOC (see previous) interchangeably.
- Lead (Pb): Lead is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. It should be noted that the Project is not anticipated to generate a quantifiable amount of lead emissions. Lead is a criteria air pollutant.

Health Effects of Air Pollutants

Ozone

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Carbon Monoxide

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM10 and PM2.5) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in PM2.5 concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM10 and PM2.5.

Nitrogen Dioxide

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO2.

Sulfur Dioxide

A few minutes of exposure to low levels of SO2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO2.

Animal studies suggest that despite SO2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO2 levels. In these studies, efforts to separate the effects of SO2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple

commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

Odors

The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that cause odors poses a big challenge. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.7 REGULATORY BACKGROUND

2.7.1 FEDERAL REGULATIONS

The U.S. EPA is responsible for setting and enforcing the NAAQS for O3, CO, NOx, SO2, PM10, and lead (3). The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955, and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (9). The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O3, NO2, SO2, PM10, CO, PM2.5, and lead. The NAAQS were amended in July 1997 to include an additional standard for O3 and to adopt a NAAQS for PM2.5. Table 2-1 (previously presented) provides the NAAQS within the basin.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and nitrogen oxides (NOx). NOx is a collective term that includes all forms of nitrogen oxides (NO, NO2, NO3) which are emitted as byproducts of the combustion process.

2.7.2 CALIFORNIA REGULATIONS

The CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (4) (3).

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

Serious non-attainment areas are required to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

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

2.7.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards (10). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts

of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.8.

2.8 REGIONAL AIR QUALITY IMPROVEMENT

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

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

As discussed above, the SCAQMD is the lead agency charged with regulating air quality emission reductions for the entire Basin. SCAQMD created AQMPs which represent a regional blueprint for achieving healthful air on behalf of the 16 million residents of the South Coast Basin. The remarkable historical improvement in air quality since the 1970's is the direct result of Southern California's comprehensive, multiyear strategy of reducing air pollution from all sources as outlined in its Air Quality Management Plans (AQMPs) and by utilizing uniform CEQA review throughout the Basin.

The 2012 AQMP states, " the remarkable historical improvement in air quality since the 1970's is the direct result of Southern California's comprehensive, multiyear strategy of reducing air pollution from all sources as outlined in its AQMPs," (13). Ozone, NOx, VOC, and CO have been decreasing in the Basin since 1975 and are projected to continue to decrease through 2020 (14). These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles traveled in the Basin continue to increase, NOx and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NOx emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy. Ozone contour maps show that the number of days exceeding the national 8-hour standard has decreased between 1997 and 2007. In the 2007 period, there was an overall decrease in exceedance days compared with the 1997 period. The overall trends of PM10 and PM2.5 in the air (not emissions) show an overall improvement since 1975. Direct emissions of PM10 have remained somewhat constant in the Basin and direct emissions of PM2.5 have decreased slightly since 1975. Area wide sources (fugitive dust from roads, dust from construction and demolition, and other sources) contribute the greatest amount of direct particulate matter emissions.

Ozone levels in the SCAB have decreased substantially over the last 30 years as shown in Table 2-4 (15). Today, the maximum measured concentrations are approximately one-third of concentrations within the late 70's.

As with other pollutants, the most recent PM10 statistics also show overall improvement as illustrated in Table 2-5. During the period for which data are available, the 24-hour national annual average decreased by almost 45 percent, from 103.7 µg/m³ in 1989 to 57.6 µg/m³ in 2014. Although the values in the late 1990's show some variability, this is probably due to meteorology rather than a change in emissions. Despite the overall decrease, ambient concentrations still exceed the State annual and 24-hour PM10 standards. Similar to the ambient concentrations, the calculated number of days above the 24-hour PM10 standards has also shown an overall drop. During 1995, there were 25 calculated days above the national standard. By 2014, there was one calculated national standard exceedance days (14).

Table 2-6 shows the most recent 24-hour average $PM_{2.5}$ concentrations (national) in the SCAB from 1999 through 2014. Overall, the annual average concentrations have decreased by almost 52 percent. The calculated number of days above the national standard also decreased, from about 88 days in 1999 to about 9 days in 2014. The SCAB is currently designated as nonattainment for the State and national $PM_{2.5}$ standards. Measures adopted as part of the upcoming $PM_{2.5}$ SIP, as well as programs to reduce ozone and diesel PM will help in reducing public exposure to $PM_{2.5}$ in this region.

The most recent Carbon dioxide concentrations in the SCAB 1986 are shown in Table 2-7 (17). Carbon monoxide concentrations in the SCAB have decreased markedly — a total decrease of more about 80 percent in the peak 8-hour concentration since 1986. The number of exceedance days has also declined. The entire SCAB is now designated as attainment for both the state and national CO standards. Ongoing reductions from motor vehicle control programs should continue the downward trend in ambient CO concentrations.

TABLE 2-4: SOUTH COAST AIR BASIN OZONE TREND

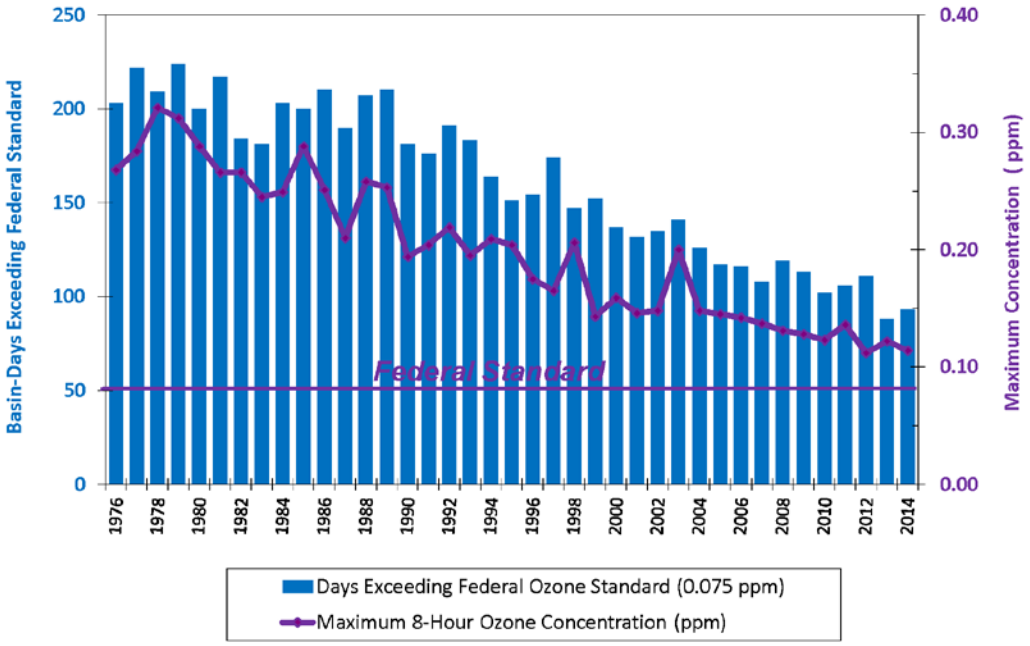


TABLE 2-5: SOUTH COAST AIR BASIN PM10 TREND

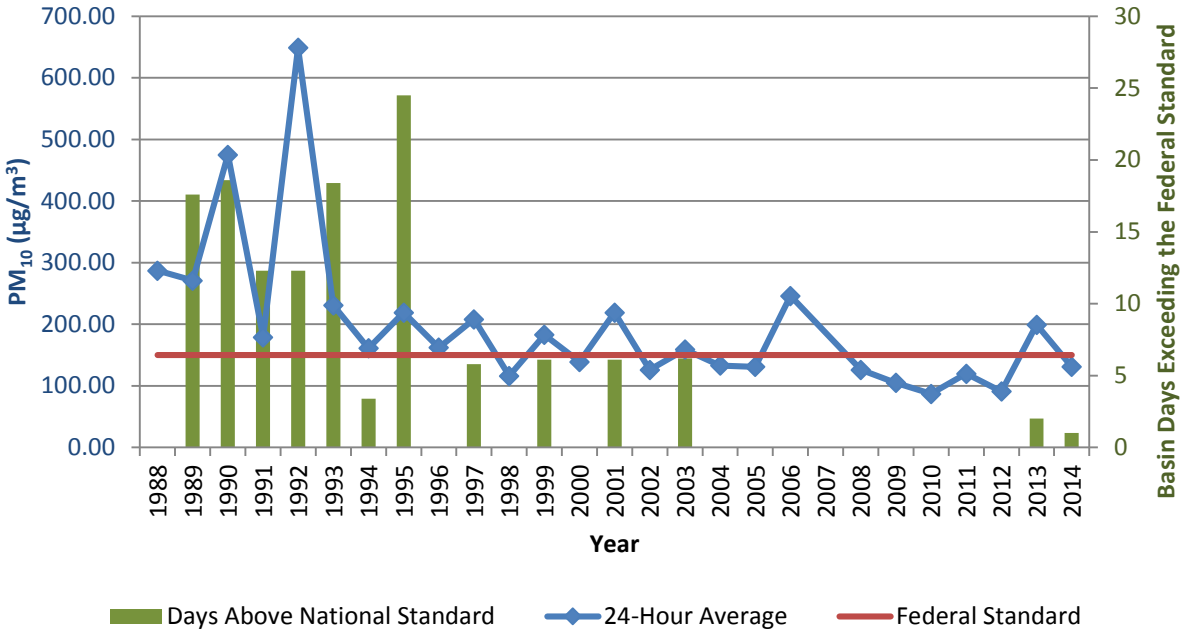


TABLE 2-6: SOUTH COAST AIR BASIN $PM_{2.5}$ TREND

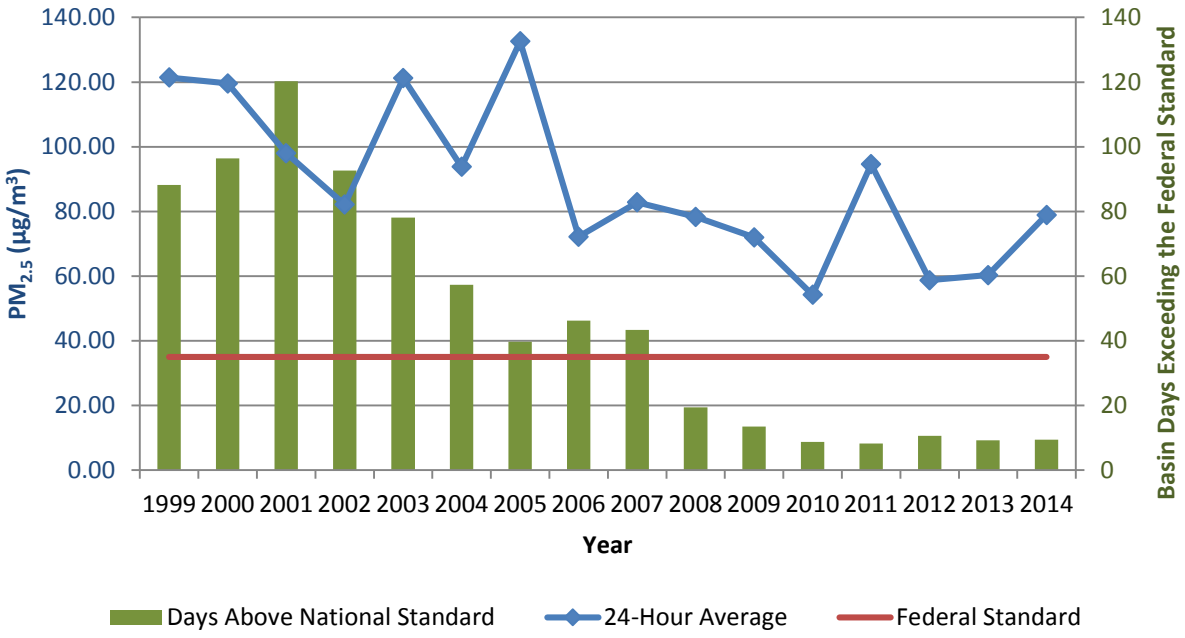
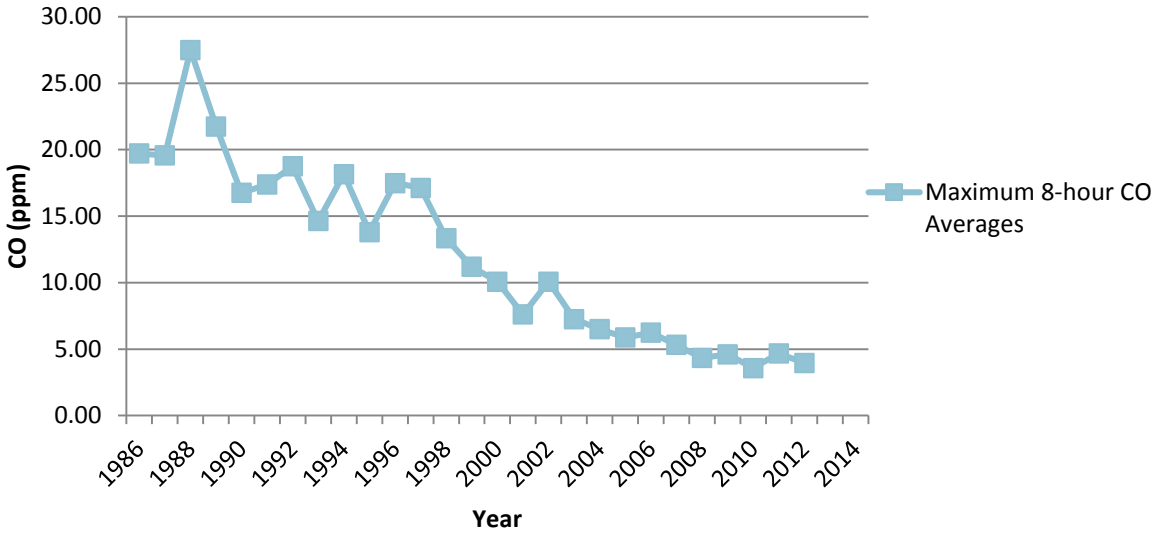


TABLE 2-7: SOUTH COAST AIR BASIN CARBON MONOXIDE TREND



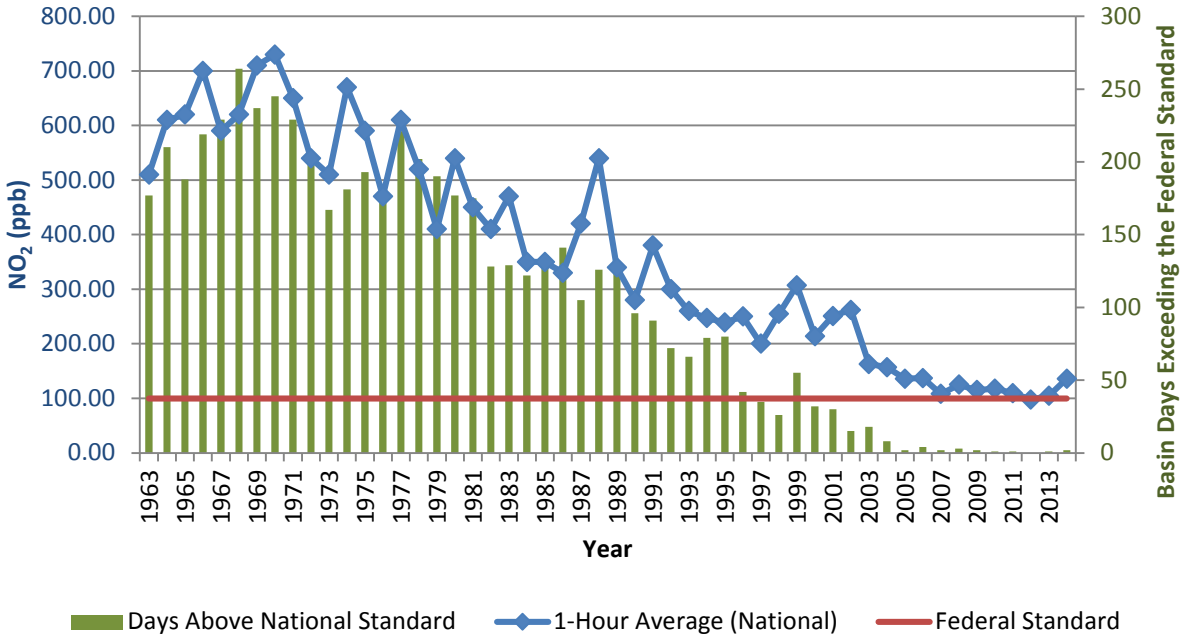
Part of the control process of the SCAQMD's duty to greatly improve the air quality in the Basin is the uniform CEQA review procedures required by SCAQMD's CEQA Handbook (18). The single threshold of significance used to assess Project direct and cumulative impacts has in fact "worked" as evidenced by the track record of the air quality in the Basin dramatically improving over the course of the past decades. As stated by the SCAQMD the District's thresholds of

significance are based on factual and scientific data and are therefore appropriate thresholds of significance to use for this Project.

The most recent NO_2 data for the SCAB is shown in Table 2-8 (17). Over the last 50 years, NO_2 values have decreased significantly; the peak 1-hour average for 2013 was almost 74 percent lower than what it was during 1963. The SCAB attained the State 1-hour NO_2 standard in 1994, bringing the entire State into attainment. A new state annual average standard of 0.030 parts per million was adopted by the ARB in February 2007 (19). The new standard is just barely exceeded in the South Coast. NO_2 is formed from NO_x emissions, which also contribute to ozone. As a result, the majority of the future emission control measures will be implemented as part of the overall ozone control strategy. Many of these control measures will target mobile sources, which account for more than three-quarters of California's NO_x emissions. These measures are expected to bring the South Coast into attainment of the State annual average standard.

The American Lung Association website includes data collected from State air quality monitors that are used to compile an annual State of the Air report. These reports have been published over the last 13 years. The latest State of the Air Report compiled for the Basin was in 2010 (20). As noted in this report, air quality in the Basin has significantly improved in terms of both pollution levels and high pollution days over the past three decades. The area's average number of high ozone days dropped from 189.5 day per year in the initial 2000 State of the Air report (1996–1998) to 141.8 in the 2006–2008 report. The region has seen dramatic reduction in particle pollution since the initial State of the Air report (20).

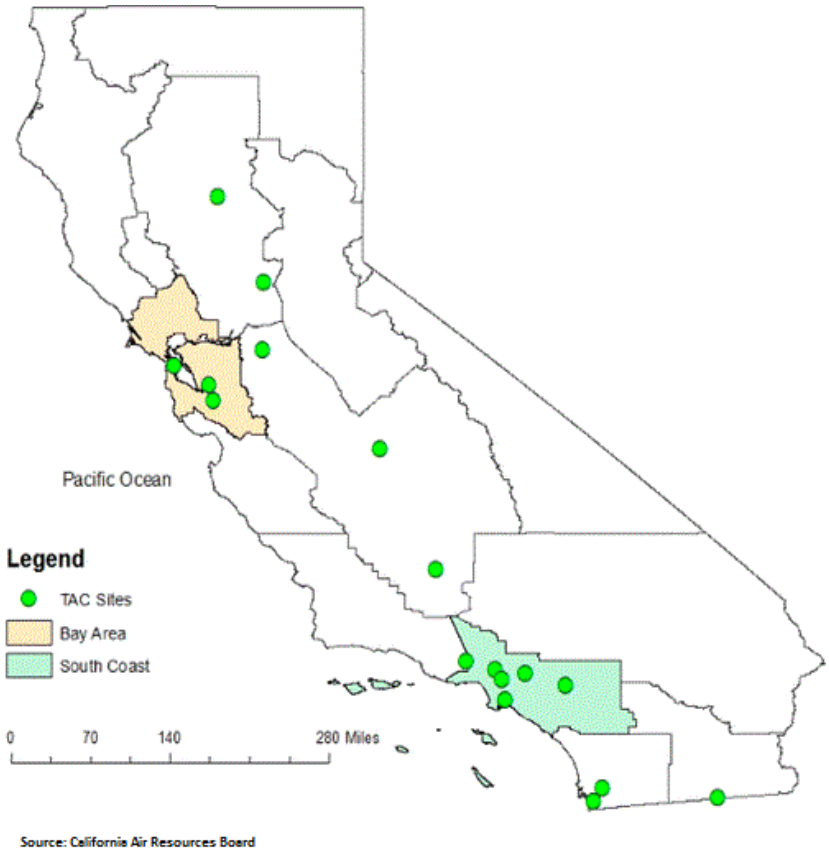
TABLE 2-8: SOUTH COAST AIR BASIN NITROGEN DIOXIDE TREND



TOXIC AIR CONTAMINANTS (TACS) TRENDS

In 1984, as a result of public concern for exposure to airborne carcinogens, the CARB adopted regulations to reduce the amount of air toxic contaminant emissions resulting from mobile and area sources, such as cars, trucks, stationary products, and consumer products. According to the *Ambient and Emission Trends of Toxic Air Contaminants in California* journal article which was prepared for CARB, results show that between 1990-2012, ambient concentration and emission trends for the seven TACs responsible for most of the known cancer risk associated with airborne exposure in California have declined significantly (21). The seven TACs studied shown below include those that are derived from mobile sources: diesel particulate matter (DPM), benzene, and 1,3-butadiene; those that are derived from stationary sources: perchloroethylene and hexavalent chromium; and those derived from photochemical reactions of emitted VOCs: formaldehyde and acetaldehyde[2]. TACs data was gathered at monitoring sites from both the Bay Area and South Coast Air Basins, as shown on Exhibit 2-A; Several of the sites in the SCAB include Reseda, Compton, Rubidoux, Burbank, and Fontana. The decline in ambient concentration and emission trends of these TACs are a result of various regulations CARB has implemented to address cancer risk.

EXHIBIT 2-A: CALIFORNIA TOXIC AIR CONTAMINANT SITES



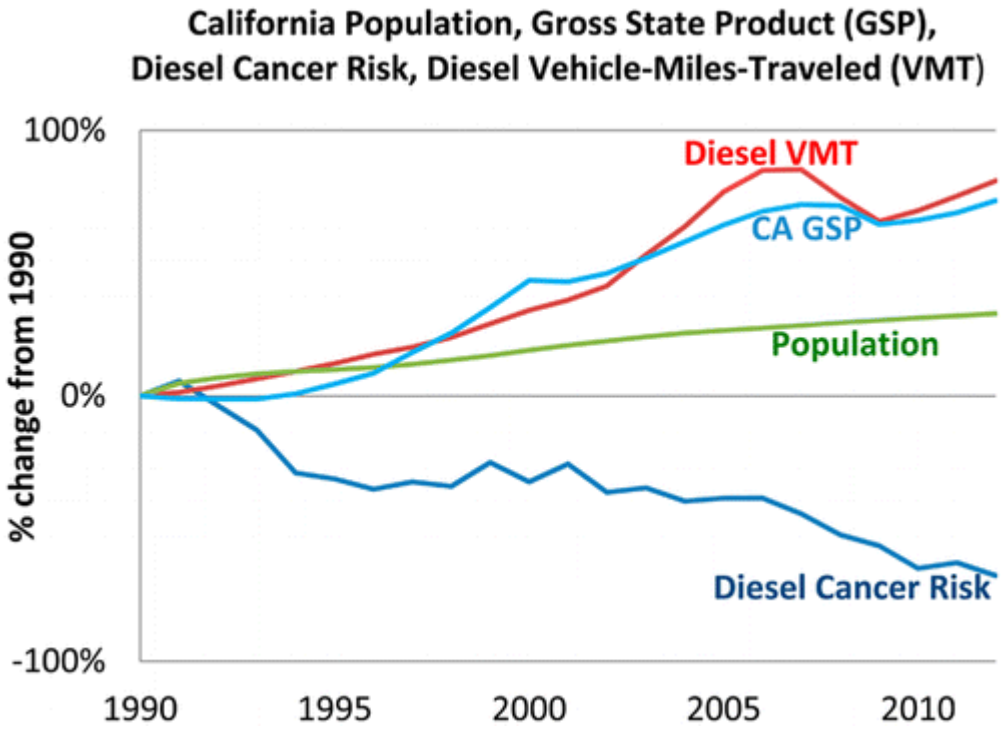
[2] It should be noted that ambient DPM concentrations are not measured directly. Rather, a surrogate method using the coefficient of haze (COH) and elemental carbon (EC) is used to estimate DPM concentrations.

Mobile Source TACs

The CARB introduced two programs that aimed at reducing mobile emissions for light and medium duty vehicles through vehicle emissions controls and cleaner fuel. Since 1996, light-duty vehicles sold in California are equipped with California's second-generation On-Board Diagnostic (OBD-II) system as a result of about half of total car emissions stemming from emissions control device malfunctions. CARB's phase II Reformulated Gasoline (RFG-2) regulation, adopted in 1996, also led to a reduction of mobile source emissions. Through such regulations, benzene levels declined 88% from 1990-2012. 1,3-Butadiene concentrations also declined 85% from 1990-2012 as a result of the motor vehicle regulations (21).

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

EXHIBIT 2-B: DIESEL PARTICULATE MATTER AND DIESEL VEHICLE MILES TREND



Source: California Air Resources Board

Stationary Source TACs

Various regulations led to a decrease in perchloroethylene and hexavalent chromium, with a 92% and 86% decline, respectively. By 1993, several local air districts required dry cleaning businesses to use a carbon absorber and refrigerated condenser, as well as, dry-to-dry machines and closed-looped machines instead of vented transfer machines. Starting in 2003, California provided financial incentives for dry cleaners to use other solvents and soon after, the CARB banned the use of perchloroethylene in automotive products, aerosol coatings, and most consumer products. In 2007, CARB's dry cleaning regulation was amended to require phase-out of perchloroethylene machines by 2023, which would further reduce emissions to minimal levels (21).

Hexavalent chromium emissions began to decline in 1988 with the ARB-regulated regulations contributing to more than 97% emission reduction within four years. The various regulations include prohibiting the use of hexavalent chromium in cooling towers (1989), in motor vehicle and mobile equipment coatings (2001), and in thermal spraying operations (2005). By 2005, hexavalent chromium emissions were 99.97% less than in 1987, far exceeding expectations. In 2006, hexavalent chromium emissions were further reduced with the 2006 ARB regulation requiring add-on air pollution control devices and chemical fume suppressants.

Secondary TACs

Between 1996-2012, ambient concentrations of formaldehyde and acetaldehyde declined 22% and 21%, respectively. The decline in these TACs are attributed from increasingly stringent motor vehicle exhaust emission standards, vehicle fleet turnover, fuel reformulation, and the switch from MTBE (formaldehyde precursor) to ethanol in gasoline (21).

As previously discussed, ambient and emissions levels of TACs have reduced significantly from 1990-2012. The overall declining trend in TACs is expected to continue in California from implementation of toxic air controls.

DIESEL REGULATIONS

The CARB and the Ports of Los Angeles and Long Beach have adopted several iterations of regulations for diesel trucks that are aimed at reducing diesel particulate matter (DPM). More specifically, the CARB Drayage Truck Regulation (21), the CARB statewide On-road Truck and Bus Regulation (22), and the Ports of Los Angeles and Long Beach "Clean Truck Program" (CTP) require accelerated implementation of "clean trucks" into the statewide truck fleet (23). In other words, older more polluting trucks will be replaced with newer, cleaner trucks as a function of these regulatory requirements

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

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

CANCER RISK TRENDS

Based on information available from CARB, overall cancer risk throughout the basin has had a declining trend since 1990. In 1998, following an exhaustive 10-year scientific assessment process, the State of California Air Resources Board (ARB) identified particulate matter from diesel-fueled engines as a toxic air contaminant. The SCAQMD initiated a comprehensive urban toxic air pollution study, called MATES-II (for Multiple Air Toxics Exposure Study). MATES-II showed that average cancer risk in the SCAB ranges from 1,100 in a million to 1,750 in a million, with an average regional risk of about 1,400 in a million. Moreover, diesel particulate matter (DPM) accounts for more than 70 percent of the cancer risk.

In 2008 the SCAQMD prepared an update to the MATES-II study, referred to as MATES-III. MATES-III estimates the average excess cancer risk level from exposure to TACs is approximately 1,200 in one million basin-wide (a decrease in a regional risk by 200 in a million in comparison to the MATES-II study).

Nonetheless, the SCAQMD's most recent in-depth analysis of the toxic air contaminants and their resulting health risks for all of Southern California was from the *Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES IV,"* which shows that cancer risk has decreased more than 50% between MATES III (2005) and MATES IV (2012) (25).

MATES-IV study represents the baseline health risk for a cumulative analysis. MATES-IV estimates the average excess cancer risk level from exposure to TACs is less than 400 in one million basin-wide. These model estimates were based on monitoring data collected at ten fixed sites within the South Coast Air Basin. None of the fixed monitoring sites are within the local area of the Project site. However, MATES-IV has extrapolated the excess cancer risk levels throughout the basin by modeling the specific grids. MATES-IV modeling predicted an excess cancer risk of 838.12 in one million for the Project area[3]. DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 68% of the total risk shown in MATES-IV. Cumulative Project generated TACs are limited to DPM.

2.9 EXISTING PROJECT SITE AIR QUALITY CONDITIONS

Existing air quality conditions at the Project site would generally reflect ambient monitored conditions as presented previously at Table 2-3.

[3] Based on a conversation with SCAQMD employee Kalam Cheung on December 10, 2015, the Mates IV Methodology was updated on November 20, 2015.

3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the SCAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (20):

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

Within the context of the above threshold considerations, and based on the SCAQMD's CEQA Air Quality Handbook (1993), a project's localized CO emissions impacts would be significant if they exceed the following California standards for localized CO concentrations (13):

- 1-hour CO standard of 20.0 parts per million (ppm)
- 8-hour CO standard of 9.0 ppm.

The SCAQMD has also developed regional and localized significance thresholds for other regulated pollutants, as summarized at Table 3-1 (21). The SCAQMD's CEQA Air Quality Significance Thresholds (March 2011) indicate that any projects in the SCAB with daily emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact.

TABLE 3-1: MAXIMUM DAILY EMISSIONS THRESHOLDS

Pollutant	Construction	Operations
Regional Thresholds		
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
Sox	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Localized Thresholds		
NOx	270 lbs/day	270 lbs/day
CO	1,746 lbs/day	1,746 lbs/day
PM10	14 lbs/day	4 lbs/day
PM2.5	8 lbs/day	2 lbs/day

3.3 PROJECT-RELATED SOURCES OF POTENTIAL IMPACT

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

On October 2, 2013, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2013.2.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (NO_x, VOC, PM_{10}, $PM_{2.5}$, SO_x, and CO) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (22). Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendix 3.2.

3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of CO, VOCs, NOx, SOx, PM10, and PM2.5. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction

- Architectural Coating
- Paving

For purposes of this analysis, construction is expected to commence in June 2016 and will last through March 2017. Construction duration by phase is shown on Table 3-2. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[4] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA guidelines. The site specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity was based on CalEEMod 2013.2.2 defaults and client specifications. The equipment list modeled was based on SCAQMD's summary of a Five Acre Site and client specifications. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.2 of this analysis. A detailed summary of construction equipment assumptions by phase is provided at Table 3-3.

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions". Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). The CalEEMod model was utilized to calculate fugitive dust emissions resulting from this phase of activity. Based on consultation with the client, the Project site is currently vacant and no demolition is required. It is our understanding that the site is expected to balance, therefore no import/export of soil is needed.

Construction emissions for construction worker vehicles traveling to and from the Project site, as well as vendor trips (construction materials delivered to the Project site) were estimated based on information from the applicant and default assumptions of the CalEEMod model.

TABLE 3-2: CONSTRUCTION DURATION ASSUMPTIONS

Phase Name	Start Date	End Date	Days
Site Preparation	06/01/2016	06/14/2016	10
Grading	06/15/2016	07/06/2016	20
Building Construction	07/07/2016	02/01/2017	150
Paving	02/02/2017	03/01/2017	20
Architectural Coating	03/02/2017	03/29/2017	20

[4] As shown in the California Emissions Estimator Model (CalEEMod) User's Guide Version 2013.2, Table 3.4 "OFFROAD Equipment Emission Factors" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Activity	Equipment	Number	Hours Per Day
Site Preparation	Rubber Tired Dozers	3	8
	Tractors/Loaders/Backhoes	2	8
Grading	Graders	2	8
	Skiploader	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Tractors/Loaders/Backhoes	3	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Skiploader	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Cement and Mortar Mixers	2	8
	Pavers	1	8
	Paving Equipment	2	8
	Rollers	1	8
	Tractors/Loaders/Backhoes	1	8
Architectural Coating	Air Compressors	1	8

3.4.1 CONSTRUCTION EMISSIONS SUMMARY

SCAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) (24); Rule 431.2 (Low Sulfur Fuel) (25); Rule 403 (Fugitive Dust) (26); and Rule 1186 / 1186.1 (Street Sweepers) (27). It should be noted that Best Available Control Measures (BACMs) are not mitigation as they are standard regulatory requirements. Notwithstanding, credit for Rule 403 and Rule 1113 have been taken.

The estimated maximum daily construction emissions without mitigation are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.2. Under the assumed scenarios, emissions resulting from the Project construction will not exceed criteria pollutant thresholds established by the SCAQMD. Therefore, Project construction-source emissions will be less than significant and no mitigation measures are required.

TABLE 3-4: MAXIMUM CONSTRUCTION EMISSIONS SUMMARY

Year	Emissions (pounds per day)					
	VOC	NOx	CO	SOx	PM10	PM2.5
2016	7.83	87.08	55.46	0.07	10.19	6.63
2017	30.27	38.20	30.91	0.05	3.33	2.44
Maximum Daily Emissions	**7.83**	**87.08**	**55.46**	**0.07**	**10.19**	**6.63**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of ROG, NOX, CO, SOX, PM10, and PM2.5. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- On-Site Equipment Emissions

3.5.1 AREA SOURCE EMISSIONS

Architectural Coatings

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using the CalEEMod model.

Consumer Products

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

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod model.

3.5.2 ENERGY SOURCE EMISSIONS

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using the CalEEMod model.

3.5.3 MOBILE SOURCE EMISSIONS

Vehicles

Project operational (vehicular) impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations in the vicinity of the Project. The Project related operational air quality impacts derive primarily from vehicle trips generated by the Project. Trip characteristics available from the report, Central Commerce Center Traffic Impact Analysis (Kunzman Associates, Inc.) 2016 were utilized in this analysis (34).

Project operational (vehicular) impacts are dependent on both overall daily vehicle trip generation and the effect of the Project on peak hour traffic volumes and traffic operations. Project-related operational air quality impacts derive predominantly from mobile sources (vehicles). It should be noted that the Project's traffic study presents the total Project vehicle trips in terms of Passenger Car Equivalents (PCEs) and actual vehicles in an effort to recognize and acknowledge the effects of heavy vehicles at the study area intersections. Notwithstanding, for purposes of the air quality study, the PCE trips were not used. Rather, to more accurately estimate and model vehicular-source emissions, the actual number of vehicles, by vehicle classification (e.g., passenger cars (including light trucks), heavy trucks) were used in the analysis. The vehicle fleet mix, in terms of actual vehicles, as derived from the traffic study for the Project is comprised of approximately 79.6% passenger cars and approximately 20.4% total trucks. For analysis purposes 17.19% of all trucks are assumed to be Light-Heavy-Duty (LHD), 22.56% of all trucks are assumed to be Medium-Heavy-Duty (MHD), and 60.25% of all trucks are assumed to be Heavy-Heavy-Duty (HHD). The resulting estimated vehicle-source emissions are summarized at Table 3-7.

3.5.3.1 Trip Length

Background

A technical deficiency inherent in calculating the projected vehicle emissions associated with any project is related to the estimation of trip length and vehicle miles traveled (VMT). VMT for a given project is calculated by the total number of vehicle trips to/from the Project x average trip length. This method of estimating VMT for use in calculating vehicle emissions likely results in the over-estimation and double-counting of emissions because, for a distribution warehouse

center such as the Project, the land use is likely to attract (divert) existing vehicle trips that are already on the circulation system as opposed to generating new trips. In this regard, the Project would, to a large extent, redistribute existing mobile-source emissions rather than generate additional emissions within the Basin. As such, the estimation of the Project's vehicular-source emissions is likely overstated in that no credit for, or reduction in, emissions is assumed based on diversion of existing trips.

Provided below is a summary of the VMT recommendations of the SCAQMD and SCAG, followed by a description of the methodology used to calculate the VMT rates used in this AQIA.

SCAQMD Recommendation

In the last five years, the SCAQMD has provided numerous comments on the trip length for warehouse/distribution and industrial land use projects (35). The SCAQMD asserts that the model-default trip length in CalEEMod™ and the URBan EMISsions (URBEMIS) 2007 model (version 9.2.4) would underestimate emissions. The 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 (POLA and POLB) and/or to destinations outside of California. The SCAQMD states that for this reason, the CalEEMod™ and the URBan EMISsions model default trip length (approximately 12.6 miles) would not be representative of activities at like facilities. The SCAQMD generally recommends the use of a 40-mile one-way trip length.

Southern California Association of Government (SCAG) Heavy Duty Truck Model

SCAG is comprised of 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 (2008) transportation validation for the 2003 Regional Model, SCAG indicates the average internal truck trip length for the SCAG region is 5.92 miles for Light Duty Trucks, 13.06 miles for Medium Duty Trucks, and 24.11 miles for Heavy Duty Trucks.

Approach for Analysis of the Project

The SCAQMD approach identified above is deemed to be the most applicable for the Project. This same methodology is employed in analyses for similar projects in the City and other jurisdictions within the County, and is considered by the Lead Agency to be appropriate and accurate.

Two separate model runs were utilized in order to more accurately model emissions resulting from vehicle operations. The first run analyzed passenger car emissions, which incorporated a default trip length of 16.6 miles for passenger cars within San Bernardino County and a fleet mix of 100% Light-Duty-Auto vehicles (LDA). The second run analyzed truck emissions, which incorporated an average truck trip length of 40 miles and a fleet mix of: 17.19% of Light-Heavy-

Duty (LHD), 22.56% of Medium-Heavy-Duty (MHD), and 60.25% of Heavy-Heavy-Duty (HHD). This proportional truck mix by axle type is based on information provided in the Project's traffic study. The estimated emissions resulting from vehicle operations are summarized in Section 3.5.5 (presented later in this report.) Detailed emission calculations are provided in Appendix 3.2.

Fugitive Dust Related to Vehicular Travel

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

3.5.4 ON-SITE EQUIPMENT EMISSIONS

It is common for an industrial warehouse project to require cargo handling equipment to move empty containers and empty chassis to and from the various pieces of cargo handling equipment that receive and distribute containers. The most common type of cargo handling equipment is the yard truck which is designed for moving cargo containers. Yard trucks are also known as yard goats, utility tractors (UTRs), hustlers, yard hostlers, and yard tractors. Yard trucks have a horsepower (hp) range of approximately 175 hp to 200 hp (37). Based on the latest available information from SCAQMD (36); high-cube warehouse projects typically have 3.6 yard trucks per million square feet of building space. For this particular Project, on-site modeled operational equipment includes one 200 hp yard tractors operating at 4 hours a day (37) for 365 days of the year[5]. In addition to the use of yard trucks operating at the Project site, forklifts are a common piece of equipment used in warehouse operations. The Project includes one 89 hp yard forklifts operating at 4 hours a day for 365 days of the year.

Based on client specifications, all on-site equipment will be electric-powered and are assumed to be non-diesel consistent with industry standards. Therefore, on-site equipment was not modeled in the analysis.

3.5.5 OPERATIONAL EMISSIONS SUMMARY

Operational-source emissions without implementation of mitigation measures are summarized on Table 3-5. For regional emissions, the Project will not exceed the numerical thresholds of significance established by the SCAQMD. Therefore, Project operational-source emissions are considered to be less than significant and no mitigation measures are required.

[5] 4 hour daily on-site operation of the yard trucks is based on the Southern California International Gateway Recirculated Draft EIR. Table C1.2-BL-17 *Activity Data for Existing Business CHE – 2010 Baseline* indicates that the average annual hours of operation for all diesel Container Handling Equipment, Forklifts, and Yard Tractors totaled 72,187 annual operating hours. The total number of pieces of equipment equals 52. As such, 72,187/52 = 1,388 annual hours per piece of equipment. 1,388 annual hours per piece of equipment/365 days = an average of 3.80 hours per day per piece of equipment. As a conservative measure this is rounded up to 4 hours for analytical purposes.

TABLE 3-5: PEAK OPERATIONAL EMISSIONS SUMMARY

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area Source	3.65	2.50E-04	0.03	0.00	9.00E-05	9.00E-05
Energy Source	6.70E-03	0.06	0.05	3.70E-04	4.63E-03	4.63E-03
Mobile (Trucks)	1.99	34.26	19.11	0.11	3.83	1.44
Mobile (Passenger Cars)	0.90	1.18	17.3	0.05	4.56	1.23
Total Maximum Daily Emissions	**6.55**	**35.50**	**36.49**	**0.16**	**8.39**	**2.67**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Operational Activities – Winter Scenario	**Emissions (pounds per day)**					
	VOC	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Area Source	3.65	2.50E-04	0.03	0.00	9.00E-05	9.00E-05
Energy Source	6.70E-03	0.06	0.05	3.70E-04	4.63E-03	4.63E-03
Mobile (Trucks)	2.03	35.71	20.39	0.11	3.83	1.44
Mobile (Passenger Cars)	0.83	1.25	14.49	0.05	4.56	1.23
Total Maximum Daily Emissions	**6.52**	**37.02**	**34.96**	**0.16**	**8.39**	**2.67**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

3.6 LOCALIZED SIGNIFIANCE - CONSTRUCTION ACTIVITY

BACKGROUND ON LOCALIZED SIGNIFICANCE THRESHOLD (LST) DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD Final Localized Significance Threshold Methodology (Methodology) (31). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of any given project are above or below State standards. In the case of CO and NO2, 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, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM10 and PM2.5; both of which are non-attainment pollutants.

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality

standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (31).

EMISSIONS CONSIDERED

SCAQMD's Methodology clearly states that "off-site mobile emissions from the Project should NOT be included in the emissions compared to LSTs (31)." Therefore, for purposes of the construction LST analysis only emissions included in the CalEEMod "on-site" emissions outputs were considered.

Sensitive Receptors

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, persons with preexisting respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather to exercise are defined as "sensitive receptors".

The nearest sensitive receptor is the residential community located approximately 95 feet/ 29 meters southeast of the Project site. As a conservative measure, LSTs for receptors located at 25 meters were utilized in this AQIA.

APPLICABILITY OF LSTS FOR THE PROJECT

For this Project, the appropriate Source Receptor Area (SRA) for the LST is the Central San Bernardino Valley 2 monitoring station (SRA 34). LSTs apply to carbon monoxide (CO), nitrogen dioxide (NO2), particulate matter ≤ 10 microns (PM10), and particulate matter ≤ 2.5 microns (PM2.5). The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- The CalEEMod model is utilized to determine the maximum daily on-site emissions that will occur during construction activity.
- The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (32) is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.
- If the total acreage disturbed is less than or equal to five acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a Project has the potential to result in a significant impact (the SCAQMD recommends that Projects exceeding the

screening look-up tables undergo dispersion modeling to determine actual impacts). The look-up tables establish a maximum daily emissions threshold in pounds per day that can be compared to CalEEMod outputs.

- If the total acreage disturbed is greater than five acres per day, then the SCAQMD recommends dispersion modeling to be conducted to determine the actual pollutant concentrations for applicable LSTs in the air. In other words, the maximum daily on-site emissions as calculated in CalEEMod are modeled via air dispersion modeling to calculate the actual concentration in the air (e.g., parts per million or micrograms per cubic meter) in order to determine if any applicable thresholds are exceeded.

CONSTRUCTION-SOURCE EMISSIONS LST ANALYSIS

The Project is modeled after AQMD's Summary of Five Acre Site Example Results By Phase and Equipment and client specifications. Therefore, the maximum daily disturbed-acreage of five acres is used in determining the applicability of the SCAQMD's LST look-up tables. This methodology is consistent with recent recommendations made by SCAQMD planning staff.

Impacts Summary

Table 3-6 identifies the localized construction impacts at the nearest receptor location in the vicinity of the Project. Construction-source emissions will not exceed SCAQMD's localized significance thresholds. Therefore, a less than significant impact will occur and no mitigation measures are required.

TABLE 3-6: LOCALIZED SIGNIFICANCE CONSTRUCTION SUMMARY

On-Site Site Preparation Emissions	Emissions (pounds per day)			
	NOx	CO	PM10	PM2.5
Maximum Daily Emissions	54.63	41.11	9.98	6.58
SCAQMD Localized Threshold	270	1,746	14	8
Threshold Exceeded?	NO	NO	NO	NO

On-Site Grading Emissions	Emissions (pounds per day)			
	NOx	CO	PM10	PM2.5
Maximum Daily Emissions	86.96	53.87	7.96	5.44
SCAQMD Localized Threshold	270	1,746	14	8
Threshold Exceeded?	NO	NO	NO	NO

3.7 LOCALIZED SIGNIFICANCE – LONG-TERM OPERATIONAL ACTIVITY

Table 3-7 shows the calculated emissions for the Project's operational activities compared with the applicable LSTs. The LST analysis includes on-site sources only; however, the CalEEMod™ model outputs do not separate on-site and off-site emissions from mobile sources. In an effort to establish a maximum potential impact scenario for analytic purposes, the emissions shown on Table 3-7 represent all on-site Project-related stationary (area) sources and five percent (5%) of the Project-related mobile sources. Considering that the weighted trip length used in CalEEMod™ for the Project is approximately 16.6 miles for passenger cars and 40 miles for trucks, 5% of this

total would represent an on-site travel distance of approximately 0.83 mile/ 4,382 feet for each passenger car and approximately 2 miles/ 10,560 feet for each truck. Thus the 5% assumption is conservative and would tend to overstate the actual impact. Modeling based on these assumptions demonstrates that even within broad encompassing parameters, Project operational-source emissions would not exceed applicable LSTs.

As noted previously, the nearest sensitive receptor land use (where an individual could remain for 24 hours) is located approximately 29 miles southeast of the Project site. Accordingly, LSTs for receptors at 25 meters are utilized in this analysis and provide for a conservative i.e. "health protective" standard of care.

LOCALIZED THRESHOLDS FOR OPERATIONAL ACTIVITY

Applicable localized thresholds from the SCAQMD's mass-rate LST lookup tables for a five-acre project site are as follows:

- NOx: 270 pounds per day;
- PM_{10}: 4 pounds per day;
- $PM_{2.5}$: 2 pounds per day; or
- CO: 1,746 pounds per day.

If emissions exceed the LST for a 5-acre site, then additional dispersion modeling needs to be conducted to determine if there is an actual exceedance of the AAQS. Use of the LSTs for a 5-acre site for operational activities is appropriate since this would result in more stringent LSTs because emissions would occur in a more concentrated area and closer to the nearest sensitive receptor than in reality.

TABLE 3-7: LOCALIZED SIGNIFICANCE OPERATIONS SUMMARY

Operational Activity	Emissions (pounds per day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**1.91**	**1.90**	**0.42**	**0.14**
SCAQMD Localized Threshold	270	1,746	4	2
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

As shown on Table 3-8, operational emissions will not exceed the LST thresholds for the nearest sensitive receptor. Therefore, the Project will have a less than significant localized impact during operational activity.

3.8 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific carbon monoxide (CO) "hot spots" is not needed to reach this conclusion.

It has long been recognized that adverse localized CO concentrations ("hot spots") are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentrations in the air basin have steadily declined, as indicated by historical emissions data presented previously at Table 2-7.

A CO "hotspot" would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the California AAQS and National AAQS for CO (43).

As identified within SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection (44). To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: Long Beach Blvd. and Imperial Highway (Lynwood); Wilshire Blvd. and Veteran Ave. (Westwood); Sunset Blvd. and Highland Ave. (Hollywood); and La Cienega Blvd. and Century Blvd. (Inglewood). These analyses did not predict a violation of CO standards, as shown on Table 3-8. Traffic volumes generating the CO concentrations for the analysis are shown on Table 3-9. It can therefore be reasonably concluded that projects (such as the proposed Moreno Valley Logistics Center) that are not subject to the extremes in vehicle volumes and vehicle congestion that was evidenced in the 2003 Los Angeles hot spot analysis would similarly not create or result in CO hot spots.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (45). The proposed Project considered herein would not produce the volume of traffic required to generate a CO hotspot either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO threshold considerations. Therefore, CO hotspots are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

TABLE 3-8: CO MODEL RESULTS

Intersection Location	Carbon Monoxide Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire-Veteran	4.6	3.5	4.2
Sunset-Highland	4	4.5	3.9
La Cienega-Century	3.7	3.1	5.8
Long Beach-Imperial	3	3.1	9.3

TABLE 3-9: TRAFFIC VOLUMES FOR INTERSECTIONS EVALUATED IN AQMP

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire-Veteran	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset-Highland	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega-Century	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach-Imperial	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

TABLE 3-10: PROJECT PEAK HOUR TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westboun d (AM/PM)	Total (AM/PM)
Arrowhead Ave - Central Ave	443/426	546/568	0/0	194/471	1,183/1,465
Arrowhead Ave- Orange Show Rd.	6/121	326/766	1,283/1,465	426/1,065	2,041/3,417
Waterman Ave- Central Ave	835/1,000	957/1,092	389/234	224/304	2,405/2,630
Waterman Ave- Orange Show Rd	772/1,184	973/1,115	950/1,208	475/1,082	3,170/4,589

Source: Central Commerce Center Traffic Impact Analysis (Kunzman Associates, Inc., 2016).

3.9 AIR QUALITY MANAGEMENT PLANNING

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

Currently, these state and federal air quality standards are exceeded in most parts of the Basin. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. AQMPs are updated regularly in order

to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy.

The Final 2012 AQMP was adopted by the AQMD Governing Board on December 7, 2012 (10). The 2012 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories.

Similar to the 2007 AQMP, the 2012 AQMP was based on assumptions provided by both CARB and SCAG in the 2014 EMFAC model for the most recent motor vehicle and demographics information, respectively. The air quality levels projected in the 2012 AQMP are based on several assumptions. For example, the 2012 AQMP has assumed that development associated with general plans, specific plans, residential projects, and wastewater facilities will be constructed in accordance with population growth projections identified by SCAG in its 2012 RTP. The 2012 AQMP also has assumed that such development projects will implement strategies to reduce emissions generated during the construction and operational phases of development. The Project's consistency with the 2012 AQMP is discussed as follows:

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993) (13). These indicators are discussed below:

- Consistency Criterion No. 1: The proposed Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Construction Impacts

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if localized significance thresholds (LSTs) or regional significance thresholds were exceeded. As evaluated as part of the Project analysis (previously presented), the Project's localized and regional construction-source emissions will not exceed applicable LSTs and regional thresholds, respectively. Thus, a less than significant impact is expected.

Operational Impacts

The violations that Consistency Criterion No. 1 refers to are the CAAQS and NAAQS. CAAQS and NAAQS violations would occur if LSTs or regional significance thresholds were exceeded. As evaluated as part of the Project analysis (previously presented), the Project's localized and regional construction-source emissions will not exceed applicable LSTs and regional thresholds, respectively. Thus, a less than significant impact is expected.

On the basis of the preceding discussion, the Project is consistent with the first criterion.

- Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.

Overview

The 2012 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the Southern California Association of Governments (SCAG), which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City's General Plan is considered to be consistent with the AQMP.

Construction Impacts

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities.

Operational Impacts

The City of San Bernardino designates the Project site as "Industrial (I)". According to the Development Code, the primary purpose of areas designated "Industrial (I)" is to accommodate enterprises engaged in manufacturing, processing, creating, repairing, renovating, painting, cleaning, or assembling of goods, merchandise, or equipment (44).

The Project is currently zoned as "Light Industrial (LI)", which is intended to retain, enhance, and intensify existing uses and provide for the new development of lighter industrial uses along vehicular, rail, and air transportation routes serving the City.

The Project site is consistent with the existing zoning and land use designation. Additionally, Project operational emissions will not exceed the applicable daily thresholds established by the SCAQMD. As such, a less than significant impact is expected.

On the basis of the preceding discussion, the Project is determined to be consistent with the second criterion.

AQMP Consistency Conclusion

The Project would not result in or cause NAAQS or CAAQS violations. The Project's proposed land use designation for the subject site is consistent with the development intensities as reflected in the adopted General Plan. The Project is therefore considered to be consistent with the AQMP.

3.10 Potential Impacts to Sensitive Receptors

Exposure to Criteria Pollutants

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors.

Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during construction. Therefore sensitive receptors would not be subject to a significant air quality impact during Project construction.

Results of the LST analysis indicate that the Project will not exceed the SCAQMD localized significance thresholds during operational activity. The proposed Project would not result in a CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in Section 3.8. Thus a less than significant impact to sensitive receptors during operational activity is expected.

EXPOSURE TO TOXIC AIR CONTAMINANTS

Construction Activity

Construction activities would include operation of diesel-fueled off-road equipment, resulting in emissions of diesel particulate matter (DPM), a recognized toxic air contaminant (TAC). However, because carcinogenic DPM health risk is estimated using the annual average concentration over long exposure periods (40 to 70 years), estimating carcinogenic health risk for exposure periods less than nine years is not typical. Construction activity associated with the project would occur over an estimated duration of less than one year, and would be less than the nine-year exposure period that would necessitate further evaluation. The most conservative distance to evaluate exposure to sensitive receptors is 25 meters (80 feet). As discussed above, emissions generated during construction of would not exceed the LSTs and, therefore, would not substantially affect nearby receptors. As such, the Projects potential health risk impact associated with DPM during construction activity is less than significant.

Operational Activity

Operational activities would include operation of diesel-fueled trucks resulting in emissions of DPM, a recognized TAC.

The CARB published the Air Quality and Land Use Handbook on April 28, 2005 (referred to herein as the CARB Handbook), to serve as a general guide for considering health effects associated with siting sensitive receptors proximate to sources of TAC emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

According to the City of San Bernardino Zoning Map, the areas adjacent to the project site to the north, west, and south of the Project site are zoned Industrial Light (IL) and the area adjacent east of the Project site is zoned Office Industrial Park (OIP). The nearest zoned residential area is located approximately 3,000 feet north of the Project site.

Notwithstanding, the nearest sensitive receptors to the project site are located approximately 95 feet southeast of the Project site; these sensitive receptors are nonconforming residential uses in an area zoned OIP. As such, for the purposes of this evaluation, the nearest sensitive receptor distance of approximately 95 feet is utilized in determining the potential health risk impacts associated with DPM.

Although there are sensitive receptors in the project vicinity located nearer than the CARB recommended 1,000 foot buffer distance, the project generates less than 100 trucks per day (per the Project's traffic impact analysis it would generate only 93 trucks per day). Based on the CARB guidance document, if the project generates more than 100 trucks per day additional analysis would be warranted. Since the Project does not generate more than 100 trucks per day, pursuant to CARB guidance, no additional analysis is necessary and the Projects potential health risk impact associated with DPM during operational activity is presumed to be less than significant.

3.11 ODORS

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

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

The Project does not contain land uses typically associated with emitting objectionable odors. With build-out of the proposed Project, the landfill will cease that occurs under existing condition, thus eliminating any existing potential odors. Potential odor sources associated with the proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered

containers and removed at regular intervals in compliance with the City's solid waste regulations. The proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the proposed Project construction and operations would be less than significant and no mitigation is required.

3.12 CUMULATIVE IMPACTS

The Project area is designated as an extreme non-attainment area for ozone and a non-attainment area for PM_{10} and $PM_{2.5}$.

The SCAQMD has recognized that there is typically insufficient information to quantitatively evaluate the cumulative contributions of multiple projects because each project applicant has no control over nearby projects.

Related projects could contribute to an existing or projected air quality exceedance because the Basin is currently nonattainment for ozone, PM10, and PM2.5.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (25). In this report the AQMD clearly states (Page D-3):

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

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

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a commutatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment. Therefore, the individual Project would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Project will not exceed the applicable SCAQMD regional threshold for construction and operational-source emissions. As such, the Project will not result in a cumulatively significant impact for construction or operational activity.

Construction Impacts

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

Operational Impacts

Project operational-source emissions will not exceed applicable SCAQMD regional thresholds. Therefore, Project operational-source emissions will be considered less than significant on a project-specific and cumulative basis.

4 FINDINGS & CONCLUSIONS

4.1 CONSTRUCTION-SOURCE EMISSIONS

REGIONAL IMPACTS

Emissions resulting from Project construction activity will not exceed the numerical regional thresholds of significance established by the SCAQMD for any criteria pollutant. Therefore, Project construction-source emissions are considered to be less than significant and no mitigation measures are required.

LOCALIZED IMPACTS

Additionally, emissions resulting from Project construction activity will not exceed the SCAQMD's localized significance thresholds. Therefore, a less than significant impact would occur.

Project construction-source emissions will not conflict with the applicable AQMP as shown in Section 3.9 of this report.

ODORS

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

4.2 OPERATIONAL-SOURCE EMISSIONS

REGIONAL IMPACTS

Emissions resulting from Project operational activity will not exceed the numerical regional thresholds of significance established by the SCAQMD for any criteria pollutant. Therefore, a less than significant impact would occur and no mitigation measures are required.

LOCALIZED IMPACTS

Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the operational LSTs section of this report. The proposed Project would not result in a significant CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in Section 3.8, thus a less than significant impact to sensitive receptors during operational activity is expected. Lastly, project operational-source emissions would not have the potential to conflict with the applicable AQMP during operational activity as shown in Section 3.9 of this report.

ODORS

Substantial odor-generating sources include land uses such as agricultural activities, feedlots, wastewater treatment facilities, landfills or various heavy industrial uses. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous refuse. Moreover, SCAQMD Rule 402 acts to prevent occurrences of odor nuisances. Consistent with City requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations. Potential operational-source odor impacts are therefore considered less-than-significant.

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6 CERTIFICATION

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Central Commerce Center Project. The information contained in this air quality impact report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 660-1994 ext. 217.

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EDUCATION

Master of Science in Environmental Studies
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PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June, 2013
Planned Communities and Urban Infill – Urban Land Institute • June, 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007
AB2588 Regulatory Standards – Trinity Consultants • November, 2006
Air Dispersion Modeling – Lakes Environmental • June, 2006

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APPENDIX 3.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

2013
Area Designations for State Ambient Air Quality Standards
OZONE

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

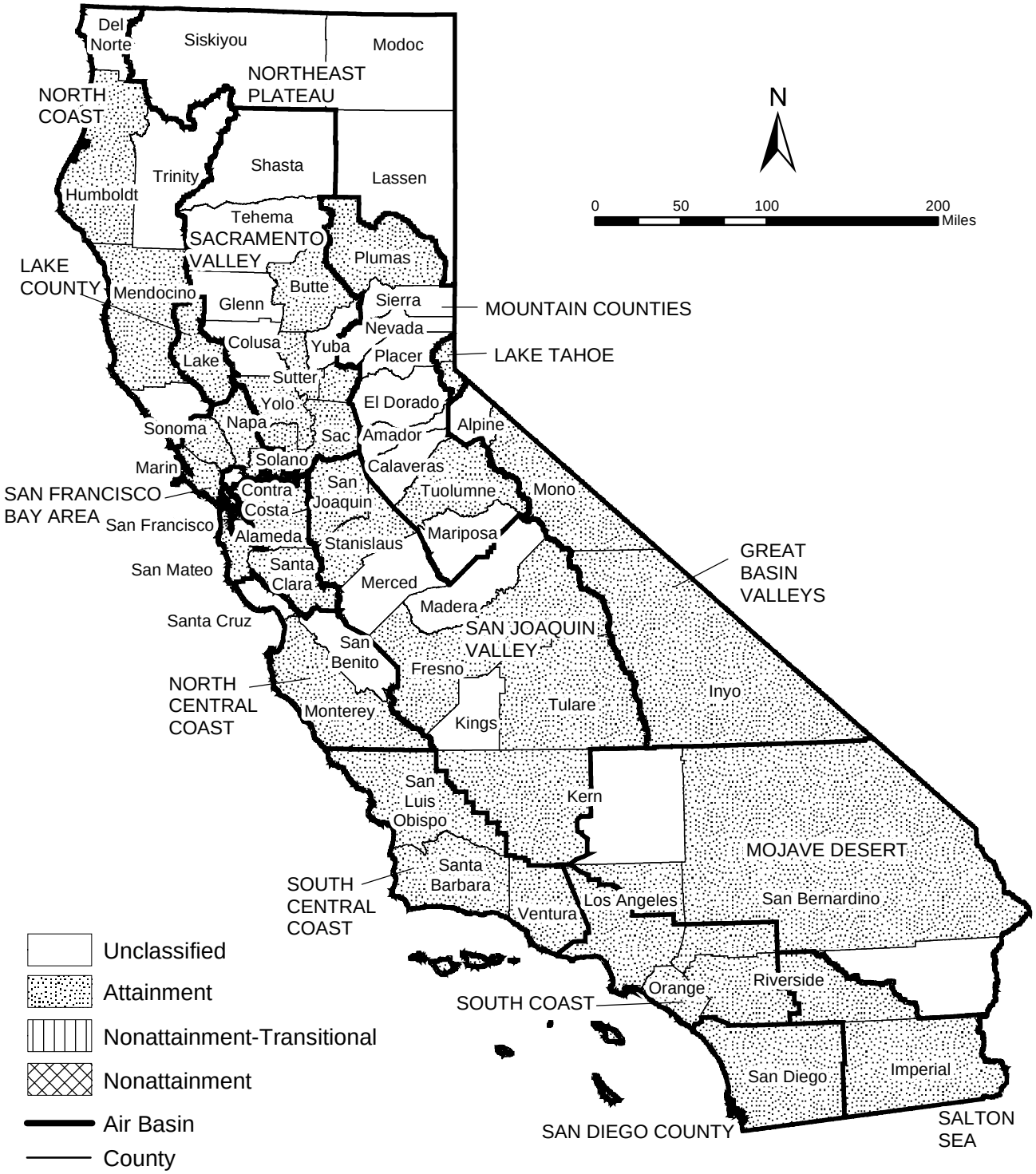
2013
Area Designations for State Ambient Air Quality Standards
PM10

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

2013
Area Designations for State Ambient Air Quality Standards
PM2.5

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

2013
Area Designations for State Ambient Air Quality Standards
CARBON MONOXIDE



Source Date:
June 2013
Air Quality Planning Branch, AQPSD

2013
Area Designations for State Ambient Air Quality Standards
NITROGEN DIOXIDE

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

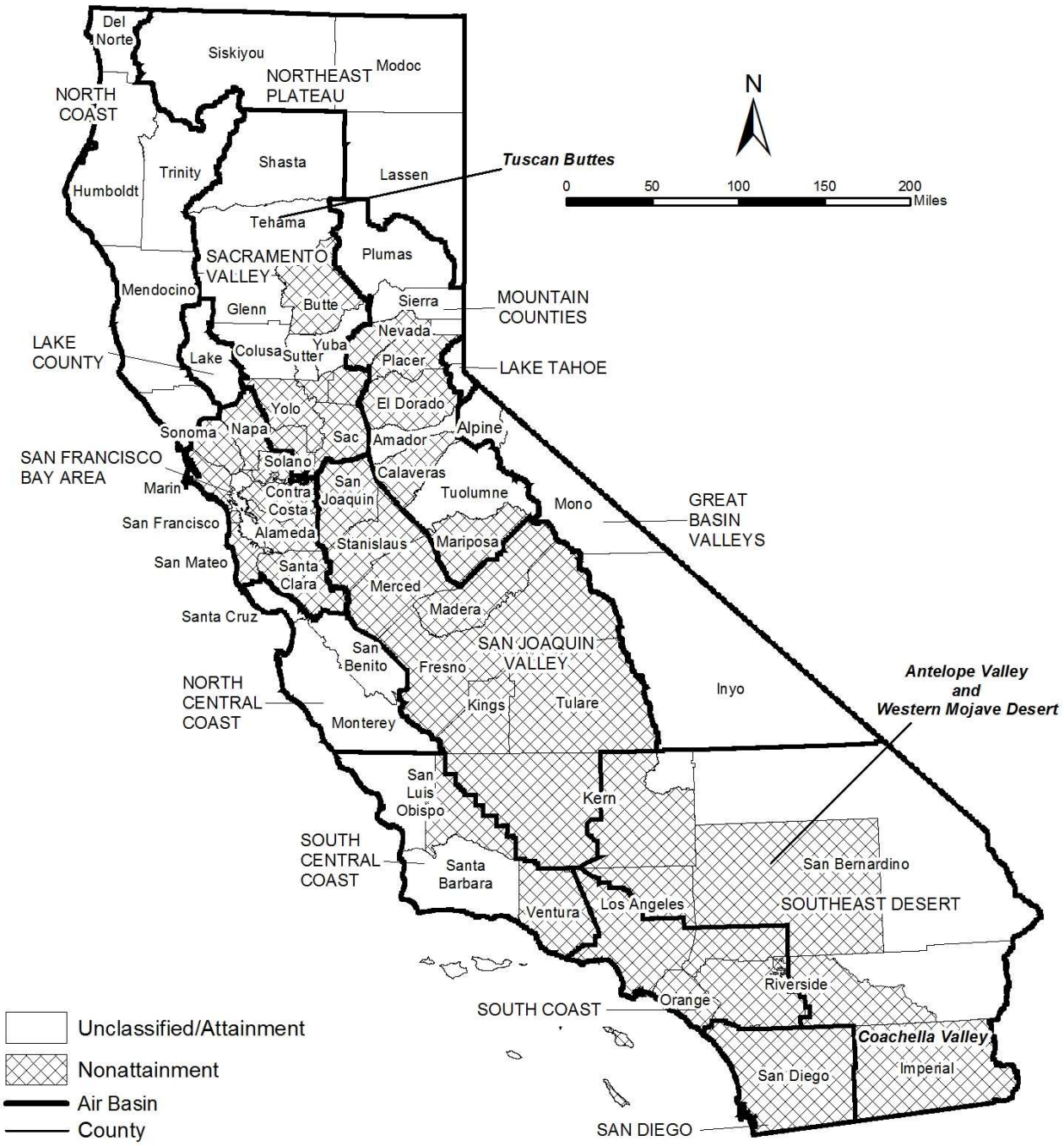
2013
Area Designations for State Ambient Air Quality Standards
SULFUR DIOXIDE

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

2013
Area Designations for State Ambient Air Quality Standards
LEAD

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards 8-HOUR OZONE



Source Date:
June 2013
Air Quality Planning Branch, AQPSD

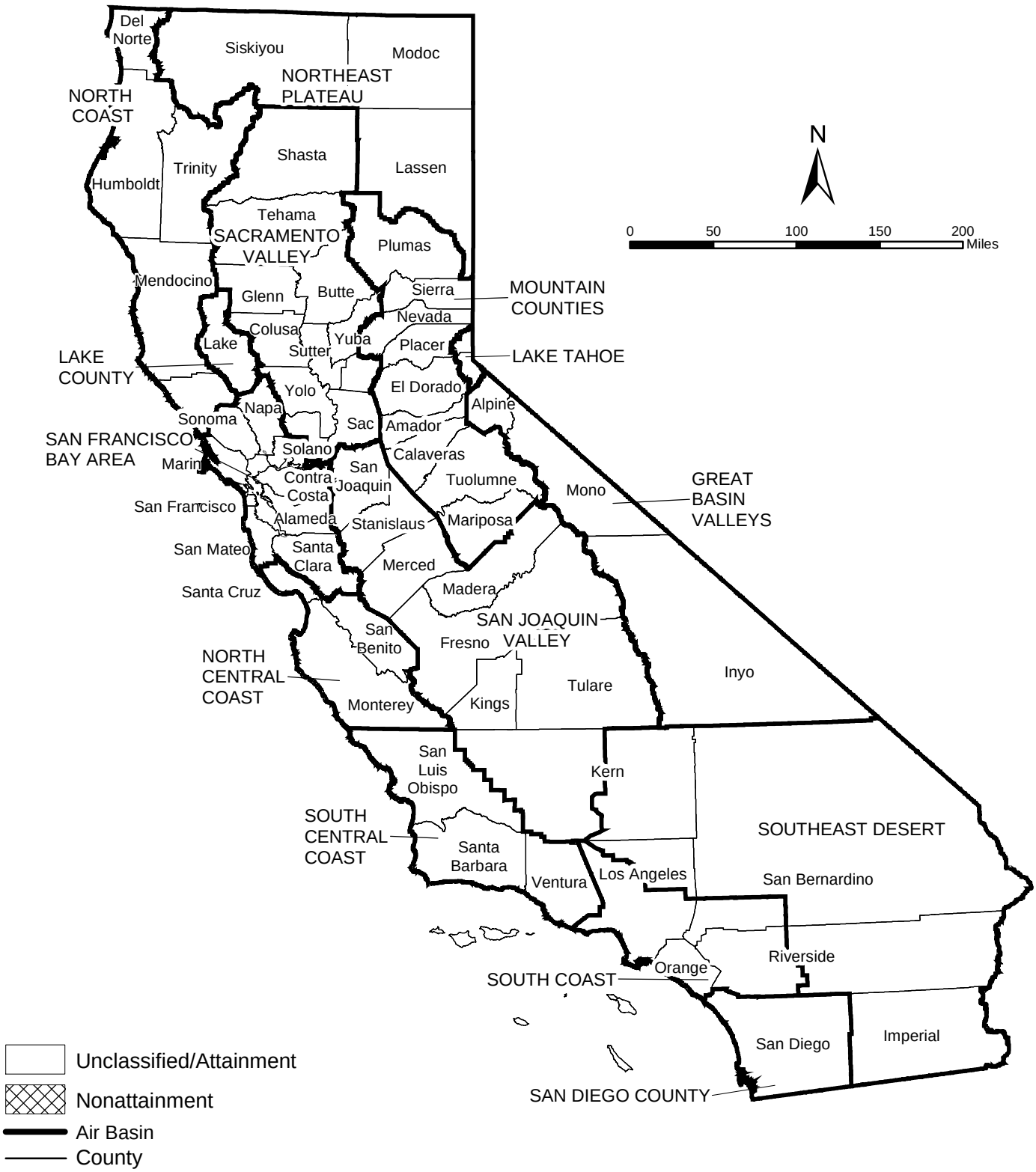
Area Designations for National Ambient Air Quality Standards PM10

Source Date:
September 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards PM2.5

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards CARBON MONOXIDE

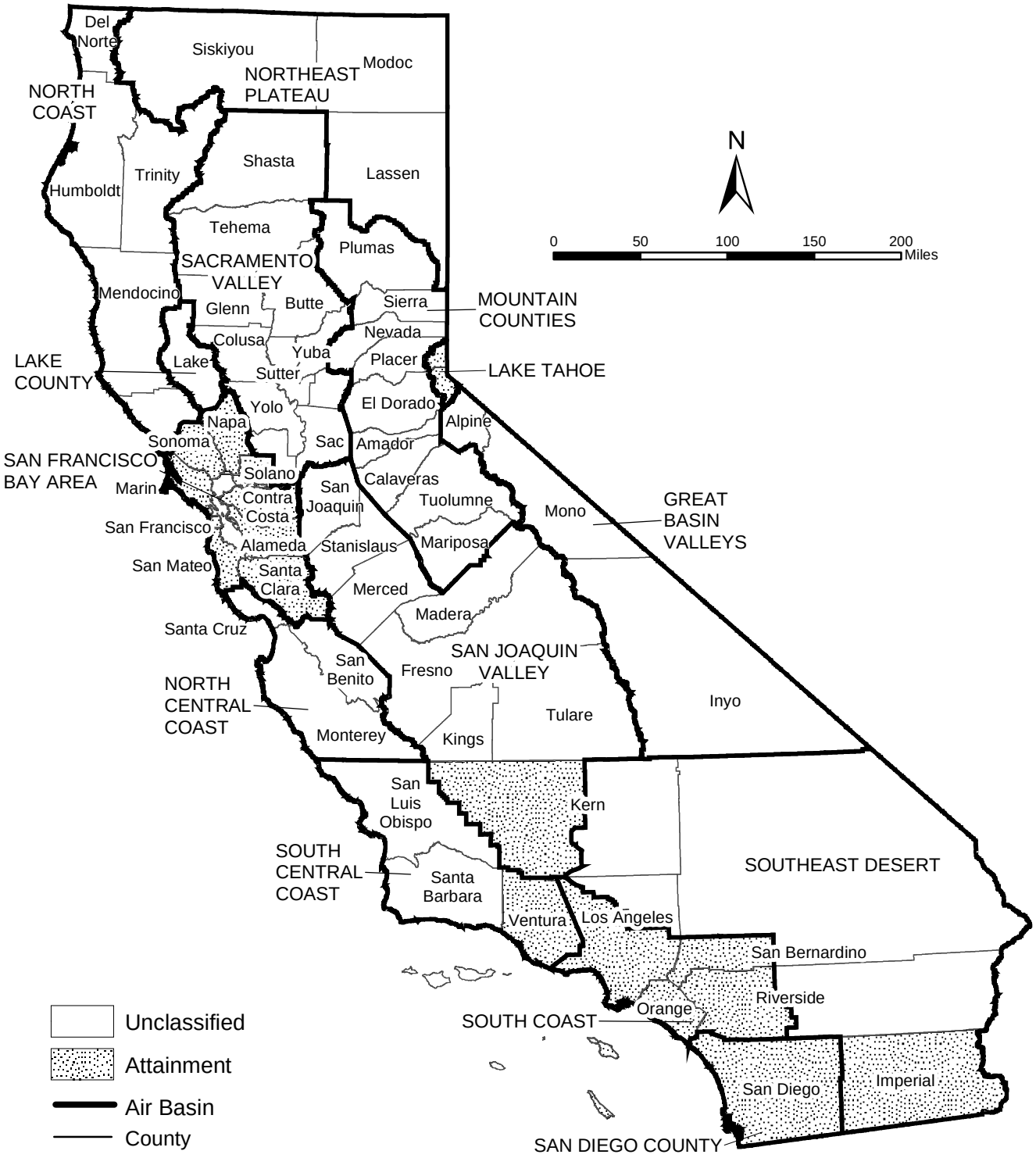


Source Date:
June 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards
NITROGEN DIOXIDE

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards
SULFUR DIOXIDE



Source Date:
June 2013
Air Quality Planning Branch, AQPSD

Area Designations for National Ambient Air Quality Standards LEAD

Source Date:
June 2013
Air Quality Planning Branch, AQPSD

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APPENDIX 3.2:

CALEEMOD EMISSIONS MODEL OUTPUTS

Construction

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	127.00	1000sqft	2.92	126,995.00	0
Parking Lot	122.00	Space	1.10	48,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	515.47	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - Total lot acreage: 5.24

Construction Phase - Based on a 2017 opening year and client specifications

Off-road Equipment - Based on 8 hour workday

Off-road Equipment - Based on SCAQMD Summary of a 5 acre site and client specifications. "Other Construction Equipment" represents Skip Loader

Off-road Equipment - Based on SCAQMD Summary of a 5 acre site and client specifications. "Other Construction Equipment" represents Skip Loader

Off-road Equipment - Based on SCAQMD Summary of a 5 acre site

Grading -

Architectural Coating - Based on updated Rule 1113- Default coatings 50 g/L low VOC levels

Vehicle Trips - Construction run only

Road Dust - Construction run only

Consumer Products - Construction run only

Energy Use - Construction run only

Water And Wastewater - Construction run only

Solid Waste - Construction run only

Construction Off-road Equipment Mitigation -

Area Coating - Construction run only

Landscape Equipment - Construction run only

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	230.00	150.00
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	18.00	20.00

tblConstructionPhase	NumDays	5.00	10.00
tblConsumerProducts	ROG_EF	1.98E-05	1E-10
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	LightingElect	0.88	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.45	0.00
tblEnergyUse	T24NG	2.11	0.00
tblLandscapeEquipment	NumberSummerDays	250	1
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	630.89	515.47
tblProjectCharacteristics	OperationalYear	2014	2017
tblRoadDust	RoadPercentPave	100	0
tblSolidWaste	SolidWasteGenerationRate	119.38	0.00
tblVehicleTrips	ST_TR	2.59	0.00
tblVehicleTrips	SU_TR	2.59	0.00
tblVehicleTrips	WD_TR	2.59	0.00

tblWater	IndoorWaterUseRate	29,368,750.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	7.8256	87.0764	55.4569	0.0699	18.2675	4.3714	21.2076	9.9840	4.0217	12.6890	0.0000	7,195.1828	7,195.1828	2.1027	0.0000	7,239.3385
2017	30.2709	38.1181	30.9080	0.0515	1.0094	2.3209	3.3303	0.2714	2.1695	2.4409	0.0000	4,911.6774	4,911.6774	0.9446	0.0000	4,931.5143
Total	**38.0965**	**125.1945**	**86.3649**	**0.1214**	**19.2768**	**6.6923**	**24.5379**	**10.2554**	**6.1912**	**15.1299**	**0.0000**	**12,106.8603**	**12,106.8603**	**3.0473**	**0.0000**	**12,170.8528**

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					
2016	7.8256	87.0764	55.4569	0.0699	7.2470	4.3714	10.1872	3.9263	4.0217	6.6313	0.0000	7,195.1828	7,195.1828	2.1027	0.0000	7,239.3385
2017	30.2709	38.1181	30.9080	0.0515	1.0094	2.3209	3.3303	0.2714	2.1695	2.4409	0.0000	4,911.6774	4,911.6774	0.9446	0.0000	4,931.5143
Total	**38.0965**	**125.1945**	**86.3649**	**0.1214**	**8.2564**	**6.6923**	**13.5175**	**4.1977**	**6.1912**	**9.0722**	**0.0000**	**12,106.8603**	**12,106.8603**	**3.0473**	**0.0000**	**12,170.8528**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**57.17**	**0.00**	**44.91**	**59.07**	**0.00**	**40.04**	**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	2.5200e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**2.5200e-003**	**2.5000e-004**	**0.0259**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**	**0.0000**	**0.0577**

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	2.5200e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**2.5200e-003**	**2.5000e-004**	**0.0259**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**	**0.0000**	**0.0577**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2016	6/14/2016	5	10	
2	Grading	Grading	6/15/2016	7/6/2016	5	16	
3	Building Construction	Building Construction	7/7/2016	2/1/2017	5	150	
4	Paving	Paving	2/2/2017	3/1/2017	5	20	
5	Architectural Coating	Architectural Coating	3/2/2017	3/29/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 48

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 192,689; Non-Residential Outdoor: 64,230 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Scrapers	2	8.00	361	0.48
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Other Construction Equipment	1	8.00	171	0.42
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	1	8.00	171	0.42
Building Construction	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	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	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	74.00	29.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2016

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	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0774	0.0941	1.2399	2.5300e-003	0.2012	1.4900e-003	0.2027	0.0534	1.3700e-003	0.0547		210.2000	210.2000	0.0104		210.4193
Total	**0.0774**	**0.0941**	**1.2399**	**2.5300e-003**	**0.2012**	**1.4900e-003**	**0.2027**	**0.0534**	**1.3700e-003**	**0.0547**		**210.2000**	**210.2000**	**0.0104**		**210.4193**

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	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**7.0458**	**2.9387**	**9.9845**	**3.8730**	**2.7036**	**6.5766**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0774	0.0941	1.2399	2.5300e-003	0.2012	1.4900e-003	0.2027	0.0534	1.3700e-003	0.0547		210.2000	210.2000	0.0104		210.4193
Total	**0.0774**	**0.0941**	**1.2399**	**2.5300e-003**	**0.2012**	**1.4900e-003**	**0.2027**	**0.0534**	**1.3700e-003**	**0.0547**		**210.2000**	**210.2000**	**0.0104**		**210.4193**

3.3 Grading - 2016

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	7.7267	86.9562	53.8726	0.0666		4.3695	4.3695		4.0199	4.0199		6,926.5940	6,926.5940	2.0893		6,970.4694
Total	**7.7267**	**86.9562**	**53.8726**	**0.0666**	**9.2036**	**4.3695**	**13.5731**	**3.6538**	**4.0199**	**7.6737**		**6,926.5940**	**6,926.5940**	**2.0893**		**6,970.4694**

3.3 Grading - 2016

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	0.0989	0.1202	1.5843	3.2300e-003	0.2571	1.9100e-003	0.2590	0.0682	1.7500e-003	0.0699		268.5889	268.5889	0.0133		268.8691
Total	**0.0989**	**0.1202**	**1.5843**	**3.2300e-003**	**0.2571**	**1.9100e-003**	**0.2590**	**0.0682**	**1.7500e-003**	**0.0699**		**268.5889**	**268.5889**	**0.0133**		**268.8691**

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					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	7.7267	86.9562	53.8726	0.0666		4.3695	4.3695		4.0199	4.0199	0.0000	6,926.5940	6,926.5940	2.0893		6,970.4694
Total	**7.7267**	**86.9562**	**53.8726**	**0.0666**	**3.5894**	**4.3695**	**7.9589**	**1.4250**	**4.0199**	**5.4449**	**0.0000**	**6,926.5940**	**6,926.5940**	**2.0893**		**6,970.4694**

3.3 Grading - 2016

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	0.0989	0.1202	1.5843	3.2300e-003	0.2571	1.9100e-003	0.2590	0.0682	1.7500e-003	0.0699		268.5889	268.5889	0.0133		268.8691
Total	**0.0989**	**0.1202**	**1.5843**	**3.2300e-003**	**0.2571**	**1.9100e-003**	**0.2590**	**0.0682**	**1.7500e-003**	**0.0699**		**268.5889**	**268.5889**	**0.0133**		**268.8691**

3.4 Building Construction - 2016

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	4.2883	38.1626	24.0364	0.0348		2.4973	2.4973		2.3360	2.3360		3,502.3100	3,502.3100	0.9133		3,521.4892
Total	**4.2883**	**38.1626**	**24.0364**	**0.0348**		**2.4973**	**2.4973**		**2.3360**	**2.3360**		**3,502.3100**	**3,502.3100**	**0.9133**		**3,521.4892**

3.4 Building Construction - 2016

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	0.2458	2.5327	2.8775	6.3000e-003	0.1822	0.0419	0.2241	0.0520	0.0386	0.0906		632.3197	632.3197	4.5500e-003		632.4153
Worker	0.3183	0.3869	5.0974	0.0104	0.8272	6.1400e-003	0.8333	0.2194	5.6400e-003	0.2250		864.1555	864.1555	0.0429		865.0571
Total	**0.5641**	**2.9196**	**7.9749**	**0.0167**	**1.0094**	**0.0481**	**1.0574**	**0.2714**	**0.0442**	**0.3156**		**1,496.4752**	**1,496.4752**	**0.0475**		**1,497.4724**

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	4.2883	38.1626	24.0364	0.0348		2.4973	2.4973		2.3360	2.3360	0.0000	3,502.3099	3,502.3099	0.9133		3,521.4892
Total	**4.2883**	**38.1626**	**24.0364**	**0.0348**		**2.4973**	**2.4973**		**2.3360**	**2.3360**	**0.0000**	**3,502.3099**	**3,502.3099**	**0.9133**		**3,521.4892**

3.4 Building Construction - 2016

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	0.2458	2.5327	2.8775	6.3000e-003	0.1822	0.0419	0.2241	0.0520	0.0386	0.0906		632.3197	632.3197	4.5500e-003		632.4153
Worker	0.3183	0.3869	5.0974	0.0104	0.8272	6.1400e-003	0.8333	0.2194	5.6400e-003	0.2250		864.1555	864.1555	0.0429		865.0571
Total	**0.5641**	**2.9196**	**7.9749**	**0.0167**	**1.0094**	**0.0481**	**1.0574**	**0.2714**	**0.0442**	**0.3156**		**1,496.4752**	**1,496.4752**	**0.0475**		**1,497.4724**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.9361	35.4682	23.5992	0.0348		2.2776	2.2776		2.1297	2.1297		3,459.4994	3,459.4994	0.9009		3,478.4173
Total	**3.9361**	**35.4682**	**23.5992**	**0.0348**		**2.2776**	**2.2776**		**2.1297**	**2.1297**		**3,459.4994**	**3,459.4994**	**0.9009**		**3,478.4173**

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2270	2.3031	2.7300	6.3000e-003	0.1822	0.0374	0.2196	0.0520	0.0344	0.0864		621.9154	621.9154	4.4000e-003		622.0078
Worker	0.2829	0.3469	4.5788	0.0104	0.8272	5.9100e-003	0.8331	0.2194	5.4500e-003	0.2248		830.2627	830.2627	0.0394		831.0892
Total	**0.5099**	**2.6499**	**7.3088**	**0.0167**	**1.0094**	**0.0433**	**1.0527**	**0.2714**	**0.0398**	**0.3112**		**1,452.1781**	**1,452.1781**	**0.0438**		**1,453.0970**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.9361	35.4682	23.5992	0.0348		2.2776	2.2776		2.1297	2.1297	0.0000	3,459.4994	3,459.4994	0.9009		3,478.4173
Total	**3.9361**	**35.4682**	**23.5992**	**0.0348**		**2.2776**	**2.2776**		**2.1297**	**2.1297**	**0.0000**	**3,459.4994**	**3,459.4994**	**0.9009**		**3,478.4173**

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2270	2.3031	2.7300	6.3000e-003	0.1822	0.0374	0.2196	0.0520	0.0344	0.0864		621.9154	621.9154	4.4000e-003		622.0078
Worker	0.2829	0.3469	4.5788	0.0104	0.8272	5.9100e-003	0.8331	0.2194	5.4500e-003	0.2248		830.2627	830.2627	0.0394		831.0892
Total	**0.5099**	**2.6499**	**7.3088**	**0.0167**	**1.0094**	**0.0433**	**1.0527**	**0.2714**	**0.0398**	**0.3112**		**1,452.1781**	**1,452.1781**	**0.0438**		**1,453.0970**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6707	17.1450	12.9107	0.0197		0.9881	0.9881		0.9114	0.9114		1,970.1783	1,970.1783	0.5832		1,982.4253
Paving	0.1441					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8148**	**17.1450**	**12.9107**	**0.0197**		**0.9881**	**0.9881**		**0.9114**	**0.9114**		**1,970.1783**	**1,970.1783**	**0.5832**		**1,982.4253**

3.5 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0688	0.0844	1.1138	2.5300e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3300e-003	0.0547		201.9558	201.9558	9.5700e-003		202.1568
Total	**0.0688**	**0.0844**	**1.1138**	**2.5300e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3300e-003**	**0.0547**		**201.9558**	**201.9558**	**9.5700e-003**		**202.1568**

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	1.6707	17.1450	12.9107	0.0197		0.9881	0.9881		0.9114	0.9114	0.0000	1,970.1783	1,970.1783	0.5832		1,982.4253
Paving	0.1441					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8148**	**17.1450**	**12.9107**	**0.0197**		**0.9881**	**0.9881**		**0.9114**	**0.9114**	**0.0000**	**1,970.1783**	**1,970.1783**	**0.5832**		**1,982.4253**

3.5 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0688	0.0844	1.1138	2.5300e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3300e-003	0.0547		201.9558	201.9558	9.5700e-003		202.1568
Total	**0.0688**	**0.0844**	**1.1138**	**2.5300e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3300e-003**	**0.0547**		**201.9558**	**201.9558**	**9.5700e-003**		**202.1568**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.7705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4431	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311		375.2641	375.2641	0.0396		376.0961
Total	**30.2136**	**2.9134**	**2.4908**	**3.9600e-003**		**0.2311**	**0.2311**		**0.2311**	**0.2311**		**375.2641**	**375.2641**	**0.0396**		**376.0961**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0573	0.0703	0.9281	2.1100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		168.2965	168.2965	7.9800e-003		168.4640
Total	**0.0573**	**0.0703**	**0.9281**	**2.1100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**168.2965**	**168.2965**	**7.9800e-003**		**168.4640**

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	29.7705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4431	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311	0.0000	375.2641	375.2641	0.0396		376.0961
Total	**30.2136**	**2.9134**	**2.4908**	**3.9600e-003**		**0.2311**	**0.2311**		**0.2311**	**0.2311**	**0.0000**	**375.2641**	**375.2641**	**0.0396**		**376.0961**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0573	0.0703	0.9281	2.1100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		168.2965	168.2965	7.9800e-003		168.4640
Total	**0.0573**	**0.0703**	**0.9281**	**2.1100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**168.2965**	**168.2965**	**7.9800e-003**		**168.4640**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

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

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471808	0.065740	0.172776	0.155900	0.055970	0.009039	0.016651	0.041094	0.001122	0.001334	0.004921	0.000712	0.002932

4.4 Fleet Mix

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5200e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Unmitigated	2.5200e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**2.5200e-003**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**2.5200e-003**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Construction

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	127.00	1000sqft	2.92	126,995.00	0
Parking Lot	122.00	Space	1.10	48,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	515.47	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - Total lot acreage: 5.24

Construction Phase - Based on a 2017 opening year and client specifications

Off-road Equipment - Based on 8 hour workday

Off-road Equipment - Based on SCAQMD Summary of a 5 acre site and client specifications. "Other Construction Equipment" represents Skip Loader

Off-road Equipment - Based on SCAQMD Summary of a 5 acre site and client specifications. "Other Construction Equipment" represents Skip Loader

Off-road Equipment - Based on SCAQMD Summary of a 5 acre site

Grading -

Architectural Coating - Based on updated Rule 1113- Default coatings 50 g/L low VOC levels

Vehicle Trips - Construction run only

Road Dust - Construction run only

Consumer Products - Construction run only

Energy Use - Construction run only

Water And Wastewater - Construction run only

Solid Waste - Construction run only

Construction Off-road Equipment Mitigation -

Area Coating - Construction run only

Landscape Equipment - Construction run only

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	230.00	150.00
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	18.00	20.00

tblConstructionPhase	NumDays	5.00	10.00
tblConsumerProducts	ROG_EF	1.98E-05	1E-10
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	LightingElect	0.88	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.45	0.00
tblEnergyUse	T24NG	2.11	0.00
tblLandscapeEquipment	NumberSummerDays	250	1
tblOffRoadEquipment	OffRoadEquipmentType		Scrapers
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	CO2IntensityFactor	630.89	515.47
tblProjectCharacteristics	OperationalYear	2014	2017
tblRoadDust	RoadPercentPave	100	0
tblSolidWaste	SolidWasteGenerationRate	119.38	0.00
tblVehicleTrips	ST_TR	2.59	0.00
tblVehicleTrips	SU_TR	2.59	0.00
tblVehicleTrips	WD_TR	2.59	0.00

tblWater	IndoorWaterUseRate	29,368,750.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	7.8196	87.0847	55.2276	0.0696	18.2675	4.3714	21.2076	9.9840	4.0217	12.6890	0.0000	7,171.2537	7,171.2537	2.1027	0.0000	7,215.4093
2017	30.2672	38.2021	30.6595	0.0505	1.0094	2.3213	3.3307	0.2714	2.1698	2.4412	0.0000	4,832.3654	4,832.3654	0.9448	0.0000	4,852.2051
Total	**38.0869**	**125.2868**	**85.8871**	**0.1201**	**19.2768**	**6.6927**	**24.5383**	**10.2554**	**6.1915**	**15.1302**	**0.0000**	**12,003.6191**	**12,003.6191**	**3.0474**	**0.0000**	**12,067.6145**

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					
2016	7.8196	87.0847	55.2276	0.0696	7.2470	4.3714	10.1872	3.9263	4.0217	6.6313	0.0000	7,171.2537	7,171.2537	2.1027	0.0000	7,215.4093
2017	30.2672	38.2021	30.6595	0.0505	1.0094	2.3213	3.3307	0.2714	2.1698	2.4412	0.0000	4,832.3654	4,832.3654	0.9448	0.0000	4,852.2051
Total	**38.0869**	**125.2868**	**85.8871**	**0.1201**	**8.2564**	**6.6927**	**13.5179**	**4.1977**	**6.1915**	**9.0725**	**0.0000**	**12,003.6191**	**12,003.6191**	**3.0474**	**0.0000**	**12,067.6144**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**57.17**	**0.00**	**44.91**	**59.07**	**0.00**	**40.04**	**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	2.5200e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**2.5200e-003**	**2.5000e-004**	**0.0259**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**	**0.0000**	**0.0577**

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	2.5200e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**2.5200e-003**	**2.5000e-004**	**0.0259**	**0.0000**	**0.0000**	**9.0000e-005**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**	**0.0000**	**0.0577**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2016	6/14/2016	5	10	
2	Grading	Grading	6/15/2016	7/6/2016	5	16	
3	Building Construction	Building Construction	7/7/2016	2/1/2017	5	150	
4	Paving	Paving	2/2/2017	3/1/2017	5	20	
5	Architectural Coating	Architectural Coating	3/2/2017	3/29/2017	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 48

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 192,689; Non-Residential Outdoor: 64,230 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	0	8.00	162	0.38
Grading	Graders	2	8.00	174	0.41
Grading	Scrapers	2	8.00	361	0.48
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Other Construction Equipment	1	8.00	171	0.42
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	8.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Other Construction Equipment	1	8.00	171	0.42
Building Construction	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	8.00	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	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	10	74.00	29.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2016

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	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036		4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**18.0663**	**2.9387**	**21.0049**	**9.9307**	**2.7036**	**12.6343**		**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0727	0.1005	1.0604	2.3000e-003	0.2012	1.4900e-003	0.2027	0.0534	1.3700e-003	0.0547		191.4728	191.4728	0.0104		191.6921
Total	**0.0727**	**0.1005**	**1.0604**	**2.3000e-003**	**0.2012**	**1.4900e-003**	**0.2027**	**0.0534**	**1.3700e-003**	**0.0547**		**191.4728**	**191.4728**	**0.0104**		**191.6921**

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	5.0771	54.6323	41.1053	0.0391		2.9387	2.9387		2.7036	2.7036	0.0000	4,065.0053	4,065.0053	1.2262		4,090.7544
Total	**5.0771**	**54.6323**	**41.1053**	**0.0391**	**7.0458**	**2.9387**	**9.9845**	**3.8730**	**2.7036**	**6.5766**	**0.0000**	**4,065.0053**	**4,065.0053**	**1.2262**		**4,090.7544**

3.2 Site Preparation - 2016

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	0.0727	0.1005	1.0604	2.3000e-003	0.2012	1.4900e-003	0.2027	0.0534	1.3700e-003	0.0547		191.4728	191.4728	0.0104		191.6921
Total	**0.0727**	**0.1005**	**1.0604**	**2.3000e-003**	**0.2012**	**1.4900e-003**	**0.2027**	**0.0534**	**1.3700e-003**	**0.0547**		**191.4728**	**191.4728**	**0.0104**		**191.6921**

3.3 Grading - 2016

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	7.7267	86.9562	53.8726	0.0666		4.3695	4.3695		4.0199	4.0199		6,926.5940	6,926.5940	2.0893		6,970.4694
Total	**7.7267**	**86.9562**	**53.8726**	**0.0666**	**9.2036**	**4.3695**	**13.5731**	**3.6538**	**4.0199**	**7.6737**		**6,926.5940**	**6,926.5940**	**2.0893**		**6,970.4694**

3.3 Grading - 2016

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	0.0929	0.1285	1.3550	2.9400e-003	0.2571	1.9100e-003	0.2590	0.0682	1.7500e-003	0.0699		244.6597	244.6597	0.0133		244.9400
Total	**0.0929**	**0.1285**	**1.3550**	**2.9400e-003**	**0.2571**	**1.9100e-003**	**0.2590**	**0.0682**	**1.7500e-003**	**0.0699**		**244.6597**	**244.6597**	**0.0133**		**244.9400**

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					3.5894	0.0000	3.5894	1.4250	0.0000	1.4250			0.0000			0.0000
Off-Road	7.7267	86.9562	53.8726	0.0666		4.3695	4.3695		4.0199	4.0199	0.0000	6,926.5940	6,926.5940	2.0893		6,970.4694
Total	**7.7267**	**86.9562**	**53.8726**	**0.0666**	**3.5894**	**4.3695**	**7.9589**	**1.4250**	**4.0199**	**5.4449**	**0.0000**	**6,926.5940**	**6,926.5940**	**2.0893**		**6,970.4694**

3.3 Grading - 2016

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	0.0929	0.1285	1.3550	2.9400e-003	0.2571	1.9100e-003	0.2590	0.0682	1.7500e-003	0.0699		244.6597	244.6597	0.0133		244.9400
Total	**0.0929**	**0.1285**	**1.3550**	**2.9400e-003**	**0.2571**	**1.9100e-003**	**0.2590**	**0.0682**	**1.7500e-003**	**0.0699**		**244.6597**	**244.6597**	**0.0133**		**244.9400**

3.4 Building Construction - 2016

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	4.2883	38.1626	24.0364	0.0348		2.4973	2.4973		2.3360	2.3360		3,502.3100	3,502.3100	0.9133		3,521.4892
Total	**4.2883**	**38.1626**	**24.0364**	**0.0348**		**2.4973**	**2.4973**		**2.3360**	**2.3360**		**3,502.3100**	**3,502.3100**	**0.9133**		**3,521.4892**

3.4 Building Construction - 2016

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	0.2615	2.6011	3.3043	6.2600e-003	0.1822	0.0423	0.2245	0.0520	0.0389	0.0910		627.0170	627.0170	4.6900e-003		627.1155
Worker	0.2990	0.4134	4.3595	9.4600e-003	0.8272	6.1400e-003	0.8333	0.2194	5.6400e-003	0.2250		787.1661	787.1661	0.0429		788.0677
Total	**0.5605**	**3.0144**	**7.6638**	**0.0157**	**1.0094**	**0.0485**	**1.0578**	**0.2714**	**0.0446**	**0.3160**		**1,414.1831**	**1,414.1831**	**0.0476**		**1,415.1831**

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	4.2883	38.1626	24.0364	0.0348		2.4973	2.4973		2.3360	2.3360	0.0000	3,502.3099	3,502.3099	0.9133		3,521.4892
Total	**4.2883**	**38.1626**	**24.0364**	**0.0348**		**2.4973**	**2.4973**		**2.3360**	**2.3360**	**0.0000**	**3,502.3099**	**3,502.3099**	**0.9133**		**3,521.4892**

3.4 Building Construction - 2016

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	0.2615	2.6011	3.3043	6.2600e-003	0.1822	0.0423	0.2245	0.0520	0.0389	0.0910		627.0170	627.0170	4.6900e-003		627.1155
Worker	0.2990	0.4134	4.3595	9.4600e-003	0.8272	6.1400e-003	0.8333	0.2194	5.6400e-003	0.2250		787.1661	787.1661	0.0429		788.0677
Total	**0.5605**	**3.0144**	**7.6638**	**0.0157**	**1.0094**	**0.0485**	**1.0578**	**0.2714**	**0.0446**	**0.3160**		**1,414.1831**	**1,414.1831**	**0.0476**		**1,415.1831**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.9361	35.4682	23.5992	0.0348		2.2776	2.2776		2.1297	2.1297		3,459.4994	3,459.4994	0.9009		3,478.4173
Total	**3.9361**	**35.4682**	**23.5992**	**0.0348**		**2.2776**	**2.2776**		**2.1297**	**2.1297**		**3,459.4994**	**3,459.4994**	**0.9009**		**3,478.4173**

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2413	2.3636	3.1564	6.2500e-003	0.1822	0.0378	0.2200	0.0520	0.0347	0.0868		616.6859	616.6859	4.5400e-003		616.7811
Worker	0.2648	0.3703	3.9040	9.4600e-003	0.8272	5.9100e-003	0.8331	0.2194	5.4500e-003	0.2248		756.1802	756.1802	0.0394		757.0067
Total	**0.5061**	**2.7339**	**7.0604**	**0.0157**	**1.0094**	**0.0437**	**1.0530**	**0.2714**	**0.0402**	**0.3116**		**1,372.8660**	**1,372.8660**	**0.0439**		**1,373.7878**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.9361	35.4682	23.5992	0.0348		2.2776	2.2776		2.1297	2.1297	0.0000	3,459.4994	3,459.4994	0.9009		3,478.4173
Total	**3.9361**	**35.4682**	**23.5992**	**0.0348**		**2.2776**	**2.2776**		**2.1297**	**2.1297**	**0.0000**	**3,459.4994**	**3,459.4994**	**0.9009**		**3,478.4173**

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2413	2.3636	3.1564	6.2500e-003	0.1822	0.0378	0.2200	0.0520	0.0347	0.0868		616.6859	616.6859	4.5400e-003		616.7811
Worker	0.2648	0.3703	3.9040	9.4600e-003	0.8272	5.9100e-003	0.8331	0.2194	5.4500e-003	0.2248		756.1802	756.1802	0.0394		757.0067
Total	**0.5061**	**2.7339**	**7.0604**	**0.0157**	**1.0094**	**0.0437**	**1.0530**	**0.2714**	**0.0402**	**0.3116**		**1,372.8660**	**1,372.8660**	**0.0439**		**1,373.7878**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6707	17.1450	12.9107	0.0197		0.9881	0.9881		0.9114	0.9114		1,970.1783	1,970.1783	0.5832		1,982.4253
Paving	0.1441					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8148**	**17.1450**	**12.9107**	**0.0197**		**0.9881**	**0.9881**		**0.9114**	**0.9114**		**1,970.1783**	**1,970.1783**	**0.5832**		**1,982.4253**

3.5 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0644	0.0901	0.9496	2.3000e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3300e-003	0.0547		183.9357	183.9357	9.5700e-003		184.1368
Total	**0.0644**	**0.0901**	**0.9496**	**2.3000e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3300e-003**	**0.0547**		**183.9357**	**183.9357**	**9.5700e-003**		**184.1368**

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	1.6707	17.1450	12.9107	0.0197		0.9881	0.9881		0.9114	0.9114	0.0000	1,970.1783	1,970.1783	0.5832		1,982.4253
Paving	0.1441					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8148**	**17.1450**	**12.9107**	**0.0197**		**0.9881**	**0.9881**		**0.9114**	**0.9114**	**0.0000**	**1,970.1783**	**1,970.1783**	**0.5832**		**1,982.4253**

3.5 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0644	0.0901	0.9496	2.3000e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3300e-003	0.0547		183.9357	183.9357	9.5700e-003		184.1368
Total	**0.0644**	**0.0901**	**0.9496**	**2.3000e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3300e-003**	**0.0547**		**183.9357**	**183.9357**	**9.5700e-003**		**184.1368**

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	29.7705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4431	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311		375.2641	375.2641	0.0396		376.0961
Total	**30.2136**	**2.9134**	**2.4908**	**3.9600e-003**		**0.2311**	**0.2311**		**0.2311**	**0.2311**		**375.2641**	**375.2641**	**0.0396**		**376.0961**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0537	0.0751	0.7914	1.9200e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		153.2798	153.2798	7.9800e-003		153.4473
Total	**0.0537**	**0.0751**	**0.7914**	**1.9200e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**153.2798**	**153.2798**	**7.9800e-003**		**153.4473**

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	29.7705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.4431	2.9134	2.4908	3.9600e-003		0.2311	0.2311		0.2311	0.2311	0.0000	375.2641	375.2641	0.0396		376.0961
Total	**30.2136**	**2.9134**	**2.4908**	**3.9600e-003**		**0.2311**	**0.2311**		**0.2311**	**0.2311**	**0.0000**	**375.2641**	**375.2641**	**0.0396**		**376.0961**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0537	0.0751	0.7914	1.9200e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		153.2798	153.2798	7.9800e-003		153.4473
Total	**0.0537**	**0.0751**	**0.7914**	**1.9200e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**153.2798**	**153.2798**	**7.9800e-003**		**153.4473**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

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

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.471808	0.065740	0.172776	0.155900	0.055970	0.009039	0.016651	0.041094	0.001122	0.001334	0.004921	0.000712	0.002932

4.4 Fleet Mix

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	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
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5200e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Unmitigated	2.5200e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**2.5200e-003**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**2.5200e-003**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Operations- Trucks

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	127.00	1000sqft	2.92	126,995.00	0
Parking Lot	122.00	Space	1.10	48,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	515.47	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - Total lot acreage: 5.24

Construction Phase - Operation run only

Off-road Equipment - Operation run only

Vehicle Trips - Trip rate based on traffic study (Kunzman Associates)

Vechicle Emission Factors - Trip characteristics based on traffic study (Kunzman Associates)

Vechicle Emission Factors - Trip characteristics based on traffic study (Kunzman Associates)

Vechicle Emission Factors - Trip characteristics based on traffic study (Kunzman Associates)

Area Coating - Based on updated Rule 1113- Default coatings 50 g/L Low VOC levels

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

Area Mitigation - Based on updated Rule 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	50
tblConstructionPhase	NumDays	20.00	1.00
tblEnergyUse	T24E	0.45	0.35
tblEnergyUse	T24NG	2.11	1.76
tblLandUse	LandUseSquareFeet	127,000.00	126,995.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	630.89	515.47
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleEF	HHD	0.04	0.60
tblVehicleEF	HHD	0.04	0.60

tblVehicleEF	HHD	0.04	0.60
tblVehicleEF	LDA	0.47	0.00
tblVehicleEF	LDA	0.47	0.00
tblVehicleEF	LDA	0.47	0.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LHD1	0.06	0.17
tblVehicleEF	LHD1	0.06	0.17
tblVehicleEF	LHD1	0.06	0.17
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MHD	0.02	0.23
tblVehicleEF	MHD	0.02	0.23
tblVehicleEF	MHD	0.02	0.23

tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.59	0.73
tblVehicleTrips	SU_TR	2.59	0.73
tblVehicleTrips	WD_TR	2.59	0.73

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.1357	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Mobile	1.9933	34.2644	19.1102	0.1071	3.2375	0.5879	3.8254	0.9020	0.5408	1.4428		10,606.1122	10,606.1122	0.0825		10,607.8456
Total	**6.1357**	**34.3256**	**19.1873**	**0.1074**	**3.2375**	**0.5926**	**3.8301**	**0.9020**	**0.5456**	**1.4475**		**10,679.2536**	**10,679.2536**	**0.0841**	**1.3400e-003**	**10,681.4350**

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	3.6464	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Mobile	1.9933	34.2644	19.1102	0.1071	3.2375	0.5879	3.8254	0.9020	0.5408	1.4428		10,606.1122	10,606.1122	0.0825		10,607.8456
Total	**5.6464**	**34.3256**	**19.1873**	**0.1074**	**3.2375**	**0.5926**	**3.8301**	**0.9020**	**0.5456**	**1.4475**		**10,679.2536**	**10,679.2536**	**0.0841**	**1.3400e-003**	**10,681.4350**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	7.98	0.00	0.00	0.00	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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40

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
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Demolition - 2016

Mitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.9933	34.2644	19.1102	0.1071	3.2375	0.5879	3.8254	0.9020	0.5408	1.4428		10,606.1122	10,606.1122	0.0825		10,607.8456
Unmitigated	1.9933	34.2644	19.1102	0.1071	3.2375	0.5879	3.8254	0.9020	0.5408	1.4428		10,606.1122	10,606.1122	0.0825		10,607.8456

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	92.71	92.71	92.71	1,349,858	1,349,858
Total	92.71	92.71	92.71	1,349,858	1,349,858

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	0.00	0.00	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.000000	0.000000	0.000000	0.000000	0.171900	0.000000	0.225600	0.602500	0.000000	0.000000	0.000000	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	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
NaturalGas Unmitigated	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	621.239	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Total		**6.7000e-003**	**0.0609**	**0.0512**	**3.7000e-004**		**4.6300e-003**	**4.6300e-003**		**4.6300e-003**	**4.6300e-003**		**73.0869**	**73.0869**	**1.4000e-003**	**1.3400e-003**	**73.5317**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.621239	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Total		**6.7000e-003**	**0.0609**	**0.0512**	**3.7000e-004**		**4.6300e-003**	**4.6300e-003**		**4.6300e-003**	**4.6300e-003**		**73.0869**	**73.0869**	**1.4000e-003**	**1.3400e-003**	**73.5317**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	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	3.6464	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Unmitigated	4.1357	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577

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	0.6525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**4.1357**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

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	0.1631					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**3.6464**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Operations- Trucks

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	127.00	1000sqft	2.92	126,995.00	0
Parking Lot	122.00	Space	1.10	48,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	515.47	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - Total lot acreage: 5.24

Construction Phase - Operation run only

Off-road Equipment - Operation run only

Vehicle Trips - Trip rate based on traffic study (Kunzman Associates)

Vechicle Emission Factors - Trip characteristics based on traffic study (Kunzman Associates)

Vechicle Emission Factors - Trip characteristics based on traffic study (Kunzman Associates)

Vechicle Emission Factors - Trip characteristics based on traffic study (Kunzman Associates)

Area Coating - Based on updated Rule 1113- Default coatings 50 g/L Low VOC levels

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

Area Mitigation - Based on updated Rule 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	50
tblConstructionPhase	NumDays	20.00	1.00
tblEnergyUse	T24E	0.45	0.35
tblEnergyUse	T24NG	2.11	1.76
tblLandUse	LandUseSquareFeet	127,000.00	126,995.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	630.89	515.47
tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleEF	HHD	0.04	0.60
tblVehicleEF	HHD	0.04	0.60

tblVehicleEF	HHD	0.04	0.60
tblVehicleEF	LDA	0.47	0.00
tblVehicleEF	LDA	0.47	0.00
tblVehicleEF	LDA	0.47	0.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LHD1	0.06	0.17
tblVehicleEF	LHD1	0.06	0.17
tblVehicleEF	LHD1	0.06	0.17
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MHD	0.02	0.23
tblVehicleEF	MHD	0.02	0.23
tblVehicleEF	MHD	0.02	0.23

tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.59	0.73
tblVehicleTrips	SU_TR	2.59	0.73
tblVehicleTrips	WD_TR	2.59	0.73

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.1357	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Mobile	2.0338	35.7135	20.3945	0.1070	3.2375	0.5887	3.8262	0.9020	0.5416	1.4436		10,592.4907	10,592.4907	0.0830		10,594.2336
Total	**6.1762**	**35.7747**	**20.4715**	**0.1073**	**3.2375**	**0.5934**	**3.8310**	**0.9020**	**0.5463**	**1.4483**		**10,665.6321**	**10,665.6321**	**0.0845**	**1.3400e-003**	**10,667.8230**

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	3.6464	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Mobile	2.0338	35.7135	20.3945	0.1070	3.2375	0.5887	3.8262	0.9020	0.5416	1.4436		10,592.4907	10,592.4907	0.0830		10,594.2336
Total	**5.6868**	**35.7747**	**20.4715**	**0.1073**	**3.2375**	**0.5934**	**3.8310**	**0.9020**	**0.5463**	**1.4483**		**10,665.6321**	**10,665.6321**	**0.0845**	**1.3400e-003**	**10,667.8230**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	7.92	0.00	0.00	0.00	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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40

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
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Demolition - 2016

Mitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0338	35.7135	20.3945	0.1070	3.2375	0.5887	3.8262	0.9020	0.5416	1.4436		10,592.4907	10,592.4907	0.0830		10,594.2336
Unmitigated	2.0338	35.7135	20.3945	0.1070	3.2375	0.5887	3.8262	0.9020	0.5416	1.4436		10,592.4907	10,592.4907	0.0830		10,594.2336

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	92.71	92.71	92.71	1,349,858	1,349,858
Total	92.71	92.71	92.71	1,349,858	1,349,858

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	0.00	0.00	100.00	0.00	0.00	100	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.000000	0.000000	0.000000	0.000000	0.171900	0.000000	0.225600	0.602500	0.000000	0.000000	0.000000	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	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
NaturalGas Unmitigated	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	621.239	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Total		**6.7000e-003**	**0.0609**	**0.0512**	**3.7000e-004**		**4.6300e-003**	**4.6300e-003**		**4.6300e-003**	**4.6300e-003**		**73.0869**	**73.0869**	**1.4000e-003**	**1.3400e-003**	**73.5317**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.621239	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Total		**6.7000e-003**	**0.0609**	**0.0512**	**3.7000e-004**		**4.6300e-003**	**4.6300e-003**		**4.6300e-003**	**4.6300e-003**		**73.0869**	**73.0869**	**1.4000e-003**	**1.3400e-003**	**73.5317**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	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	3.6464	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Unmitigated	4.1357	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577

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	0.6525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**4.1357**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

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	0.1631					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**3.6464**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Operations- Passenger Cars

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	127.00	1000sqft	2.92	126,995.00	0
Parking Lot	122.00	Space	1.10	48,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	515.47	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - Total lot acreage: 5.24

Construction Phase - Operation run only

Off-road Equipment - Operation run only

Vehicle Trips - Trip rate based on traffic study (Kunzman Associates)

Vechicle Emission Factors - Passenger cars only

Vechicle Emission Factors - Passenger cars only

Vechicle Emission Factors - Passenger cars only

Area Coating - Based on updated Rule 1113- Default coatings 50 g/L Low VOC levels

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

On-road Fugitive Dust - Operation run only

Area Mitigation - Based on updated Rule 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	50
tblConstructionPhase	NumDays	20.00	1.00
tblEnergyUse	T24E	0.45	0.35
tblEnergyUse	T24NG	2.11	1.76
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	VendorPercentPave	100.00	0.00
tblOnRoadDust	WorkerPercentPave	100.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	630.89	515.47

tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleEF	HHD	0.04	0.00
tblVehicleEF	HHD	0.04	0.00
tblVehicleEF	HHD	0.04	0.00
tblVehicleEF	LDA	0.47	1.00
tblVehicleEF	LDA	0.47	1.00
tblVehicleEF	LDA	0.47	1.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LHD1	0.06	0.00
tblVehicleEF	LHD1	0.06	0.00
tblVehicleEF	LHD1	0.06	0.00
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00

tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.59	2.83
tblVehicleTrips	SU_TR	2.59	2.83
tblVehicleTrips	WD_TR	2.59	2.83

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.1357	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Mobile	0.9039	1.1755	17.3007	0.0502	4.5372	0.0247	4.5619	1.2028	0.0227	1.2255		3,915.5476	3,915.5476	0.1576		3,918.8570
Total	**5.0463**	**1.2366**	**17.3778**	**0.0506**	**4.5372**	**0.0294**	**4.5666**	**1.2028**	**0.0275**	**1.2302**		**3,988.6890**	**3,988.6890**	**0.1591**	**1.3400e-003**	**3,992.4464**

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	3.6464	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Mobile	0.9039	1.1755	17.3007	0.0502	4.5372	0.0247	4.5619	1.2028	0.0227	1.2255		3,915.5476	3,915.5476	0.1576		3,918.8570
Total	**4.5569**	**1.2366**	**17.3778**	**0.0506**	**4.5372**	**0.0294**	**4.5666**	**1.2028**	**0.0275**	**1.2302**		**3,988.6890**	**3,988.6890**	**0.1591**	**1.3400e-003**	**3,992.4464**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	9.70	0.00	0.00	0.00	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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40

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
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Demolition - 2016

Mitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.9039	1.1755	17.3007	0.0502	4.5372	0.0247	4.5619	1.2028	0.0227	1.2255		3,915.5476	3,915.5476	0.1576		3,918.8570
Unmitigated	0.9039	1.1755	17.3007	0.0502	4.5372	0.0247	4.5619	1.2028	0.0227	1.2255		3,915.5476	3,915.5476	0.1576		3,918.8570

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	359.78	359.78	359.78	2,173,916	2,173,916
Parking Lot	0.00	0.00	0.00		
Total	359.78	359.78	359.78	2,173,916	2,173,916

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	100.00	0.00	0.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	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	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
NaturalGas Unmitigated	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	621.239	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Total		**6.7000e-003**	**0.0609**	**0.0512**	**3.7000e-004**		**4.6300e-003**	**4.6300e-003**		**4.6300e-003**	**4.6300e-003**		**73.0869**	**73.0869**	**1.4000e-003**	**1.3400e-003**	**73.5317**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.621239	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Total		**6.7000e-003**	**0.0609**	**0.0512**	**3.7000e-004**		**4.6300e-003**	**4.6300e-003**		**4.6300e-003**	**4.6300e-003**		**73.0869**	**73.0869**	**1.4000e-003**	**1.3400e-003**	**73.5317**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	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	3.6464	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Unmitigated	4.1357	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577

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	0.6525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**4.1357**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

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	0.1631					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**3.6464**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Operations- Passenger Cars

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	127.00	1000sqft	2.92	126,995.00	0
Parking Lot	122.00	Space	1.10	48,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	515.47	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CPUC GHG Calculator version 3c, worksheet tab "CO2 Allocations," cells AH/AQ 35-44.

Land Use - Total lot acreage: 5.24

Construction Phase - Operation run only

Off-road Equipment - Operation run only

Vehicle Trips - Trip rate based on traffic study (Kunzman Associates)

Vechicle Emission Factors - Passenger cars only

Vechicle Emission Factors - Passenger cars only

Vechicle Emission Factors - Passenger cars only

Area Coating - Based on updated Rule 1113- Default coatings 50 g/L Low VOC levels

Energy Use - Title-24 Electricity Energy Intensity and Title-24 Natural Gas Energy Intensity were adjusted by 21.8% and 16.8% respectively, to reflect 2013 Title 24 requirements. Source: Impact Analysis California's 2013 Building Energy Efficiency Standards (CEC 2013)

On-road Fugitive Dust - Operation run only

Area Mitigation - Based on updated Rule 1113

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	100	50
tblConstructionPhase	NumDays	20.00	1.00
tblEnergyUse	T24E	0.45	0.35
tblEnergyUse	T24NG	2.11	1.76
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	VendorPercentPave	100.00	0.00
tblOnRoadDust	WorkerPercentPave	100.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	630.89	515.47

tblProjectCharacteristics	OperationalYear	2014	2017
tblVehicleEF	HHD	0.04	0.00
tblVehicleEF	HHD	0.04	0.00
tblVehicleEF	HHD	0.04	0.00
tblVehicleEF	LDA	0.47	1.00
tblVehicleEF	LDA	0.47	1.00
tblVehicleEF	LDA	0.47	1.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT1	0.07	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LDT2	0.17	0.00
tblVehicleEF	LHD1	0.06	0.00
tblVehicleEF	LHD1	0.06	0.00
tblVehicleEF	LHD1	0.06	0.00
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	LHD2	9.0390e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MCY	4.9210e-003	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MDV	0.16	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00

tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	MHD	0.02	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	2.59	2.83
tblVehicleTrips	SU_TR	2.59	2.83
tblVehicleTrips	WD_TR	2.59	2.83

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
2016	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.1357	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Mobile	0.8322	1.2474	14.4872	0.0456	4.5372	0.0247	4.5619	1.2028	0.0227	1.2255		3,557.3408	3,557.3408	0.1576		3,560.6502
Total	**4.9747**	**1.3085**	**14.5643**	**0.0459**	**4.5372**	**0.0294**	**4.5666**	**1.2028**	**0.0275**	**1.2302**		**3,630.4822**	**3,630.4822**	**0.1591**	**1.3400e-003**	**3,634.2396**

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	3.6464	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Energy	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Mobile	0.8322	1.2474	14.4872	0.0456	4.5372	0.0247	4.5619	1.2028	0.0227	1.2255		3,557.3408	3,557.3408	0.1576		3,560.6502
Total	**4.4853**	**1.3085**	**14.5643**	**0.0459**	**4.5372**	**0.0294**	**4.5666**	**1.2028**	**0.0275**	**1.2302**		**3,630.4822**	**3,630.4822**	**0.1591**	**1.3400e-003**	**3,634.2396**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	9.84	0.00	0.00	0.00	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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/1/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	162	0.38
Demolition	Rubber Tired Dozers	0	8.00	255	0.40

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
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Demolition - 2016

Mitigated Construction On-Site

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

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.8322	1.2474	14.4872	0.0456	4.5372	0.0247	4.5619	1.2028	0.0227	1.2255		3,557.3408	3,557.3408	0.1576		3,560.6502
Unmitigated	0.8322	1.2474	14.4872	0.0456	4.5372	0.0247	4.5619	1.2028	0.0227	1.2255		3,557.3408	3,557.3408	0.1576		3,560.6502

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	359.78	359.78	359.78	2,173,916	2,173,916
Parking Lot	0.00	0.00	0.00		
Total	359.78	359.78	359.78	2,173,916	2,173,916

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No Rail	16.60	8.40	6.90	100.00	0.00	0.00	100	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	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	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
NaturalGas Unmitigated	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	621.239	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Total		**6.7000e-003**	**0.0609**	**0.0512**	**3.7000e-004**		**4.6300e-003**	**4.6300e-003**		**4.6300e-003**	**4.6300e-003**		**73.0869**	**73.0869**	**1.4000e-003**	**1.3400e-003**	**73.5317**

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					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0.621239	6.7000e-003	0.0609	0.0512	3.7000e-004		4.6300e-003	4.6300e-003		4.6300e-003	4.6300e-003		73.0869	73.0869	1.4000e-003	1.3400e-003	73.5317
Total		**6.7000e-003**	**0.0609**	**0.0512**	**3.7000e-004**		**4.6300e-003**	**4.6300e-003**		**4.6300e-003**	**4.6300e-003**		**73.0869**	**73.0869**	**1.4000e-003**	**1.3400e-003**	**73.5317**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	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	3.6464	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Unmitigated	4.1357	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577

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	0.6525					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**4.1357**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

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	0.1631					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.4807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-003	2.5000e-004	0.0259	0.0000		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005		0.0545	0.0545	1.5000e-004		0.0577
Total	**3.6464**	**2.5000e-004**	**0.0259**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**		**0.0545**	**0.0545**	**1.5000e-004**		**0.0577**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

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A.2 - Air Quality and Greenhouse Gases Memo

URBAN CROSSROADS

41 Corporate Park | Suite 300 | Irvine, CA 92606 | (949) 660-1994
www.urbanXroads.com

February 2, 2016

Mr. Frank Coyle
FirstCarbon Solutions
280 Commerce 200
Irvine, CA 92602

SUBJECT: CENTRAL COMMERCE CENTER AIR QUALITY AND GREENHOUSE GAS MEMORANDUM

Dear Mr. Frank Coyle:

Urban Crossroads, Inc. is pleased to submit this Air Quality and Greenhouse Gas Memorandum for the proposed Central Commerce Center ("Project"), which is located at 270 E. Central Avenue in the City of San Bernardino. The Project is proposed to consist of 127,327 square feet distribution warehouse.

The Project was previously evaluated for 126,995 square feet distribution warehouse in the *Central Commerce Center Air Quality and Greenhouse Gas Reports* dated January 25, 2016 ("previously prepared Air Quality and Greenhouse Gas Reports").

The purpose of this Air Quality and Greenhouse Gas Memorandum is to determine if the Project as proposed would result in substantial changes to the previously prepared Air Quality and Greenhouse Gas Reports.

CONCLUSION

The Proposed Project has increased 332 square feet to 127,327 square feet from the previously evaluated 126,995 square feet Project. As a result, there would be a negligible increase in Project construction-source emissions due to an increase in construction activity and a negligible increase in Project operational-source emissions due to additional activity related to area, energy, and mobile sources. Notwithstanding, the increase in square feet and resulting air-quality emissions would be *de minimus* and no substantial changes would occur that would alter the findings of the previously prepared Air Quality report.

Similarly, for greenhouse gases, there would be a negligible increase in total greenhouse gas emissions as a result of additional activity related to construction, area, energy, mobile, waste, and water usage sources. Notwithstanding, the increase in square feet and resulting greenhouse gas emissions would be *de minimus* and no substantive changes would occur that would alter the findings of the previously prepared Greenhouse Gas report.

As such, no substantive changes would occur to the previously prepared Air Quality and Greenhouse Gas Reports.

If you have any questions, please contact me directly at (949) 336-5987.

Respectfully submitted,

URBAN CROSSROADS, INC.

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