

Air Quality & Greenhouse Gas Assessment

13131 Los Angeles Street Industrial Project

Irwindale, California

Prepared For:

Community Development Department, Planning Division
5050 North Irwindale Avenue
Irwindale, California

December 2019



CONTENTS

1.0 INTRODUCTION 1

 1.1 Project Location and Description..... 1

2.0 AIR QUALITY 4

 2.1 Air Quality Setting..... 4

 2.1.1 South Coast Air Basin..... 4

 2.1.2 Criteria Air Pollutants..... 5

 2.1.3 Carbon Monoxide 6

 2.1.4 Nitrogen Oxides..... 6

 2.1.5 Ozone..... 7

 2.1.6 Particulate Matter..... 7

 2.1.7 Toxic Air Contaminants..... 8

 2.1.8 Ambient Air Quality..... 8

 2.1.9 Sensitive Receptors..... 10

 2.2 Regulatory Framework..... 10

 2.2.1 Federal 10

 2.2.2 State..... 11

 2.2.3 Local..... 15

 2.3 Air Quality Emissions Impact Assessment..... 17

 2.3.1 Thresholds of Significance 17

 2.3.2 Methodology 18

 2.3.3 Impact Analysis..... 19

3.0 GREENHOUSE GAS EMISSIONS 41

 3.1 Greenhouse Gas Setting..... 41

 3.1.1 Sources of Greenhouse Gas Emissions 42

 3.2 Regulatory Framework..... 43

 3.2.1 State..... 43

 3.2.2 Local..... 45

 3.3 Greenhouse Gas Emissions Impact Assessment 45

 3.3.1 Thresholds of Significance 45

 3.3.2 Methodology 46

 3.3.3 Impact Analysis..... 47

4.0 REFERENCES..... 53

LIST OF TABLES

Table 2-1. Criteria Air Pollutants- Summary of Common Sources and Effects.....6
Table 2-2. Summary of Ambient Air Quality Data.....9
Table 2-3. Attainment Status of Criteria Pollutants in the South Coast Air Basin 10
Table 2-4. SCAQMD Regional Significance Thresholds – Pounds per Day 17
Table 2-5. Local Significance Thresholds 18
Table 2-6. Construction-Related Emissions (Regional Significance Analysis)..... 20
Table 2-7. Equipment-Specific Grading Rates 21
Table 2-8. Construction-Related Emissions (Localized Significance Analysis) 22
Table 2-9. Operational-Related Emissions (Regional Significance Analysis) 23
Table 2-10. Operational-Related Emissions Attributable to Project Buildout (Localized Significance Analysis)..... 31
Table 2-11. Maximum Operational Health Risk at the Project Vicinity Residential Neighborhoods 37
Table 3-1. Greenhouse Gases 42
Table 3-2. Construction-Related Greenhouse Gas Emissions..... 47
Table 3-3. Operational-Related GHG Emissions 48
Table 3-4. Consistency with SCAG’s RTP/SCS Goals..... 50

LIST OF FIGURES

Figure 1. Project Vicinity2
Figure 2. Project Location.....3

LIST OF ATTACHMENTS

- Attachment A – CalEEMod Output File for Air Quality Emissions
- Attachment B – Operational Health Risk Assessment - Diesel Particulate Matter
- Attachment C – CalEEMod Output File for Greenhouse Gas Emissions

LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|-------------------|--|
| °F | Degrees Fahrenheit |
| µg/m ³ | Micrograms per cubic meter; ppm = parts per million |
| 2016 AQMP | 2016 Air Quality Management Plan |
| 2016 RTP/SCS | 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy |
| AB | Assembly Bill |
| AERMOD | USEPA air toxic dispersion model |
| ATCM | Airborne toxics control measure |
| CAA | Clean Air Act |
| CAAQS | California Ambient Air Quality Standards |
| CalEEMod | California Emissions Estimator Model |
| CalEPA | California Environmental Protection Agency |
| CAPCOA | California Air Pollution Control Officers Association |
| CARB | California Air Resources Board |
| CC&Rs | Covenants, Codes, and Restrictions |
| CCR | California Code of Regulations |
| CEQA | California Environmental Quality Act |
| CFR | Code of Federal Regulations |
| CH ₄ | Methane |
| CO | Carbon monoxide |
| CO ₂ | Carbon dioxide |
| CO ₂ e | Carbon dioxide equivalent |
| DOC | Department of Conservation |
| DPM | Diesel particulate matter |
| EMFAC | EMission FACtor model |
| EO | Executive Order |
| GHG | Greenhouse gas |
| HRA | Health risk assessment |
| I- | Interstate |
| IPCC | Intergovernmental Panel on Climate Change |
| LOS | Level of service |
| LSTs | Localized significance threshold |
| MATES IV | Multiple Air Toxics Exposure Study in the South Coast Air Basin |
| N ₂ O | Nitrous oxide |
| NAAQS | National Ambient Air Quality Standards |
| NO ₂ | Nitrogen dioxide |
| NOP | Notice of Preparation |
| NO _x | Nitric oxides |
| NSR | New Source Review |
| O ₃ | Ozone |
| OEHHA | California Office of Environmental Health Hazard Assessment's |
| OPR | Office of Planning and Research |
| PM ₁₀ | Coarse particulate matter |
| PM _{2.5} | Fine particulate matter |
| ppb | Parts per billion |
| ppm | Parts per million |
| Project | 13131 Los Angeles Street Industrial Project |

LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---------------------|--|
| RCPG | Regional Comprehensive Plan and Guide |
| RECLAIM | Regional Clean Air Incentives Market |
| REL | Reference Exposure Level |
| Risk Reduction Plan | Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles |
| ROGs | Reactive organic gases |
| RTP/SCS | Regional Transportation Plan/Sustainable Communities Strategy |
| SB | Senate Bill |
| SCAG | Southern California Association of Governments |
| SCAQMD | South Coast Air Quality Management District |
| sf | Square-foot |
| SIP | State Implementation Plan |
| SJVAPCD | San Joaquin Valley Air Pollution Control District |
| SO ₂ | Sulfur dioxide |
| SoCAB | South Coast Air Basin |
| SO _x | Sulfur oxides |
| SRA | Source receptor area |
| SSAB | Salton Sea Air Basin |
| Strategy | Mobile Source Strategy |
| TACs | Toxic air contaminants |
| USEPA | U.S. Environmental Protection Agency |
| VOCs | Volatile organic compounds |

1.0 INTRODUCTION

This report documents the results of a Noise Impact Assessment completed for the 13131 Los Angeles Street Industrial Project (Project), which includes the construction of a standalone concrete tilt-up, 528,710-square-foot (sf) building in Irwindale, California. This assessment was prepared using methodologies and assumptions recommended in the rules and regulations of the South Coast Air Quality Management District (SCAQMD), and in consideration of the Notice of Preparation (NOP) comment letters received from both the SCAQMD and California Air Resources Board (CARB) as presented in Appendix A of the Draft EIR prepared for the Project. Regional and local existing conditions are presented, along with pertinent emissions standards and regulations. The purpose of this assessment is to estimate Project-generated criteria air pollutants and greenhouse gas (GHG) emissions attributable to the Project and to determine the level of impact the Project would have on the environment.

1.1 Project Location and Description

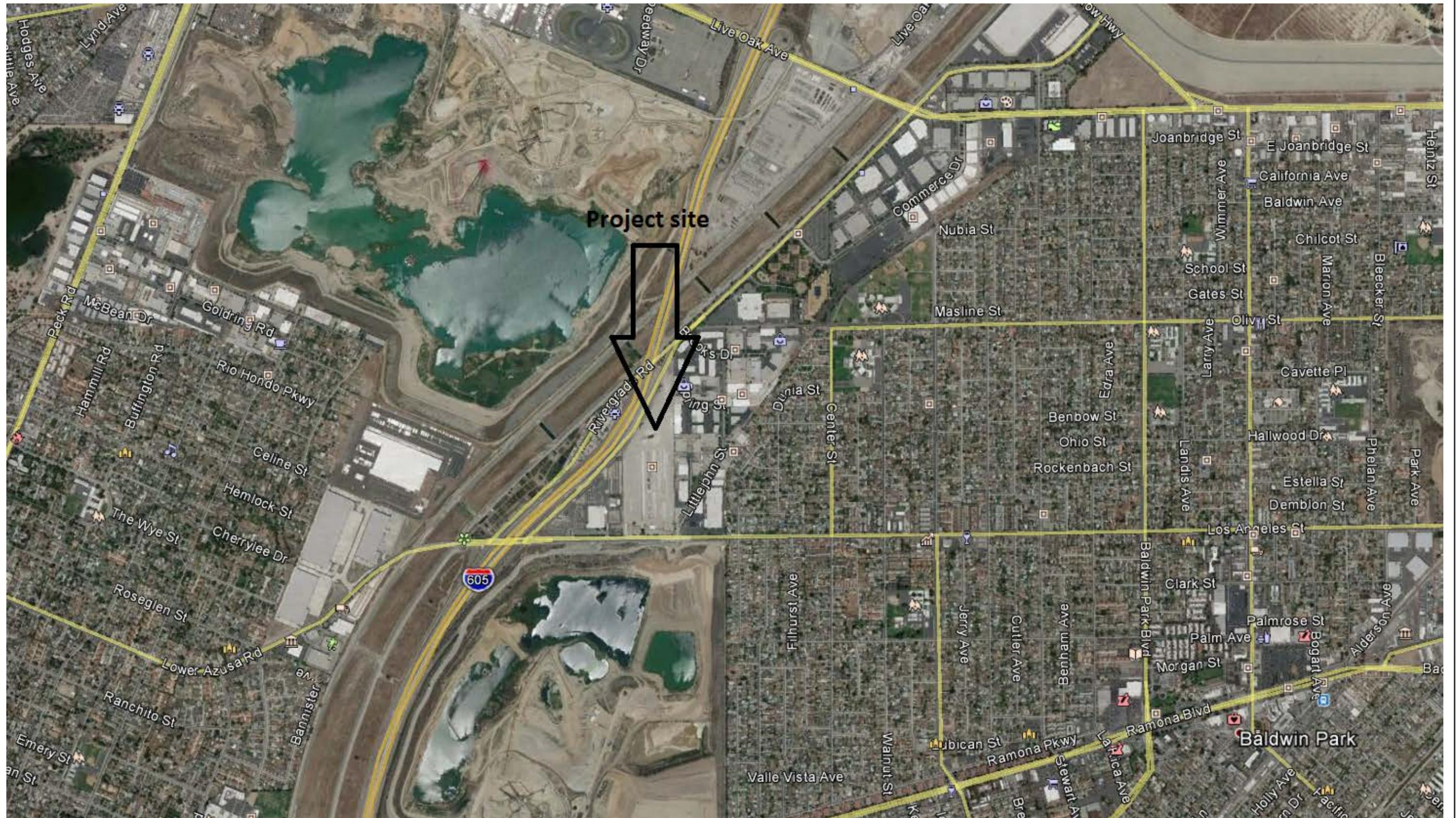
The Project site is located in the city of Irwindale, located in central Los Angeles County (see Figure 1). The Project site is an approximate 24.88-acre lot located along Rivergrade Road and Los Angeles Street. The irregular-shaped site is generally bound by Interstate (I-) 605 to the north and west, industrial uses and residences located in the City of Baldwin Park to the east, and Los Angeles Street to the south (see Figure 2. *Project Vicinity*). The Project is proposing a 528,710-sf concrete tilt-up building that will be used for industrial purposes. The site has been previously developed for industrial use and is currently occupied with multiple buildings proposed from demolition.

The Project site is designated by the City of Irwindale General Plan as "Industrial/Business Park". According to the General Plan, the Industrial/Business Park designation allows for office, manufacturing, and warehouse uses, including commercial manufacturing, light manufacturing, and heavy manufacturing.



Map Date: 6/27/2019
Photo (or Base) Source: Google Earth

Figure 1. Project Vicinity



Map Date: 6/27/2019
Photo (or Base) Source: Google Earth

Figure 2. Project Location

2.0 AIR QUALITY

2.1 Air Quality Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the South Coast Air Basin (SoCAB), which encompasses the Project site, pursuant to the regulatory authority of the SCAQMD.

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project area.

2.1.1 South Coast Air Basin

CARB divides the state into air basins that share similar meteorological and topographical features. San Juan Capistrano lies in the SoCAB, which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County. The air basin is on a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean on the southwest, with high mountains forming the remainder of the perimeter (SCAQMD 1993).

Temperature and Precipitation

The air basin is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds. The annual average temperature varies little throughout the 6,645-square-mile SoCAB, ranging from the low 60s to the high 80s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas (SCAQMD 1993).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rains fall between November and April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains.

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent, and low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (SCAQMD 1993).

Wind

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

Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the diffusion of pollutants by inhibiting the eastward transport of pollutants. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (SCAQMD 1993).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two similarly distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the "mixing height." The combination of winds and inversions is a critical determinant leading to highly degraded air quality in the summer and generally good air quality in the winter in San Juan Capistrano (SCAQMD 1993).

2.1.2 Criteria Air Pollutants

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health with a determined margin of safety. Ozone (O₃), coarse particulate matter (PM₁₀), and fine particulate matter (PM_{2.5}) are generally considered to be regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as carbon monoxide (CO), nitrogen dioxide (NO₂), and sulfur dioxide (SO₂) are considered to be local pollutants because they tend to accumulate in the air locally. PM is also considered a local pollutant. Health effects commonly associated with criteria pollutants are summarized in Table 2-1.

| Table 2-1. Criteria Air Pollutants- Summary of Common Sources and Effects | | |
|--|--|---|
| Pollutant | Major Manmade Sources | Human Health & Welfare Effects |
| CO | An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust. | Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death. |
| NO ₂ | A reddish-brown gas formed during fuel combustion for motor vehicles, energy utilities and industrial sources. | Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Causes brown discoloration of the atmosphere. |
| O ₃ | Formed by a chemical reaction between reactive organic gases (ROGs) and nitrous oxides (N ₂ O) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, solvents, paints and landfills. | Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. |
| PM ₁₀ & PM _{2.5} | Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others. | Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze). |
| SO ₂ | A colorless, nonflammable gas formed when fuel containing sulfur is burned. Examples are refineries, cement manufacturing, and locomotives. | Respiratory irritant. Aggravates lung and heart problems. Can damage crops and natural vegetation. Impairs visibility. |

Source: California Air Pollution Control Officers Association (CAPCOA 2013)

2.1.3 Carbon Monoxide

CO, in the urban environment, is associated primarily with the incomplete combustion of fossil fuels in motor vehicles. CO combines with hemoglobin in the bloodstream and reduces the amount of oxygen that can be circulated through the body. High CO concentrations can cause headaches, aggravate cardiovascular disease and impair central nervous system functions. CO concentrations can vary greatly over comparatively short distances. Relatively high concentrations of CO are typically found near crowded intersections and along heavy roadways with slow moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within relatively short distances (i.e., up to 600 feet or 185 meters) of the source. Overall CO emissions are decreasing as a result of the Federal Motor Vehicle Control Program, which has mandated increasingly lower emission levels for vehicles manufactured since 1973. CO levels in the SoCAB are in compliance with the state and federal one- and eight-hour standards.

2.1.4 Nitrogen Oxides

Nitrogen gas comprises about 80 percent of the air and is naturally occurring. At high temperatures and under certain conditions, nitrogen can combine with oxygen to form several different gaseous compounds collectively called nitric oxides (NO_x). Motor vehicle emissions are the main source of NO_x in urban areas. NO_x is very toxic to animals and humans because of its ability to form nitric acid with water in

the eyes, lungs, mucus membrane, and skin. In animals, long-term exposure to NO_x increases susceptibility to respiratory infections, and lowering resistance to such diseases as pneumonia and influenza. Laboratory studies show that susceptible humans, such as asthmatics, who are exposed to high concentrations can suffer from lung irritation or possible lung damage. Precursors of NO_x, such as NO and NO₂, attribute to the formation of O₃ and PM_{2.5}. Epidemiological studies have also shown associations between NO₂ concentrations and daily mortality from respiratory and cardiovascular causes and with hospital admissions for respiratory conditions.

2.1.5 Ozone

O₃ is a secondary pollutant, meaning it is not directly emitted. It is formed when volatile organic compounds (VOCs) or ROG and NO_x undergo photochemical reactions that occur only in the presence of sunlight. The primary source of ROG emissions is unburned hydrocarbons in motor vehicle and other internal combustion engine exhaust. NO_x forms as a result of the combustion process, most notably due to the operation of motor vehicles. Sunlight and hot weather cause ground-level O₃ to form. Ground-level O₃ is the primary constituent of smog. Because O₃ formation occurs over extended periods of time, both O₃ and its precursors are transported by wind and high O₃ concentrations can occur in areas well away from sources of its constituent pollutants.

People with lung disease, children, older adults, and people who are active can be affected when O₃ levels exceed ambient air quality standards. Numerous scientific studies have linked ground-level O₃ exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses.

2.1.6 Particulate Matter

Particulate matter includes both aerosols and solid particulates of a wide range of sizes and composition. Of concern are those particles smaller than or equal to 10 microns in diameter size (PM₁₀) and small than or equal to 2.5 microns in diameter (PM_{2.5}). Smaller particulates are of greater concern because they can penetrate deeper into the lungs than larger particles. PM₁₀ is generally emitted directly as a result of mechanical processes that crush or grind larger particles or form the resuspension of dust, typically through construction activities and vehicular travel. PM₁₀ generally settles out of the atmosphere rapidly and is not readily transported over large distances. PM_{2.5} is directly emitted in combustion exhaust and is formed in atmospheric reactions between various gaseous pollutants, including NO_x, sulfur oxides (SO_x) and VOCs. PM_{2.5} can remain suspended in the atmosphere for days and/or weeks and can be transported long distances.

The principal health effects of airborne PM are on the respiratory system. Short-term exposure of high PM_{2.5} and PM₁₀ levels are associated with premature mortality and increased hospital admissions and emergency room visits. Long-term exposure is associated with premature mortality and chronic respiratory disease. According to the U.S. Environmental Protection Agency (USEPA), some people are much more sensitive than others to breathing PM₁₀ and PM_{2.5}. People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worse illnesses; people with bronchitis can expect aggravated symptoms; and children may experience decline in lung function due to breathing in PM₁₀ and

PM_{2.5}. Other groups considered sensitive include smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths.

2.1.7 Toxic Air Contaminants

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

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children (whose lungs are still developing) and the elderly (who may have other serious health problems). Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's PM_{2.5} air quality problems. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

Diesel Exhaust

Most recently, CARB identified DPM as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine (USEPA 2002). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

2.1.8 Ambient Air Quality

Ambient air quality at the Project site can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. CARB maintains more than 60 monitoring stations throughout

California. The Azusa (803 North Loren Avenue, Azusa) air quality monitoring station, located approximately six miles northeast of the development site, is the closest station to the site. The Azusa monitoring station monitors ambient concentrations of O₃, PM_{2.5}, PM₁₀, the three pollutants in nonattainment of air quality standards in the Project region. Ambient emission concentrations will vary due to localized variations in emission sources and climate and should be considered “generally” representative of ambient concentrations in the development area.

Table 2-2 summarizes the published data concerning O₃, PM_{2.5}, PM₁₀ since 2016 from the Azusa monitoring station for each year that the monitoring data is provided. O₃, PM₁₀ and PM_{2.5} are the pollutant species most potentially affecting the Project region.

| Table 2-2. Summary of Ambient Air Quality Data | | | |
|--|---------------|---------------|---------------|
| Pollutant Standards | 2016 | 2017 | 2018 |
| O₃ | | | |
| Max 1-hour concentration (ppm) | 0.146 | 0.152 | 0.139 |
| Max 8-hour concentration (ppm) (state/federal) | 0.107 / 0.106 | 0.114 / 0.114 | 0.100 / 0.099 |
| Number of days above 1-hour standard (state/federal) | 30 / 4 | 38 / 7 | 24 / 3 |
| Number of days above 8-hour standard (state/federal) | 40 / 36 | 64 / 62 | 43 / 42 |
| PM₁₀ | | | |
| Max 24-hour concentration (µg/m ³) (state/federal) | 74.6 / 74.0 | 83.9 / 83.9 | 78.3 / 78.3 |
| Number of days above 24-hour standard (state/federal) | * / 0 | * / 0 | 59.2 / 0 |
| PM_{2.5} | | | |
| Max 24-hour concentration (µg/m ³) (state/federal) | 32.1 / 32.1 | 24.9 / 24.9 | 41.8 / 41.8 |
| Number of days above federal 24-hour standard | 0 | 0 | 0 |

Source: CARB 2019

µg/m³ = micrograms per cubic meter; ppm = parts per million

* = Insufficient data available

The USEPA and CARB designate air basins or portions of air basins and counties as being in “attainment” or “nonattainment” for each of the criteria pollutants. Areas that do not meet the standards are classified as nonattainment areas. The National Ambient Air Quality Standards (NAAQS) (other than O₃, PM₁₀, PM_{2.5}, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. The NAAQS for O₃, PM₁₀, and PM_{2.5} are based on statistical calculations over one- to three-year periods, depending on the pollutant. The California Ambient Air Quality Standards (CAAQS) are not to be exceeded during a three-year period. The attainment status for the SoCAB is included in Table 2-3.

The determination of whether an area meets the state and federal standards is based on air quality monitoring data. Some areas are unclassified, which means there is insufficient monitoring data for determining attainment or nonattainment. Unclassified areas are typically treated as being in attainment. Because the attainment/nonattainment designation is pollutant-specific, an area may be classified as nonattainment for one pollutant and attainment for another. Similarly, because the state and federal

standards differ, an area could be classified as attainment for the federal standards of a pollutant and as nonattainment for the state standards of the same pollutant. The region is designated as a nonattainment area for the federal O₃ and PM_{2.5} standards and is also a nonattainment area for the state standards for O₃, PM₁₀, and PM_{2.5} (CARB 2018a). The Project region is also a nonattainment area for the federal lead standard. This is a result of operations at the Ports of Los Angeles and Long Beach coupled with a few specific industrial processes that occur in the region, such as battery recycling. The Project would not be source of lead.

| Table 2-3. Attainment Status of Criteria Pollutants in the South Coast Air Basin | | |
|---|--------------------------|----------------------------|
| Pollutant | State Designation | Federal Designation |
| O ₃ | Nonattainment | Nonattainment |
| PM ₁₀ | Nonattainment | Attainment |
| PM _{2.5} | Nonattainment | Nonattainment |
| CO | Attainment | Unclassified/Attainment |
| NO ₂ | Attainment | Unclassified/Attainment |
| SO ₂ | Attainment | Unclassified/Attainment |

Source: CARB 2018a

2.1.9 Sensitive Receptors

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

The nearest sensitive receptors to the Project site are residences located approximately 205 meters (670 feet) to the east. In addition to these residences, three schools (Walnut Elementary School, Burch Elementary School, and Olive Middle School) are located within one mile of the Project site.

2.2 Regulatory Framework

2.2.1 Federal

Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the USEPA to establish the NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that CO₂ is an air pollutant covered by the CAA; however, no NAAQS have been established for CO₂.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those “sensitive receptors” most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The USEPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation. Table 2-3 lists the federal attainment status of the SoCAB for the criteria pollutants.

2.2.2 State

California Clean Air Act

The California Clean Air Act (CCAA) allows the State to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California’s State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the SIP. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The 2016 Air Quality Management Plan (2016 AQMP) is the SIP for the SoCAB. The 2016 AQMP is a regional blueprint for achieving air quality standards and healthful air in the SoCAB and those portions of the Salton Sea Air Basin that are under SCAQMD’s jurisdiction. The 2016 AQMP represents a new approach, focusing on available, proven, and cost-effective alternatives to traditional strategies, while seeking to achieve multiple

goals in partnership with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The most effective way to reduce air pollution impacts is to reduce emissions from mobile sources. The AQMP relies on a regional and multi-level partnership of governmental agencies at the federal, state, regional, and local levels. These agencies (USEPA, CARB, local governments, Southern California Association of Governments [SCAG] and the SCAQMD) are the primary agencies that implement the AQMP programs. The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's latest Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. The 2016 AQMP includes integrated strategies and measures to meet the NAAQS. The current status of the SIPs for the SoCAB's nonattainment pollutants are shown below:

- On November 28, 2007, CARB submitted a SIP revision to the USEPA for O₃, PM_{2.5} (1997 Standard), CO, and NO₂ in the SoCAB. This revision is identified as the "2007 South Coast SIP". The 2007 South Coast SIP demonstrates attainment of the federal PM_{2.5} standard in the SoCAB by 2014 and attainment of the federal eight-hour O₃ standard by 2023. This SIP also includes a request to reclassify the O₃ attainment designation from "severe" to "extreme". The USEPA approved the redesignation effective June 4, 2010. The "extreme" designation requires the attainment of the eight-hour O₃ standard in the SoCAB by June 2024. CARB approved PM_{2.5} SIP revisions in April 2011 and the O₃ SIP revisions in July 2011. The USEPA approved the PM_{2.5} SIP in 2013 and has approved 46 of the 61 1997 8-hour O₃ SIP requirements (USEPA 2018a). In 2014, the USEPA proposed a finding that the SoCAB has attained the 1997 PM_{2.5} standards. In 2016, the USEPA determined that the SoCAB had attained the 1997 PM_{2.5} standards; however the SoCAB was not redesignated as an attainment area because the USEPA had not approved a maintenance plan and additional requirements under the CAA had not been met (USEPA 2018b).
- In 2012, the SCAQMD adopted the 2012 AQMP, which was a regional and multiagency effort (the SCAQMD, CARB, SCAG, and the USEPA). The primary purposes of the 2012 AQMP were to demonstrate attainment of the federal 24-hour PM_{2.5} standard by 2014 and to update the USEPA-approved 8-hour Ozone Control Plan. In 2012, the 2012 AQMP was submitted to CARB and the USEPA for concurrent review and approval for inclusion in the SIP. The 2012 AQMP was approved by CARB on January 25, 2013.
- In 2017, the SCAQMD adopted the 2016 AQMP. The 2016 AQMP includes strategies and measures to meet the following NAAQS:
 - 2008 8-hour O₃ (75 parts per billion [ppb]) by 2013
 - 2012 Annual PM_{2.5} (12 µg/m³) by 2025
 - 1997 8-hour O₃ (80 ppb) by 2023
 - 1979 1-hour O₃ (120 ppb) by 2022
 - 2006 24-hour PM_{2.5} (35 µg/m³) by 2019

Tanner Air Toxics Act & Air Toxics “Hot Spots” Information and Assessment Act

CARB’s Statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

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

Mobile Source Strategy

In 2016 CARB released the update to the Mobile Source Strategy (Strategy). This demonstrates how the state will meet air quality standards, achieve GHG emission reduction targets, decrease health risks from transportation emissions, and reduce petroleum consumption over the next 15 years. This includes engine technology that is effectively 90 percent cleaner than today’s current standards, with clean, renewable fuels comprising half the fuels burned.

The strategy also relies on the increased use of renewable fuels to ensure that air pollutant reductions are achieved while meeting the ongoing demand for liquid and gaseous fuels in applications where combustion technologies remain, including in heavy-duty trucks and equipment and light-duty hybrid vehicles. The estimated benefits of the Mobile Source Strategy in reducing emissions from mobile sources includes an 80 percent reduction of O₃-forming emissions (ROG and NO_x), and a 45 percent reduction in DPM emissions in the SoCAB from current levels. Statewide, the Strategy would also result in a 45 percent reduction of GHG emissions and a 50 percent reduction in the consumption of petroleum-based fuels.

Governor’s Sustainable Freight Action Plan

Under the Governor’s Sustainable Freight Action Plan strategy, CARB is working with agency partners and stakeholders to implement a broad program that includes regulations, incentives, and policies designed to support the transformation to a more sustainable freight system and reduce community impacts from freight operations in California. The Governor’s Sustainable Freight Action Plan identifies strategies and actions to achieve a sustainable freight transportation system that meets California’s environmental, energy, mobility, safety and economic needs. The plan also identifies and initiates corridor-level freight pilot projects within the state’s primary trade corridors that integrate advanced technologies, alternative fuels, freight and fuel infrastructure and local economic development opportunities. The plan seeks to

improve the state freight system efficiency 25 percent by “increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030” as well as to deploy over 100,000 zero-emission freight vehicles and equipment and maximizing near-zero equipment and equipment powered by renewable energy by 2030.

Diesel Risk Reduction Plan

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

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

In 2008, CARB approved the Truck and Bus Regulation to significantly reduce PM and NO_x emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks had to be retrofitted with PM filters beginning January 1, 2012, and older trucks had to be replaced by January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010-model-year engines or equivalent.

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

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of CARB's ATCM *to Limit Diesel-Fueled Commercial Motor Vehicle Idling* is to reduce public exposure to DPM and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles.¹ The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

CARB Final Regulation Order, *Requirements to Reduce Idling Emissions from New and In-Use Trucks*, beginning in 2008, requires that new 2008 and subsequent model-year heavy-duty diesel engines be equipped with an engine shutdown system that automatically shuts down the engine after 300 seconds of

¹ *The ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is codified in Title 13 of the CCR, Chapter 10, § 2485.*

continuous idling operation once the vehicle is stopped, the transmission is set to “neutral” or “park”, and the parking brake is engaged.

2.2.3 Local

South Coast Air Quality Management District

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

The following is a list of noteworthy SCAQMD rules that are required of construction activities associated with the Proposed Project:

- **Rule 201 & Rule 203 (Permit to Construct & Permit to Operate)** – Rule 201 requires a “Permit to Construct” prior to the installation of any equipment “the use of which may cause the issuance of air contaminants . . .” and Regulation II provides the requirements for the application for a Permit to Construct. Rule 203 similarly requires a Permit to Operate.
- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM₁₀ suppression techniques are summarized below.
 - a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
 - b) All onsite roads will be paved as soon as feasible or watered periodically or chemically stabilized.
 - c) All material transported offsite will be either sufficiently watered or securely covered to prevent excessive amounts of dust.

- d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
 - e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.
- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.
 - **Rule 1401 (New Source Review of Toxic Air Contaminants)** – This rule requires new source review of any new, relocated, or modified permit units that emit TACs. The rule establishes allowable risks for permit units requiring permits pursuant to Rules 201 and 203 discussed above.
 - **Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities)** – This rule specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

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

The SCAQMD has conducted an in-depth analysis of the TACs and their resulting health risks for all of Southern California. This study, the Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES IV," shows that cancer risk has decreased more than 50 percent between MATES III (2008a) and MATES IV (2015). MATES IV is the most comprehensive dataset documenting the ambient air toxic levels and health risks associated with the SoCAB emissions. The SCAQMD is currently in the process of developing MATES V. The 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 10 fixed sites within the SoCAB. None of the fixed monitoring sites are within the local area of the Project site. However, MATES IV has extrapolated the excess cancer risk levels throughout the basin by modeling the specific grids. MATES IV modeling predicted an excess cancer risk of 427 in one million for the Project area. DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 68 percent of the total risk shown in MATES-IV.

2.3 Air Quality Emissions Impact Assessment

2.3.1 Thresholds of Significance

The impact analysis provided below is based on the following California Environmental Quality Act (CEQA) Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to air quality if it would do any of the following:

- 1) Conflict with or obstruct implementation of any applicable air quality plan.
- 2) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- 3) Expose sensitive receptors to substantial pollutant concentrations.
- 4) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

SCAQMD Thresholds

The significance criteria established by the applicable air quality management or air pollution control district (SCAQMD) may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if the Proposed Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality for construction and operational activities of land use development projects such as that proposed, as shown in Table 2-4.

| Air Pollutant | Construction Activities | Operations |
|---------------------------|--------------------------------|-------------------|
| Reactive Organic Gas | 75 | 55 |
| Carbon Monoxide | 550 | 550 |
| Nitrogen Oxide | 100 | 55 |
| Sulfur Oxide | 150 | 150 |
| Coarse Particulate Matter | 150 | 150 |
| Fine Particulate Matter | 55 | 55 |

Source: SCAQMD 1993 (PM_{2.5} threshold adopted June 1, 2007)

By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's individual

emissions exceed its identified significance thresholds, the project would be cumulatively considerable. Projects that do not exceed significance thresholds would not be considered cumulative considerable.

Localized Significance Thresholds

In addition to regional significance thresholds, the SCAQMD developed localized significance thresholds (LSTs) for emissions of NO₂, CO, PM₁₀, and PM_{2.5} generated at new development sites (offsite mobile source emissions are not included in the LST analysis protocol). LSTs represent the maximum emissions that can be generated at a Project site without expecting to cause or substantially contribute to an exceedance of the most stringent national or State ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb five acres or less on a single day. Irwindale is located within SCAQMD SRA 9 (East San Gabriel Valley). Table 2-5 shows the LSTs for a one-acre, two-acre, and five-acre project site in SRA 9 with sensitive receptors located within 200 meters of the Project site (as previously described, the nearest sensitive receptors are residences located approximately 205 meters [670 feet] east of the Project site).

| Table 2-5. Local Significance Thresholds | | | | |
|---|---|---------------|------------------------|-------------------------|
| Project Size | Pollutant (pounds per day Construction/Operations) | | | |
| | NO₂ | CO | PM₁₀ | PM_{2.5} |
| 1 Acre | 251 / 251 | 4,803 / 4,803 | 75 / 19 | 22 / 6 |
| 2 Acres | 284 / 284 | 5,658 / 5,658 | 84 / 20 | 26 / 7 |
| 5 Acres | 368 / 368 | 7,600 / 7,600 | 105 / 26 | 35 / 9 |

Source: SCAQMD 2009

2.3.2 Methodology

Air quality impacts were assessed in accordance with methodologies recommended by CARB and the SCAQMD, as well as in consideration of the NOP comment letters received from both the SCAQMD and CARB as presented in Appendix A of the Draft EIR prepared for the Project. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were primarily calculated using CalEEMod model defaults for Los Angeles County. Operational air pollutant emissions were based on the Project site plans and the estimated traffic trip generation rates and Project fleet mix from KOA (2019). It is noted that the SCAQMD NOP comment letter recommends estimating the Project fleet mix based on 0.64 average daily heavy-duty truck trips per 1,000 sf of proposed industrial warehouse building space. Employing this SCAQMD-recommended metric results in an estimate of 338 heavy-duty truck trips daily (0.64 x 528.710 = 338). However, this analysis is based on an estimate of 557 heavy-duty

truck trips daily (349 three- and four-axle heavy-heavy-duty trucks and 208 two-axle medium-heavy-duty trucks) as provided by KOA, and thus is more conservative than recommended by the SCAQMD.

Additionally, DPM concentration generated from Project haul trucks and the associated dispersion was modeled using the USEPA's AERMOD air toxic dispersion model. AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The resultant concentration values were then used to calculate chronic and carcinogenic health risk using the standardized equations contained in the California Office of Environmental Health Hazard Assessment's (OEHHA) Guidance Manual for Preparation of Health Risk Assessments (2015).

2.3.3 Impact Analysis

Project Construction-Generated Criteria Air Quality Emissions

Regional Construction Significance Analysis

Construction-generated emissions are temporary and short-term but have the potential to represent a significant air quality impact. Three basic sources of short-term emissions will be generated through construction of the Proposed Project: operation of the construction vehicles (i.e., excavators, trenchers, dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities. Construction activities such as excavation and grading operations, construction vehicle traffic, and wind blowing over exposed soils would generate exhaust emissions and fugitive PM emissions that affect local air quality at various times during construction. Effects would be variable depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. The dry climate of the area during the summer months creates a high potential for dust generation. Construction activities would be subject to SCAQMD Rule 403, which requires taking reasonable precautions to prevent the emissions of fugitive dust, such as using water or chemicals, where possible, for control of dust during the clearing of land and other construction activities.

Construction-generated emissions associated the Proposed Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See Attachment A for more information regarding the construction assumptions, including construction equipment and duration, used in this analysis.

Predicted maximum daily construction-generated emissions for the Proposed Project are summarized in Table 2-6. Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

| Construction Year | Pollutant (pounds per day) | | | | | |
|---|----------------------------|-----------------|-----------|-----------------|------------------|-------------------|
| | ROG | NO _x | CO | SO ₂ | PM ₁₀ | PM _{2.5} |
| Construction in 2020 | 18.56 | 50.26 | 48.06 | 0.10 | 9.37 | 5.93 |
| Construction in 2021 | 18.09 | 41.15 | 46.57 | 0.10 | 4.22 | 2.34 |
| <i>SCAQMD Regional Significance Threshold</i> | 75 | 100 | 550 | 150 | 150 | 55 |
| Exceed SCAQMD Regional Threshold? | No | No | No | No | No | No |

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SCAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include the following: sweeping/cleaning adjacent roadway access areas daily; washing equipment tires before leaving the construction site; water exposed surfaces three times daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied.

Emissions estimates account for the site preparation and grading of 24.88 acres along with the demolition of 62,500 square feet of building space. Building construction, paving, and painting are assumed to occur simultaneously.

As shown in Table 2-6, emissions generated during Project construction would not exceed the SCAQMD’s regional thresholds of significance. Therefore, criteria pollutant emissions generated during Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard.

Localized Construction Significance Analysis

As noted in CARB’s NOP letter concerning the Proposed Project, diesel emissions generated during the construction of the Project could potentially negatively impact the community to the east of the Project site. As previously stated, the nearest sensitive receptors to the Project site are the residences approximately 205 meters (670 feet) east of the Project site. In addition to these residences, three schools (Walnut Elementary School, Burch Elementary School, and Olive Middle School) are located within one mile of the Project site. In order to identify localized, air toxic-related impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards’ Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008b]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific level proposed projects.

For this Project, the appropriate SRA for the localized significance thresholds is the East San Gabriel Valley source receptor area (SRA 9). LSTs apply to CO, NO₂, PM₁₀, and PM_{2.5}. The Proposed Project would disturb ±24.88 acres during construction. As previously described, the SCAQMD has produced lookup tables for projects that disturb less than or equal to five acres daily. The SCAQMD has also issued guidance on applying the CalEEMod emissions software to LSTs for projects greater than five acres. Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, Table 2-7 is used to determine the maximum daily disturbed-acreage for comparison to LSTs.

| Construction Phase | Equipment Type | Acres Graded/Disturbed per 8-Hour Day | Equipment Quantity | Operating Hours per Day | Acres Graded per Day |
|--|--------------------------------|--|---------------------------|--------------------------------|-----------------------------|
| Site Preparation | Rubber Tired Dozers | 0.5 | 3 | 8 | 1.5 |
| | Tractors/ Loaders/ Backhoes | 0.5 | 4 | 8 | 2.0 |
| | Site Preparation Total: | | | | 3.5 |
| Grading | Excavators | 0.0 | 2 | 8 | 0.0 |
| | Rubber Tired Dozer | 0.5 | 1 | 8 | 0.5 |
| | Graders | 0.5 | 1 | 8 | 0.5 |
| | Scraper | 1.0 | 2 | 8 | 2.0 |
| | Tractors/ Loaders/ Backhoes | 0.5 | 2 | 8 | 1.0 |
| | Grading Total: | | | | 4.0 |
| Maximum Total Acres Graded per Day: | | | | | 4.0 |

As shown in Table 2-7, Project implementation could potentially disturb up to 3.5 acres daily during the site preparation phase of construction, and 4.0 acres daily during the grading phase of construction. Therefore, the grading phase of construction represents the most potent ground-disturbing construction activities. Thus, the LST threshold value for a 3.5-acre construction site were sourced from the LST lookup tables for site preparation and the LST threshold value for a 4.0-acre construction site were sourced from the LST lookup tables for Project grading activities.

The nearest sensitive receptors to the Project site are the residences in Baldwin Park located approximately 205 meters (670 feet) east of the Project site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, LSTs for receptors located at 200 meters were utilized in this analysis. The SCAQMD's methodology clearly states that "off-site mobile emissions from a project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "onsite" emissions outputs were considered. Table 2-8 presents the results of localized emissions during the grading phase of construction, which is construction activity that disturbs the most acreage daily. The LSTs reflect a maximum disturbance of 3.5 acres daily during site preparation activities and 4.0 acres daily during grading activities, at 200 meters for the Proposed Project.

| Activity | Pollutant (pounds per day) | | | |
|---|----------------------------|-----------|------------------|-------------------|
| | NO _x | CO | PM ₁₀ | PM _{2.5} |
| Project Site Preparation | 42.41 | 21.51 | 9.24 | 5.89 |
| SCAQMD Localized Significance Threshold (3.5 acres of disturbance) | 326.00 | 6,629.00 | 94.50 | 30.50 |
| Project Site Grading | 50.19 | 31.95 | 5.55 | 3.40 |
| SCAQMD Localized Significance Threshold (4.0 acres of disturbance) | 340.00 | 6,952.67 | 98.00 | 32.00 |
| Exceed SCAQMD Localized Threshold? | No | No | No | No |

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emission reduction/credits for construction emissions are applied based on the required implementation of SCAQMD Rule 403. The specific Rule 403 measures applied in CalEEMod include the following: sweeping/cleaning adjacent roadway access areas daily; washing equipment tires before leaving the construction site; water exposed surfaces three times daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied.

Emissions estimates account for the site prep and grading of 24.88 acres along with the demolition of 62,500 square feet of buildings.

Table 2-8 shows that the emissions of these pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during construction activities. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative. The SCAQMD Environmental Justice Enhancement Initiative program seeks to ensure that everyone has the right to equal protection from air pollution. The Environmental Justice Program is divided into three categories, with the LST protocol promulgated under Category I: *Further-Reduced Health Risk*. Thus, the fact that onsite Project construction emissions would be generated at rates below the LSTs for NO_x, CO, PM₁₀, and PM_{2.5} demonstrates that the Project would likely not adversely impact the neighboring community to the east.

Project Operations Criteria Air Quality Emissions

Regional Operational Significance Analysis

Implementation of the Project would result in long-term operational emissions of criteria air pollutants such as PM₁₀, PM_{2.5}, CO, and SO₂ as well as ozone precursors such as ROG and NO_x. Project-generated increases in emissions would be predominantly associated with motor vehicle use. As previously described, operational air pollutant emissions were based on the Project site plans and the estimated traffic trip generation rates and Project fleet mix from KOA (2019).. As previously described, the SCAQMD NOP comment letter recommends estimating the Project fleet mix based on 0.64 average daily heavy-duty truck trips per 1,000 sf of proposed industrial warehouse building space. Employing this SCAQMD-recommended metric results in an estimate of 338 heavy-duty truck trips daily (0.64 x 528,710 = 338). However, this analysis is based on an estimate of 557 heavy-duty truck trips daily (349 three- and four-axle heavy-heavy-duty trucks and 208 two-axle medium-heavy-duty trucks) as provided by KOA, and thus is more conservative than recommended by the SCAQMD. Consistent with SCAQMD recommendations, in order to more accurately account for the trip distribution patterns of freight trucks, the average trip length

is calculated at 49.8 miles, which represents the average distance between the Project site and the Port of Los Angeles/Long Beach, the Project site and the Banning Pass, the Project Site and the San Diego County line, the Project site and the Cajon Pass, and the Project site and downtown Los Angeles.

Long-term operational emissions attributable to the Project are identified in Table 2-9 and compared to the regional operational significance thresholds promulgated by the SCAQMD.

| Table 2-9. Operational-Related Emissions (Regional Significance Analysis) | | | | | | |
|--|-----------------------------------|-----------------------|---------------|-----------------------|------------------------|-------------------------|
| Emission Source | Pollutant (pounds per day) | | | | | |
| | ROG | NO_x | CO | SO₂ | PM₁₀ | PM_{2.5} |
| Summer Emissions | | | | | | |
| Area | 11.81 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 |
| Energy | 0.28 | 2.57 | 2.15 | 0.01 | 0.19 | 0.19 |
| Mobile | 23.43 | 250.71 | 431.59 | 2.08 | 137.06 | 37.98 |
| Total: | 35.52 | 253.29 | 433.80 | 2.09 | 137.26 | 38.18 |
| <i>SCAQMD Regional Significance Threshold</i> | 55 | 55 | 550 | 150 | 150 | 55 |
| Exceed SCAQMD Regional Threshold? | No | Yes | No | No | No | No |
| Winter Emissions | | | | | | |
| Area | 11.81 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 |
| Energy | 0.28 | 2.57 | 2.15 | 0.01 | 0.19 | 0.19 |
| Mobile | 23.04 | 259.77 | 399.87 | 2.00 | 137.07 | 37.98 |
| Total: | 35.14 | 262.34 | 402.09 | 2.02 | 137.26 | 38.18 |
| <i>SCAQMD Regional Significance Threshold</i> | 55 | 55 | 550 | 150 | 150 | 55 |
| Exceed SCAQMD Regional Threshold? | No | Yes | No | No | No | No |

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emissions projections account for a trip generation rate and fleet mix identified by KOA 2019. Specifically, KOA estimates the Project generation of 3,459 average vehicle trips daily, 16.2 percent of which would be medium-heavy duty and heavy-heavy duty trucks. The average trip length is calculated at 49.8 miles, which represents the average distance between the Project site and the Port of Los Angeles/Long Beach, the Project site and the Banning Pass, the Project Site and the San Diego County line, the Project site and the Cajon Pass, and the Project site and downtown Los Angeles.

As shown in Table 2-9, the Project’s emissions associated with operations would exceed the SCAQMD significance threshold for NO_x. As previously described, NO_x is a precursor of O₃, a pollutant for which the SoCAB is classified nonattainment.

O₃ is produced when ROG and NO_x undergo photochemical reactions that occur only in the presence of sunlight. O₃ is a very difficult pollutant to regulate due to the time it takes to create and the fact that it can be transported away from its source by wind and meteorological air patterns. People with lung disease, children, older adults, and people who are active can be affected when O₃ levels exceed ambient air

quality standards. Numerous scientific studies have linked ground level O₃ exposure to a variety of problems including lung irritation, difficult breathing, permanent lung damage to those with repeated exposure, and respiratory illnesses. O₃ and NO_x have been decreasing in California since 1975 and are projected to continue to decrease in the future. Although vehicle miles traveled across the state continue to increase, NO_x levels are decreasing due to the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_x emissions from electric utilities have also decreased due to the use of cleaner fuels and renewable energy.

SCAQMD's 2016 AQMP, previously described, identifies robust NO_x reductions from new regulations on Regional Clean Air Incentives Market (RECLAIM) facilities, non-refinery flares, commercial cooking, and residential and commercial appliances. Such combustion sources are already heavily regulated with the lowest NO_x emissions levels achievable, yet there are opportunities to require and accelerate replacement with cleaner zero-emission alternatives, such as residential and commercial furnaces, pool heaters, and backup power equipment. The SCAQMD plans to achieve such replacements through a combination of regulations and incentives. Technology-forcing regulations can drive development and commercialization of clean technologies, with future year requirements for new or existing equipment. Incentives can then accelerate deployment and enhance public acceptability of new technologies. The 2016 AQMP also emphasizes that beginning in 2012, continued implementation of previously adopted regulations have been leading to NO_x emission reductions of 68 percent by 2023 and 80 percent by 2031. With the addition of 2016 AQMP regulatory measures, a 30 percent reduction of NO_x from stationary sources is expected in the 15-year period between 2008 and 2023. This is in addition to significant NO_x reductions from stationary sources achieved in the decades prior to 2008.

NO_x is produced as a result of incomplete fossil fuel combustion. The majority of these emissions would be generated by mobile sources, which is an emission source that cannot be regulated by the City of Irwindale. CARB is primarily responsible for controlling pollution from motor vehicles. The air district must adopt rules to achieve and maintain the SAAQS and FAAQS within their jurisdiction. A reduction of vehicle trips to and from the Proposed Project site would reduce the amount of mobile emissions. Methods of reducing vehicle trips include carpooling, transit, cycling, and pedestrian connections. However, this Project is proposing an industrial warehouse and the reduction of vehicle trips is only feasible for the employees working in the facility, though the majority of traffic trips instigated by the Project would be related to haul truck trips transporting freight.

Foothill Transit provides transit service to the City of Irwindale. The use of transit service over passenger automobiles can result in a reduction of daily air pollutants. The nearest bus stops to the Proposed Project are located 0.14 mile to the east at Los Angeles Street and Hornbrook Avenue. Additionally, the implementation element of the Irwindale General Plan Public Transit Review Program evaluates local transit to ensure circulation goals and policies are achieved.

As described in the Regulatory Framework discussion above, the State of California has implemented numerous strategies pertaining to trucks and the reduction of emissions that directly apply to the Project. Urban goods delivery is an essential component of the greater freight system and vital to the urban economy. While urban goods delivery represents a small share of urban traffic, it generates a disproportionate amount of pollution emissions. The State of California promulgates policies designed

and implemented to improve the efficiency and environmental footprint of the urban freight system, including the introduction of zero and near-zero emission vehicles—a strategy embedded in the Governor’s Sustainable Freight Action Plan as well as CARB’s AB 32 Scoping Plan, SIP, and Mobile Source Strategy.

Additionally, the Project is proposing an industrial warehouse use in close proximity to the I-605, I-10, and I-205, which are major regional freeway corridors. Further, the I-10 corridor has been identified as a “Major International Trade Highway Route” in the California State Goods Movement Action Plan (2007) and therefore serves to accommodate existing truck trips along the interstate. The Goods Movement Action Plan is a statewide initiative to improve and expand California’s goods movement industry and infrastructure in a manner which will increase mobility and relieve traffic congestion as well as improve air quality and protect public health. The Plan further identifies I-10 (located 2.2 miles south of the Project site and linked to the Project site by I-605) as a “Priority Corridor” for development toward more efficient goods movement and anticipates that the development of good movement-supporting facilities, such as industrial warehouses like that proposed by the Project, will improve the efficiency of overall goods movement throughout the state, and thus reduce truck-related air pollutant emissions and improve air quality.

Both CARB and the SCAQMD have prepared NOP letters concerning the Proposed Project that contain several mitigation measure recommendations to reduce mobile-source criteria air pollutant emissions generated by Project operations. Thus, the following CARB and SCAQMD mitigation is recommended for the Proposed Project:

The following air pollutant reduction measures shall be incorporated during Project operations:

- AQ-1:** Prior to the certificate of occupancy issuance, the Project Applicant shall demonstrate to the satisfaction of the City of Irwindale Community Development Department Manager that the following measures would be implemented during Project operations. These measures shall be enforced and maintained through Covenants, Codes, and Restrictions (CC&Rs), or other means acceptable to the City of Irwindale Community Development Department Manager.
- The proposed warehouse shall be constructed with the appropriate infrastructure to facilitate sufficient electric charging for trucks to plug-in in anticipation of future technology allowing trucks to operate partially on electricity.
 - At least five percent of all vehicle parking spaces (including for trucks) shall include EV charging stations. Further, electrical hookups to plug in any onboard auxiliary equipment shall be provided for Project trucks. Electrical panels shall be appropriately sized to allow for future expanded use.
 - The majority of all loading/unloading docks and trailer spaces shall be equipped with electrical hookups for trucks with transport refrigeration units or auxiliary power units.
 - Legible, durable, weather-proof signs shall be placed at truck access gates, loading docks, and truck parking areas that identify applicable California Air Resources Board

(CARB) anti-idling regulations. At a minimum each sign shall include: 1) instructions for truck drivers to shut off engines when not in use; 2) instructions for drivers of diesel trucks to restrict idling to no more than five minutes; and 3) telephone numbers of the building facilities manager and CARB to report violations.

- Locate any check-in points for trucks well inside the Project site to ensure that there are no trucks queuing outside of the facility.
- Ensure that truck traffic within the Project site is located away from the eastern property line (the property line closest to sensitive receptors) to the maximum extent possible.
- The Project site is 205 meters (673 feet) from the nearest sensitive receptors at the nearest. Establish a buffer zone of at least 300 meters (984 feet) between truck loading zones/docks and the nearest sensitive receptors to the east.
- Restrict overnight parking in the residential communities to the east of the Project and establish overnight parking within the Project site where trucks can be stored overnight.
- All service equipment (i.e., forklifts) used within the site shall be electric or compressed natural gas-powered.
- In order to promote alternative fuels, and help support “clean” truck fleets, the developer/successor-in-interest shall provide building occupants with information related to SCAQMD’s Carl Moyer Program, or other such programs that promote truck retrofits or “clean” vehicles and information including, but not limited to, the health effect of diesel particulates, benefits of reduced idling time, CARB regulations, and importance of not parking in residential areas. Tenants shall be notified about the availability of: 1) alternatively fueled cargo handling equipment; 2) grant programs for diesel-fueled vehicle engine retrofit and/or replacement; 3) designated truck parking locations in the project vicinity; 4) access to alternative fueling stations proximate to the site that supply compressed natural gas; and 5) the United States Environmental Protection Agency’s SmartWay program.

Despite these efforts set forth above, including imposition of CARB and SCAQMD recommendations contained in mitigation measure **AQ-1**, Project-instigated heavy-duty truck travel would result in SCAQMD daily significance thresholds to be exceeded, which equates to a cumulatively considerable net increase of NO_x (an O₃ precursor) for which the Project region is nonattainment under an applicable federal or state ambient air quality standard. While California state strategies such as the Governor’s Sustainable Freight Action Plan, CARB’s AB 32 Scoping Plan, and the Mobile Source Strategy will improve the efficiency and environmental footprint of the urban freight system, including the introduction of zero and near-zero emission vehicles, it is not currently feasible to reduce projected Project emissions to levels below the regional significance thresholds.

The SCAQMD has set its CEQA significance thresholds for NO_x at 10 tons per year (expressed as 55 pounds per day) based on the federal CAA, which defines a major stationary source (in extreme ozone nonattainment areas such as the SoCAB) as emitting 10 tons per year. The thresholds correlate with the

trigger levels for the federal New Source Review (NSR) Program and SCAQMD Rule 1303 for new or modified sources. The NSR Program² was created by the federal CAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based FAAQS. The FAAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the SCAQMD's mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

As previously stated, NO_x is a precursor-emissions that forms O₃ in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so O₃ may be formed at a distance downwind from the sources. Breathing ground-level O₃ can result health effects that include reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily O₃ concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that O₃ can make asthma symptoms worse and can increase sensitivity to asthma triggers.

Table 2-9 shows that a large proportion of the Project's NO_x emissions are from mobile sources. Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. CARB (a branch of the CalEPA) is primarily responsible for controlling pollution from motor vehicles. The air districts must adopt rules to achieve and maintain the SAAQS and FAAQS within their jurisdictions.

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno [Friant Ranch, L.P.]* [2018] 6 Cal.5th 502, Case No. S219783). As noted above and shown in Table 2-9, the Project's operational emissions would exceed the SCAQMD's NO_x significance thresholds, resulting in an impact. Pursuant to Rule 8.520(f) of the Rules of the California Court, the SCAQMD and the San Joaquin Valley Air Pollution Control District (SJVAPCD) filed amicus curiae briefs in regard to this case. In both briefs, SCAQMD and SJVAPCD provided technical explanations as to why it may not be feasible for a project to relate the expected adverse air quality impacts to likely health consequences. As summarized below, for the reasons set forth by the SCAQMD and SJVAPCD, the Proposed Project's significant air quality impacts currently cannot feasibly be related to likely health consequences. The technical demands for feasibly and accurately relating the adverse air quality impacts to likely health consequences are too high for this Proposed Project at this time. The technical challenges are listed below, with the SCAQMD and SJVAPCD amicus briefs providing support on the findings for the Proposed Project:

² Code of Federal Regulation (CFR) [*i.e.*, PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)]

- O₃ is not formed at the location of sources/emissions, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the Proposed Project at this time.

"For the so-called criteria pollutants, such as O₃, it may be more difficult to quantify health impacts. O₃ is formed in the atmosphere from the chemical reaction of NO_x and VOC in the presence of sunlight. It takes time and the influence of meteorological conditions for these reactions to occur, so O₃ may be formed at a distance downwind from the sources." [SCAQMD p.11]

- O₃ and secondary PM formation is complex, which necessitates the use of more sophisticated modeling that is not reasonably feasible for the Project at this time. The Proposed Project, while much smaller in scale to the Friant Ranch project, similarly includes area wide sources and mobile sources.

"Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of O₃ or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single 'point source,' but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site." [SJVAPCD p.9]

- The quantity of precursor emissions is not proportional to local O₃ and secondary PM concentration, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the Proposed Project at this time.

"Ground level O₃ (smog) is not directly emitted into the air but is formed when precursor pollutants such as NO_x and VOCs are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight. Once formed, O₃ can be transported long distances by wind. Because of the complexity of O₃ formation, a specific tonnage amount of NO_x or VOCs emitted in a particular area does not equate to a particular concentration of O₃ in that area." [SJVAPCD p.4]

"Secondary PM, like O₃, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as SO_x and NO_x. Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area." [SJVAPCD p.5]

- Emissions do not cause health effects – it is the resulting concentration of criteria pollutants, which is influenced by sunlight, complex reactions, and transport, which necessitates the use of complex and more sophisticated modeling that is not reasonably feasible for the Proposed Project at this time.

"The disconnect between the tonnage of precursor pollutants (NO_x, SO_x and VOCs) and the concentration of O₃ or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting O₃ or PM." [SJVAPCD p.5]

- Currently available modeling tools are appropriate for regional evaluations, but not individual projects like the Proposed Project.

"For instance, the computer models used to simulate and predict an attainment date for the O₃ or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NO_x, SO_x and VOCs) and the atmospheric chemistry and meteorology of the Valley... the models simulate future O₃ or PM levels based on predicted changes in precursor emissions Valley wide... The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which all of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment." [SJVAPCDF p.6-7]

"Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, "cumulative impacts."" [SJVAPCD p.8]

"...the currently available modeling tools are equipped to model the impact of all emission sources in the Valley on attainment... Running the photochemical grid model used for predicting O₃ attainment with the emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NO_x and VOC in the Valley) is not likely to yield valid information given the relative scale involved." [SJVAPCD p.9-10]

- The SJVAPCD indicates that it is currently impossible to accurately correlate project level emissions to specific health impacts.

"Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like O₃ and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level." [SJVAPCD p.10]

- SCAQMD highlights that CARB indicated that a CARB methodology of analysis for PM_{2.5} health impacts is not suited for small projects.

Also, CARB has developed a methodology that can predict expected mortality (premature deaths) from large amounts of PM_{2.5}... SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1,837 pounds/day) Again, this project involved large amounts of additional PM_{2.5} in the District, up to 2.82 tons/day (5,650 pounds/day of PM_{2.5}, or 1,029 tons/year... However, the primary author of the CARB methodology has reported that this PM_{2.5} health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties." "Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts." [SCAQMD p.14]

- SCAQMD indicates that the CARB PM_{2.5} methodology would provide unreliable findings for a small project with a small population and that a lead agency should be able to decide if and when it may be appropriate.

"Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small PM_{2.5} increases (3.8 pounds/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated PM_{2.5} emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so... SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information" [SCAQMD p.15]

"This CEQA document was not challenged in court." [SCAQMD p.15]

- The development of new technical approaches in the future may change the feasibility determination.

"Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths." [SCAQMD p.16]

For the reasons set forth above, it is not currently feasible to relate the Proposed Project's regional NO_x impacts to likely health consequences. The SCAQMD is responsible for assessing air pollutant impacts regionally, and the potential health consequences from those on a regional basis. The current evaluation on the limitations and uncertainties of existing tools is consistent with SCAQMD findings. Currently available regional modeling tools are not designed to capture changes in pollutant concentrations for this Proposed Project that would be meaningful. This is due in part to a relatively coarse spatial resolution (e.g., greater than 4 x 4 kilometers) which makes it speculative to discern regional Project impacts on air quality.

Localized Operational Significance Analysis

According to the SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project only if the project includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). The Proposed Project includes one 528,710-sf warehouse. Therefore, in the case of the Proposed Project, the operational phase LST protocol is applied. Operational LSTs apply to CO, NO₂, PM₁₀, and PM_{2.5}.

The nearest sensitive receptors to the Project site are single-family residences located to the east of the site. The nearest residence is approximately 0.13 mile (670 feet/205 meters) distant. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, operational LSTs for receptors located at 200 meters were utilized in this analysis.

The appropriate SRA for the localized significance thresholds is the East San Gabriel Valley area (SRA 9) since this area includes the Project site. As described, the SCAQMD has produced lookup tables for projects that disturb one, two and five acres. While the Proposed Project site is ±24.88 acres, the LST

threshold value for a five-acre site was employed from the LST lookup tables. This is conservative since the analysis will only account for the dispersion of air pollutants over five acres before reaching sensitive receptors, as opposed to accounting for the dispersion of air pollutants over a greater 24.88-acre area.

For a worst-case scenario assessment, the emissions shown in Table 2-10 include all “onsite” project-related stationary (area) sources and 10 percent of the Project-related mobile sources. Considering that the longest weighted trip length used in CalEEMod for the Project is approximately 49.8 miles, 10 percent of this total would represent an onsite travel distance for each car and truck of approximately 2.49 miles; thus, the 10 percent assumption is conservative and would tend to overstate the actual impact.

| Table 2-10. Operational-Related Emissions Attributable to Project Buildout (Localized Significance Analysis) | | | | |
|---|-----------------------------------|-----------------|------------------------|-------------------------|
| Source | Pollutant (pounds per day) | | | |
| | NO₂ | CO | PM₁₀ | PM_{2.5} |
| Onsite Emissions (Summer) | 25.97 | 40.03 | 13.72 | 3.81 |
| Onsite Emissions (Winter) | 25.32 | 43.38 | 13.72 | 3.81 |
| <i>SCAQMD Localized Significance Threshold</i> | <i>368.00</i> | <i>7,600.00</i> | <i>26.00</i> | <i>9.00</i> |
| Exceed SCAQMD Localized Significance Threshold? | No | No | No | No |

Source: CalEEMod version 2016.3.2. Refer to Attachment A for Model Data Outputs.

Notes: Emissions projections account for a trip generation rate and fleet mix identified by KOA 2019. Specifically, KOA estimates the Project generation of 3,459 average vehicle trips daily, 16.2 percent of which would be medium-heavy duty and heavy-heavy duty trucks. . The average trip length is calculated at 49.8 miles, which represents the average distance between the Project site and the Port of Los Angeles/Long Beach, the Project site and the Banning Pass, the Project Site and the San Diego County line, the Project site and the Cajon Pass, and the Project site and downtown Los Angeles.

As seen in Table 2-10, the emissions of these pollutants on the peak day of operations would not result in significant concentrations of pollutants at nearby sensitive receptors. Therefore, significant impacts would not occur concerning LSTs during operational activities.

Conflict with the 2016 Air Quality Management Plan

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

As previously mentioned, the Project site is located within the SoCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SoCAB is in nonattainment. In order to reduce such emissions, the SCAQMD drafted the 2016 AQMP. The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The

2016 AQMP is a regional and multi-agency effort including the SCAQMD, CARB, SCAG, and the USEPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2016 RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.) The Project is subject to the SCAQMD's AQMP.

According to the SCAQMD, in order to determine consistency with SCAQMD's air quality planning two main criteria must be addressed.

Criterion 1:

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

- a) *Would the project result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new air quality violations?*

As shown in Table 2-9, the Proposed Project would result in emissions exceeding the SCAQMD regional NO_x threshold during operations. As previously discussed, the predominate source of NO_x emissions would be due to mobile sources, mainly that of heavy-duty trucks. Mobile emission cannot be regulated by the City. Therefore, the Proposed Project would have the potential to cause or affect a violation of the ambient air quality standards.

- b) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

The Project would result in NO_x emissions beyond the SCAQMD regional significance threshold during operations, it could potentially delay the timely attainment of air quality standards and/or AQMP emission reduction.

The Project would not be consistent with Criterion 1.

Criterion 2:

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the SoCAB focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining Project consistency focuses on whether or not the Proposed Project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

- a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the 2016 AQMP?*

A project is consistent with regional air quality planning efforts in part if it is consistent with the population, housing, and employment assumptions that were used in the development of the SCAQMD air quality plans. Generally, three sources of data form the basis for the projections of air pollutant emissions in Irwindale. Specifically, SCAG's *Growth Management* Chapter of the Regional Comprehensive Plan and Guide (RCPG) provides regional population forecasts for the region and SCAG's *2016 RTP/SCS* provides socioeconomic forecast projections of regional population growth. The City of Irwindale General Plan is referenced by SCAG in order to assist forecasting future growth in Irwindale.

The Proposed Project is consistent with the land use designation and development density presented in the City of Irwindale General Plan. As previously stated, the Project site is designated by the City of Irwindale General Plan as "Industrial/Business Park", which allows for office, manufacturing, and warehouse uses, including commercial manufacturing, light manufacturing and heavy manufacturing. Furthermore, the Project does not involve any uses that would increase population beyond what is considered in the General Plan and, therefore, would not affect city-wide plans for population growth at the Project site. Thus, the Proposed Project is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the General Plan and RCPG. As a result, the Project would not conflict with the land use assumptions or exceed the population or job growth projections used by SCAQMD to develop the 2016 AQMP. The City of Irwindale's population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City; and these are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections into their air quality planning efforts, it can be concluded that the Proposed Project would be consistent with the projections. (SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans.) Therefore, the Proposed Project would be considered consistent with the population, housing, and employment growth projections utilized in the preparation of SCAQMD's air quality plans.

b) Would the project implement all feasible air quality mitigation measures?

In order to further reduce emissions, the Project would be required to comply with emission reduction measures promulgated by the SCAQMD, such as SCAQMD Rules 402, 403, 1113, and 1403. SCAQMD Rule 402 prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD Rule 403 requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM₁₀ emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. SCAQMD 1113 requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories. Rule 1403 specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials. All operators are required to maintain records, including waste shipment records, and are required to use

appropriate warning labels, signs, and markings. As such, the Proposed Project meets this consistency criterion.

- c) *Would the project be consistent with the land use planning strategies set forth by SCAQMD air quality planning efforts?*

The AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Proposed Project is consistent with the land use designation and development density presented in the City of Irwindale's General Plan and therefore would not exceed the population or job growth projections used by the SCAQMD to develop the AQMP.

In conclusion, the determination of AQMP consistency is primarily concerned with the long-term influence of a project on air quality. While the Project would be consistent with Criterion 2, resultant operational emissions would exceed regional significance thresholds potentially hindering the region's ability to meet state and federal air quality standards, thereby conflicting with Criterion 1. Thus, the Project would conflict with the SCAQMD 2016 AQMP.

Exposure of Sensitive Receptors to Toxic Air Contaminants

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

Construction-Generated Air Contaminants

Construction-related activities would result in temporary, short-term Project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment for site preparation (e.g., clearing, grading); soil hauling truck traffic; paving; application of architectural coatings; and other miscellaneous activities. For construction activity, DPM is the primary TAC of concern. Particulate exhaust emissions from diesel-fueled engines (i.e., DPM) were identified as a TAC by the CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs. Accordingly, DPM is the focus of this discussion.

Based on the emission modeling conducted the maximum construction-related annual emissions of PM_{2.5} exhaust, considered a surrogate for DPM, would be 2.02 pounds per day during 2020 construction activities and 1.65 during 2021 construction activities (see Attachment A). PM_{2.5} is considered a surrogate for DPM because more than 90 percent of DPM is less than 1 microgram in diameter and therefore is a subset of particulate matter under 2.5 microns in diameter (i.e., PM_{2.5}), according to CARB. Most PM_{2.5} derives from combustion, such as use of gasoline and diesel fuels by motor vehicles.) Furthermore, even during the most intense month of construction, emissions of DPM would be generated from different

locations on the Project site, rather than a single location, because different types of construction activities (e.g., demolition, site preparation, building construction) would not occur at the same place at the same time.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period of time. According to the OEHHA, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-, 30-, or nine-year exposure period; further, such assessments should be limited to the period/duration of activities associated with the Proposed Project. Consequently, an important consideration is the fact that construction of the Proposed Project is not anticipated to last nine consecutive years, the minimum duration of exposure from which to calculate health risk (Project construction is anticipated to last two years), and that on a day-to-day basis, construction activity generally spans eight hours as opposed to throughout the entire day.

Therefore, considering the relatively low mass of DPM emissions that would be generated during even the most intense season of construction, the fact that construction would not last as long as the minimum duration of exposure from which to calculate health risk, and the relatively short duration that construction activities (less than two years) would occur, construction-related TAC emissions would not expose sensitive receptors to substantial amounts of air toxics.

Furthermore, the Project has been evaluated against the SCAQMD's LSTs for construction. As previously stated, LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative and can be used to assist lead agencies in analyzing localized impacts associated with Project-specific level of proposed projects. The SCAQMD Environmental Justice Enhancement Initiative program seeks to ensure that everyone has the right to equal protection from air pollution. The Environmental Justice Program is divided into three categories, with the LST protocol promulgated under Category I: *Further-Reduced Health Risk*. As shown in Table 2-8, the emissions of pollutants on the peak day of construction would not result in significant concentrations of pollutants at nearby sensitive receptors. Thus, the fact that onsite Project construction emissions would be generated at rates below the LSTs for NO_x, CO, PM₁₀, and PM_{2.5} demonstrates that the Project would likely not adversely impact the neighboring community to the east.

Operational Air Contaminants

Operation of the Proposed Project would result in the development of substantial sources of air toxins. The Project includes a warehouse facility that would be utilized by heavy- and medium-duty trucks. DPM from trucks idling and accessing the site would be a major source of operational air contaminants. An HRA has been prepared for this Project (see Attachment B). The following discussion is based on this HRA.

Project Health Risk Assessment

CARB identified DPM as a TAC in 1998. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Diesel exhaust is composed of two phases, either gas or particulate – both contribute to the risk. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particulate phase has many different types that can be classified by size or composition. The sizes of diesel particulates of greatest health concern are fine and ultrafine particles. These particles may be composed of elemental carbon with adsorbed³ compounds such as organics, sulfates, nitrates, metals, and other trace elements. Diesel exhaust is emitted from a broad range of on- and off-road diesel engines. As the Project would accommodate daily visits from heavy-duty diesel trucks during operations, an analysis of DPM was performed using the USEPA-approved AERMOD model.

Non-Carcinogenic Hazards

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

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index at a sensitive receptor associated with DPM emissions from the Project would be 0.0013 and 0.0347, respectively. This concentration would occur at the residential neighborhood located east of the Project site, specifically at the western cul-de-sac of Benbow Street. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits.

Carcinogenic Risk

Vehicle DPM emissions were estimated using emission factors for coarse particulate matter less than 10 microns in diameter (PM₁₀) generated with the 2017 version of the Emission FACtor model (EMFAC) developed by CARB. EMFAC 2017 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to project changes in future emissions from on-road mobile sources. The most recent version of this model, EMFAC 2017, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled by speed, and number of starts per day. The most important improvement in EMFAC 2017 is the integration of the new data and methods to estimate

³This term is specifically used for gases.

emissions from diesel trucks and buses. The model includes the emissions benefits of the truck and bus rule and the previously adopted rules for other on-road diesel equipment.

For this Project, annual average PM₁₀ emission factors were generated by running EMFAC 2017 for vehicles in the SoCAB within Los Angeles County. EMFAC generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of vehicle speed, temperature, and relative humidity. The model was run for speeds traveled on and within the vicinity of the Project site. The vehicle travel speeds for each segment modeled are summarized below.

- Idling (15 minutes per truck) – onsite loading/unloading; and
- five miles per hour – onsite vehicle movement including driving and maneuvering; and
- 35 miles per hour – offsite vehicle movement including driving and maneuvering.

The average PM₁₀ emission factors for heavy trucks were calculated based on the annual average emission factors for various exposure periods associated with assumptions for evaluating exposure over three different periods (i.e., 70-, 30-, and nine-year exposure scenarios). The posted speed limit on Los Angeles Street is 40 miles per hour. The average PM₁₀ emission factor for heavy trucks traveling 35 miles per hour is greater than those traveling 40 miles per hour. Thus, the use of an emissions factor for trucks traveling 35 miles per hour is conservative.

Based on the AERMOD outputs, the expected annual average diesel PM₁₀ emission concentrations at the most exposed sensitive receptor (located at the western cul-de-sac of Benbow Street) resulting from operation of the Project (557 daily heavy-duty truck trips) would be 0.007 µg/m³ at the greatest.

Cancer risk calculations for residences are based on 70-, 30-, and nine-year exposure periods while schools are based on a nine-year exposure period. The calculated carcinogenic risk at the sensitive receptor as a result of the Project is depicted in Table 2-11.

| Table 2-11. Maximum Operational Health Risk at the Project Vicinity Residential Neighborhoods | | | |
|--|---|--|---|
| Exposure Scenario | Maximum Cancer Risk (Risk per Million) | Significance Threshold (Risk per Million) | Exceeds SCAQMD Significance Threshold? |
| Residences to the East with Highest Pollutant Concentrations | | | |
| 70-Year Exposure | 3.24 | 10 | No |
| 30-Year Exposure | 2.73 | 10 | No |
| 9-Year Exposure | 1.96 | 10 | No |
| Walnut Elementary School to the Northeast | | | |
| 9-Year Exposure | 1.02 | 10 | No |

Source: Refer to Attachment B for Model Data Outputs.

Notes: The elementary school is only analyzed for nine years of exposure as students are not expected to attend school beyond those years.

In conclusion, non-carcinogenic hazards resulting from the Proposed Project are calculated to be within acceptable limits. Additionally, impacts related to cancer risk from heavy trucks would be less than significant at the nearest residences and nearest school. Therefore, impacts related to health risk from the Project would be less than significant.

Naturally Occurring Asbestos

Another potential air quality issue associated with construction-related activities is the airborne entrainment of asbestos due to the disturbance of naturally-occurring asbestos-containing soils. The Proposed Project is not located within an area designated by the State of California as likely to contain naturally-occurring asbestos (Department of Conservation [DOC] 2000). As a result, construction-related activities would not be anticipated to result in increased exposure of sensitive land uses to asbestos.

Carbon Monoxide Hot Spots

It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when idling at intersections. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Under certain meteorological conditions, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Given the high traffic volume potential, areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. However, transport of this criteria pollutant is extremely limited, and CO disperses rapidly with distance from the source under normal meteorological conditions. Furthermore, vehicle emissions standards have become increasingly more stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Project vicinity have steadily declined.

Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard. The analysis prepared for CO attainment in the SCAQMD's 1992 *Federal Attainment Plan for Carbon Monoxide* in Los Angeles County can be used to demonstrate the potential for CO exceedances. The SCAQMD CO hot spot analysis was conducted for four busy intersections in Los Angeles County during the peak morning and afternoon time periods. The intersections evaluated included Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection evaluated was at Wilshire Boulevard and Veteran Avenue, which has a traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the level of service (LOS) in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be LOS E at peak morning traffic and LOS F at peak afternoon traffic (LOS E and F are the two least efficient traffic LOS ratings). Even with the inefficient LOS and volume of traffic, the CO analysis concluded that there was no violation of CO standards (SCAQMD 1992).

According to the Traffic Study prepared for the Project (KOA 2019), the Project is anticipated to generate 3,459 daily trips on average. Because the Proposed Project would not increase traffic volumes at any intersection to more than 100,000 vehicles per day, there is no likelihood of the Project traffic exceeding CO values.

Odors

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

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

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

According to the SCAQMD, land uses commonly considered to be potential sources of obnoxious odorous emissions include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Proposed Project does not include any uses identified by the SCAQMD as being associated with odors.

Cumulative Air Quality Impacts

The cumulative setting for air quality includes the City of Irwindale and the SoCAB. The SoCAB is designated as a nonattainment area for state standards of O₃, PM₁₀, and PM_{2.5}. The region is also designated as a nonattainment area for federal standards of O₃ and PM_{2.5} (CARB 2018a). Cumulative growth in population, vehicle use, and industrial activity could inhibit efforts to improve regional air quality and attain the ambient air quality standards. Thus, the setting for this cumulative analysis consists of the SoCAB and associated growth and development anticipated in the air basin.

The SCAQMD's approach to assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and CCAAs. As discussed earlier, the Proposed Project would potentially conflict with the 2016 AQMP, which is intended to bring the SoCAB into attainment for all criteria pollutants, since projected daily emissions of NO_x would exceed SCAQMD regional thresholds. On December 12, 2008 the CARB adopted Resolution 08-43, which limits NO_x, PM₁₀ and PM_{2.5} emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order (EO) R-09-010 was adopted that codified Resolution 08-43 into Section 2025, title 13 of the California Code of Regulations (CCR). This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. This regulation also provides a few exemptions including a onetime per year three-day pass for trucks registered outside of California.

In addition, the SCAQMD recommends that any given project's potential contribution to cumulative impacts be assessed using the same significance criteria as for project-specific impacts. Therefore, individual projects that do not generate operational or construction emissions that exceed the SCAQMD's daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the air basin is in nonattainment and therefore would not be considered to have a significant, adverse air quality impact. Alternatively, individual Project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable. As previously noted, the Project would exceed the applicable SCAQMD regional thresholds for operational-source NO_x emissions. As such, the Project would be considered cumulatively considerable in terms of its effect on regional air quality.

3.0 GREENHOUSE GAS EMISSIONS

3.1 Greenhouse Gas Setting

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface and a smaller portion of this radiation is reflected back toward space. This absorbed radiation is then emitted from the earth as low-frequency infrared radiation. The frequencies at which bodies emit radiation are proportional to temperature. Because the earth has a much lower temperature than the sun, it emits lower-frequency radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead trapped, resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth. Without the greenhouse effect, the earth would not be able to support life as we know it.

Prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Fluorinated gases also make up a small fraction of the GHGs that contribute to climate change. Fluorinated gases include chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride; however, it is noted that these gases are not associated with typical land use development. Human-caused emissions of these GHGs in excess of natural ambient concentrations are believed to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic factors together (Intergovernmental Panel on Climate Change [IPCC] 2014).

Table 3-1 describes the primary GHGs attributed to global climate change, including their physical properties, primary sources, and contributions to the greenhouse effect.

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. CH₄ traps over 25 times more heat per molecule than CO₂, and N₂O absorbs 298 times more heat per molecule than CO₂ (IPCC 2014). Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO₂e), which weight each gas by its global warming potential. Expressing GHG emissions in CO₂e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have long atmospheric lifetimes (one to several thousand years). GHGs persist in the atmosphere for long enough time periods to be dispersed around the globe. Although the exact lifetime of any particular GHG molecule is dependent on multiple variables and cannot be pinpointed, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, or other forms. Of the total annual human-caused CO₂ emissions, approximately 55 percent is sequestered through ocean and land uptakes every year, averaged

over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remains stored in the atmosphere (IPCC 2013).

| Greenhouse Gas | Description |
|-----------------------|--|
| CO ₂ | Carbon dioxide is a colorless, odorless gas. CO ₂ is emitted in a number of ways, both naturally and through human activities. The largest source of CO ₂ emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO ₂ emissions. The atmospheric lifetime of CO ₂ is variable because it is so readily exchanged in the atmosphere. ¹ |
| CH ₄ | Methane is a colorless, odorless gas and is the major component of natural gas, about 87 percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (intestinal fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of CH ₄ to the atmosphere. Natural sources of CH ₄ include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. The atmospheric lifetime of CH ₄ is about 12 years. ² |
| N ₂ O | Nitrous oxide is a clear, colorless gas with a slightly sweet odor. Nitrous oxide is produced by both natural and human-related sources. Primary human-related sources of N ₂ O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N ₂ O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N ₂ O is approximately 120 years. ³ |

Sources: ¹US EPA 2016a, ²USEPA 2016b, ³USEPA 2016c

The quantity of GHGs that it takes to ultimately result in climate change is not precisely known; it is sufficient to say the quantity is enormous, and no single project alone would measurably contribute to a noticeable incremental change in the global average temperature or to global, local, or microclimates. From the standpoint of CEQA, GHG impacts to global climate change are inherently cumulative.

3.1.1 Sources of Greenhouse Gas Emissions

In July 2018, CARB released the 2018 edition of the California GHG inventory covering calendar year 2016 emissions. In 2016, California emitted 429.4 million gross metric tons of CO₂e including from imported electricity. Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2016, accounting for approximately 41 percent of total GHG emissions in the state. This sector was followed by the industrial sector (23 percent) and the electric power sector including both in- and out-of-state sources (16 percent) (CARB 2018b).

Emissions of CO₂ are byproducts of fossil fuel combustion. CH₄, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices and landfills. N₂O is also largely attributable to agricultural practices and soil management. Carbon dioxide sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution (CO₂ dissolving into the water), respectively, two of the most common processes for removing CO₂ from the atmosphere.

3.2 Regulatory Framework

3.2.1 State

Executive Order S-3-05

EO S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

While dated, this EO remains relevant because a more recent California Appellate Court decision, *Cleveland National Forest Foundation v. San Diego Association of Governments* (November 24, 2014) 231 Cal.App.4th 1056, examined whether it should be viewed as having the equivalent force of a legislative mandate for specific emissions reductions. While the California Supreme Court ruled that the San Diego Association of Governments did not abuse its discretion by declining "to adopt the 2050 goal as a measure of significance in light of the fact that the Executive Order does not specify any plan or implementation measures to achieve its goal, the decision also recognized that the goal of a 40 percent reduction in 1990 GHG levels by 2030 is "widely acknowledged" as a "necessary interim target to ensure that California meets its longer-range goal of reducing greenhouse gas emissions 80 percent below 1990 levels by the year 2050.

Assembly Bill 32 Climate Change Scoping Plan and Updates

In 2006, the California legislature passed AB 32 (Health and Safety Code § 38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has identified a GHG reduction target of 15 percent from current levels for local governments and notes that successful implementation relies on local governments' land use planning and urban growth decisions.

Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008, which was re-approved by CARB on August 24, 2011, that outlines measures to meet the 2020 GHG reduction goals. To meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures for further study and possible state implementation, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO₂e (about 191 million U.S. tons) from the transportation, energy, agriculture, and forestry sectors and other sources could be achieved should the State implement all of the measures in the Scoping Plan.

The Scoping Plan is required by AB 32 to be updated at least every five years. The first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB. The 2017 Scoping Plan Update was adopted on

December 14, 2017. The Scoping Plan Update addresses the 2030 target established by SB 32 as discussed below and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include: increasing the use of renewable energy in the state, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes.

Executive Order B-30-15

On April 20, 2015 Governor Brown signed EO B-30-15 to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's EO aligns California's GHG reduction targets with those of leading international governments such as the 28-nation European Union, which adopted the same target in October 2014. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in the California Global Warming Solutions Act of 2006 (AB 32, discussed above). California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal of reducing emissions 80 percent below 1990 levels by 2050. This is in line with the scientifically established levels needed in the U.S. to limit global warming below 2°C, the warming threshold at which major climate disruptions are projected, such as super droughts and rising sea levels.

Senate Bill 32 and Assembly Bill 197 of 2016

In August 2016, Governor Brown signed SB 32 and AB 197, which serve to extend California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include § 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the state's continuing efforts to pursue the long-term target expressed in EOs S-3-05 and B-30-15 of 80 percent below 1990 emissions levels by 2050.

Senate Bill X1-2 of 2011, Senate Bill 350 of 2015, and Senate Bill 100 of 2018

SB X1-2 of 2011 requires all California utilities to generate 33 percent of their electricity from renewables by 2020. SB X1-2 sets a three-stage compliance period requiring all California utilities, including independently-owned utilities, energy service providers, and community choice aggregators, to generate 20 percent of their electricity from renewables by December 31, 2013; 25 percent by December 31, 2016; and 33 percent by December 31, 2020. SB X1-2 also requires the renewable electricity standard to be met increasingly with renewable energy that is supplied to the California grid from sources within, or directly proximate to, California.

In October 2015, SB 350 was signed by Governor Edmund (Jerry) Brown, which requires retail sellers and publicly-owned utilities to procure 50 percent of their electricity from renewable resources by 2030. In 2018, SB 100 was signed by Governor Brown, codifying a goal of 60 percent renewable procurement by 2030 and 100 percent by 2045 Renewables Portfolio Standard.

3.2.2 Local

South Coast Air Quality Management District

To provide guidance to local lead agencies on determining significance for GHG emissions in CEQA documents, SCAQMD staff is convening an ongoing GHG CEQA Significance Threshold Working Group. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that provide input to SCAQMD staff on developing the significance thresholds. On October 8, 2008, the SCAQMD released the *Draft AQMD Staff CEQA GHG Significance Thresholds*. These thresholds have not been finalized and continue to be developed through the working group.

The SCAQMD has not announced when staff is expecting to present a finalized version of its GHG thresholds to the governing board. On September 28, 2010, the SCAQMD recommended a numeric "bright-line" threshold of 10,000 metric tons per year of CO₂e for industrial land use projects. This threshold was developed as part of the SCAQMD GHG CEQA Significance Threshold Working Group. This working group was formed to assist SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the State Office of Planning and Research (OPR), CARB, the Attorney General's Office, a variety of city and county planning departments in the SoCAB, various utilities such as sanitation and power companies throughout the SoCAB, industry groups, and environmental and professional organizations. The numeric "bright line" was developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provides guidance to CEQA practitioners with regard to determining whether GHG emissions from a proposed industrial land use project are significant.

Southern California Association of Governments

On April 7, 2016, the SCAG Regional Council adopted the *2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS)*. The 2016 RTP/SCS charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The 2016 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The SCAG region strives toward sustainability through integrated land use and transportation planning. The SCAG region must achieve specific federal air quality standards and is required by State law to lower regional GHG emissions.

3.3 Greenhouse Gas Emissions Impact Assessment

3.3.1 Thresholds of Significance

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project would result in a significant impact to greenhouse gas emissions if it would:

- 1) generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or
- 2) conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

SCAQMD Thresholds

On September 28, 2010, the SCAQMD recommended a numeric, bright-line threshold of 10,000 metric tons of CO₂e annually for industrial land uses. This threshold was developed as part of the SCAQMD GHG CEQA Significance Threshold Working Group. The working group was formed to assist the SCAQMD's efforts to develop a GHG significance threshold and is composed of a wide variety of stakeholders including the State OPR, CARB, the Attorney General's Office, a variety of city and county planning departments in the SoCAB, various utilities such as sanitation and power companies throughout the basin, industry groups, and environmental and professional organizations. SCAQMD thresholds were developed to be consistent with CEQA requirements for developing significance thresholds, are supported by substantial evidence, and provide guidance to CEQA practitioners and lead agencies with regard to determining whether GHG emissions from a proposed project are significant.

For the purposes of this evaluation, the Proposed Project will first be compared to the SCAQMD numeric bright-line threshold of 10,000 metric tons of CO₂e annually for industrial project. The Project is also evaluated for compliance with SCAG's 2016–2040 RTP/SCS, which establishes an overall GHG target for the Project region consistent with both the target date of AB 32 (2020) and the post-2020 GHG reduction goals of SB 32

3.3.2 Methodology

GHG-related impacts were assessed in accordance with methodologies recommended by CARB and the SCAQMD, as well as in consideration of the NOP comment letters received from both the SCAQMD and CARB as presented in Appendix A of the Draft EIR prepared for the Project. Where GHG emission quantification was required, emissions were modeled using the CalEEMod, version 2016.3.2. CalEEMod is a statewide land use emissions computer model designed to quantify potential GHG emissions associated with both construction and operations from a variety of land use projects. Project construction-generated GHG emissions were primarily calculated using CalEEMod model defaults for Los Angeles County. Operational GHG emissions were based on the Project site plans and the estimated traffic trip generation rates and Project fleet mix from KOA (2019). It is noted that the SCAQMD NOP comment letter recommends estimating the Project fleet mix based on 0.64 average daily heavy-duty truck trips per 1,000 sf of proposed industrial warehouse building space. Employing this SCAQMD-recommended metric results in an estimate of 338 heavy-duty truck trips daily ($0.64 \times 528.710 = 338$). However, this analysis is based on an estimate of 557 heavy-duty truck trips daily (349 three- and four-axle heavy-heavy-duty trucks and 208 two-axle medium-heavy-duty trucks) as provided by KOA, and thus is more conservative than recommended by the SCAQMD.

3.3.3 Impact Analysis

Contribution of Greenhouse Gas Emissions

Construction

Construction-related activities that would generate GHG emissions include worker commute trips, haul trucks carrying supplies and materials to and from the Project site, and off-road construction equipment (e.g., dozers, loaders, excavators). Table 3-2 illustrates the specific construction-generated GHG emissions that would result from construction of the Project.

| Emissions Source | CO₂e (Metric Tons/ Year) |
|-------------------------|--|
| Construction in 2020 | 694 |
| Construction in 2021 | 1,239 |
| Total | 1,933 |

Source: CalEEMod version 2016.3.2. Refer to Attachment C for Model Data Outputs.

Notes: Emissions estimates account for the site prep and grading of 24.88 acres along with the demolition of 62,500 sf of buildings.

As shown in Table 3-2, Project construction would result in the generation of approximately 1,933 metric tons of CO₂e over the course of construction. Once construction is complete, the generation of these GHG emissions would cease. The amortized construction emissions are added to the annual average operational emissions.

Operations

Operation of the Project would result in GHG emissions predominantly associated with motor vehicle use. Long-term operational GHG emissions attributable to the Project are identified in Table 3-3 and compared to SCAQMD's interim screening level numeric bright-line threshold of 10,000 metric tons of CO₂e annually. As previously described, operational GHG emissions were based on the Project site plans and the estimated traffic trip generation rates and Project fleet mix from KOA (2019). As previously described, the SCAQMD NOP comment letter recommends estimating the Project fleet mix based on 0.64 average daily heavy-duty truck trips per 1,000 sf of proposed industrial warehouse building space. Employing this SCAQMD-recommended metric results in an estimate of 338 heavy-duty truck trips daily ($0.64 \times 528.710 = 338$). However, this analysis is based on an estimate of 557 heavy-duty truck trips daily (349 three- and four-axle heavy-heavy-duty trucks and 208 two-axle medium-heavy-duty trucks) as provided by KOA, and thus is more conservative than recommended by the SCAQMD. Consistent with SCAQMD recommendations, in order to more accurately account for the trip distribution patterns of freight trucks, the average trip length is calculated at 49.8 miles, which represents the average distance between the Project site and the Port of Los Angeles/Long Beach, the Project site and the Banning Pass, the Project Site and the San Diego County line, the Project site and the Cajon Pass, and the Project site and downtown Los Angeles.

| Emissions Source | CO₂e (Metric Tons/ Year) |
|---|--|
| Construction Emissions (amortized over the 30-year life of the Project) | 64 |
| Area Source Emissions | 0 |
| Energy Source Emissions | 1,882 |
| Mobile Source Emissions | 34,493 |
| Solid Waste Emissions | 472 |
| Water Emissions | 98 |
| Total Emissions | 37,009 |

Source: CalEEMod version 2016.3.2. Refer to Attachment C for Model Data Outputs.

As shown in Table 3-3, operational-generated emissions would exceed the SCAQMD's numeric bright-line threshold of 10,000 metric tons of CO₂e annually. A large majority of these emissions would be generated by mobile sources, which is an emission source that cannot be regulated by the City of Irwindale. Additionally, GHG are global pollutants. They can be carried miles away from the original source and have long atmospheric lifetimes compared to that of local pollutants. GHG Emissions do not directly pose a threat to human health but can have numerous indirect effects. As previously stated, GHG emissions have been directly correlate to climate change. This can lead to events such as droughts, heat waves, increased intensity in storm events and rising sea levels. These can result in decrease precipitation, increased wildfires, saltwater infiltration of groundwater tables and decreased crop yields. A reduction of vehicle trips to and from the Proposed Project site would reduce the amount of mobile emissions. Methods of reducing vehicle trips include carpooling, transit, cycling, and pedestrian connections. However, this Project is proposing an industrial warehouse and the reduction of vehicle trips is only feasible for the employees working in the facility, though the majority of traffic trips instigated by the Project would be related to haul truck trips transporting freight.

As stated above, the State of California, along with the SCAQMD, has implemented numerous strategies pertaining to trucks and the reduction of emissions that directly apply to the Project. Urban goods delivery is an essential component of the greater freight system and vital to the urban economy. While urban goods delivery represents a small share of urban traffic, it generates a disproportionate amount of GHG emissions. The State of California promulgates policies designed and implemented to improve the efficiency and environmental footprint of the urban freight system, including the introduction of zero and near-zero emission vehicles—a strategy embedded in the Governor's Sustainable Freight Action Plan as well as CARB's AB 32 Scoping Plan, Statewide Implementation Plan, and Mobile Source Strategy.

Additionally, the Project is proposing an industrial warehouse use in close proximity to the I-605, I-10, and I-205, which are major regional freeway corridors. Further, the I-10 corridor has been identified as a "Major International Trade Highway Route" in the California State Goods Movement Action Plan (2007) and therefore serves to accommodate existing truck trips along the interstate. The Goods Movement Action Plan is a Statewide initiative to improve and expand California's goods movement industry and

infrastructure in a manner which will increase mobility and relieve traffic congestion as well as reduce GHG emissions. The Plan further identifies I-10 (located 2.2 miles south of the Project site and linked to the Project site by the I-605) as a "Priority Corridor" for development towards more efficient goods movement and anticipates that the development of good movement-supporting facilities, such as industrial warehouses like that proposed by the Project, will improve the efficiency of overall goods movement throughout the state, and thus reduce truck-related GHG emissions.

Furthermore, both CARB and the SCAQMD have prepared NOP letters concerning the Proposed Project that contain several mitigation measure recommendations to reduce Project GHG emissions generated by Project operations. Thus, the following CARB and SCAQMD mitigation is recommended for the Proposed Project:

The following GHG reduction measures shall be incorporated during Project operations:

GHG-1: Prior to the certificate of occupancy issuance, the Project Applicant shall demonstrate to the satisfaction of the City of Irwindale Community Development Department Manager that the following measures would be implemented during Project operations. These measures shall be enforced and maintained through Covenants, Codes, and Restrictions (CC&Rs), or other means acceptable to the City of Irwindale Community Development Department Manager.

- Maximize use of solar energy, including solar panels.
- Install the maximum possible number of solar energy arrays on the building roof and/or on the Project site to generate solar energy for the facility.
- Maximize the planting of trees in landscaping and parking lots.
- Employ the use of light-colored paving and roofing materials.
- Utilize only Energy Star heating, cooling, and lighting devices and appliances.
- Employ the use of electric or alternatively-fueled sweeper with HEPA filters.

Despite these efforts set forth above, including imposition of CARB and SCAQMD recommendations contained in mitigation measure **GHG-1**, Project-instigated heavy-duty truck travel would result in SCAQMD industrial land use significance threshold to be exceeded.

Conflict with any Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases

The City of Irwindale does not currently have an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. However, Irwindale is a member city of the SCAG. SCAG's 2016–2040 RTP/SCS, adopted April 7, 2016, is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The RTP/SCS embodies a collective vision for the region's future and is developed with input from local governments, county transportation commissions, tribal governments, nonprofit organizations, businesses, and local stakeholders in Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. The RTP/SCS establishes GHG

emissions goals for automobiles and light-duty trucks for 2020 and 2035 and establishes an overall GHG target for the region consistent with both the Statewide GHG-reduction targets for 2020 and the post-2020 statewide GHG reduction goals. The 2016 RTP/SCS contains over 4,000 transportation projects, including highway improvements, railroad grade separations, bicycle lanes, new transit hubs, and replacement bridges. These future investments were included in county plans developed by the six-county transportation commissions and seek to reduce traffic bottlenecks, improve the efficiency of the region’s network, and expand mobility choices. The RTP/SCS is an important planning document for the region, allowing project sponsors to qualify for federal funding. In addition, the RTP/SCS is supported by a combination of transportation and land use strategies that help the region achieve state GHG emission reduction goals and federal CAA requirements, preserve open space areas, improve public health and roadway safety, support the vital goods movement industry, and use resources more efficiently. The Proposed Project’s consistency with the RTP/SCS goals is analyzed in detail in Table 3-4.

| Table 3-4. Consistency with SCAG’s RTP/SCS Goals | |
|---|---|
| SCAG Goals | Compliance with Goal |
| Goal 1: Align the plan investments and policies with improving regional economic development and competitiveness. | Not Applicable: This is not a project-specific policy and is therefore not applicable. |
| Goal 2: Maximize mobility and accessibility for all people and goods in the region. | <p>Consistent: Improvements to the transportation network in Irwindale are developed and maintained to meet the needs of local and regional transportation and to ensure efficient mobility. A number of regional and local plans and programs are used to guide development and maintenance of transportation networks, including but not limited to:</p> <ul style="list-style-type: none"> • Caltrans Traffic Impact Studies Guidelines • Caltrans Highway Capacity Manual • SCAG RTP/SCS <p>The Project is proposing an industrial warehouse use in close proximity to I-605, I-10, and I-205, which are major regional freeway corridors. Further, the I-10 corridor has been identified as a “Major International Trade Highway Route” in the California State Goods Movement Action Plan and therefore serves to accommodate existing truck trips along the interstate. The Goods Movement Action Plan is a statewide initiative to improve and expand California’s goods movement industry and infrastructure in a manner which will increase mobility and relieve traffic congestion as well as reduce GHG emissions. The Plan further identifies I-10 (located 2.2 miles south of the Project site and linked to the Project site by I-605) as a “Priority Corridor” for development towards more efficient goods movement and anticipates that the development of good movement-supporting facilities, such as industrial warehouses like that proposed by the Project, will improve the efficiency of overall goods movement throughout the state, and thus reduce truck-related GHG emissions.</p> |

| Table 3-4. Consistency with SCAG's RTP/SCS Goals | |
|---|--|
| SCAG Goals | Compliance with Goal |
| Goal 3: Ensure travel safety and reliability for all people and goods in the region. | Consistent: All modes of transit in Irwindale are required to follow safety standards set by corresponding regulatory documents. Pedestrian walkways and bicycle routes must follow safety precautions and standards established by local (e.g., City of Irwindale, County of Los Angeles) and regional (e.g., SCAG, Caltrans) agencies. Roadways for motorists must follow safety standards established for the local and regional plans. The Project is proposing an industrial warehouse use in close proximity to the I-605, I-10, and I-205, which are major regional freeway corridors. Warehouses positioned in close proximity to major freeway corridors are considered goods-movement-supporting facilities, and will improve the efficiency of overall goods movement throughout the state, and thus reduce truck-related GHG emissions. |
| Goal 4: Preserve and ensure a sustainable regional transportation system. | Consistent: All new roadway developments and improvements to the existing transportation network must be assessed with some level of traffic analysis (e.g., traffic assessments, traffic impact studies) to determine how the developments would impact existing traffic capacities and to determine the needs for improving future traffic capacities. |
| Goal 5: Maximize the productivity of our transportation system. | Consistent: The local and regional transportation system would be improved and maintained to encourage efficiency and productivity. The City of Irwindale's Public Works and Utility Department oversees the improvement and maintenance of all aspects of the public right-of-way on an as-needed basis. The City also strives to maximize productivity of the region's public transportation system (e.g., bus, bicycle) for residents, visitors, and workers coming into and out of Irwindale |
| Goal 6: Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking). | Consistent: The reduction of energy use, improvement of air quality, and promotion of more environmentally sustainable development are encouraged through the development of alternative transportation methods, green design techniques for buildings, and other energy-reducing techniques. For example, development projects are required to comply with the provisions of the California Building and Energy Efficiency Standards and the Green Building Standards Code (CALGreen). The City also strives to maximize the protection of the environment and improvement of air quality by encouraging and improving the use of the region's public transportation system (e.g., bus, bicycle) for residents, visitors, and workers coming into and out of Irwindale. |
| Goal 7: Actively encourage and create incentives for energy efficiency, where possible. | Not Applicable: This is not a project-specific policy and is therefore not applicable |
| Goal 8: Encourage land use and growth patterns that facilitate transit and non-motorized transportation. | Consistent: See response to RTP/SCS Goal 6. |

| Table 3-4. Consistency with SCAG's RTP/SCS Goals | |
|--|--|
| SCAG Goals | Compliance with Goal |
| Goal 9: Maximize the security of our transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies. | Consistent: The City of Irwindale monitors existing and newly constructed roadways and transit routes to determine the adequacy and safety of these systems. Other local and regional agencies (e.g., Los Angeles County Transportation Department, Caltrans, SCAG) work with the City to manage these systems. Security situations involving roadways and evacuations would be addressed in the County of Los Angeles emergency management protocols (e.g., Los Angeles County Operational Area Emergency Operations Plan) developed in accordance with the State and federal mandated emergency management regulations. |

Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emission reduction targets. As shown, the Proposed Project would in no way conflict with the stated goals of the RTP/SCS; therefore, the Proposed Project would not interfere with SCAG's ability to achieve the region's year 2020 and post-2020 mobile source GHG reduction targets outlined in the 2016 RTP/SCS, and it can be assumed that regional mobile emissions will decrease in line with the goals of the RTP/SCS. Furthermore, the Proposed Project is not regionally significant per CEQA Guidelines Section 15206 and as such, it would not conflict with the SCAG RTP/SCS targets, since those targets were established and are applicable on a regional level.

The Proposed Project would not conflict with an adopted plan, policy, or regulation pertaining to GHGs.

Cumulative GHG Impacts

Climate change is a global problem. And GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about one day), GHGs have much longer atmospheric lifetimes of one year to several thousand years that allow them to be dispersed around the globe.

It is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of Project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the Proposed Project as well as other cumulative related projects would also be subject to all applicable regulatory requirements, which would further reduce GHG emissions. As previously discussed, the Proposed Project would not conflict with the 2016 RTP/SCS. As a result, the Project would not conflict with any GHG reduction plans. However, the Project's cumulative contribution of GHG emissions would surpass the SCAQMD significance threshold for industrial land uses.

4.0 REFERENCES

- CAPCOA. 2013. *Health Effects*. <http://www.capcoa.org/health-effects/>.
- CARB. 2019. Air Quality Data Statistics. <http://www.arb.ca.gov/adam/index.html>.
- _____. 2018a. State and Federal Area Designation Maps. <http://www.arb.ca.gov/desig/adm/adm.htm>.
- _____. 2018b. *California Greenhouse Gas Emission Inventory 2018 Edition*.
<https://ww3.arb.ca.gov/cc/inventory/data/data.htm>
- _____. 2008. *Climate Change Scoping Plan Appendices (Appendix F)*.
- _____. 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*.
- DOC. 2000. *A General Location Guide for Ultramafic Rocks in California—Areas More Likely to Contain Naturally Occurring Asbestos*.
- IPCC. 2014. *Climate Change 2014 Synthesis Report: Approved Summary for Policymakers*.
<http://www.ipcc.ch/>.
- _____. 2013. *Carbon and Other Biogeochemical Cycles*. In: *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf.
- OEHHA. 2015. *Guidance Manual for Preparation of Health Risk Assessments*.
- KOA. 2019. Traffic Impact Study: Irwindale Industrial Project 13131 Los Angeles Street.
- SCAQMD. 2017. *Multiple Air Toxics Exposure Study V (MATES V)*.
- _____. 2015. *Multiple Air Toxics Exposure Study IV (MATES IV)*.
- _____. 2009. *Localized Significance Threshold Appendix C – Mass Rate LST Look-Up Tables*. Revised October 21, 2009. <http://www.aqmd.gov/ceqa/handbook/LST/LST.html>.
- _____. 2008a. *Multiple Air Toxics Exposure Study III (MATES III)*.
- _____. 2008b. *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]).
- _____. 1993. *CEQA Air Quality Handbook*.
- _____. 1992. 1992 Federal Attainment Plan for Carbon Monoxide.
- State of California. 2007. Goods Movement Action Plan.
- USEPA. 2018a. *Status of SIP Required Elements for California Designated Areas*.
- _____. 2018b. *Nonattainment Areas for Criteria Pollutants*.

_____. 2016a. *Climate Change – Greenhouse Gas Emissions: Carbon Dioxide*.
<http://www.epa.gov/climatechange/emissions/co2.html>.

_____. 2016b. *Methane*. <https://www3.epa.gov/climatechange/ghgemissions/gases/ch4.html>.

_____. 2016c. *Nitrous Oxide*. <https://www3.epa.gov/climatechange/ghgemissions/gases/n2o.html>.

_____. 2002. Health Assessment Document for Diesel Engine Exhaust.
<https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=300055PV.TXT>.

LIST OF ATTACHMENTS

Attachment A – CalEEMod Output File for Air Quality Emissions

Attachment B – Operational Health Risk Assessment - Diesel Particulate Matter

Attachment C – CalEEMod Output File for Greenhouse Gas Emissions

ATTACHMENT A

CalEEMod Output Files – Criteria Air Pollutants

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

13131 Los Angeles Street Industrial Project

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|--------|----------|-------------|--------------------|------------|
| General Light Industry | 528.71 | 1000sqft | 24.88 | 528,710.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 33 |
| Climate Zone | 9 | | | Operational Year | 2021 |
| Utility Company | Southern California Edison | | | | |
| CO2 Intensity (lb/MW hr) | 511.47 | CH4 Intensity (lb/MW hr) | 0.029 | N2O Intensity (lb/MW hr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SCE 2017 CO2 Intensity Factor

Land Use - Lot acreage update to match that of the project.

Construction Phase - Construction, paving and coating will occur at the same time.

Demolition -

Vehicle Trips - Trips updated to match the traffic report.

Construction Off-road Equipment Mitigation - SCAQMD rule 403. Percent reductions based on fugitive dust mitigation measures-Table 11-4

Fleet Mix - Fleet mix updated to match that of the traffic report provided by KOA.

Water And Wastewater - Water use per Section 3.11 of the Draft EIR

Solid Waste - Solid waste per Section 3.11 of the Draft EIR

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

| Table Name | Column Name | Default Value | New Value |
|---------------------------|--------------------------------|---------------|------------|
| tblConstDustMitigation | CleanPavedRoadPercentReduction | 0 | 40 |
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 20.00 | 370.00 |
| tblConstructionPhase | NumDays | 20.00 | 370.00 |
| tblConstructionPhase | PhaseEndDate | 4/23/2021 | 12/30/2021 |
| tblConstructionPhase | PhaseEndDate | 2/26/2021 | 12/30/2021 |
| tblConstructionPhase | PhaseEndDate | 7/26/2019 | 5/28/2020 |
| tblConstructionPhase | PhaseEndDate | 9/27/2019 | 7/30/2020 |
| tblConstructionPhase | PhaseEndDate | 3/26/2021 | 12/30/2021 |
| tblConstructionPhase | PhaseEndDate | 8/9/2019 | 6/11/2020 |
| tblConstructionPhase | PhaseStartDate | 3/27/2021 | 7/31/2020 |
| tblConstructionPhase | PhaseStartDate | 9/28/2019 | 7/31/2020 |
| tblConstructionPhase | PhaseStartDate | 7/1/2019 | 5/1/2020 |
| tblConstructionPhase | PhaseStartDate | 8/10/2019 | 6/12/2020 |
| tblConstructionPhase | PhaseStartDate | 2/27/2021 | 7/31/2020 |
| tblConstructionPhase | PhaseStartDate | 7/27/2019 | 5/29/2020 |
| tblFleetMix | HHD | 0.03 | 0.10 |
| tblFleetMix | LDA | 0.55 | 0.44 |
| tblFleetMix | MH | 8.9100e-004 | 0.00 |
| tblFleetMix | MHD | 0.02 | 0.06 |
| tblFleetMix | OBUS | 2.4790e-003 | 0.00 |
| tblFleetMix | SBUS | 6.8200e-004 | 0.00 |
| tblFleetMix | UBUS | 2.2700e-003 | 0.00 |
| tblLandUse | LotAcreage | 12.14 | 24.88 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 511.47 |
| tblSolidWaste | SolidWasteGenerationRate | 655.60 | 938.60 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

| | | | |
|-----------------|--------------------|----------------|---------------|
| tblVehicleTrips | CC_TL | 8.40 | 49.80 |
| tblVehicleTrips | CNW_TL | 6.90 | 49.80 |
| tblVehicleTrips | CW_TL | 16.60 | 49.80 |
| tblVehicleTrips | DV_TP | 5.00 | 0.00 |
| tblVehicleTrips | PB_TP | 3.00 | 0.00 |
| tblVehicleTrips | PR_TP | 92.00 | 100.00 |
| tblVehicleTrips | ST_TR | 1.32 | 6.54 |
| tblVehicleTrips | SU_TR | 0.68 | 6.54 |
| tblVehicleTrips | WD_TR | 6.97 | 6.54 |
| tblWater | IndoorWaterUseRate | 122,264,187.50 | 22,395,735.00 |

2.0 Emissions Summary

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

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 | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |
| Energy | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |
| Mobile | 23.4306 | 250.7193 | 431.5925 | 2.0802 | 135.4230 | 1.6429 | 137.0659 | 36.4394 | 1.5456 | 37.9850 | | 214,107.2478 | 214,107.2478 | 8.2481 | | 214,313.4507 |
| Total | 35.5296 | 253.2902 | 433.8059 | 2.0956 | 135.4230 | 1.8384 | 137.2614 | 36.4394 | 1.7412 | 38.1806 | | 217,191.8602 | 217,191.8602 | 8.3076 | 0.0566 | 217,416.4004 |

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 | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |
| Energy | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |
| Mobile | 23.4306 | 250.7193 | 431.5925 | 2.0802 | 135.4230 | 1.6429 | 137.0659 | 36.4394 | 1.5456 | 37.9850 | | 214,107.2478 | 214,107.2478 | 8.2481 | | 214,313.4507 |
| Total | 35.5296 | 253.2902 | 433.8059 | 2.0956 | 135.4230 | 1.8384 | 137.2614 | 36.4394 | 1.7412 | 38.1806 | | 217,191.8602 | 217,191.8602 | 8.3076 | 0.0566 | 217,416.4004 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 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 | 5/1/2020 | 5/28/2020 | 5 | 20 | |
| 2 | Site Preparation | Site Preparation | 5/29/2020 | 6/11/2020 | 5 | 10 | |
| 3 | Grading | Grading | 6/12/2020 | 7/30/2020 | 5 | 35 | |
| 4 | Building Construction | Building Construction | 7/31/2020 | 12/30/2021 | 5 | 370 | |
| 5 | Paving | Paving | 7/31/2020 | 12/30/2021 | 5 | 370 | |
| 6 | Architectural Coating | Architectural Coating | 7/31/2020 | 12/30/2021 | 5 | 370 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 793,065; Non-Residential Outdoor: 264,355; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 2 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 2 | 8.00 | 367 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

Trips and VMT

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

| 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 | 6 | 15.00 | 0.00 | 284.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 8 | 20.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 222.00 | 87.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 44.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 3.0761 | 0.0000 | 3.0761 | 0.4658 | 0.0000 | 0.4658 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.3121 | 33.2010 | 21.7532 | 0.0388 | | 1.6587 | 1.6587 | | 1.5419 | 1.5419 | | 3,747.7049 | 3,747.7049 | 1.0580 | | 3,774.1536 |
| Total | 3.3121 | 33.2010 | 21.7532 | 0.0388 | 3.0761 | 1.6587 | 4.7348 | 0.4658 | 1.5419 | 2.0076 | | 3,747.7049 | 3,747.7049 | 1.0580 | | 3,774.1536 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.2 Demolition - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1240 | 4.0831 | 0.9048 | 0.0112 | 0.2483 | 0.0130 | 0.2613 | 0.0681 | 0.0125 | 0.0805 | | 1,215.281 2 | 1,215.281 2 | 0.0827 | | 1,217.349 2 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0690 | 0.0491 | 0.6568 | 1.7700e-003 | 0.1677 | 1.4000e-003 | 0.1691 | 0.0445 | 1.2900e-003 | 0.0458 | | 176.4169 | 176.4169 | 5.5600e-003 | | 176.5560 |
| Total | 0.1931 | 4.1322 | 1.5615 | 0.0130 | 0.4159 | 0.0144 | 0.4304 | 0.1125 | 0.0138 | 0.1263 | | 1,391.698 1 | 1,391.698 1 | 0.0883 | | 1,393.905 2 |

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 | | | | | 1.1997 | 0.0000 | 1.1997 | 0.1816 | 0.0000 | 0.1816 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.3121 | 33.2010 | 21.7532 | 0.0388 | | 1.6587 | 1.6587 | | 1.5419 | 1.5419 | 0.0000 | 3,747.704 9 | 3,747.704 9 | 1.0580 | | 3,774.153 6 |
| Total | 3.3121 | 33.2010 | 21.7532 | 0.0388 | 1.1997 | 1.6587 | 2.8584 | 0.1816 | 1.5419 | 1.7235 | 0.0000 | 3,747.704 9 | 3,747.704 9 | 1.0580 | | 3,774.153 6 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.2 Demolition - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1240 | 4.0831 | 0.9048 | 0.0112 | 0.1732 | 0.0130 | 0.1862 | 0.0496 | 0.0125 | 0.0621 | | 1,215.281 2 | 1,215.281 2 | 0.0827 | | 1,217.349 2 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0690 | 0.0491 | 0.6568 | 1.7700e-003 | 0.1094 | 1.4000e-003 | 0.1108 | 0.0302 | 1.2900e-003 | 0.0315 | | 176.4169 | 176.4169 | 5.5600e-003 | | 176.5560 |
| Total | 0.1931 | 4.1322 | 1.5615 | 0.0130 | 0.2825 | 0.0144 | 0.2970 | 0.0798 | 0.0138 | 0.0935 | | 1,391.698 1 | 1,391.698 1 | 0.0883 | | 1,393.905 2 |

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|------------------------|------------------------|---------------|-----|------------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 18.0663 | 0.0000 | 18.0663 | 9.9307 | 0.0000 | 9.9307 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.0765 | 42.4173 | 21.5136 | 0.0380 | | 2.1974 | 2.1974 | | 2.0216 | 2.0216 | | 3,685.101 6 | 3,685.101 6 | 1.1918 | | 3,714.897 5 |
| Total | 4.0765 | 42.4173 | 21.5136 | 0.0380 | 18.0663 | 2.1974 | 20.2637 | 9.9307 | 2.0216 | 11.9523 | | 3,685.101 6 | 3,685.101 6 | 1.1918 | | 3,714.897 5 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.0828 | 0.0589 | 0.7881 | 2.1300e-003 | 0.2012 | 1.6800e-003 | 0.2029 | 0.0534 | 1.5500e-003 | 0.0549 | | 211.7003 | 211.7003 | 6.6700e-003 | | 211.8672 |
| Total | 0.0828 | 0.0589 | 0.7881 | 2.1300e-003 | 0.2012 | 1.6800e-003 | 0.2029 | 0.0534 | 1.5500e-003 | 0.0549 | | 211.7003 | 211.7003 | 6.6700e-003 | | 211.8672 |

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 | 4.0765 | 42.4173 | 21.5136 | 0.0380 | | 2.1974 | 2.1974 | | 2.0216 | 2.0216 | 0.0000 | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |
| Total | 4.0765 | 42.4173 | 21.5136 | 0.0380 | 7.0458 | 2.1974 | 9.2433 | 3.8730 | 2.0216 | 5.8946 | 0.0000 | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.0828 | 0.0589 | 0.7881 | 2.1300e-003 | 0.1312 | 1.6800e-003 | 0.1329 | 0.0362 | 1.5500e-003 | 0.0377 | | 211.7003 | 211.7003 | 6.6700e-003 | | 211.8672 |
| Total | 0.0828 | 0.0589 | 0.7881 | 2.1300e-003 | 0.1312 | 1.6800e-003 | 0.1329 | 0.0362 | 1.5500e-003 | 0.0377 | | 211.7003 | 211.7003 | 6.6700e-003 | | 211.8672 |

3.4 Grading - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 8.6733 | 0.0000 | 8.6733 | 3.5965 | 0.0000 | 3.5965 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.4501 | 50.1975 | 31.9583 | 0.0620 | | 2.1739 | 2.1739 | | 2.0000 | 2.0000 | | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |
| Total | 4.4501 | 50.1975 | 31.9583 | 0.0620 | 8.6733 | 2.1739 | 10.8472 | 3.5965 | 2.0000 | 5.5965 | | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.4 Grading - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.0920 | 0.0655 | 0.8757 | 2.3600e-003 | 0.2236 | 1.8700e-003 | 0.2254 | 0.0593 | 1.7200e-003 | 0.0610 | | 235.2226 | 235.2226 | 7.4200e-003 | | 235.4080 |
| Total | 0.0920 | 0.0655 | 0.8757 | 2.3600e-003 | 0.2236 | 1.8700e-003 | 0.2254 | 0.0593 | 1.7200e-003 | 0.0610 | | 235.2226 | 235.2226 | 7.4200e-003 | | 235.4080 |

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 | | | | | 3.3826 | 0.0000 | 3.3826 | 1.4026 | 0.0000 | 1.4026 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.4501 | 50.1975 | 31.9583 | 0.0620 | | 2.1739 | 2.1739 | | 2.0000 | 2.0000 | 0.0000 | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |
| Total | 4.4501 | 50.1975 | 31.9583 | 0.0620 | 3.3826 | 2.1739 | 5.5565 | 1.4026 | 2.0000 | 3.4026 | 0.0000 | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.4 Grading - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.0920 | 0.0655 | 0.8757 | 2.3600e-003 | 0.1458 | 1.8700e-003 | 0.1477 | 0.0402 | 1.7200e-003 | 0.0419 | | 235.2226 | 235.2226 | 7.4200e-003 | | 235.4080 |
| Total | 0.0920 | 0.0655 | 0.8757 | 2.3600e-003 | 0.1458 | 1.8700e-003 | 0.1477 | 0.0402 | 1.7200e-003 | 0.0419 | | 235.2226 | 235.2226 | 7.4200e-003 | | 235.4080 |

3.5 Building Construction - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.1198 | 19.1860 | 16.8485 | 0.0269 | | 1.1171 | 1.1171 | | 1.0503 | 1.0503 | | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |
| Total | 2.1198 | 19.1860 | 16.8485 | 0.0269 | | 1.1171 | 1.1171 | | 1.0503 | 1.0503 | | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.3094 | 9.2544 | 2.4247 | 0.0226 | 0.5570 | 0.0436 | 0.6005 | 0.1604 | 0.0417 | 0.2020 | | 2,410.1149 | 2,410.1149 | 0.1471 | | 2,413.7917 |
| Worker | 1.0217 | 0.7268 | 9.7202 | 0.0262 | 2.4814 | 0.0207 | 2.5022 | 0.6581 | 0.0191 | 0.6772 | | 2,610.9706 | 2,610.9706 | 0.0823 | | 2,613.0285 |
| Total | 1.3311 | 9.9812 | 12.1449 | 0.0488 | 3.0384 | 0.0643 | 3.1027 | 0.8185 | 0.0608 | 0.8792 | | 5,021.0854 | 5,021.0854 | 0.2294 | | 5,026.8202 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.1198 | 19.1860 | 16.8485 | 0.0269 | | 1.1171 | 1.1171 | | 1.0503 | 1.0503 | 0.0000 | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |
| Total | 2.1198 | 19.1860 | 16.8485 | 0.0269 | | 1.1171 | 1.1171 | | 1.0503 | 1.0503 | 0.0000 | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.3094 | 9.2544 | 2.4247 | 0.0226 | 0.3982 | 0.0436 | 0.4418 | 0.1214 | 0.0417 | 0.1631 | | 2,410.1149 | 2,410.1149 | 0.1471 | | 2,413.7917 |
| Worker | 1.0217 | 0.7268 | 9.7202 | 0.0262 | 1.6185 | 0.0207 | 1.6393 | 0.4463 | 0.0191 | 0.4654 | | 2,610.9706 | 2,610.9706 | 0.0823 | | 2,613.0285 |
| Total | 1.3311 | 9.9812 | 12.1449 | 0.0488 | 2.0168 | 0.0643 | 2.0811 | 0.5677 | 0.0608 | 0.6285 | | 5,021.0854 | 5,021.0854 | 0.2294 | | 5,026.8202 |

3.5 Building Construction - 2021

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| Total | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.2645 | 8.4468 | 2.2082 | 0.0224 | 0.5570 | 0.0173 | 0.5743 | 0.1604 | 0.0165 | 0.1769 | | 2,391.4615 | 2,391.4615 | 0.1409 | | 2,394.9837 |
| Worker | 0.9516 | 0.6541 | 8.9416 | 0.0254 | 2.4814 | 0.0201 | 2.5015 | 0.6581 | 0.0185 | 0.6766 | | 2,528.0691 | 2,528.0691 | 0.0745 | | 2,529.9313 |
| Total | 1.2161 | 9.1009 | 11.1498 | 0.0478 | 3.0384 | 0.0373 | 3.0758 | 0.8185 | 0.0350 | 0.8534 | | 4,919.5306 | 4,919.5306 | 0.2154 | | 4,924.9150 |

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 | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | 0.0000 | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| Total | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | 0.0000 | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.5 Building Construction - 2021

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.2645 | 8.4468 | 2.2082 | 0.0224 | 0.3983 | 0.0173 | 0.4155 | 0.1214 | 0.0165 | 0.1379 | | 2,391.4615 | 2,391.4615 | 0.1409 | | 2,394.9837 |
| Worker | 0.9516 | 0.6541 | 8.9416 | 0.0254 | 1.6185 | 0.0201 | 1.6386 | 0.4463 | 0.0185 | 0.4648 | | 2,528.0691 | 2,528.0691 | 0.0745 | | 2,529.9313 |
| Total | 1.2161 | 9.1009 | 11.1498 | 0.0478 | 2.0168 | 0.0373 | 2.0541 | 0.5677 | 0.0350 | 0.6027 | | 4,919.5306 | 4,919.5306 | 0.2154 | | 4,924.9150 |

3.6 Paving - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.3566 | 14.0656 | 14.6521 | 0.0228 | | 0.7528 | 0.7528 | | 0.6926 | 0.6926 | | 2,207.7334 | 2,207.7334 | 0.7140 | | 2,225.5841 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 1.3566 | 14.0656 | 14.6521 | 0.0228 | | 0.7528 | 0.7528 | | 0.6926 | 0.6926 | | 2,207.7334 | 2,207.7334 | 0.7140 | | 2,225.5841 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.6 Paving - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.0690 | 0.0491 | 0.6568 | 1.7700e-003 | 0.1677 | 1.4000e-003 | 0.1691 | 0.0445 | 1.2900e-003 | 0.0458 | | 176.4169 | 176.4169 | 5.5600e-003 | | 176.5560 |
| Total | 0.0690 | 0.0491 | 0.6568 | 1.7700e-003 | 0.1677 | 1.4000e-003 | 0.1691 | 0.0445 | 1.2900e-003 | 0.0458 | | 176.4169 | 176.4169 | 5.5600e-003 | | 176.5560 |

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 | 1.3566 | 14.0656 | 14.6521 | 0.0228 | | 0.7528 | 0.7528 | | 0.6926 | 0.6926 | 0.0000 | 2,207.7334 | 2,207.7334 | 0.7140 | | 2,225.5841 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 1.3566 | 14.0656 | 14.6521 | 0.0228 | | 0.7528 | 0.7528 | | 0.6926 | 0.6926 | 0.0000 | 2,207.7334 | 2,207.7334 | 0.7140 | | 2,225.5841 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.6 Paving - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.0690 | 0.0491 | 0.6568 | 1.7700e-003 | 0.1094 | 1.4000e-003 | 0.1108 | 0.0302 | 1.2900e-003 | 0.0315 | | 176.4169 | 176.4169 | 5.5600e-003 | | 176.5560 |
| Total | 0.0690 | 0.0491 | 0.6568 | 1.7700e-003 | 0.1094 | 1.4000e-003 | 0.1108 | 0.0302 | 1.2900e-003 | 0.0315 | | 176.4169 | 176.4169 | 5.5600e-003 | | 176.5560 |

3.6 Paving - 2021

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.2556 | 12.9191 | 14.6532 | 0.0228 | | 0.6777 | 0.6777 | | 0.6235 | 0.6235 | | 2,207.2109 | 2,207.2109 | 0.7139 | | 2,225.0573 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 1.2556 | 12.9191 | 14.6532 | 0.0228 | | 0.6777 | 0.6777 | | 0.6235 | 0.6235 | | 2,207.2109 | 2,207.2109 | 0.7139 | | 2,225.0573 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.6 Paving - 2021

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0643 | 0.0442 | 0.6042 | 1.7100e-003 | 0.1677 | 1.3500e-003 | 0.1690 | 0.0445 | 1.2500e-003 | 0.0457 | | 170.8155 | 170.8155 | 5.0300e-003 | | 170.9413 |
| Total | 0.0643 | 0.0442 | 0.6042 | 1.7100e-003 | 0.1677 | 1.3500e-003 | 0.1690 | 0.0445 | 1.2500e-003 | 0.0457 | | 170.8155 | 170.8155 | 5.0300e-003 | | 170.9413 |

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

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.6 Paving - 2021

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0643 | 0.0442 | 0.6042 | 1.7100e-003 | 0.1094 | 1.3500e-003 | 0.1107 | 0.0302 | 1.2500e-003 | 0.0314 | | 170.8155 | 170.8155 | 5.0300e-003 | | 170.9413 |
| Total | 0.0643 | 0.0442 | 0.6042 | 1.7100e-003 | 0.1094 | 1.3500e-003 | 0.1107 | 0.0302 | 1.2500e-003 | 0.0314 | | 170.8155 | 170.8155 | 5.0300e-003 | | 170.9413 |

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 13.2463 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2422 | 1.6838 | 1.8314 | 2.9700e-003 | | 0.1109 | 0.1109 | | 0.1109 | 0.1109 | | 281.4481 | 281.4481 | 0.0218 | | 281.9928 |
| Total | 13.4885 | 1.6838 | 1.8314 | 2.9700e-003 | | 0.1109 | 0.1109 | | 0.1109 | 0.1109 | | 281.4481 | 281.4481 | 0.0218 | | 281.9928 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.2025 | 0.1441 | 1.9265 | 5.2000e-003 | 0.4918 | 4.1100e-003 | 0.4959 | 0.1304 | 3.7900e-003 | 0.1342 | | 517.4897 | 517.4897 | 0.0163 | | 517.8976 |
| Total | 0.2025 | 0.1441 | 1.9265 | 5.2000e-003 | 0.4918 | 4.1100e-003 | 0.4959 | 0.1304 | 3.7900e-003 | 0.1342 | | 517.4897 | 517.4897 | 0.0163 | | 517.8976 |

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 | 13.2463 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2422 | 1.6838 | 1.8314 | 2.9700e-003 | | 0.1109 | 0.1109 | | 0.1109 | 0.1109 | 0.0000 | 281.4481 | 281.4481 | 0.0218 | | 281.9928 |
| Total | 13.4885 | 1.6838 | 1.8314 | 2.9700e-003 | | 0.1109 | 0.1109 | | 0.1109 | 0.1109 | 0.0000 | 281.4481 | 281.4481 | 0.0218 | | 281.9928 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.2025 | 0.1441 | 1.9265 | 5.2000e-003 | 0.3208 | 4.1100e-003 | 0.3249 | 0.0885 | 3.7900e-003 | 0.0922 | | 517.4897 | 517.4897 | 0.0163 | | 517.8976 |
| Total | 0.2025 | 0.1441 | 1.9265 | 5.2000e-003 | 0.3208 | 4.1100e-003 | 0.3249 | 0.0885 | 3.7900e-003 | 0.0922 | | 517.4897 | 517.4897 | 0.0163 | | 517.8976 |

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 13.2463 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2189 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |
| Total | 13.4652 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.1886 | 0.1296 | 1.7722 | 5.0300e-003 | 0.4918 | 3.9700e-003 | 0.4958 | 0.1304 | 3.6600e-003 | 0.1341 | | 501.0587 | 501.0587 | 0.0148 | | 501.4278 |
| Total | 0.1886 | 0.1296 | 1.7722 | 5.0300e-003 | 0.4918 | 3.9700e-003 | 0.4958 | 0.1304 | 3.6600e-003 | 0.1341 | | 501.0587 | 501.0587 | 0.0148 | | 501.4278 |

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 | 13.2463 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2189 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | 0.0000 | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |
| Total | 13.4652 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | 0.0000 | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.1886 | 0.1296 | 1.7722 | 5.0300e-003 | 0.3208 | 3.9700e-003 | 0.3248 | 0.0885 | 3.6600e-003 | 0.0921 | | 501.0587 | 501.0587 | 0.0148 | | 501.4278 |
| Total | 0.1886 | 0.1296 | 1.7722 | 5.0300e-003 | 0.3208 | 3.9700e-003 | 0.3248 | 0.0885 | 3.6600e-003 | 0.0921 | | 501.0587 | 501.0587 | 0.0148 | | 501.4278 |

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|---------|----------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|--------------|--------------|--------|-----|--------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 23.4306 | 250.7193 | 431.5925 | 2.0802 | 135.4230 | 1.6429 | 137.0659 | 36.4394 | 1.5456 | 37.9850 | | 214,107.2478 | 214,107.2478 | 8.2481 | | 214,313.4507 |
| Unmitigated | 23.4306 | 250.7193 | 431.5925 | 2.0802 | 135.4230 | 1.6429 | 137.0659 | 36.4394 | 1.5456 | 37.9850 | | 214,107.2478 | 214,107.2478 | 8.2481 | | 214,313.4507 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|------------------------|-------------------------|----------|----------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Light Industry | 3,458.82 | 3,458.82 | 3,458.82 | 62,698,737 | 62,698,737 |
| Total | 3,458.82 | 3,458.82 | 3,458.82 | 62,698,737 | 62,698,737 |

4.3 Trip Type Information

| Land Use | Miles | | | Trip % | | | Trip Purpose % | | |
|------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Light Industry | 49.80 | 49.80 | 49.80 | 59.00 | 28.00 | 13.00 | 100 | 0 | 0 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| General Light Industry | 0.441202 | 0.045177 | 0.202743 | 0.121510 | 0.016147 | 0.006143 | 0.061000 | 0.101000 | 0.000000 | 0.000000 | 0.005078 | 0.000000 | 0.000000 |

5.0 Energy Detail

Historical Energy Use: N

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

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 | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |
| NaturalGas Unmitigated | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |

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 | | | | | |
| General Light Industry | 26218.2 | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |
| Total | | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

5.2 Energy by Land Use - Natural Gas

Mitigated

| | Natural Gas 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 | | | | | |
| General Light Industry | 26.2182 | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |
| Total | | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |

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 | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |
| Unmitigated | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

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 | 1.3428 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 10.4685 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 5.0600e-003 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |
| Total | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |

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 | 1.3428 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 10.4685 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 5.0600e-003 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |
| Total | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |

7.0 Water Detail

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Summer

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 Stationary Equipment**Fire Pumps and Emergency Generators**

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

Boilers

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

User Defined Equipment

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

11.0 Vegetation

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

13131 Los Angeles Street Industrial Project
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|--------|----------|-------------|--------------------|------------|
| General Light Industry | 528.71 | 1000sqft | 24.88 | 528,710.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|---------------------------------|----------------------------|---------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 33 |
| Climate Zone | 9 | | | Operational Year | 2021 |
| Utility Company | Southern California Edison | | | | |
| CO2 Intensity (lb/MW hr) | 511.47 | CH4 Intensity (lb/MW hr) | 0.029 | N2O Intensity (lb/MW hr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SCE 2017 CO2 Intensity Factor

Land Use - Lot acreage update to match that of the project.

Construction Phase - Construction, paving and coating will occur at the same time.

Demolition -

Vehicle Trips - Trips updated to match the traffic report.

Construction Off-road Equipment Mitigation - SCAQMD rule 403. Percent reductions based on fugitive dust mitigation measures-Table 11-4

Fleet Mix - Fleet mix updated to match that of the traffic report provided by KOA.

Water And Wastewater - Water use per Section 3.11 of the Draft EIR

Solid Waste - Solid waste per Section 3.11 of the Draft EIR

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

| Table Name | Column Name | Default Value | New Value |
|---------------------------|--------------------------------|---------------|------------|
| tblConstDustMitigation | CleanPavedRoadPercentReduction | 0 | 40 |
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 20.00 | 370.00 |
| tblConstructionPhase | NumDays | 20.00 | 370.00 |
| tblConstructionPhase | PhaseEndDate | 4/23/2021 | 12/30/2021 |
| tblConstructionPhase | PhaseEndDate | 2/26/2021 | 12/30/2021 |
| tblConstructionPhase | PhaseEndDate | 7/26/2019 | 5/28/2020 |
| tblConstructionPhase | PhaseEndDate | 9/27/2019 | 7/30/2020 |
| tblConstructionPhase | PhaseEndDate | 3/26/2021 | 12/30/2021 |
| tblConstructionPhase | PhaseEndDate | 8/9/2019 | 6/11/2020 |
| tblConstructionPhase | PhaseStartDate | 3/27/2021 | 7/31/2020 |
| tblConstructionPhase | PhaseStartDate | 9/28/2019 | 7/31/2020 |
| tblConstructionPhase | PhaseStartDate | 7/1/2019 | 5/1/2020 |
| tblConstructionPhase | PhaseStartDate | 8/10/2019 | 6/12/2020 |
| tblConstructionPhase | PhaseStartDate | 2/27/2021 | 7/31/2020 |
| tblConstructionPhase | PhaseStartDate | 7/27/2019 | 5/29/2020 |
| tblFleetMix | HHD | 0.03 | 0.10 |
| tblFleetMix | LDA | 0.55 | 0.44 |
| tblFleetMix | MH | 8.9100e-004 | 0.00 |
| tblFleetMix | MHD | 0.02 | 0.06 |
| tblFleetMix | OBUS | 2.4790e-003 | 0.00 |
| tblFleetMix | SBUS | 6.8200e-004 | 0.00 |
| tblFleetMix | UBUS | 2.2700e-003 | 0.00 |
| tblLandUse | LotAcreage | 12.14 | 24.88 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 511.47 |
| tblSolidWaste | SolidWasteGenerationRate | 655.60 | 938.60 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

| | | | |
|-----------------|--------------------|----------------|---------------|
| tblVehicleTrips | CC_TL | 8.40 | 49.80 |
| tblVehicleTrips | CNW_TL | 6.90 | 49.80 |
| tblVehicleTrips | CW_TL | 16.60 | 49.80 |
| tblVehicleTrips | DV_TP | 5.00 | 0.00 |
| tblVehicleTrips | PB_TP | 3.00 | 0.00 |
| tblVehicleTrips | PR_TP | 92.00 | 100.00 |
| tblVehicleTrips | ST_TR | 1.32 | 6.54 |
| tblVehicleTrips | SU_TR | 0.68 | 6.54 |
| tblVehicleTrips | WD_TR | 6.97 | 6.54 |
| tblWater | IndoorWaterUseRate | 122,264,187.50 | 22,395,735.00 |

2.0 Emissions Summary

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

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 | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |
| Energy | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |
| Mobile | 23.0423 | 259.7777 | 399.8785 | 2.0076 | 135.4230 | 1.6473 | 137.0703 | 36.4394 | 1.5499 | 37.9892 | | 206,850.4426 | 206,850.4426 | 8.1477 | | 207,054.1362 |
| Total | 35.1414 | 262.3486 | 402.0918 | 2.0230 | 135.4230 | 1.8428 | 137.2658 | 36.4394 | 1.7454 | 38.1848 | | 209,935.0550 | 209,935.0550 | 8.2072 | 0.0566 | 210,157.0859 |

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 | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |
| Energy | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |
| Mobile | 23.0423 | 259.7777 | 399.8785 | 2.0076 | 135.4230 | 1.6473 | 137.0703 | 36.4394 | 1.5499 | 37.9892 | | 206,850.4426 | 206,850.4426 | 8.1477 | | 207,054.1362 |
| Total | 35.1414 | 262.3486 | 402.0918 | 2.0230 | 135.4230 | 1.8428 | 137.2658 | 36.4394 | 1.7454 | 38.1848 | | 209,935.0550 | 209,935.0550 | 8.2072 | 0.0566 | 210,157.0859 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 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 | 5/1/2020 | 5/28/2020 | 5 | 20 | |
| 2 | Site Preparation | Site Preparation | 5/29/2020 | 6/11/2020 | 5 | 10 | |
| 3 | Grading | Grading | 6/12/2020 | 7/30/2020 | 5 | 35 | |
| 4 | Building Construction | Building Construction | 7/31/2020 | 12/30/2021 | 5 | 370 | |
| 5 | Paving | Paving | 7/31/2020 | 12/30/2021 | 5 | 370 | |
| 6 | Architectural Coating | Architectural Coating | 7/31/2020 | 12/30/2021 | 5 | 370 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 793,065; Non-Residential Outdoor: 264,355; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 2 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 2 | 8.00 | 367 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

Trips and VMT

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

| 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 | 6 | 15.00 | 0.00 | 284.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 8 | 20.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 222.00 | 87.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 44.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 3.0761 | 0.0000 | 3.0761 | 0.4658 | 0.0000 | 0.4658 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.3121 | 33.2010 | 21.7532 | 0.0388 | | 1.6587 | 1.6587 | | 1.5419 | 1.5419 | | 3,747.7049 | 3,747.7049 | 1.0580 | | 3,774.1536 |
| Total | 3.3121 | 33.2010 | 21.7532 | 0.0388 | 3.0761 | 1.6587 | 4.7348 | 0.4658 | 1.5419 | 2.0076 | | 3,747.7049 | 3,747.7049 | 1.0580 | | 3,774.1536 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.2 Demolition - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1271 | 4.1359 | 0.9616 | 0.0110 | 0.2483 | 0.0132 | 0.2615 | 0.0681 | 0.0127 | 0.0807 | | 1,194.3536 | 1,194.3536 | 0.0857 | | 1,196.4968 |
| 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 | 0.0767 | 0.0544 | 0.6015 | 1.6700e-003 | 0.1677 | 1.4000e-003 | 0.1691 | 0.0445 | 1.2900e-003 | 0.0458 | | 166.1131 | 166.1131 | 5.2400e-003 | | 166.2440 |
| Total | 0.2037 | 4.1903 | 1.5631 | 0.0127 | 0.4159 | 0.0146 | 0.4306 | 0.1125 | 0.0140 | 0.1265 | | 1,360.4666 | 1,360.4666 | 0.0910 | | 1,362.7407 |

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 | | | | | 1.1997 | 0.0000 | 1.1997 | 0.1816 | 0.0000 | 0.1816 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.3121 | 33.2010 | 21.7532 | 0.0388 | | 1.6587 | 1.6587 | | 1.5419 | 1.5419 | 0.0000 | 3,747.7049 | 3,747.7049 | 1.0580 | | 3,774.1536 |
| Total | 3.3121 | 33.2010 | 21.7532 | 0.0388 | 1.1997 | 1.6587 | 2.8584 | 0.1816 | 1.5419 | 1.7235 | 0.0000 | 3,747.7049 | 3,747.7049 | 1.0580 | | 3,774.1536 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.2 Demolition - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.1271 | 4.1359 | 0.9616 | 0.0110 | 0.1732 | 0.0132 | 0.1864 | 0.0496 | 0.0127 | 0.0623 | | 1,194.3536 | 1,194.3536 | 0.0857 | | 1,196.4968 |
| 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 | 0.0767 | 0.0544 | 0.6015 | 1.6700e-003 | 0.1094 | 1.4000e-003 | 0.1108 | 0.0302 | 1.2900e-003 | 0.0315 | | 166.1131 | 166.1131 | 5.2400e-003 | | 166.2440 |
| Total | 0.2037 | 4.1903 | 1.5631 | 0.0127 | 0.2825 | 0.0146 | 0.2972 | 0.0798 | 0.0140 | 0.0937 | | 1,360.4666 | 1,360.4666 | 0.0910 | | 1,362.7407 |

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|----------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 18.0663 | 0.0000 | 18.0663 | 9.9307 | 0.0000 | 9.9307 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.0765 | 42.4173 | 21.5136 | 0.0380 | | 2.1974 | 2.1974 | | 2.0216 | 2.0216 | | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |
| Total | 4.0765 | 42.4173 | 21.5136 | 0.0380 | 18.0663 | 2.1974 | 20.2637 | 9.9307 | 2.0216 | 11.9523 | | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.0920 | 0.0652 | 0.7218 | 2.0000e-003 | 0.2012 | 1.6800e-003 | 0.2029 | 0.0534 | 1.5500e-003 | 0.0549 | | 199.3357 | 199.3357 | 6.2800e-003 | | 199.4927 |
| Total | 0.0920 | 0.0652 | 0.7218 | 2.0000e-003 | 0.2012 | 1.6800e-003 | 0.2029 | 0.0534 | 1.5500e-003 | 0.0549 | | 199.3357 | 199.3357 | 6.2800e-003 | | 199.4927 |

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 | 4.0765 | 42.4173 | 21.5136 | 0.0380 | | 2.1974 | 2.1974 | | 2.0216 | 2.0216 | 0.0000 | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |
| Total | 4.0765 | 42.4173 | 21.5136 | 0.0380 | 7.0458 | 2.1974 | 9.2433 | 3.8730 | 2.0216 | 5.8946 | 0.0000 | 3,685.1016 | 3,685.1016 | 1.1918 | | 3,714.8975 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.0920 | 0.0652 | 0.7218 | 2.0000e-003 | 0.1312 | 1.6800e-003 | 0.1329 | 0.0362 | 1.5500e-003 | 0.0377 | | 199.3357 | 199.3357 | 6.2800e-003 | | 199.4927 |
| Total | 0.0920 | 0.0652 | 0.7218 | 2.0000e-003 | 0.1312 | 1.6800e-003 | 0.1329 | 0.0362 | 1.5500e-003 | 0.0377 | | 199.3357 | 199.3357 | 6.2800e-003 | | 199.4927 |

3.4 Grading - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 8.6733 | 0.0000 | 8.6733 | 3.5965 | 0.0000 | 3.5965 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.4501 | 50.1975 | 31.9583 | 0.0620 | | 2.1739 | 2.1739 | | 2.0000 | 2.0000 | | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |
| Total | 4.4501 | 50.1975 | 31.9583 | 0.0620 | 8.6733 | 2.1739 | 10.8472 | 3.5965 | 2.0000 | 5.5965 | | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.4 Grading - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.1022 | 0.0725 | 0.8020 | 2.2200e-003 | 0.2236 | 1.8700e-003 | 0.2254 | 0.0593 | 1.7200e-003 | 0.0610 | | 221.4841 | 221.4841 | 6.9800e-003 | | 221.6586 |
| Total | 0.1022 | 0.0725 | 0.8020 | 2.2200e-003 | 0.2236 | 1.8700e-003 | 0.2254 | 0.0593 | 1.7200e-003 | 0.0610 | | 221.4841 | 221.4841 | 6.9800e-003 | | 221.6586 |

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 | | | | | 3.3826 | 0.0000 | 3.3826 | 1.4026 | 0.0000 | 1.4026 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.4501 | 50.1975 | 31.9583 | 0.0620 | | 2.1739 | 2.1739 | | 2.0000 | 2.0000 | 0.0000 | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |
| Total | 4.4501 | 50.1975 | 31.9583 | 0.0620 | 3.3826 | 2.1739 | 5.5565 | 1.4026 | 2.0000 | 3.4026 | 0.0000 | 6,005.8653 | 6,005.8653 | 1.9424 | | 6,054.4257 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.4 Grading - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.1022 | 0.0725 | 0.8020 | 2.2200e-003 | 0.1458 | 1.8700e-003 | 0.1477 | 0.0402 | 1.7200e-003 | 0.0419 | | 221.4841 | 221.4841 | 6.9800e-003 | | 221.6586 |
| Total | 0.1022 | 0.0725 | 0.8020 | 2.2200e-003 | 0.1458 | 1.8700e-003 | 0.1477 | 0.0402 | 1.7200e-003 | 0.0419 | | 221.4841 | 221.4841 | 6.9800e-003 | | 221.6586 |

3.5 Building Construction - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.1198 | 19.1860 | 16.8485 | 0.0269 | | 1.1171 | 1.1171 | | 1.0503 | 1.0503 | | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |
| Total | 2.1198 | 19.1860 | 16.8485 | 0.0269 | | 1.1171 | 1.1171 | | 1.0503 | 1.0503 | | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.3235 | 9.2525 | 2.6742 | 0.0220 | 0.5570 | 0.0443 | 0.6012 | 0.1604 | 0.0423 | 0.2027 | | 2,344.2069 | 2,344.2069 | 0.1568 | | 2,348.1257 |
| Worker | 1.1345 | 0.8047 | 8.9024 | 0.0247 | 2.4814 | 0.0207 | 2.5022 | 0.6581 | 0.0191 | 0.6772 | | 2,458.4733 | 2,458.4733 | 0.0775 | | 2,460.4105 |
| Total | 1.4580 | 10.0572 | 11.5767 | 0.0466 | 3.0384 | 0.0650 | 3.1034 | 0.8185 | 0.0614 | 0.8799 | | 4,802.6801 | 4,802.6801 | 0.2342 | | 4,808.5362 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.1198 | 19.1860 | 16.8485 | 0.0269 | | 1.1171 | 1.1171 | | 1.0503 | 1.0503 | 0.0000 | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |
| Total | 2.1198 | 19.1860 | 16.8485 | 0.0269 | | 1.1171 | 1.1171 | | 1.0503 | 1.0503 | 0.0000 | 2,553.0631 | 2,553.0631 | 0.6229 | | 2,568.6345 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.3235 | 9.2525 | 2.6742 | 0.0220 | 0.3982 | 0.0443 | 0.4425 | 0.1214 | 0.0423 | 0.1637 | | 2,344.2069 | 2,344.2069 | 0.1568 | | 2,348.1257 |
| Worker | 1.1345 | 0.8047 | 8.9024 | 0.0247 | 1.6185 | 0.0207 | 1.6393 | 0.4463 | 0.0191 | 0.4654 | | 2,458.4733 | 2,458.4733 | 0.0775 | | 2,460.4105 |
| Total | 1.4580 | 10.0572 | 11.5767 | 0.0466 | 2.0168 | 0.0650 | 2.0818 | 0.5677 | 0.0614 | 0.6291 | | 4,802.6801 | 4,802.6801 | 0.2342 | | 4,808.5362 |

3.5 Building Construction - 2021

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| Total | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.2776 | 8.4293 | 2.4427 | 0.0218 | 0.5570 | 0.0178 | 0.5748 | 0.1604 | 0.0171 | 0.1774 | | 2,325.9061 | 2,325.9061 | 0.1502 | | 2,329.6599 |
| Worker | 1.0585 | 0.7241 | 8.1753 | 0.0239 | 2.4814 | 0.0201 | 2.5015 | 0.6581 | 0.0185 | 0.6766 | | 2,380.3974 | 2,380.3974 | 0.0701 | | 2,382.1486 |
| Total | 1.3362 | 9.1534 | 10.6180 | 0.0457 | 3.0384 | 0.0379 | 3.0763 | 0.8185 | 0.0355 | 0.8540 | | 4,706.3035 | 4,706.3035 | 0.2202 | | 4,711.8085 |

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 | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | 0.0000 | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |
| Total | 1.9009 | 17.4321 | 16.5752 | 0.0269 | | 0.9586 | 0.9586 | | 0.9013 | 0.9013 | 0.0000 | 2,553.3639 | 2,553.3639 | 0.6160 | | 2,568.7643 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.5 Building Construction - 2021

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.2776 | 8.4293 | 2.4427 | 0.0218 | 0.3983 | 0.0178 | 0.4161 | 0.1214 | 0.0171 | 0.1385 | | 2,325.9061 | 2,325.9061 | 0.1502 | | 2,329.6599 |
| Worker | 1.0585 | 0.7241 | 8.1753 | 0.0239 | 1.6185 | 0.0201 | 1.6386 | 0.4463 | 0.0185 | 0.4648 | | 2,380.3974 | 2,380.3974 | 0.0701 | | 2,382.1486 |
| Total | 1.3362 | 9.1534 | 10.6180 | 0.0457 | 2.0168 | 0.0379 | 2.0547 | 0.5677 | 0.0355 | 0.6032 | | 4,706.3035 | 4,706.3035 | 0.2202 | | 4,711.8085 |

3.6 Paving - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.3566 | 14.0656 | 14.6521 | 0.0228 | | 0.7528 | 0.7528 | | 0.6926 | 0.6926 | | 2,207.7334 | 2,207.7334 | 0.7140 | | 2,225.5841 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 1.3566 | 14.0656 | 14.6521 | 0.0228 | | 0.7528 | 0.7528 | | 0.6926 | 0.6926 | | 2,207.7334 | 2,207.7334 | 0.7140 | | 2,225.5841 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.6 Paving - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.0767 | 0.0544 | 0.6015 | 1.6700e-003 | 0.1677 | 1.4000e-003 | 0.1691 | 0.0445 | 1.2900e-003 | 0.0458 | | 166.1131 | 166.1131 | 5.2400e-003 | | 166.2440 |
| Total | 0.0767 | 0.0544 | 0.6015 | 1.6700e-003 | 0.1677 | 1.4000e-003 | 0.1691 | 0.0445 | 1.2900e-003 | 0.0458 | | 166.1131 | 166.1131 | 5.2400e-003 | | 166.2440 |

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 | 1.3566 | 14.0656 | 14.6521 | 0.0228 | | 0.7528 | 0.7528 | | 0.6926 | 0.6926 | 0.0000 | 2,207.7334 | 2,207.7334 | 0.7140 | | 2,225.5841 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 1.3566 | 14.0656 | 14.6521 | 0.0228 | | 0.7528 | 0.7528 | | 0.6926 | 0.6926 | 0.0000 | 2,207.7334 | 2,207.7334 | 0.7140 | | 2,225.5841 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.6 Paving - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.0767 | 0.0544 | 0.6015 | 1.6700e-003 | 0.1094 | 1.4000e-003 | 0.1108 | 0.0302 | 1.2900e-003 | 0.0315 | | 166.1131 | 166.1131 | 5.2400e-003 | | 166.2440 |
| Total | 0.0767 | 0.0544 | 0.6015 | 1.6700e-003 | 0.1094 | 1.4000e-003 | 0.1108 | 0.0302 | 1.2900e-003 | 0.0315 | | 166.1131 | 166.1131 | 5.2400e-003 | | 166.2440 |

3.6 Paving - 2021

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.2556 | 12.9191 | 14.6532 | 0.0228 | | 0.6777 | 0.6777 | | 0.6235 | 0.6235 | | 2,207.2109 | 2,207.2109 | 0.7139 | | 2,225.0573 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 1.2556 | 12.9191 | 14.6532 | 0.0228 | | 0.6777 | 0.6777 | | 0.6235 | 0.6235 | | 2,207.2109 | 2,207.2109 | 0.7139 | | 2,225.0573 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.6 Paving - 2021

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0715 | 0.0489 | 0.5524 | 1.6100e-003 | 0.1677 | 1.3500e-003 | 0.1690 | 0.0445 | 1.2500e-003 | 0.0457 | | 160.8377 | 160.8377 | 4.7300e-003 | | 160.9560 |
| Total | 0.0715 | 0.0489 | 0.5524 | 1.6100e-003 | 0.1677 | 1.3500e-003 | 0.1690 | 0.0445 | 1.2500e-003 | 0.0457 | | 160.8377 | 160.8377 | 4.7300e-003 | | 160.9560 |

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

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.6 Paving - 2021

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0715 | 0.0489 | 0.5524 | 1.6100e-003 | 0.1094 | 1.3500e-003 | 0.1107 | 0.0302 | 1.2500e-003 | 0.0314 | | 160.8377 | 160.8377 | 4.7300e-003 | | 160.9560 |
| Total | 0.0715 | 0.0489 | 0.5524 | 1.6100e-003 | 0.1094 | 1.3500e-003 | 0.1107 | 0.0302 | 1.2500e-003 | 0.0314 | | 160.8377 | 160.8377 | 4.7300e-003 | | 160.9560 |

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 13.2463 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2422 | 1.6838 | 1.8314 | 2.9700e-003 | | 0.1109 | 0.1109 | | 0.1109 | 0.1109 | | 281.4481 | 281.4481 | 0.0218 | | 281.9928 |
| Total | 13.4885 | 1.6838 | 1.8314 | 2.9700e-003 | | 0.1109 | 0.1109 | | 0.1109 | 0.1109 | | 281.4481 | 281.4481 | 0.0218 | | 281.9928 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.2249 | 0.1595 | 1.7645 | 4.8900e-003 | 0.4918 | 4.1100e-003 | 0.4959 | 0.1304 | 3.7900e-003 | 0.1342 | | 487.2650 | 487.2650 | 0.0154 | | 487.6489 |
| Total | 0.2249 | 0.1595 | 1.7645 | 4.8900e-003 | 0.4918 | 4.1100e-003 | 0.4959 | 0.1304 | 3.7900e-003 | 0.1342 | | 487.2650 | 487.2650 | 0.0154 | | 487.6489 |

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 | 13.2463 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2422 | 1.6838 | 1.8314 | 2.9700e-003 | | 0.1109 | 0.1109 | | 0.1109 | 0.1109 | 0.0000 | 281.4481 | 281.4481 | 0.0218 | | 281.9928 |
| Total | 13.4885 | 1.6838 | 1.8314 | 2.9700e-003 | | 0.1109 | 0.1109 | | 0.1109 | 0.1109 | 0.0000 | 281.4481 | 281.4481 | 0.0218 | | 281.9928 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 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 | 0.2249 | 0.1595 | 1.7645 | 4.8900e-003 | 0.3208 | 4.1100e-003 | 0.3249 | 0.0885 | 3.7900e-003 | 0.0922 | | 487.2650 | 487.2650 | 0.0154 | | 487.6489 |
| Total | 0.2249 | 0.1595 | 1.7645 | 4.8900e-003 | 0.3208 | 4.1100e-003 | 0.3249 | 0.0885 | 3.7900e-003 | 0.0922 | | 487.2650 | 487.2650 | 0.0154 | | 487.6489 |

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|----------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 13.2463 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2189 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |
| Total | 13.4652 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.2098 | 0.1435 | 1.6203 | 4.7400e-003 | 0.4918 | 3.9700e-003 | 0.4958 | 0.1304 | 3.6600e-003 | 0.1341 | | 471.7905 | 471.7905 | 0.0139 | | 472.1376 |
| Total | 0.2098 | 0.1435 | 1.6203 | 4.7400e-003 | 0.4918 | 3.9700e-003 | 0.4958 | 0.1304 | 3.6600e-003 | 0.1341 | | 471.7905 | 471.7905 | 0.0139 | | 472.1376 |

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 | 13.2463 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2189 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | 0.0000 | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |
| Total | 13.4652 | 1.5268 | 1.8176 | 2.9700e-003 | | 0.0941 | 0.0941 | | 0.0941 | 0.0941 | 0.0000 | 281.4481 | 281.4481 | 0.0193 | | 281.9309 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.2098 | 0.1435 | 1.6203 | 4.7400e-003 | 0.3208 | 3.9700e-003 | 0.3248 | 0.0885 | 3.6600e-003 | 0.0921 | | 471.7905 | 471.7905 | 0.0139 | | 472.1376 |
| Total | 0.2098 | 0.1435 | 1.6203 | 4.7400e-003 | 0.3208 | 3.9700e-003 | 0.3248 | 0.0885 | 3.6600e-003 | 0.0921 | | 471.7905 | 471.7905 | 0.0139 | | 472.1376 |

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|---------|----------|----------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|--------------|--------------|--------|-----|--------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 23.0423 | 259.7777 | 399.8785 | 2.0076 | 135.4230 | 1.6473 | 137.0703 | 36.4394 | 1.5499 | 37.9892 | | 206,850.4426 | 206,850.4426 | 8.1477 | | 207,054.1362 |
| Unmitigated | 23.0423 | 259.7777 | 399.8785 | 2.0076 | 135.4230 | 1.6473 | 137.0703 | 36.4394 | 1.5499 | 37.9892 | | 206,850.4426 | 206,850.4426 | 8.1477 | | 207,054.1362 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|------------------------|-------------------------|----------|----------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Light Industry | 3,458.82 | 3,458.82 | 3,458.82 | 62,698,737 | 62,698,737 |
| Total | 3,458.82 | 3,458.82 | 3,458.82 | 62,698,737 | 62,698,737 |

4.3 Trip Type Information

| Land Use | Miles | | | Trip % | | | Trip Purpose % | | |
|------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Light Industry | 49.80 | 49.80 | 49.80 | 59.00 | 28.00 | 13.00 | 100 | 0 | 0 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| General Light Industry | 0.441202 | 0.045177 | 0.202743 | 0.121510 | 0.016147 | 0.006143 | 0.061000 | 0.101000 | 0.000000 | 0.000000 | 0.005078 | 0.000000 | 0.000000 |

5.0 Energy Detail

Historical Energy Use: N

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

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 | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |
| NaturalGas Unmitigated | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |

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 | | | | | |
| General Light Industry | 26218.2 | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |
| Total | | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

5.2 Energy by Land Use - Natural Gas

Mitigated

| | Natural Gas 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 | | | | | |
| General Light Industry | 26.2182 | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |
| Total | | 0.2828 | 2.5704 | 2.1592 | 0.0154 | | 0.1954 | 0.1954 | | 0.1954 | 0.1954 | | 3,084.4967 | 3,084.4967 | 0.0591 | 0.0566 | 3,102.8263 |

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 | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |
| Unmitigated | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

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 | 1.3428 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 10.4685 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 5.0600e-003 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |
| Total | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |

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 | 1.3428 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 10.4685 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 5.0600e-003 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |
| Total | 11.8163 | 5.0000e-004 | 0.0542 | 0.0000 | | 1.9000e-004 | 1.9000e-004 | | 1.9000e-004 | 1.9000e-004 | | 0.1157 | 0.1157 | 3.1000e-004 | | 0.1234 |

7.0 Water Detail

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Winter

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 Stationary Equipment**Fire Pumps and Emergency Generators**

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

Boilers

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

User Defined Equipment

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

11.0 Vegetation

ATTACHMENT B

Project Health Risk Assessment

Health Risk Assessment

13131 Los Angeles Street Industrial Project

Irwindale, California

Prepared For:

Community Development Department, Planning Division
5050 North Irwindale Avenue
Irwindale, California

December 2019

CONTENTS

1.0 INTRODUCTION1
 1.1 Project Description and Location.....1
 2.0 Health Risk Assessment.....3
 2.1 Environmental Setting.....3
 2.1.1 Climate and Meteorology3
 2.2 Regulatory Framework.....8
 2.2.1 Federal8
 2.2.2 State.....9
 2.2.3 Local.....10
 2.3 Health Risk and Hazard Assessment11
 2.3.1 Thresholds of Significance11
 2.3.2 Methodology12
 2.3.3 Impact Analysis.....15
 3.0 REFERENCES.....18

LIST OF TABLES

Table 1. Nearest Sensitive Receptors.....8
 Table 2. Maximum Operational Health Risk at the Project Vicinity Residential Neighborhoods.....17

APPENDICES

Appendix A – Health Risk Calculations and AERMOD Outputs

LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|--------|---|
| AB | Assembly Bill |
| ASF | Age sensitivity factor |
| ATCM | Air Toxic Control Measure |
| Basin | South Coast Air Basin |
| CAPCOA | California Air Pollution Control Officers Association |
| CARB | California Air Resources Board |
| CCAA | California Clean Air Act |
| DOORS | Diesel Off-Road Reporting System |
| DPM | Diesel Particulate Matter |
| EMFAC | EMission FACtor model |
| FAH | Fraction of time at home |

LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|---------------------|--|
| FCAA | federal Clean Air Act |
| HAP | Hazardous Air Pollutants |
| HRA | Health Risk Assessment |
| kg | Kilogram |
| MSAT | Mobile Source Air Toxic |
| NAAQS | National Ambient Air Quality Standards |
| NESHAPs | National Emissions Standards for Hazardous Air Pollutants |
| NO _x | Oxides of Nitrogen |
| O ₃ | Ozone |
| OEHHA | Office of Environmental Health Hazard Assessment |
| PERP | Portable Equipment Registration Program |
| PM | Particulate matter |
| PM ₁₀ | Particulate matter less than 10 microns in diameter |
| Project | 13131 Los Angeles Street Industrial Project |
| REL | Reference Exposure Level |
| Risk Reduction Plan | Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles |
| SCAQMD | South Coast Air Quality Management District |
| SRA | Source receptor area |
| TACs | Toxic Air Contaminants |
| USEPA | U.S. Environmental Protection Agency |
| µg/m ³ | Micrograms per cubic meter |

1.0 INTRODUCTION

This report evaluates the potential health risks associated with the 13131 Los Angeles Street Industrial Project (Project) proposed in Irwindale, California. The purpose of this Health Risk Assessment (HRA) is to evaluate potential health risks associated with Toxic Air Contaminants (TAC) including Diesel Particulate Matter (DPM) resulting from the implementation of the proposed Project (Project). This Health Risk Assessment was prepared in accordance with the requirements of the South Coast Air Quality Management District (SCAQMD) and guidance from the Office of Environmental Health Hazard Assessment (OEHHA) to determine if health risks are likely to occur from the proposed Project. Further, this assessment was prepared in consideration of the Notice of Preparation comment letters received from both the SCAQMD and California Air Resources Board (CARB) as presented in Appendix A of the Draft EIR prepared for the Project. Technical data is included as see Appendix A, *Dispersion Modeling Data*.

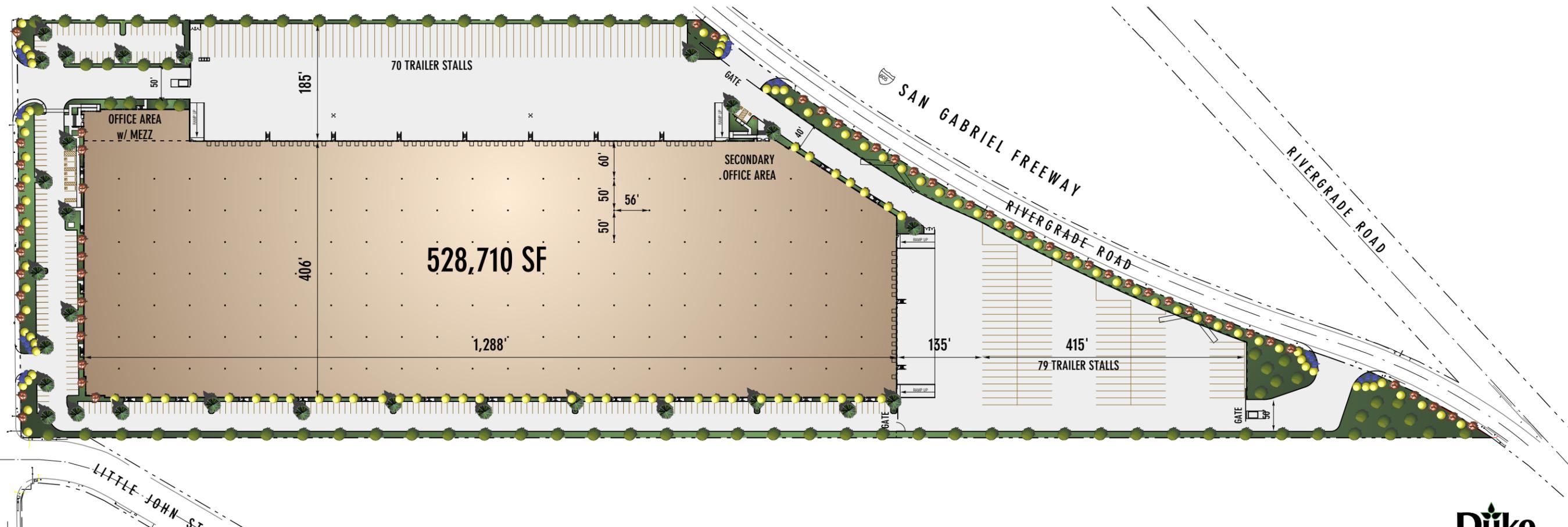
1.1 Project Description and Location

The Project site is located in the City of Irwindale, located in central Los Angeles County. The Project site is an ±24.88-acre lot located along Rivergrade Road and Los Angeles Street. The irregular shaped site is generally bound by Interstate 605 to the north and west, industrial uses and residences located in the City of Baldwin Park to the east, and Los Angeles Street to the south. The Project is proposing a 528,710 square foot concrete tilt-up building that will be used for industrial purposes (see Figure 1. *Site Plan*). The site has been previously developed as an industrial use and is currently occupied with multiple buildings proposed from demolition.

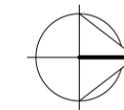
The Project site is designated by the City of Irwindale General Plan as "Industrial/Business Park". According to the General Plan, the Industrial/Business Park designation allows for office, manufacturing, and warehouse uses, including commercial manufacturing, light manufacturing, and heavy manufacturing.

Location: N:\2019\2019-030 Industrial Spec Tilt-Up Project\MAPS\Borders\Irwindale_Industrial_Spec_Tilt-Up_Site_Plan.mxd (44)-mapping_auest_7/9/2019

LOS ANGELES STREET



SITE PLAN



Map Date: 7/9/2019
Source: RGA



Figure 1 Site Plan

2019-030 Irwindale Industrial Spec Tilt-Up Project

2.0 HEALTH RISK ASSESSMENT

2.1 Environmental Setting

2.1.1 Climate and Meteorology

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

Climate

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

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

Meteorology

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

A temperature inversion is defined as an increase in temperature with height, or to the layer within which such an increase occurs. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities.

Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Inversions are usually lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O₃) observed during summer months in the Basin. Smog in southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

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

Toxic Air Contaminants

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

Hazardous Air Pollutants (HAPs) is a term used by the federal Clean Air Act (FCAA) that includes a variety of pollutants generated or emitted by industrial production activities. Identified as TACs under the California Clean Air Act (CCAA), 10 have been singled out through ambient air quality data as being the most substantial health risk in California. Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders. CARB provides emission inventories for only the larger air basins.

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

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

Acetaldehyde

Acetaldehyde is directly emitted into the atmosphere and is also formed in the atmosphere from photochemical oxidation. Acetaldehyde is generated as exhaust from mobile sources and fuel

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

Benzene

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

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

1,3-Butadiene

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

Carbon Tetrachloride

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

Chromium, Hexavalent

Chromium plating and other metal finishing processes are the primary sources of hexavalent chromium emissions in California. California has identified hexavalent chromium as a carcinogen. Exposure to

inhaled hexavalent chromium may result in lung cancer, and short-term exposure symptoms may include renal toxicity, gastrointestinal hemorrhage, and intravascular hemolysis.

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

Para-Dichlorobenzene

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

Formaldehyde

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

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

Methylene Chloride

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

Perchloroethylene

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

Diesel Particulate Matter

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

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

In its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Using information from OEHHA's assessment, CARB estimates that diesel particle levels measured in California's air in 2000 could cause 540 "excess" cancers in a population of one million people over a 70-year lifetime. Other researchers and scientific organizations, including the National Institute for Occupational Safety and Health, have calculated cancer risks from diesel exhaust similar to those developed by OEHHA and CARB.

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

Diesel engines are a major source of fine particulate pollution. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Numerous

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

Sensitive Receptors

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

| Type | Distance from Project Site at the Nearest (feet) ¹ | Direction from Project Site | Location |
|--------------------------------------|---|-----------------------------|----------------------------|
| Residential Neighborhood | 670 | East | East of Little John Street |
| School (Walnut Elementary School) | 2,115 | Northeast | East of Center Street |

Source: ¹Google Earth 2019

2.2 Regulatory Framework

2.2.1 Federal

Clean Air Act

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

In 2001, the U.S. Environmental Protection Agency (USEPA) issued its first Mobile Source Air Toxics Rule, which identified 21 mobile source air toxic (MSAT) compounds as being HAPs that required regulation. A subset of six of these MSAT compounds were identified as having the greatest influence on health and included benzene, 1,3-butadiene, formaldehyde, acrolein, acetaldehyde, and DPM. More recently, the USEPA issued a second MSAT Rule in February 2007, which generally supported the findings in the first rule and provided additional recommendations of compounds having the greatest impact on health. The rule also identified several engine emission certification standards that must be implemented. Unlike the

criteria pollutants, toxics do not have National Ambient Air Quality Standards (NAAQS) making evaluation of their impacts more subjective.

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

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

2.2.2 State

California Air Resources Board

CARB's statewide comprehensive air toxics program was established in 1983 with AB 1807 the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

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

Diesel Risk Reduction Plan

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

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen (NO_x) emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks must be retrofitted with PM filters beginning January 1, 2012, and older trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses would need to have 2010 model year engines or equivalent.

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

Heavy-Duty Vehicle Idling Emission Reduction Program

The purpose of the CARB ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling is to reduce public exposure to diesel particulate matter and criteria pollutants by limiting the idling of diesel-fueled commercial vehicles.¹ The driver of any vehicle subject to this ATCM is prohibited from idling the vehicle's primary diesel engine for greater than five minutes at any location and is prohibited from idling a diesel-fueled auxiliary power system for more than five minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle if it has a sleeper berth and the truck is located within 100 feet of a restricted area (homes and schools).

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

2.2.3 Local

South Coast Air Quality Management District

The CCAA provides the SCAQMD with the authority to manage transportation activities at indirect sources and regulate stationary source emissions. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. An example would be the motor vehicles at an intersection, a mall, and on highways. As a state agency, CARB regulates motor vehicles and fuels for their emissions.

¹ The *ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling* is codified in Title 13 of the California Code of Regulations, Chapter 10, Section 2485.

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

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

MATES-IV is the most comprehensive dataset documenting the ambient air toxic levels and health risks associated with the Basin emissions. Therefore, MATES-IV study represents the baseline health risk for a cumulative analysis. MATES-IV estimates the average excess cancer risk level from exposure to TACs is less than 400 in one million basin-wide. These model estimates were based on monitoring data collected at 10 fixed sites within the Basin. None of the fixed monitoring sites are within the local area of the Project site. However, MATES-IV has extrapolated the excess cancer risk levels throughout the basin by modeling the specific grids. MATES-IV modeling predicted an excess cancer risk of 427 in one million for the Project area. DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 68 percent of the total risk shown in MATES-IV.

2.3 Health Risk and Hazard Assessment

2.3.1 Thresholds of Significance

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

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

Cancer risk is expressed in terms of expected incremental incidence per million population. The SCAQMD has established an incidence rate of 10 persons per million as the maximum acceptable incremental cancer risk due to DPM exposure. This threshold serves to determine whether or not a given project has a

potentially significant development-specific and cumulative impact. The 10-in-one-million standard is a very health-protective significance threshold. A risk level of 10 in one million implies a likelihood that up to 10 persons out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of toxic air contaminants over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million, which is 100 times more than the SCAQMD's threshold of 10 in one million.

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

2.3.2 Methodology

This HRA evaluates potential health risks associated with the emission of DPM resulting from the implementation of the Proposed Project. As previously described, CARB estimates that about 70 percent of the cancer risk that the average Californian faces from breathing toxic air pollutants stems from diesel exhaust particles.

The air dispersion modeling for the HRA was performed using the USEPA AERMOD dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources (not a factor in this case). AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Surface and upper air meteorological data provided by the SCAQMD for Azusa Meteorological Station was selected as being the most representative meteorology based on proximity to the Project site as well as being within the same SCAQMD source receptor area (SRA). The SCAQMD divides the Basin into 38 SRAs to forecast and report air quality. Both the Project site and the Azusa Meteorological Station are located in SCAQMD SRA 9, known as the East San Gabriel Valley.

Emissions sources in the model include two area sources to represent the loading docks located at two different locations on the Project site (see Figure 1). Additionally, emissions sources in the model include a volume line source (comprised of 42 volume sources) representing the onsite truck circulation at the Project site, and a volume line source (comprised of 28 volume sources) representing the offsite truck circulation extending approximately 1,500 feet to the west of the Project site along Los Angeles Street, as well as approximately 2,550 feet to the east of the Project site along Los Angeles Street. The separated line 2W volume source was employed consistent with the recommendations of the California Air Pollution Control Officers Association (CAPCOA) Health Risk Assessments for Proposed Land Use Projects (2009) document (page 54 of Attachment 1, *Technical Modeling Guidance*), which provides guidance for modeling roads/line sources in AERMOD. This guidance is necessary since AERMOD does not have a pollutant source option directly specific to mobile sources. According to CAPCOA, the best method for

modeling emissions from travelling truck vehicles in AERMOD is to use a series of multiple volume sources. 2W volume sources involves a series of volume sources to approximate a line source. Using the width of the road as the length of the side of a single volume source, the number of volume sources along the length of the road is determined by dividing the length of the road by 2W. The number of volume sources is then determined in order to replicate a mobile source of pollutants traveling a roadway within the AERMOD software. This methodology is consistent with the USEPA *AERMOD User's Guide*. AERMOD can be used to predict the concentrations of pollutants emitted from vehicles on roads. The maximum daily exhaust emissions for all diesel equipment was used to produce an emission rate in terms of grams per second per square meter. Emissions from heavy trucks were assigned a release height of 3.65 meters in order to provide a conservative analysis (i.e., using a higher release height would result in a smaller impact by allowing pollutants to disperse before they affect a receptor).

The estimated number of daily heavy-duty trucks was obtained from KOA (2019). It is noted that the SCAQMD Notice of Preparation comment letter recommends estimating the Project fleet mix based on 0.64 average daily heavy-duty truck trips per 1,000 square feet of proposed industrial warehouse building space. Employing this SCAQMD-recommended metric results in an estimate of 338 heavy-duty truck trips daily ($0.64 \times 528,710 = 338$). However, this analysis is based on an estimate of 557 heavy-duty truck trips daily (349 three- and four-axle heavy-heavy-duty trucks and 208 two-axle medium-heavy-duty trucks) as provided by KOA, and thus is more conservative than recommended by the SCAQMD.

The model was run to obtain the peak 24-hour and annual average concentration in micrograms per cubic meter [$\mu\text{g}/\text{m}^3$] at nearby sensitive receptors. According to the SCAQMD's Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588), air dispersion modeling is required to estimate (a) annual average concentrations to calculate the Maximum Individual Cancer Risk, the maximum chronic hazard index, the zones of impact and (b) peak hourly concentrations to calculate the health impact from substances with acute non-cancer health effects. To achieve these goals, the receptor grid should extend to cover the zone of impact. To achieve these goals, the receptor grid in the model begins at the facility fence line and extends to cover the zone of impact, which is the residential community (consisting of several schools) to the east. Per SCAQMD recommendations, in order "to identify the maximum impacted receptors (i.e., peak cancer risk and peak hazard indices) a grid spacing of 75 meters is used" (SCAQMD recommends that a receptor grid be spaced at 75 meters when analyzing the effects of a facility spanning 25 to 100 acres). The analysis does not miss potential peak concentration levels at any sensitive receptors as the potential peak concentration levels at sensitive receptors are identified through the examination of pollutant concentration contour mapping. Where multiple concentration levels are identified within a single receptor grid, the highest concentration level identified is used for the purpose of determining the health risk within that receptor grid.

Note that the concentration estimates developed using this methodology are considered conservative and are not a specific prediction of the actual concentrations that would occur as a result of the Project at any one point in time. Actual 24-hour and annual average and concentrations are dependent on many variables, particularly the number and type of equipment working at specific distances during time periods of adverse meteorology.

A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 70-year lifetime basis, 30-year, and 9-year exposure scenarios. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the OEHHA Guidance Manual (2015). Only the risk associated with operations of the Proposed Project was assessed as risk associated with Project construction emissions are analyzed in the *Project Air Quality and Greenhouse Gas Assessment* prepared by ECORP.

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

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

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

Where:

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

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

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to the facility's emissions are not occurring away from home. OEHHA recommends the following FAH values: from the third trimester to

age <2 years, 85 percent of time is spent at home; from age two through <16 years, 72 percent of time is spent at home; from age 16 years and greater, 73 percent of time is spent at home.

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

$$\text{Risk}_{\text{inh-res}} = (\text{Dose}_{\text{air}} * \text{CPH} * \text{ASF} * \text{ED/AT} * \text{FAH})$$

Where:

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

Chronic Non-Cancer Hazard

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

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

Where:

| | | |
|------|---|--|
| Ci | = | Concentration in the air of substance i (annual average concentration in µg/m ³) |
| RELi | = | Chronic noncancer Reference Exposure Level for substance i (µg/m ³) |

Acute Non-Cancer Hazard

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

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

2.3.3 Impact Analysis

Project Risk and Hazard Assessment

CARB identified DPM as a TAC in 1998. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Diesel

exhaust is composed of two phases, either gas or particulate; both contribute to the risk. The gas phase is composed of many of the urban HAPs, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde, and polycyclic aromatic hydrocarbons. The particulate phase has many different types that can be classified by size or composition. The sizes of diesel particulates of greatest health concern are fine and ultrafine particles. These particles may be composed of elemental carbon with adsorbed² compounds such as organics, sulfates, nitrates, metals, and other trace elements. Diesel exhaust is emitted from a broad range of on- and off-road diesel engines. As the Project would accommodate daily visits from heavy-duty diesel trucks during operations, an analysis of DPM was performed using the USEPA-approved AERMOD model.

Non-Carcinogenic Hazards

The significance thresholds for TAC exposure requires an evaluation of non-cancer risk stated in terms of a hazard index. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is similar to the procedure for chronic non-cancer impacts.

An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index at a sensitive receptor associated with DPM emissions from the Project would be 0.0013 and 0.0347, respectively. This concentration would occur at the residential neighborhood located east of the Project site, specifically at the western cul-de-sac of Benbow Street. Therefore, non-carcinogenic hazards are calculated to be within acceptable limits.

Carcinogenic Risk

Vehicle DPM emissions were estimated using emission factors for coarse particulate matter less than 10 microns in diameter (PM₁₀) generated with the 2017 version of the Emission FACtor model (EMFAC) developed by CARB. EMFAC 2017 is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by CARB to project changes in future emissions from on-road mobile sources. The most recent version of this model, EMFAC 2017, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled by speed, and number of starts per day. The most important improvement in EMFAC 2017 is the integration of the new data and methods to estimate emissions from diesel trucks and buses. The model includes the emissions benefits of the truck and bus rule and the previously adopted rules for other on-road diesel equipment.

For this Project, annual average PM₁₀ emission factors were generated by running EMFAC 2017 for vehicles in the Basin within Los Angeles County. EMFAC generates emission factors in terms of grams of

²This term is specifically used for gases.

pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of vehicle speed, temperature, and relative humidity. The model was run for speeds traveled on and within the vicinity of the Project site. The vehicle travel speeds for each segment modeled are summarized below.

- Idling (15 minutes per truck) – onsite loading/unloading; and
- five miles per hour – onsite vehicle movement including driving and maneuvering; and
- 35 miles per hour – offsite vehicle movement including driving and maneuvering.

The average PM₁₀ emission factors for heavy trucks were calculated based on the annual average emission factors for various exposure periods associated with assumptions for evaluating exposure over three different periods (i.e., 70-, 30-, and 9-year exposure scenarios). The posted speed limit on Los Angeles Street is 40 miles per hour. The average PM₁₀ emission factor for heavy trucks traveling 35 miles per hour is greater than those traveling 40 miles per hour. Thus, the use of an emissions factor for trucks traveling 35 miles per hour is conservative.

Based on the AERMOD outputs, the expected annual average diesel PM₁₀ emission concentrations at the most exposed sensitive receptor (located at the western cul-de-sac of Benbow Street) resulting from operation of the Project (557 daily heavy-duty truck trips) would be 0.007 µg/m³ at the greatest.

Cancer risk calculations for residences are based on 70-, 30-, and 9-year exposure periods while schools are based on a 9-year exposure period. The calculated carcinogenic risk at the sensitive receptor as a result of the Project is depicted in Table 2. As shown, impacts related to cancer risk from heavy trucks would be less than significant at the nearest residences and nearest school.

| Table 2. Maximum Operational Health Risk at the Project Vicinity Residential Neighborhoods | | | |
|---|---|--|---|
| Exposure Scenario | Maximum Cancer Risk (Risk per Million) | Significance Threshold (Risk per Million) | Exceeds SCAQMD Significance Threshold? |
| Residences to the East with Highest Pollutant Concentrations | | | |
| 70-Year Exposure | 3.24 | 10 | No |
| 30-Year Exposure | 2.73 | 10 | No |
| 9-Year Exposure | 1.96 | 10 | No |
| Walnut Elementary School to the Northeast | | | |
| 9-Year Exposure | 1.02 | 10 | No |

Source: Refer to **Attachment A** for Model Data Outputs.

Notes: The elementary school is only analyzed for nine years of exposure as students are not expected to attend school beyond those years.

In conclusion, non-carcinogenic hazards resulting from the proposed Project are calculated to be within acceptable limits. Additionally, impacts related to cancer risk from heavy trucks would be less than significant at the nearest residences and nearest school. Therefore, impacts related to health risk from the Project would be less than significant.

3.0 REFERENCES

- CAPCOA. 2009. *Health Risk Assessments for Proposed Land Use Projects*.
- CARB. 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*.
- Google Earth. 2019. Available online at: <https://earth.google.com/web/@34.09480602,-117.98182982,105.57081052a,4061.62841983d,35y,0h,0t,0r>.
- KOA. 2019. *Traffic Impact Study: Irwindale Industrial Project 13131 Los Angeles Street*.
- OEHHA. 2015. *Guidance Manual for Preparation of Health Risk Assessments. Risk Assessment Guidelines. Air, Community, and Environmental Research Branch Office of Environmental Health Hazard Assessment*. California Environmental Protection Agency. February. Available online at: <https://oehha.ca.gov/media/downloads/cnr/2015guidancemanual.pdf>
- SCAQMD. 2015. *Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES IV*. Final Report. May. Available online at: <https://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf?sfvrsn=7>.
- _____. 2008. *Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES III*. Available online at: <https://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iii>.
- _____. 2004. *Draft Addendum to the Air Toxics Control Plan (March 2000)*. March. Available online at: <https://www.aqmd.gov/home/air-quality/clean-air-plans/clean-communities-plan/air-toxics-control-plan>
- _____. 2000. *An Air Toxics Control Plan for the Next Ten Years. Final Draft*. March. Available online at: <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-toxics-control-plan/air-toxics-control-plan.pdf?sfvrsn=2>

Health Risk Calculations and AERMOD Outputs

Health Risk Calculations

**Irwindale Industrial Project
DPM Emissions Calculations**

| On-Site Truck Movement | | | Avg Speed (mph) | Emission Factor (g/mi) | Daily Truck Trips (round trips) | length (mi) | g/day | g/sec |
|------------------------|--|--|-----------------|------------------------|---------------------------------|-------------|----------|----------|
| Project Trucks | | | 5 | 0.063650 | 557 | 0.8 | 2.84E+01 | 3.28E-04 |

| Off-Site Truck Movement | | | Avg Speed (mph) | Emission Factor (g/mi) | Daily Truck Trips (round trips) | length (mi) | g/day | g/sec |
|-------------------------|--|--|-----------------|------------------------|---------------------------------|-------------|----------|----------|
| Project Trucks | | | 35 | 0.015929 | 557 | 0.8 | 7.10E+00 | 8.22E-05 |

| On-Site Vehicle Idle Emissions | | Emission Factor (g/veh/day) | Idling Time (min) | Idling Time (hrs/day) | Daily Trucks | Release Height Above Ground (m) | g/day | g/sec |
|--------------------------------|--|-----------------------------|-------------------|-----------------------|--------------|---------------------------------|----------|----------|
| Project Trucks | | 0.004595 | 15 | 1.04E-02 | 279 | 3.65 | 1.34E-02 | 1.55E-07 |

| # sources | EVS |
|-----------|-----------------|
| 42 | 7.82E-06 |
| | 7.82E-06 |
| | |
| 28 | 2.93E-06 |
| | 2.93E-06 |
| | |
| 4 | 3.86E-08 |

Sources:
EMFAC2017. PM10 Emission Factors are derived from the Year 2021 Heavy-Duty Truck Fleet Mix

Notes:
The Project will accommodate 557 inbound and outbound truck trips daily. Thus each visting truck results in 2 trips, equating to 279 idling events daily.

DPM Health Risk at Highest Pollutant Concentration Residence East Neighborhood

Risk Calculations

1 Hour Avg Concentration: 0.063
 24 Hour Avg Concentration: 0.019
 Annual Avg Concentration: 0.007

Cancer Risk

| | | | | | | |
|--|---------------|-------------|-------------|-------------|--------------|-------------|
| | 3rd trimester | 0<2 years | 2<9 years | 2<16 years | 16<30 years | 16<70 years |
| DOSE _{air} = (C _{air} *(BR/BW)*A*EF*10 ⁻⁶) | 1.42397E-06 | 4.16433E-06 | 3.38589E-06 | 2.8606E-06 | 1.32904E-06 | 1.1708E-06 |
| Risk = DOSE _{air} * CPF * ASF * ED/AT * FAH | 4.75505E-08 | 1.11247E-06 | 8.04488E-07 | 1.35936E-06 | 2.134440E-07 | 7.2527E-07 |

| | | | |
|--------------|------------------|-------------------|----------------|
| Cancer Risk: | | Risk | in one million |
| | 70-year exposure | 3.24E-06 | 3.24 |
| | 30-year exposure | 2.73E-06 | 2.73 |
| | 9-year exposure | 1.96E-06 | 1.96 |
| Threshold: | | 10 in one million | |

| | | | | |
|-------|-------------------------------|----------|---------------------------|---|
| | DOSE _{air} | | mg/kg-d | Dose through inhalation |
| | CPF | 1.1 | (mg/kg/day) ⁻¹ | Cancer Potency Factor for DPM |
| BR/BW | BR/BW (3rd trimester) | 225 | L/kg | Daily Breathing rate normalized to body weight |
| | BR/BW (0 < 2 years) | 658 | bodyweight-day | |
| | BR/BW (2 < 9 years) | 535 | | |
| | BR/BW (2 < 16 years) | 452 | | |
| | BR/BW (16 < 30 years) | 210 | | |
| | BR/BW (16 < 70 years) | 185 | | |
| | 10 ⁻⁶ | 1.00E-06 | | Micrograms to milligrams conversions, liters to cubic meters conversion |
| | C _{air} | 0.0066 | ug/m ³ | Concentration in air (ug/m ³), modeled annual average concentration |
| | A | 1 | | Inhalation absorption factor |
| | EF | 0.96 | days/year | Exposure frequency (days/year) |
| ED | ED (3rd trimester) | 0.25 | years | Exposure duration (years) |
| | ED (0 < 2 years) | 2 | | |
| | ED (2 < 9 years) | 7 | | |
| | ED (2 < 16, 16 < 30 years) | 14 | | |
| | ED (16 - 70 years) | 54 | | |
| | AT | 70 | years | Averaging time period over which exposure is averaged |
| ASF | ASF (3rd trimester - 2 years) | 10 | | Age Sensitivity Factor |
| | ASF (2 - 16 years) | 3 | | |
| | ASF (16 - 70 years) | 1 | | |
| | | | | |
| FAH | FAH (3rd trimester - 2 years) | 0.85 | | Fraction of time spent at home (unitless) |
| | FAH (2 - 16 years) | 0.72 | | |
| | FAH (16 - 70 years) | 0.73 | | |

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **1.32E-03**

C_i 6.60E-03 Concentration (annual average)

REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

Acute HQ = **3.47E-02**

Max Hourly 6.60E-03

Acute REL (Acrolein) 0.19

DPM Health Risk at Walnut Elementary School

Risk Calculations

1 Hour Avg Concentration: 0.029
 24 Hour Avg Concentration: 0.010
 Annual Avg Concentration: 0.003

Cancer Risk

| | | | | | | |
|---|---------------|-------------|-------------|-------------|--------------|-------------|
| | 3rd trimester | 0<2 years | 2<9 years | 2<16 years | 16<30 years | 16<70 years |
| DOSEair = (Cair*(BR/BW)*A*EF*10 ⁻⁶) | 5.82534E-07 | 1.70359E-06 | 1.38514E-06 | 1.17025E-06 | 5.43699E-07 | 4.7897E-07 |
| Risk = DOSEair * CPF * ASF * ED/AT * FAH | 2.28853E-08 | 5.35414E-07 | 4.57095E-07 | 7.72363E-07 | 1.196137E-07 | 4.0644E-07 |

Cancer Risk: Risk in one million

| | | |
|-----------------|----------|-------------|
| 9-year exposure | 1.02E-06 | 1.02 |
|-----------------|----------|-------------|

Threshold: 10 in one million

| | | | | |
|-------|-------------------------------|----------|---|---|
| | DOSEair | | mg/kg-d | Dose through inhalation |
| | CPF | 1.1 | (mg/kg/day) ⁻¹ | Cancer Potency Factor for DPM |
| BR/BW | BR/BW (3rd trimester) | 225 | L/kg | Daily Breathing rate normalized to body weight |
| | BR/BW (0 < 2 years) | 658 | bodyweight-day | |
| | BR/BW (2 < 9 years) | 535 | | |
| | BR/BW (2 < 16 years) | 452 | | |
| | BR/BW (16 < 30 years) | 210 | | |
| | BR/BW (16 < 70 years) | 185 | | |
| | 10 ⁻⁶ | 1.00E-06 | | Micrograms to milligrams conversions, liters to cubic meters conversion |
| | Cair | 0.0027 | ug/m ³ | Concentration in air (ug/m ³), modeled annual average concentration |
| | A | 1 | | Inhalation absorption factor |
| | EF | 0.96 | days/year | Exposure frequency (days/year) |
| ED | ED (3rd trimester) | 0.25 | years | Exposure duration (years) |
| | ED (0 < 2 years) | 2 | | |
| | ED (2 < 9 years) | 7 | | |
| | ED (2 < 16, 16 < 30 years) | 14 | | |
| | ED (16 - 70 years) | 54 | | |
| | AT | 70 | years | Averaging time period over which exposure is averaged |
| ASF | ASF (3rd trimester - 2 years) | 10 | Age Sensitivity Factor | |
| | ASF (2 - 16 years) | 3 | | |
| | ASF (16 - 70 years) | 1 | | |
| FAH | FAH (3rd trimester - 2 years) | 1 | Fraction of time spent at home (unitless) | |
| | FAH (2 - 16 years) | 1 | | |
| | FAH (16 - 70 years) | 1 | | |

Chronic Noncancer Hazard

Threshold: 1

Hazard Quotient = C_i/REL_i

HQ = **5.40E-04**

C_i 2.70E-03 Concentration (annual average)

REL_i 5 Reference Exposure Level

Acute NonCancer Hazard

Threshold: 1

Acute HQ = Maximum Hourly Concentration/Acute REL

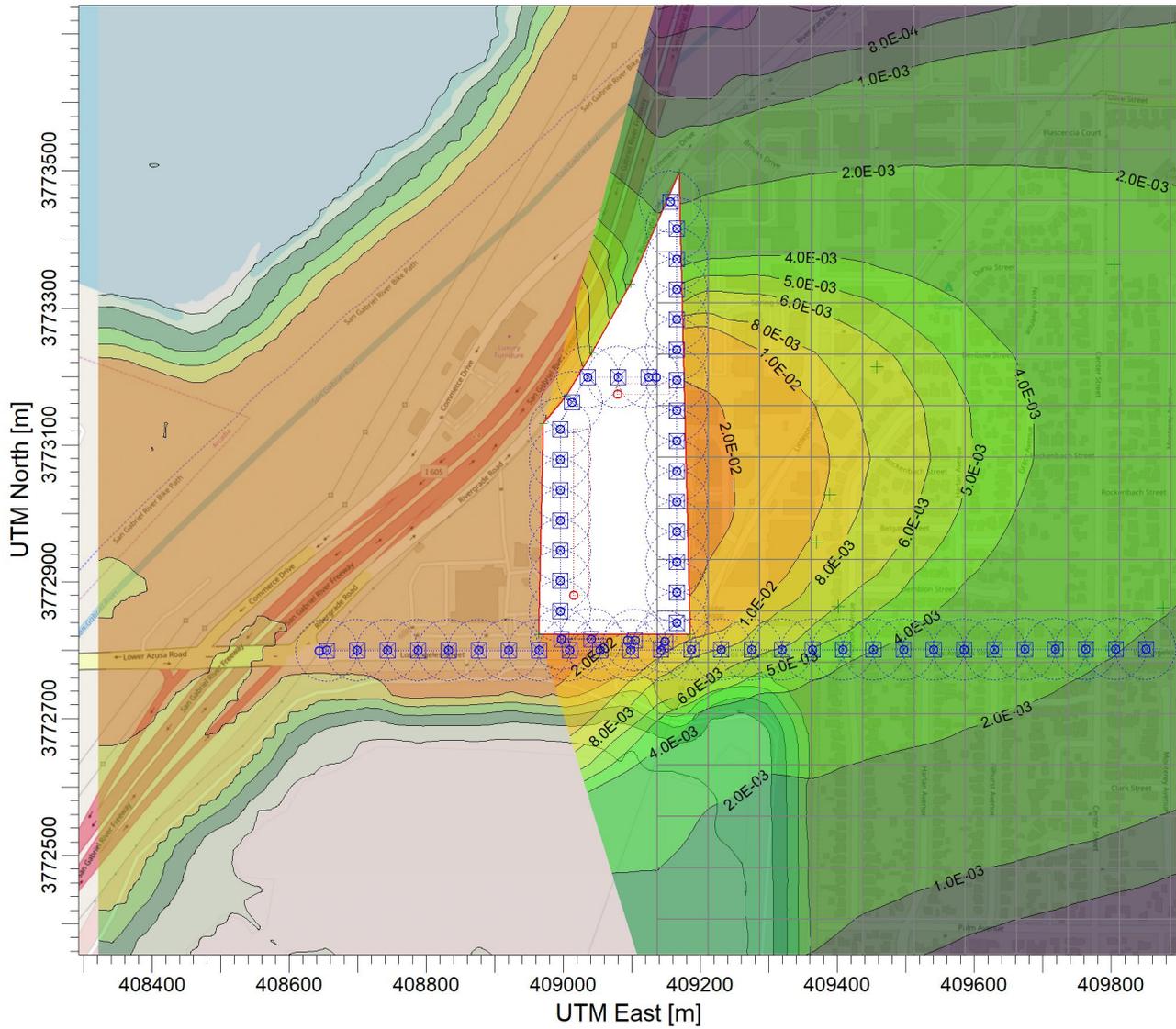
Acute HQ = **1.42E-02**

Max Hourly 2.70E-03

Acute REL (Acrolein) 0.19

PROJECT TITLE:

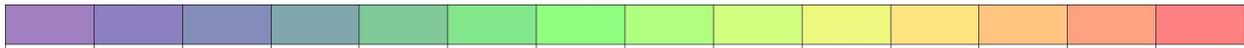
C:\Lakes\AERMOD View\Irwindale Industrial\Irwindale Industrial.isc



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: ALL

ug/m³

Max: 4.8E-02 [ug/m³] at (409137.19, 3773157.01)



4.8E-04 5.0E-04 6.0E-04 8.0E-04 1.0E-03 2.0E-03 4.0E-03 5.0E-03 6.0E-03 8.0E-03 1.0E-02 2.0E-02 4.0E-02 4.8E-02

COMMENTS:

SOURCES:

COMPANY NAME:

5

RECEPTORS:

MODELER:

265

OUTPUT TYPE:

SCALE: 1:10,091

Concentration



MAX:

DATE: **11/22/2019**

PROJECT NO.:

4.8E-02 ug/m³

Optional Files



Re-Start File



Init File



Multi-Year Analyses



Event Input File



Error Listing File

Detailed Error Listing File

Filename: Irwindale Industrial.err

Source Pathway - Source Inputs

AERMOD

Area Sources

| Source Type | Source ID | X Coordinate [m] | Y Coordinate [m] | Base Elevation (Optional) | Release Height [m] | Emission Rate [g/ (s-m^2)] | Length of X Side [m] | Length of Y Side [m] | Orientation Angle from North [deg] | Initial Vertical Dim. [m] |
|-------------|-----------|------------------|------------------|---------------------------|--------------------|----------------------------|----------------------|----------------------|------------------------------------|---------------------------|
| AREA | AREA1 | 409079.00 | 3773174.00 | 108.06 | 3.68 | 3.86E-8 | 76.20 | 15.00 | 0.00 | |
| | | Loading Dock 1 | | | | | | | | |
| AREA | AREA2 | 409015.00 | 3772880.00 | 106.56 | 3.68 | 1.16E-7 | 22.86 | 243.84 | 0.00 | |
| | | Loading Dock 2 | | | | | | | | |

Source Pathway - Source Inputs

AERMOD

Line Volume Sources

Source Type: LINE VOLUME

Source: SLINE2 (onsite circulation)

| Length of Side [m] | Emission Rate [g/ s] | Building Height [m] | X Coordinate for Points [m] | Y Coordinate for points [m] | Base Elevation [m] | Release Height [m] |
|--------------------|----------------------|---------------------|-----------------------------|-----------------------------|--------------------|--------------------|
| 22.15 | 7.82E-6 | | 409093.52 | 3772814.46 | 105.58 | 3.65 |
| | | | 409165.57 | 3772812.46 | 105.40 | 3.65 |
| | | | 409165.57 | 3773448.92 | 110.05 | 3.65 |
| | | | 409153.56 | 3773456.93 | 109.94 | 3.65 |

Source Type: LINE VOLUME

Source: SLINE3 (onsite circulation)

| Length of Side [m] | Emission Rate [g/ s] | Building Height [m] | X Coordinate for Points [m] | Y Coordinate for points [m] | Base Elevation [m] | Release Height [m] |
|--------------------|----------------------|---------------------|-----------------------------|-----------------------------|--------------------|--------------------|
| 22.15 | 7.82E-6 | | 409135.55 | 3773198.74 | 108.64 | 3.65 |
| | | | 409033.47 | 3773198.74 | 108.73 | 3.65 |
| | | | 408995.45 | 3773132.69 | 107.95 | 3.65 |
| | | | 408995.45 | 3772822.46 | 105.69 | 3.65 |
| | | | 408993.45 | 3772816.46 | 105.51 | 3.65 |
| | | | 409061.50 | 3772816.46 | 105.59 | 3.65 |

Source Type: LINE VOLUME

Source: SLINE4 (Offsite circulation)

| Length of Side [m] | Emission Rate [g/ s] | Building Height [m] | X Coordinate for Points [m] | Y Coordinate for points [m] | Base Elevation [m] | Release Height [m] |
|--------------------|----------------------|---------------------|-----------------------------|-----------------------------|--------------------|--------------------|
| 22.15 | 2.93E-6 | | 408643.97 | 3772799.39 | 105.50 | 3.65 |
| | | | 409875.92 | 3772801.46 | 109.38 | 3.65 |

Source Pathway - Source Inputs

AERMOD

Volume Sources Generated from Line Sources

| Line Source ID | Volume Source ID | X Coordinate [m] | Y Coordinate [m] | Base Elevation [m] | Release Height [m] | Emission Rate [g/s] | Length of Side [m] | Building Height [m] | Initial Lateral Dimencion [m] | Initial Vertical Dimencion [m] |
|----------------|------------------|------------------|------------------|--------------------|--------------------|---------------------|--------------------|---------------------|-------------------------------|--------------------------------|
| SLINE2 | L0000085 | 409104.59 | 3772814.15 | 105.58 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000086 | 409148.87 | 3772812.92 | 105.49 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000087 | 409165.57 | 3772840.05 | 106.12 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000088 | 409165.57 | 3772884.35 | 107.22 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000089 | 409165.57 | 3772928.65 | 107.27 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000090 | 409165.57 | 3772972.95 | 107.37 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000091 | 409165.57 | 3773017.25 | 107.58 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000092 | 409165.57 | 3773061.55 | 107.70 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000093 | 409165.57 | 3773105.85 | 107.84 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000094 | 409165.57 | 3773150.15 | 108.20 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000095 | 409165.57 | 3773194.45 | 108.94 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000096 | 409165.57 | 3773238.75 | 109.62 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000097 | 409165.57 | 3773283.05 | 109.67 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000098 | 409165.57 | 3773327.35 | 109.72 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000099 | 409165.57 | 3773371.65 | 109.75 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000100 | 409165.57 | 3773415.95 | 109.98 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000101 | 409156.15 | 3773455.21 | 110.03 | 3.65 | 4.60E-7 | 22.15 | | 20.60 | 2.37 |

| Line Source ID | Volume Source ID | X Coordinate [m] | Y Coordinate [m] | Base Elevation [m] | Release Height [m] | Emission Rate [g/s] | Length of Side [m] | Building Height [m] | Initial Lateral Dimencion [m] | Initial Vertical Dimencion [m] |
|----------------|------------------|------------------|------------------|--------------------|--------------------|---------------------|--------------------|---------------------|-------------------------------|--------------------------------|
| SLINE3 | L0000102 | 409124.47 | 3773198.74 | 108.64 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000103 | 409080.17 | 3773198.74 | 109.07 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000104 | 409035.87 | 3773198.74 | 108.72 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000105 | 409012.57 | 3773162.43 | 108.52 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000106 | 408995.45 | 3773122.70 | 107.90 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |

Source Pathway - Source Inputs

AERMOD

| Line Source ID | Volume Source ID | X Coordinate [m] | Y Coordinate [m] | Base Elevation [m] | Release Height [m] | Emission Rate [g/s] | Length of Side [m] | Building Height [m] | Initial Lateral Dimencion [m] | Initial Vertical Dimencion [m] |
|----------------|------------------|------------------|------------------|--------------------|--------------------|---------------------|--------------------|---------------------|-------------------------------|--------------------------------|
| SLINE3 | L0000107 | 408995.45 | 3773078.40 | 107.39 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000108 | 408995.45 | 3773034.10 | 107.17 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000109 | 408995.45 | 3772989.80 | 106.92 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000110 | 408995.45 | 3772945.50 | 106.54 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000111 | 408995.45 | 3772901.20 | 106.47 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000112 | 408995.45 | 3772856.90 | 106.23 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000113 | 408996.97 | 3772816.46 | 105.58 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000114 | 409041.27 | 3772816.46 | 106.38 | 3.65 | 6.02E-7 | 22.15 | | 20.60 | 2.37 |

| Line Source ID | Volume Source ID | X Coordinate [m] | Y Coordinate [m] | Base Elevation [m] | Release Height [m] | Emission Rate [g/s] | Length of Side [m] | Building Height [m] | Initial Lateral Dimencion [m] | Initial Vertical Dimencion [m] |
|----------------|------------------|------------------|------------------|--------------------|--------------------|---------------------|--------------------|---------------------|-------------------------------|--------------------------------|
| SLINE4 | L0000115 | 408655.04 | 3772799.41 | 105.43 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000116 | 408699.34 | 3772799.49 | 105.18 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000117 | 408743.64 | 3772799.56 | 105.04 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000118 | 408787.94 | 3772799.64 | 105.06 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000119 | 408832.24 | 3772799.71 | 105.21 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000120 | 408876.54 | 3772799.78 | 105.26 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000121 | 408920.84 | 3772799.86 | 105.32 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000122 | 408965.14 | 3772799.93 | 105.46 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000123 | 409009.44 | 3772800.01 | 105.48 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000124 | 409053.74 | 3772800.08 | 105.34 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000125 | 409098.04 | 3772800.15 | 104.67 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000126 | 409142.34 | 3772800.23 | 104.62 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000127 | 409186.64 | 3772800.30 | 104.90 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000128 | 409230.94 | 3772800.38 | 105.92 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000129 | 409275.24 | 3772800.45 | 106.93 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |

Source Pathway - Source Inputs

AERMOD

| Line Source ID | Volume Source ID | X Coordinate [m] | Y Coordinate [m] | Base Elevation [m] | Release Height [m] | Emission Rate [g/s] | Length of Side [m] | Building Height [m] | Initial Lateral Dimension [m] | Initial Vertical Dimension [m] |
|----------------|------------------|------------------|------------------|--------------------|--------------------|---------------------|--------------------|---------------------|-------------------------------|--------------------------------|
| SLINE4 | L0000130 | 409319.54 | 3772800.53 | 107.22 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000131 | 409363.84 | 3772800.60 | 107.30 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000132 | 409408.14 | 3772800.67 | 107.42 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000133 | 409452.44 | 3772800.75 | 107.55 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000134 | 409496.74 | 3772800.82 | 107.71 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000135 | 409541.04 | 3772800.90 | 107.99 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000136 | 409585.34 | 3772800.97 | 108.36 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000137 | 409629.64 | 3772801.05 | 108.60 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000138 | 409673.94 | 3772801.12 | 108.74 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000139 | 409718.24 | 3772801.19 | 108.91 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000140 | 409762.54 | 3772801.27 | 109.02 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000141 | 409806.84 | 3772801.34 | 109.16 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |
| | L0000142 | 409851.14 | 3772801.42 | 109.32 | 3.65 | 1.05E-7 | 22.15 | | 20.60 | 2.37 |

Receptor Pathway

AERMOD

Receptor Networks

Note: Terrain Elevations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

| Receptor Network ID | Grid Origin X Coordinate [m] | Grid Origin Y Coordinate [m] | No. of X-Axis Receptors | No. of Y-Axis Receptors | Spacing for X-Axis [m] | Spacing for Y-Axis [m] |
|---------------------|------------------------------|------------------------------|-------------------------|-------------------------|------------------------|------------------------|
| UCART1 | 409137.19 | 3772257.01 | 12 | 21 | 75.00 | 75.00 |

Discrete Receptors

Discrete Cartesian Receptors

| Record Number | X-Coordinate [m] | Y-Coordinate [m] | Group Name (Optional) | Terrain Elevations | Flagpole Heights [m] (Optional) |
|---------------|------------------|------------------|-----------------------|--------------------|---------------------------------|
| 1 | 409401.47 | 3772863.91 | | 107.99 | |
| 2 | 409875.62 | 3772861.91 | | 109.93 | |
| 3 | 409457.48 | 3773214.03 | | 110.17 | |
| 4 | 409803.60 | 3773364.08 | | 112.42 | |

Plant Boundary Receptors

Cartesian Plant Boundary

Primary

| Record Number | X-Coordinate [m] | Y-Coordinate [m] | Group Name (Optional) | Terrain Elevations | Flagpole Heights [m] (Optional) |
|---------------|------------------|------------------|-----------------------|--------------------|---------------------------------|
| 1 | 409185.40 | 3772822.72 | FENCEPRI | 105.12 | |
| 2 | 409168.92 | 3773498.24 | FENCEPRI | 110.54 | |
| 3 | 409098.31 | 3773335.83 | FENCEPRI | 108.78 | |
| 4 | 409041.82 | 3773234.62 | FENCEPRI | 108.26 | |
| 5 | 409004.16 | 3773171.07 | FENCEPRI | 108.05 | |
| 6 | 408971.21 | 3773131.06 | FENCEPRI | 107.62 | |
| 7 | 408964.15 | 3772822.72 | FENCEPRI | 105.58 | |

Receptor Groups

| Record Number | Group ID | Group Description |
|---------------|----------|--|
| 1 | FENCEPRI | Cartesian plant boundary Primary Receptors |

Receptor Pathway

AERMOD

Terrain Elevations and Flagpole Heights for Network Grids

Uniform Cartesian Grid

| Receptor Network ID | Location: X-Coordinate [m] | Location: Y-Coordinate [m] | Terrain Elevations (Optional) | Flagpole Heights (Optional) |
|---------------------|----------------------------|----------------------------|-------------------------------|-----------------------------|
| UCART1 | 409137.19 | 3772257.01 | 55.30 | Option not Selected |
| | 409212.19 | 3772257.01 | 54.10 | |
| | 409287.19 | 3772257.01 | 66.40 | |
| | 409362.19 | 3772257.01 | 103.90 | |
| | 409437.19 | 3772257.01 | 105.70 | |
| | 409512.19 | 3772257.01 | 106.20 | |
| | 409587.19 | 3772257.01 | 106.20 | |
| | 409662.19 | 3772257.01 | 106.70 | |
| | 409737.19 | 3772257.01 | 107.10 | |
| | 409812.19 | 3772257.01 | 107.50 | |
| | 409887.19 | 3772257.01 | 107.60 | |
| | 409962.19 | 3772257.01 | 108.40 | |
| | 409137.19 | 3772332.01 | 53.80 | |
| | 409212.19 | 3772332.01 | 53.80 | |
| | 409287.19 | 3772332.01 | 63.20 | |
| | 409362.19 | 3772332.01 | 103.50 | |
| | 409437.19 | 3772332.01 | 105.70 | |
| | 409512.19 | 3772332.01 | 106.30 | |
| | 409587.19 | 3772332.01 | 106.70 | |
| | 409662.19 | 3772332.01 | 106.80 | |
| | 409737.19 | 3772332.01 | 107.20 | |
| | 409812.19 | 3772332.01 | 107.60 | |
| | 409887.19 | 3772332.01 | 108.10 | |
| | 409962.19 | 3772332.01 | 108.50 | |
| | 409137.19 | 3772407.01 | 54.00 | |
| | 409212.19 | 3772407.01 | 55.10 | |
| | 409287.19 | 3772407.01 | 65.60 | |
| | 409362.19 | 3772407.01 | 102.50 | |
| | 409437.19 | 3772407.01 | 105.50 | |
| | 409512.19 | 3772407.01 | 106.00 | |
| | 409587.19 | 3772407.01 | 106.90 | |
| | 409662.19 | 3772407.01 | 107.20 | |
| | 409737.19 | 3772407.01 | 107.70 | |
| | 409812.19 | 3772407.01 | 107.90 | |
| | 409887.19 | 3772407.01 | 108.40 | |
| | 409962.19 | 3772407.01 | 108.90 | |
| | 409137.19 | 3772482.01 | 56.00 | |
| | 409212.19 | 3772482.01 | 55.30 | |
| | 409287.19 | 3772482.01 | 65.10 | |
| | 409362.19 | 3772482.01 | 103.00 | |
| 409437.19 | 3772482.01 | 105.70 | | |
| 409512.19 | 3772482.01 | 106.60 | | |
| 409587.19 | 3772482.01 | 107.30 | | |
| 409662.19 | 3772482.01 | 107.40 | | |
| 409737.19 | 3772482.01 | 107.90 | | |

Receptor Pathway

AERMOD

| Receptor Network ID | Location: X-Coordinate [m] | Location: Y-Coordinate [m] | Terrain Elevations (Optional) | Flagpole Heights (Optional) |
|---------------------|----------------------------|----------------------------|-------------------------------|-----------------------------|
| UCART1 | 409812.19 | 3772482.01 | 108.20 | Option not Selected |
| | 409887.19 | 3772482.01 | 109.00 | |
| | 409962.19 | 3772482.01 | 109.50 | |
| | 409137.19 | 3772557.01 | 53.80 | |
| | 409212.19 | 3772557.01 | 54.60 | |
| | 409287.19 | 3772557.01 | 65.40 | |
| | 409362.19 | 3772557.01 | 103.40 | |
| | 409437.19 | 3772557.01 | 106.00 | |
| | 409512.19 | 3772557.01 | 106.80 | |
| | 409587.19 | 3772557.01 | 107.50 | |
| | 409662.19 | 3772557.01 | 107.90 | |
| | 409737.19 | 3772557.01 | 108.00 | |
| | 409812.19 | 3772557.01 | 108.30 | |
| | 409887.19 | 3772557.01 | 108.70 | |
| | 409962.19 | 3772557.01 | 109.10 | |
| | 409137.19 | 3772632.01 | 62.00 | |
| | 409212.19 | 3772632.01 | 65.80 | |
| | 409287.19 | 3772632.01 | 65.70 | |
| | 409362.19 | 3772632.01 | 103.50 | |
| | 409437.19 | 3772632.01 | 106.20 | |
| | 409512.19 | 3772632.01 | 107.00 | |
| | 409587.19 | 3772632.01 | 107.80 | |
| | 409662.19 | 3772632.01 | 108.10 | |
| | 409737.19 | 3772632.01 | 109.40 | |
| | 409812.19 | 3772632.01 | 108.90 | |
| | 409887.19 | 3772632.01 | 109.20 | |
| | 409962.19 | 3772632.01 | 109.40 | |
| | 409137.19 | 3772707.01 | 90.60 | |
| | 409212.19 | 3772707.01 | 77.50 | |
| | 409287.19 | 3772707.01 | 72.80 | |
| | 409362.19 | 3772707.01 | 107.00 | |
| | 409437.19 | 3772707.01 | 107.10 | |
| | 409512.19 | 3772707.01 | 107.20 | |
| | 409587.19 | 3772707.01 | 108.00 | |
| | 409662.19 | 3772707.01 | 108.50 | |
| | 409737.19 | 3772707.01 | 109.60 | |
| | 409812.19 | 3772707.01 | 109.30 | |
| | 409887.19 | 3772707.01 | 109.50 | |
| | 409962.19 | 3772707.01 | 109.90 | |
| | 409137.19 | 3772782.01 | 104.80 | |
| 409212.19 | 3772782.01 | 105.50 | | |
| 409287.19 | 3772782.01 | 107.00 | | |
| 409362.19 | 3772782.01 | 107.40 | | |
| 409437.19 | 3772782.01 | 107.70 | | |
| 409512.19 | 3772782.01 | 107.90 | | |
| 409587.19 | 3772782.01 | 108.50 | | |
| 409662.19 | 3772782.01 | 108.80 | | |
| 409737.19 | 3772782.01 | 109.00 | | |

Receptor Pathway

AERMOD

| Receptor Network ID | Location: X-Coordinate [m] | Location: Y-Coordinate [m] | Terrain Elevations (Optional) | Flagpole Heights (Optional) |
|---------------------|----------------------------|----------------------------|-------------------------------|-----------------------------|
| UCART1 | 409812.19 | 3772782.01 | 109.30 | Option not Selected |
| | 409887.19 | 3772782.01 | 109.60 | |
| | 409962.19 | 3772782.01 | 110.20 | |
| | 409137.19 | 3772857.01 | 106.70 | |
| | 409212.19 | 3772857.01 | 106.20 | |
| | 409287.19 | 3772857.01 | 107.30 | |
| | 409362.19 | 3772857.01 | 107.60 | |
| | 409437.19 | 3772857.01 | 108.00 | |
| | 409512.19 | 3772857.01 | 108.20 | |
| | 409587.19 | 3772857.01 | 108.70 | |
| | 409662.19 | 3772857.01 | 108.90 | |
| | 409737.19 | 3772857.01 | 109.30 | |
| | 409812.19 | 3772857.01 | 109.80 | |
| | 409887.19 | 3772857.01 | 110.10 | |
| | 409962.19 | 3772857.01 | 110.50 | |
| | 409137.19 | 3772932.01 | 107.10 | |
| | 409212.19 | 3772932.01 | 107.40 | |
| | 409287.19 | 3772932.01 | 107.50 | |
| | 409362.19 | 3772932.01 | 107.80 | |
| | 409437.19 | 3772932.01 | 108.10 | |
| | 409512.19 | 3772932.01 | 108.70 | |
| | 409587.19 | 3772932.01 | 108.80 | |
| | 409662.19 | 3772932.01 | 109.30 | |
| | 409737.19 | 3772932.01 | 109.70 | |
| | 409812.19 | 3772932.01 | 109.80 | |
| | 409887.19 | 3772932.01 | 110.40 | |
| | 409962.19 | 3772932.01 | 110.80 | |
| | 409137.19 | 3773007.01 | 107.60 | |
| | 409212.19 | 3773007.01 | 107.60 | |
| | 409287.19 | 3773007.01 | 107.50 | |
| | 409362.19 | 3773007.01 | 108.20 | |
| | 409437.19 | 3773007.01 | 108.50 | |
| | 409512.19 | 3773007.01 | 109.00 | |
| | 409587.19 | 3773007.01 | 109.00 | |
| | 409662.19 | 3773007.01 | 109.50 | |
| | 409737.19 | 3773007.01 | 110.20 | |
| | 409812.19 | 3773007.01 | 110.60 | |
| | 409887.19 | 3773007.01 | 110.70 | |
| | 409962.19 | 3773007.01 | 111.50 | |
| | 409137.19 | 3773082.01 | 107.60 | |
| 409212.19 | 3773082.01 | 108.10 | | |
| 409287.19 | 3773082.01 | 108.60 | | |
| 409362.19 | 3773082.01 | 108.50 | | |
| 409437.19 | 3773082.01 | 108.90 | | |
| 409512.19 | 3773082.01 | 109.50 | | |
| 409587.19 | 3773082.01 | 109.40 | | |
| 409662.19 | 3773082.01 | 109.90 | | |
| 409737.19 | 3773082.01 | 110.20 | | |

Receptor Pathway

AERMOD

| Receptor Network ID | Location: X-Coordinate [m] | Location: Y-Coordinate [m] | Terrain Elevations (Optional) | Flagpole Heights (Optional) |
|---------------------|----------------------------|----------------------------|-------------------------------|-----------------------------|
| UCART1 | 409812.19 | 3773082.01 | 111.00 | Option not Selected |
| | 409887.19 | 3773082.01 | 111.10 | |
| | 409962.19 | 3773082.01 | 111.50 | |
| | 409137.19 | 3773157.01 | 108.00 | |
| | 409212.19 | 3773157.01 | 108.10 | |
| | 409287.19 | 3773157.01 | 109.10 | |
| | 409362.19 | 3773157.01 | 108.70 | |
| | 409437.19 | 3773157.01 | 109.90 | |
| | 409512.19 | 3773157.01 | 109.50 | |
| | 409587.19 | 3773157.01 | 109.90 | |
| | 409662.19 | 3773157.01 | 110.30 | |
| | 409737.19 | 3773157.01 | 111.00 | |
| | 409812.19 | 3773157.01 | 111.50 | |
| | 409887.19 | 3773157.01 | 111.50 | |
| | 409962.19 | 3773157.01 | 112.40 | |
| | 409137.19 | 3773232.01 | 109.50 | |
| | 409212.19 | 3773232.01 | 110.00 | |
| | 409287.19 | 3773232.01 | 109.50 | |
| | 409362.19 | 3773232.01 | 109.00 | |
| | 409437.19 | 3773232.01 | 109.30 | |
| | 409512.19 | 3773232.01 | 110.20 | |
| | 409587.19 | 3773232.01 | 110.10 | |
| | 409662.19 | 3773232.01 | 110.90 | |
| | 409737.19 | 3773232.01 | 111.40 | |
| | 409812.19 | 3773232.01 | 111.60 | |
| | 409887.19 | 3773232.01 | 111.90 | |
| | 409962.19 | 3773232.01 | 112.60 | |
| | 409137.19 | 3773307.01 | 109.60 | |
| | 409212.19 | 3773307.01 | 110.30 | |
| | 409287.19 | 3773307.01 | 109.50 | |
| | 409362.19 | 3773307.01 | 109.30 | |
| | 409437.19 | 3773307.01 | 110.40 | |
| | 409512.19 | 3773307.01 | 110.60 | |
| | 409587.19 | 3773307.01 | 111.00 | |
| | 409662.19 | 3773307.01 | 111.80 | |
| | 409737.19 | 3773307.01 | 111.90 | |
| | 409812.19 | 3773307.01 | 112.20 | |
| | 409887.19 | 3773307.01 | 112.30 | |
| | 409962.19 | 3773307.01 | 113.00 | |
| | 409137.19 | 3773382.01 | 109.70 | |
| 409212.19 | 3773382.01 | 110.70 | | |
| 409287.19 | 3773382.01 | 110.20 | | |
| 409362.19 | 3773382.01 | 109.90 | | |
| 409437.19 | 3773382.01 | 110.50 | | |
| 409512.19 | 3773382.01 | 110.90 | | |
| 409587.19 | 3773382.01 | 111.70 | | |
| 409662.19 | 3773382.01 | 111.90 | | |
| 409737.19 | 3773382.01 | 112.50 | | |

Receptor Pathway

AERMOD

| Receptor Network ID | Location: X-Coordinate [m] | Location: Y-Coordinate [m] | Terrain Elevations (Optional) | Flagpole Heights (Optional) |
|---------------------|----------------------------|----------------------------|-------------------------------|-----------------------------|
| UCART1 | 409812.19 | 3773382.01 | 112.60 | Option not Selected |
| | 409887.19 | 3773382.01 | 113.20 | |
| | 409962.19 | 3773382.01 | 113.90 | |
| | 409137.19 | 3773457.01 | 109.90 | |
| | 409212.19 | 3773457.01 | 111.30 | |
| | 409287.19 | 3773457.01 | 111.10 | |
| | 409362.19 | 3773457.01 | 110.20 | |
| | 409437.19 | 3773457.01 | 110.90 | |
| | 409512.19 | 3773457.01 | 111.50 | |
| | 409587.19 | 3773457.01 | 111.70 | |
| | 409662.19 | 3773457.01 | 112.10 | |
| | 409737.19 | 3773457.01 | 112.60 | |
| | 409812.19 | 3773457.01 | 113.10 | |
| | 409887.19 | 3773457.01 | 114.30 | |
| | 409962.19 | 3773457.01 | 114.20 | |
| | 409137.19 | 3773532.01 | 112.90 | |
| | 409212.19 | 3773532.01 | 111.70 | |
| | 409287.19 | 3773532.01 | 111.70 | |
| | 409362.19 | 3773532.01 | 111.60 | |
| | 409437.19 | 3773532.01 | 112.30 | |
| | 409512.19 | 3773532.01 | 112.10 | |
| | 409587.19 | 3773532.01 | 112.30 | |
| | 409662.19 | 3773532.01 | 112.70 | |
| | 409737.19 | 3773532.01 | 113.60 | |
| | 409812.19 | 3773532.01 | 113.60 | |
| | 409887.19 | 3773532.01 | 113.90 | |
| | 409962.19 | 3773532.01 | 114.50 | |
| | 409137.19 | 3773607.01 | 109.60 | |
| | 409212.19 | 3773607.01 | 113.60 | |
| | 409287.19 | 3773607.01 | 112.10 | |
| | 409362.19 | 3773607.01 | 112.50 | |
| | 409437.19 | 3773607.01 | 112.80 | |
| | 409512.19 | 3773607.01 | 113.10 | |
| | 409587.19 | 3773607.01 | 112.90 | |
| | 409662.19 | 3773607.01 | 113.20 | |
| | 409737.19 | 3773607.01 | 114.00 | |
| | 409812.19 | 3773607.01 | 114.00 | |
| | 409887.19 | 3773607.01 | 114.70 | |
| | 409962.19 | 3773607.01 | 115.10 | |
| | 409137.19 | 3773682.01 | 110.50 | |
| 409212.19 | 3773682.01 | 109.90 | | |
| 409287.19 | 3773682.01 | 114.60 | | |
| 409362.19 | 3773682.01 | 112.50 | | |
| 409437.19 | 3773682.01 | 113.50 | | |
| 409512.19 | 3773682.01 | 113.50 | | |
| 409587.19 | 3773682.01 | 113.40 | | |
| 409662.19 | 3773682.01 | 114.80 | | |
| 409737.19 | 3773682.01 | 115.40 | | |

Receptor Pathway

AERMOD

| Receptor Network ID | Location: X-Coordinate [m] | Location: Y-Coordinate [m] | Terrain Elevations (Optional) | Flagpole Heights (Optional) |
|---------------------|----------------------------|----------------------------|-------------------------------|-----------------------------|
| UCART1 | 409812.19 | 3773682.01 | 114.80 | Option not Selected |
| | 409887.19 | 3773682.01 | 115.80 | |
| | 409962.19 | 3773682.01 | 116.30 | |
| | 409137.19 | 3773757.01 | 113.60 | |
| | 409212.19 | 3773757.01 | 112.00 | |
| | 409287.19 | 3773757.01 | 109.50 | |
| | 409362.19 | 3773757.01 | 115.50 | |
| | 409437.19 | 3773757.01 | 113.40 | |
| | 409512.19 | 3773757.01 | 114.20 | |
| | 409587.19 | 3773757.01 | 114.40 | |
| | 409662.19 | 3773757.01 | 114.90 | |
| | 409737.19 | 3773757.01 | 115.60 | |
| | 409812.19 | 3773757.01 | 115.70 | |
| | 409887.19 | 3773757.01 | 115.90 | |
| | 409962.19 | 3773757.01 | 116.40 | |

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: C:\Users\smyers\Desktop\AZUS_V9_ADJU\AZUS_v9.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: C:\Users\smyers\Desktop\AZUS_V9_ADJU\AZUS_v9.PFL
Format Type: Default AERMET format

Wind Speed



Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 104.00 [m]

Meteorological Station Data

| Stations | Station No. | Year | X Coordinate [m] | Y Coordinate [m] | Station Name |
|-----------|-------------|------|------------------|------------------|--------------|
| Surface | | 2012 | | | |
| Upper Air | | 2012 | | | |
| On-Site | | 2012 | | | |

Data Period

Data Period to Process

Start Date: 1/1/2012 Start Hour: 1 End Date: 12/31/2016 End Hour: 24

Wind Speed Categories

| Stability Category | Wind Speed [m/s] | Stability Category | Wind Speed [m/s] |
|--------------------|------------------|--------------------|------------------|
| A | 1.54 | D | 8.23 |
| B | 3.09 | E | 10.8 |
| C | 5.14 | F | No Upper Bound |

Output Pathway

AERMOD

Tabular Printed Outputs

| Short Term Averaging Period | RECTABLE Highest Values Table | | | | | | | | | | MAXTABLE Maximum Values Table | DAYTABLE Daily Values Table |
|-----------------------------|----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|----------------------------------|--------------------------------|
| | 1st | 2nd | 3rd | 4th | 5th | 6th | 7th | 8th | 9th | 10th | | |
| 1 | | | | | | | | | | | | No |
| 24 | | | | | | | | | | | | No |

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: Irwindale Industrial.AD

| Averaging Period | Source Group ID | High Value | File Name |
|------------------|-----------------|------------|--------------|
| 1 | ALL | 1st | 01H1GALL.PLT |
| 24 | ALL | 1st | 24H1GALL.PLT |
| Annual | ALL | N/A | AN00GALL.PLT |

Sensitive Receptor Summary

C:\Lakes\AERMOD View\Irwindale Industrial\Irwindale Industrial.isc

PM10 - Concentration - Source Group: ALL

| Averaging Period | Rank | Peak | Units | Receptor ID | X (m) | Y (m) | ZELEV (m) | ZFLAG (m) | ZHILL (m) | Peak Date, Start Hour |
|------------------|------|---------|--------|-------------|-----------|------------|-----------|-----------|-----------|-----------------------|
| 1-HR | 1ST | 0.07621 | ug/m^3 | Residence 1 | 409401.47 | 3772863.91 | 107.99 | 0.00 | 107.99 | 6/17/2014, 6 |
| 1-HR | 1ST | 0.02877 | ug/m^3 | Residence 2 | 409875.62 | 3772861.91 | 109.93 | 0.00 | 109.93 | 6/25/2015, 6 |
| 1-HR | 1ST | 0.06270 | ug/m^3 | Residence 3 | 409457.48 | 3773214.03 | 110.17 | 0.00 | 110.17 | 7/13/2014, 6 |
| 1-HR | 1ST | 0.02925 | ug/m^3 | School 4 | 409803.60 | 3773364.08 | 112.42 | 0.00 | 112.42 | 7/13/2014, 6 |
| 1-HR | 1ST | 0.08546 | ug/m^3 | Residence 5 | 409369.71 | 3772957.56 | 107.70 | 0.00 | 107.70 | 6/25/2015, 6 |
| 1-HR | 1ST | 0.08260 | ug/m^3 | Residence 6 | 409388.47 | 3773026.76 | 108.60 | 0.00 | 108.60 | 6/24/2015, 6 |
| 24-HR | 1ST | 0.01904 | ug/m^3 | Residence 1 | 409401.47 | 3772863.91 | 107.99 | 0.00 | 107.99 | 6/27/2015, 24 |
| 24-HR | 1ST | 0.00703 | ug/m^3 | Residence 2 | 409875.62 | 3772861.91 | 109.93 | 0.00 | 109.93 | 6/27/2015, 24 |
| 24-HR | 1ST | 0.01976 | ug/m^3 | Residence 3 | 409457.48 | 3773214.03 | 110.17 | 0.00 | 110.17 | 11/12/2014, 24 |
| 24-HR | 1ST | 0.00962 | ug/m^3 | School 4 | 409803.60 | 3773364.08 | 112.42 | 0.00 | 112.42 | 9/10/2013, 24 |
| 24-HR | 1ST | 0.02699 | ug/m^3 | Residence 5 | 409369.71 | 3772957.56 | 107.70 | 0.00 | 107.70 | 6/27/2015, 24 |
| 24-HR | 1ST | 0.02695 | ug/m^3 | Residence 6 | 409388.47 | 3773026.76 | 108.60 | 0.00 | 108.60 | 11/12/2014, 24 |
| ANNUAL | | 0.00598 | ug/m^3 | Residence 1 | 409401.47 | 3772863.91 | 107.99 | 0.00 | 107.99 | |
| ANNUAL | | 0.00206 | ug/m^3 | Residence 2 | 409875.62 | 3772861.91 | 109.93 | 0.00 | 109.93 | |
| ANNUAL | | 0.00660 | ug/m^3 | Residence 3 | 409457.48 | 3773214.03 | 110.17 | 0.00 | 110.17 | |
| ANNUAL | | 0.00276 | ug/m^3 | School 4 | 409803.60 | 3773364.08 | 112.42 | 0.00 | 112.42 | |
| ANNUAL | | 0.00931 | ug/m^3 | Residence 5 | 409369.71 | 3772957.56 | 107.70 | 0.00 | 107.70 | |
| ANNUAL | | 0.00974 | ug/m^3 | Residence 6 | 409388.47 | 3773026.76 | 108.60 | 0.00 | 108.60 | |

ATTACHMENT C

CalEEMod Output Files – Greenhouse Gas Emissions

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

13131 Los Angeles Street Industrial Project
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|--------|----------|-------------|--------------------|------------|
| General Light Industry | 528.71 | 1000sqft | 24.88 | 528,710.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|----------------------------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 33 |
| Climate Zone | 9 | | | Operational Year | 2021 |
| Utility Company | Southern California Edison | | | | |
| CO2 Intensity (lb/MWhr) | 511.47 | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics - SCE 2017 CO2 Intensity Factor

Land Use - Lot acreage update to match that of the project.

Construction Phase - Construction, paving and coating will occur at the same time.

Demolition -

Vehicle Trips - Trips updated to match the traffic report.

Construction Off-road Equipment Mitigation - SCAQMD rule 403. Percent reductions based on fugitive dust mitigation measures-Table 11-4

Fleet Mix - Fleet mix updated to match that of the traffic report provided by KOA.

Water And Wastewater - Water use per Section 3.11 of the Draft EIR

Solid Waste - Solid waste per Section 3.11 of the Draft EIR

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

| Table Name | Column Name | Default Value | New Value |
|---------------------------|--------------------------------|---------------|------------|
| tblConstDustMitigation | CleanPavedRoadPercentReduction | 0 | 40 |
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 0 | 15 |
| tblConstructionPhase | NumDays | 20.00 | 370.00 |
| tblConstructionPhase | NumDays | 20.00 | 370.00 |
| tblConstructionPhase | PhaseEndDate | 4/23/2021 | 12/30/2021 |
| tblConstructionPhase | PhaseEndDate | 2/26/2021 | 12/30/2021 |
| tblConstructionPhase | PhaseEndDate | 7/26/2019 | 5/28/2020 |
| tblConstructionPhase | PhaseEndDate | 9/27/2019 | 7/30/2020 |
| tblConstructionPhase | PhaseEndDate | 3/26/2021 | 12/30/2021 |
| tblConstructionPhase | PhaseEndDate | 8/9/2019 | 6/11/2020 |
| tblConstructionPhase | PhaseStartDate | 3/27/2021 | 7/31/2020 |
| tblConstructionPhase | PhaseStartDate | 9/28/2019 | 7/31/2020 |
| tblConstructionPhase | PhaseStartDate | 7/1/2019 | 5/1/2020 |
| tblConstructionPhase | PhaseStartDate | 8/10/2019 | 6/12/2020 |
| tblConstructionPhase | PhaseStartDate | 2/27/2021 | 7/31/2020 |
| tblConstructionPhase | PhaseStartDate | 7/27/2019 | 5/29/2020 |
| tblFleetMix | HHD | 0.03 | 0.10 |
| tblFleetMix | LDA | 0.55 | 0.44 |
| tblFleetMix | MH | 8.9100e-004 | 0.00 |
| tblFleetMix | MHD | 0.02 | 0.06 |
| tblFleetMix | OBUS | 2.4790e-003 | 0.00 |
| tblFleetMix | SBUS | 6.8200e-004 | 0.00 |
| tblFleetMix | UBUS | 2.2700e-003 | 0.00 |
| tblLandUse | LotAcreage | 12.14 | 24.88 |
| tblProjectCharacteristics | CO2IntensityFactor | 702.44 | 511.47 |
| tblSolidWaste | SolidWasteGenerationRate | 655.60 | 938.60 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

| | | | |
|-----------------|--------------------|----------------|---------------|
| tblVehicleTrips | CC_TL | 8.40 | 49.80 |
| tblVehicleTrips | CNW_TL | 6.90 | 49.80 |
| tblVehicleTrips | CW_TL | 16.60 | 49.80 |
| tblVehicleTrips | DV_TP | 5.00 | 0.00 |
| tblVehicleTrips | PB_TP | 3.00 | 0.00 |
| tblVehicleTrips | PR_TP | 92.00 | 100.00 |
| tblVehicleTrips | ST_TR | 1.32 | 6.54 |
| tblVehicleTrips | SU_TR | 0.68 | 6.54 |
| tblVehicleTrips | WD_TR | 6.97 | 6.54 |
| tblWater | IndoorWaterUseRate | 122,264,187.50 | 22,395,735.00 |

2.0 Emissions Summary

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|------------|--|--|
| 4 | 4-1-2020 | 6-30-2020 | 1.0135 | 1.0135 |
| 5 | 7-1-2020 | 9-30-2020 | 1.9972 | 1.9972 |
| 6 | 10-1-2020 | 12-31-2020 | 2.1006 | 2.1006 |
| 7 | 1-1-2021 | 3-31-2021 | 1.9113 | 1.9113 |
| 8 | 4-1-2021 | 6-30-2021 | 1.9254 | 1.9254 |
| 9 | 7-1-2021 | 9-30-2021 | 1.9466 | 1.9466 |
| | | Highest | 2.1006 | 2.1006 |

2.2 Overall Operational

Unmitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|-----------------|--------------------|--------------------|----------------|---------------|--------------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 2.1562 | 6.0000e-005 | 6.7700e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 0.0131 | 0.0131 | 3.0000e-005 | 0.0000 | 0.0140 |
| Energy | 0.0516 | 0.4691 | 0.3940 | 2.8100e-003 | | 0.0357 | 0.0357 | | 0.0357 | 0.0357 | 0.0000 | 1,872.2005 | 1,872.2005 | 0.0870 | 0.0253 | 1,881.9248 |
| Mobile | 4.1813 | 48.1456 | 74.2371 | 0.3688 | 24.1786 | 0.2990 | 24.4776 | 6.5170 | 0.2813 | 6.7983 | 0.0000 | 34,459.7207 | 34,459.7207 | 1.3446 | 0.0000 | 34,493.3352 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 190.5273 | 0.0000 | 190.5273 | 11.2598 | 0.0000 | 472.0234 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 7.1051 | 67.6543 | 74.7595 | 0.7336 | 0.0180 | 98.4709 |
| Total | 6.3890 | 48.6148 | 74.6379 | 0.3716 | 24.1786 | 0.3347 | 24.5132 | 6.5170 | 0.3170 | 6.8340 | 197.6325 | 36,399.5887 | 36,597.2211 | 13.4250 | 0.0434 | 36,945.7682 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

2.2 Overall Operational

Mitigated Operational

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|----------------|---------------|----------------|----------------|---------------|---------------|-----------------|--------------------|--------------------|----------------|---------------|--------------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Area | 2.1562 | 6.0000e-005 | 6.7700e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 0.0131 | 0.0131 | 3.0000e-005 | 0.0000 | 0.0140 |
| Energy | 0.0516 | 0.4691 | 0.3940 | 2.8100e-003 | | 0.0357 | 0.0357 | | 0.0357 | 0.0357 | 0.0000 | 1,872.2005 | 1,872.2005 | 0.0870 | 0.0253 | 1,881.9248 |
| Mobile | 4.1813 | 48.1456 | 74.2371 | 0.3688 | 24.1786 | 0.2990 | 24.4776 | 6.5170 | 0.2813 | 6.7983 | 0.0000 | 34,459.7207 | 34,459.7207 | 1.3446 | 0.0000 | 34,493.3352 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 190.5273 | 0.0000 | 190.5273 | 11.2598 | 0.0000 | 472.0234 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 7.1051 | 67.6543 | 74.7595 | 0.7336 | 0.0180 | 98.4709 |
| Total | 6.3890 | 48.6148 | 74.6379 | 0.3716 | 24.1786 | 0.3347 | 24.5132 | 6.5170 | 0.3170 | 6.8340 | 197.6325 | 36,399.5887 | 36,597.2211 | 13.4250 | 0.0434 | 36,945.7682 |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

3.0 Construction Detail

Construction Phase

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|------------|---------------|----------|-------------------|
| 1 | Demolition | Demolition | 5/1/2020 | 5/28/2020 | 5 | 20 | |
| 2 | Site Preparation | Site Preparation | 5/29/2020 | 6/11/2020 | 5 | 10 | |
| 3 | Grading | Grading | 6/12/2020 | 7/30/2020 | 5 | 35 | |
| 4 | Building Construction | Building Construction | 7/31/2020 | 12/30/2021 | 5 | 370 | |
| 5 | Paving | Paving | 7/31/2020 | 12/30/2021 | 5 | 370 | |
| 6 | Architectural Coating | Architectural Coating | 7/31/2020 | 12/30/2021 | 5 | 370 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 793,065; Non-Residential Outdoor: 264,355; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Site Preparation | Rubber Tired Dozers | 3 | 8.00 | 247 | 0.40 |
| Site Preparation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Grading | Excavators | 2 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Scrapers | 2 | 8.00 | 367 | 0.48 |
| Grading | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 3 | 7.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Pavers | 2 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 8.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 8.00 | 80 | 0.38 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 78 | 0.48 |

Trips and VMT

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

| 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 | 6 | 15.00 | 0.00 | 284.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 7 | 18.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 8 | 20.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 9 | 222.00 | 87.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 6 | 15.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 44.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Demolition - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0308 | 0.0000 | 0.0308 | 4.6600e-003 | 0.0000 | 4.6600e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0331 | 0.3320 | 0.2175 | 3.9000e-004 | | 0.0166 | 0.0166 | | 0.0154 | 0.0154 | 0.0000 | 33.9986 | 33.9986 | 9.6000e-003 | 0.0000 | 34.2386 |
| Total | 0.0331 | 0.3320 | 0.2175 | 3.9000e-004 | 0.0308 | 0.0166 | 0.0474 | 4.6600e-003 | 0.0154 | 0.0201 | 0.0000 | 33.9986 | 33.9986 | 9.6000e-003 | 0.0000 | 34.2386 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.2 Demolition - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 1.2500e-003 | 0.0422 | 9.2900e-003 | 1.1000e-004 | 2.4400e-003 | 1.3000e-004 | 2.5700e-003 | 6.7000e-004 | 1.3000e-004 | 8.0000e-004 | 0.0000 | 10.9451 | 10.9451 | 7.6000e-004 | 0.0000 | 10.9642 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 6.9000e-004 | 5.6000e-004 | 6.1700e-003 | 2.0000e-005 | 1.6400e-003 | 1.0000e-005 | 1.6600e-003 | 4.4000e-004 | 1.0000e-005 | 4.5000e-004 | 0.0000 | 1.5320 | 1.5320 | 5.0000e-005 | 0.0000 | 1.5332 |
| Total | 1.9400e-003 | 0.0427 | 0.0155 | 1.3000e-004 | 4.0800e-003 | 1.4000e-004 | 4.2300e-003 | 1.1100e-003 | 1.4000e-004 | 1.2500e-003 | 0.0000 | 12.4771 | 12.4771 | 8.1000e-004 | 0.0000 | 12.4974 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0120 | 0.0000 | 0.0120 | 1.8200e-003 | 0.0000 | 1.8200e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0331 | 0.3320 | 0.2175 | 3.9000e-004 | | 0.0166 | 0.0166 | | 0.0154 | 0.0154 | 0.0000 | 33.9986 | 33.9986 | 9.6000e-003 | 0.0000 | 34.2385 |
| Total | 0.0331 | 0.3320 | 0.2175 | 3.9000e-004 | 0.0120 | 0.0166 | 0.0286 | 1.8200e-003 | 0.0154 | 0.0172 | 0.0000 | 33.9986 | 33.9986 | 9.6000e-003 | 0.0000 | 34.2385 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.2 Demolition - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 1.2500e-003 | 0.0422 | 9.2900e-003 | 1.1000e-004 | 1.7100e-003 | 1.3000e-004 | 1.8400e-003 | 4.9000e-004 | 1.3000e-004 | 6.2000e-004 | 0.0000 | 10.9451 | 10.9451 | 7.6000e-004 | 0.0000 | 10.9642 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 6.9000e-004 | 5.6000e-004 | 6.1700e-003 | 2.0000e-005 | 1.0700e-003 | 1.0000e-005 | 1.0900e-003 | 3.0000e-004 | 1.0000e-005 | 3.1000e-004 | 0.0000 | 1.5320 | 1.5320 | 5.0000e-005 | 0.0000 | 1.5332 |
| Total | 1.9400e-003 | 0.0427 | 0.0155 | 1.3000e-004 | 2.7800e-003 | 1.4000e-004 | 2.9300e-003 | 7.9000e-004 | 1.4000e-004 | 9.3000e-004 | 0.0000 | 12.4771 | 12.4771 | 8.1000e-004 | 0.0000 | 12.4974 |

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0903 | 0.0000 | 0.0903 | 0.0497 | 0.0000 | 0.0497 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0204 | 0.2121 | 0.1076 | 1.9000e-004 | | 0.0110 | 0.0110 | | 0.0101 | 0.0101 | 0.0000 | 16.7153 | 16.7153 | 5.4100e-003 | 0.0000 | 16.8505 |
| Total | 0.0204 | 0.2121 | 0.1076 | 1.9000e-004 | 0.0903 | 0.0110 | 0.1013 | 0.0497 | 0.0101 | 0.0598 | 0.0000 | 16.7153 | 16.7153 | 5.4100e-003 | 0.0000 | 16.8505 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.2000e-004 | 3.4000e-004 | 3.7000e-003 | 1.0000e-005 | 9.9000e-004 | 1.0000e-005 | 9.9000e-004 | 2.6000e-004 | 1.0000e-005 | 2.7000e-004 | 0.0000 | 0.9192 | 0.9192 | 3.0000e-005 | 0.0000 | 0.9199 |
| Total | 4.2000e-004 | 3.4000e-004 | 3.7000e-003 | 1.0000e-005 | 9.9000e-004 | 1.0000e-005 | 9.9000e-004 | 2.6000e-004 | 1.0000e-005 | 2.7000e-004 | 0.0000 | 0.9192 | 0.9192 | 3.0000e-005 | 0.0000 | 0.9199 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0352 | 0.0000 | 0.0352 | 0.0194 | 0.0000 | 0.0194 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0204 | 0.2121 | 0.1076 | 1.9000e-004 | | 0.0110 | 0.0110 | | 0.0101 | 0.0101 | 0.0000 | 16.7153 | 16.7153 | 5.4100e-003 | 0.0000 | 16.8505 |
| Total | 0.0204 | 0.2121 | 0.1076 | 1.9000e-004 | 0.0352 | 0.0110 | 0.0462 | 0.0194 | 0.0101 | 0.0295 | 0.0000 | 16.7153 | 16.7153 | 5.4100e-003 | 0.0000 | 16.8505 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 4.2000e-004 | 3.4000e-004 | 3.7000e-003 | 1.0000e-005 | 6.4000e-004 | 1.0000e-005 | 6.5000e-004 | 1.8000e-004 | 1.0000e-005 | 1.9000e-004 | 0.0000 | 0.9192 | 0.9192 | 3.0000e-005 | 0.0000 | 0.9199 |
| Total | 4.2000e-004 | 3.4000e-004 | 3.7000e-003 | 1.0000e-005 | 6.4000e-004 | 1.0000e-005 | 6.5000e-004 | 1.8000e-004 | 1.0000e-005 | 1.9000e-004 | 0.0000 | 0.9192 | 0.9192 | 3.0000e-005 | 0.0000 | 0.9199 |

3.4 Grading - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.1518 | 0.0000 | 0.1518 | 0.0629 | 0.0000 | 0.0629 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0779 | 0.8785 | 0.5593 | 1.0900e-003 | | 0.0380 | 0.0380 | | 0.0350 | 0.0350 | 0.0000 | 95.3475 | 95.3475 | 0.0308 | 0.0000 | 96.1185 |
| Total | 0.0779 | 0.8785 | 0.5593 | 1.0900e-003 | 0.1518 | 0.0380 | 0.1898 | 0.0629 | 0.0350 | 0.0979 | 0.0000 | 95.3475 | 95.3475 | 0.0308 | 0.0000 | 96.1185 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.4 Grading - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 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 | 1.6200e-003 | 1.3000e-003 | 0.0144 | 4.0000e-005 | 3.8400e-003 | 3.0000e-005 | 3.8700e-003 | 1.0200e-003 | 3.0000e-005 | 1.0500e-003 | 0.0000 | 3.5747 | 3.5747 | 1.1000e-004 | 0.0000 | 3.5775 |
| Total | 1.6200e-003 | 1.3000e-003 | 0.0144 | 4.0000e-005 | 3.8400e-003 | 3.0000e-005 | 3.8700e-003 | 1.0200e-003 | 3.0000e-005 | 1.0500e-003 | 0.0000 | 3.5747 | 3.5747 | 1.1000e-004 | 0.0000 | 3.5775 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0592 | 0.0000 | 0.0592 | 0.0246 | 0.0000 | 0.0246 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0779 | 0.8785 | 0.5593 | 1.0900e-003 | | 0.0380 | 0.0380 | | 0.0350 | 0.0350 | 0.0000 | 95.3474 | 95.3474 | 0.0308 | 0.0000 | 96.1183 |
| Total | 0.0779 | 0.8785 | 0.5593 | 1.0900e-003 | 0.0592 | 0.0380 | 0.0972 | 0.0246 | 0.0350 | 0.0596 | 0.0000 | 95.3474 | 95.3474 | 0.0308 | 0.0000 | 96.1183 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.4 Grading - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 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 | 1.6200e-003 | 1.3000e-003 | 0.0144 | 4.0000e-005 | 2.5100e-003 | 3.0000e-005 | 2.5400e-003 | 6.9000e-004 | 3.0000e-005 | 7.2000e-004 | 0.0000 | 3.5747 | 3.5747 | 1.1000e-004 | 0.0000 | 3.5775 |
| Total | 1.6200e-003 | 1.3000e-003 | 0.0144 | 4.0000e-005 | 2.5100e-003 | 3.0000e-005 | 2.5400e-003 | 6.9000e-004 | 3.0000e-005 | 7.2000e-004 | 0.0000 | 3.5747 | 3.5747 | 1.1000e-004 | 0.0000 | 3.5775 |

3.5 Building Construction - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1166 | 1.0552 | 0.9267 | 1.4800e-003 | | 0.0614 | 0.0614 | | 0.0578 | 0.0578 | 0.0000 | 127.3855 | 127.3855 | 0.0311 | 0.0000 | 128.1624 |
| Total | 0.1166 | 1.0552 | 0.9267 | 1.4800e-003 | | 0.0614 | 0.0614 | | 0.0578 | 0.0578 | 0.0000 | 127.3855 | 127.3855 | 0.0311 | 0.0000 | 128.1624 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0174 | 0.5185 | 0.1404 | 1.2300e-003 | 0.0301 | 2.4100e-003 | 0.0326 | 8.7000e-003 | 2.3100e-003 | 0.0110 | 0.0000 | 118.8719 | 118.8719 | 7.5500e-003 | 0.0000 | 119.0608 |
| Worker | 0.0564 | 0.0455 | 0.5026 | 1.3800e-003 | 0.1338 | 1.1400e-003 | 0.1349 | 0.0355 | 1.0500e-003 | 0.0366 | 0.0000 | 124.7069 | 124.7069 | 3.9300e-003 | 0.0000 | 124.8052 |
| Total | 0.0737 | 0.5640 | 0.6430 | 2.6100e-003 | 0.1639 | 3.5500e-003 | 0.1675 | 0.0442 | 3.3600e-003 | 0.0476 | 0.0000 | 243.5788 | 243.5788 | 0.0115 | 0.0000 | 243.8659 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1166 | 1.0552 | 0.9267 | 1.4800e-003 | | 0.0614 | 0.0614 | | 0.0578 | 0.0578 | 0.0000 | 127.3853 | 127.3853 | 0.0311 | 0.0000 | 128.1623 |
| Total | 0.1166 | 1.0552 | 0.9267 | 1.4800e-003 | | 0.0614 | 0.0614 | | 0.0578 | 0.0578 | 0.0000 | 127.3853 | 127.3853 | 0.0311 | 0.0000 | 128.1623 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.5 Building Construction - 2020**Mitigated Construction Off-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0174 | 0.5185 | 0.1404 | 1.2300e-003 | 0.0216 | 2.4100e-003 | 0.0240 | 6.6000e-003 | 2.3100e-003 | 8.9100e-003 | 0.0000 | 118.8719 | 118.8719 | 7.5500e-003 | 0.0000 | 119.0608 |
| Worker | 0.0564 | 0.0455 | 0.5026 | 1.3800e-003 | 0.0874 | 1.1400e-003 | 0.0886 | 0.0242 | 1.0500e-003 | 0.0252 | 0.0000 | 124.7069 | 124.7069 | 3.9300e-003 | 0.0000 | 124.8052 |
| Total | 0.0737 | 0.5640 | 0.6430 | 2.6100e-003 | 0.1090 | 3.5500e-003 | 0.1126 | 0.0308 | 3.3600e-003 | 0.0341 | 0.0000 | 243.5788 | 243.5788 | 0.0115 | 0.0000 | 243.8659 |

3.5 Building Construction - 2021**Unmitigated Construction On-Site**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.2471 | 2.2662 | 2.1548 | 3.5000e-003 | | 0.1246 | 0.1246 | | 0.1172 | 0.1172 | 0.0000 | 301.1285 | 301.1285 | 0.0727 | 0.0000 | 302.9447 |
| Total | 0.2471 | 2.2662 | 2.1548 | 3.5000e-003 | | 0.1246 | 0.1246 | | 0.1172 | 0.1172 | 0.0000 | 301.1285 | 301.1285 | 0.0727 | 0.0000 | 302.9447 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0351 | 1.1162 | 0.3026 | 2.8800e-003 | 0.0712 | 2.2800e-003 | 0.0735 | 0.0206 | 2.1800e-003 | 0.0227 | 0.0000 | 278.7876 | 278.7876 | 0.0171 | 0.0000 | 279.2151 |
| Worker | 0.1242 | 0.0967 | 1.0914 | 3.1600e-003 | 0.3163 | 2.6100e-003 | 0.3189 | 0.0840 | 2.4000e-003 | 0.0864 | 0.0000 | 285.4015 | 285.4015 | 8.4000e-003 | 0.0000 | 285.6114 |
| Total | 0.1593 | 1.2129 | 1.3940 | 6.0400e-003 | 0.3875 | 4.8900e-003 | 0.3924 | 0.1046 | 4.5800e-003 | 0.1091 | 0.0000 | 564.1891 | 564.1891 | 0.0255 | 0.0000 | 564.8266 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.2471 | 2.2662 | 2.1548 | 3.5000e-003 | | 0.1246 | 0.1246 | | 0.1172 | 0.1172 | 0.0000 | 301.1281 | 301.1281 | 0.0727 | 0.0000 | 302.9443 |
| Total | 0.2471 | 2.2662 | 2.1548 | 3.5000e-003 | | 0.1246 | 0.1246 | | 0.1172 | 0.1172 | 0.0000 | 301.1281 | 301.1281 | 0.0727 | 0.0000 | 302.9443 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.5 Building Construction - 2021

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0351 | 1.1162 | 0.3026 | 2.8800e-003 | 0.0511 | 2.2800e-003 | 0.0534 | 0.0156 | 2.1800e-003 | 0.0178 | 0.0000 | 278.7876 | 278.7876 | 0.0171 | 0.0000 | 279.2151 |
| Worker | 0.1242 | 0.0967 | 1.0914 | 3.1600e-003 | 0.2066 | 2.6100e-003 | 0.2092 | 0.0571 | 2.4000e-003 | 0.0595 | 0.0000 | 285.4015 | 285.4015 | 8.4000e-003 | 0.0000 | 285.6114 |
| Total | 0.1593 | 1.2129 | 1.3940 | 6.0400e-003 | 0.2577 | 4.8900e-003 | 0.2626 | 0.0727 | 4.5800e-003 | 0.0773 | 0.0000 | 564.1891 | 564.1891 | 0.0255 | 0.0000 | 564.8266 |

3.6 Paving - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0746 | 0.7736 | 0.8059 | 1.2500e-003 | | 0.0414 | 0.0414 | | 0.0381 | 0.0381 | 0.0000 | 110.1552 | 110.1552 | 0.0356 | 0.0000 | 111.0459 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0746 | 0.7736 | 0.8059 | 1.2500e-003 | | 0.0414 | 0.0414 | | 0.0381 | 0.0381 | 0.0000 | 110.1552 | 110.1552 | 0.0356 | 0.0000 | 111.0459 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.6 Paving - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 3.8100e-003 | 3.0700e-003 | 0.0340 | 9.0000e-005 | 9.0400e-003 | 8.0000e-005 | 9.1200e-003 | 2.4000e-003 | 7.0000e-005 | 2.4700e-003 | 0.0000 | 8.4261 | 8.4261 | 2.7000e-004 | 0.0000 | 8.4328 |
| Total | 3.8100e-003 | 3.0700e-003 | 0.0340 | 9.0000e-005 | 9.0400e-003 | 8.0000e-005 | 9.1200e-003 | 2.4000e-003 | 7.0000e-005 | 2.4700e-003 | 0.0000 | 8.4261 | 8.4261 | 2.7000e-004 | 0.0000 | 8.4328 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0746 | 0.7736 | 0.8059 | 1.2500e-003 | | 0.0414 | 0.0414 | | 0.0381 | 0.0381 | 0.0000 | 110.1551 | 110.1551 | 0.0356 | 0.0000 | 111.0457 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.0746 | 0.7736 | 0.8059 | 1.2500e-003 | | 0.0414 | 0.0414 | | 0.0381 | 0.0381 | 0.0000 | 110.1551 | 110.1551 | 0.0356 | 0.0000 | 111.0457 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.6 Paving - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 3.8100e-003 | 3.0700e-003 | 0.0340 | 9.0000e-005 | 5.9100e-003 | 8.0000e-005 | 5.9800e-003 | 1.6300e-003 | 7.0000e-005 | 1.7000e-003 | 0.0000 | 8.4261 | 8.4261 | 2.7000e-004 | 0.0000 | 8.4328 |
| Total | 3.8100e-003 | 3.0700e-003 | 0.0340 | 9.0000e-005 | 5.9100e-003 | 8.0000e-005 | 5.9800e-003 | 1.6300e-003 | 7.0000e-005 | 1.7000e-003 | 0.0000 | 8.4261 | 8.4261 | 2.7000e-004 | 0.0000 | 8.4328 |

3.6 Paving - 2021

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1632 | 1.6795 | 1.9049 | 2.9600e-003 | | 0.0881 | 0.0881 | | 0.0811 | 0.0811 | 0.0000 | 260.3052 | 260.3052 | 0.0842 | 0.0000 | 262.4099 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.1632 | 1.6795 | 1.9049 | 2.9600e-003 | | 0.0881 | 0.0881 | | 0.0811 | 0.0811 | 0.0000 | 260.3052 | 260.3052 | 0.0842 | 0.0000 | 262.4099 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.6 Paving - 2021

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 8.3900e-003 | 6.5300e-003 | 0.0737 | 2.1000e-004 | 0.0214 | 1.8000e-004 | 0.0215 | 5.6800e-003 | 1.6000e-004 | 5.8400e-003 | 0.0000 | 19.2839 | 19.2839 | 5.7000e-004 | 0.0000 | 19.2981 |
| Total | 8.3900e-003 | 6.5300e-003 | 0.0737 | 2.1000e-004 | 0.0214 | 1.8000e-004 | 0.0215 | 5.6800e-003 | 1.6000e-004 | 5.8400e-003 | 0.0000 | 19.2839 | 19.2839 | 5.7000e-004 | 0.0000 | 19.2981 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|-----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.1632 | 1.6795 | 1.9049 | 2.9600e-003 | | 0.0881 | 0.0881 | | 0.0811 | 0.0811 | 0.0000 | 260.3049 | 260.3049 | 0.0842 | 0.0000 | 262.4096 |
| Paving | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 0.1632 | 1.6795 | 1.9049 | 2.9600e-003 | | 0.0881 | 0.0881 | | 0.0811 | 0.0811 | 0.0000 | 260.3049 | 260.3049 | 0.0842 | 0.0000 | 262.4096 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.6 Paving - 2021

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 8.3900e-003 | 6.5300e-003 | 0.0737 | 2.1000e-004 | 0.0140 | 1.8000e-004 | 0.0141 | 3.8600e-003 | 1.6000e-004 | 4.0200e-003 | 0.0000 | 19.2839 | 19.2839 | 5.7000e-004 | 0.0000 | 19.2981 |
| Total | 8.3900e-003 | 6.5300e-003 | 0.0737 | 2.1000e-004 | 0.0140 | 1.8000e-004 | 0.0141 | 3.8600e-003 | 1.6000e-004 | 4.0200e-003 | 0.0000 | 19.2839 | 19.2839 | 5.7000e-004 | 0.0000 | 19.2981 |

3.7 Architectural Coating - 2020

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.7286 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0133 | 0.0926 | 0.1007 | 1.6000e-004 | | 6.1000e-003 | 6.1000e-003 | | 6.1000e-003 | 6.1000e-003 | 0.0000 | 14.0429 | 14.0429 | 1.0900e-003 | 0.0000 | 14.0701 |
| Total | 0.7419 | 0.0926 | 0.1007 | 1.6000e-004 | | 6.1000e-003 | 6.1000e-003 | | 6.1000e-003 | 6.1000e-003 | 0.0000 | 14.0429 | 14.0429 | 1.0900e-003 | 0.0000 | 14.0701 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.7 Architectural Coating - 2020

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 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 | 0.0112 | 9.0100e-003 | 0.0996 | 2.7000e-004 | 0.0265 | 2.3000e-004 | 0.0267 | 7.0400e-003 | 2.1000e-004 | 7.2500e-003 | 0.0000 | 24.7167 | 24.7167 | 7.8000e-004 | 0.0000 | 24.7362 |
| Total | 0.0112 | 9.0100e-003 | 0.0996 | 2.7000e-004 | 0.0265 | 2.3000e-004 | 0.0267 | 7.0400e-003 | 2.1000e-004 | 7.2500e-003 | 0.0000 | 24.7167 | 24.7167 | 7.8000e-004 | 0.0000 | 24.7362 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|---------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 0.7286 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0133 | 0.0926 | 0.1007 | 1.6000e-004 | | 6.1000e-003 | 6.1000e-003 | | 6.1000e-003 | 6.1000e-003 | 0.0000 | 14.0429 | 14.0429 | 1.0900e-003 | 0.0000 | 14.0701 |
| Total | 0.7419 | 0.0926 | 0.1007 | 1.6000e-004 | | 6.1000e-003 | 6.1000e-003 | | 6.1000e-003 | 6.1000e-003 | 0.0000 | 14.0429 | 14.0429 | 1.0900e-003 | 0.0000 | 14.0701 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.7 Architectural Coating - 2020

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 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 | 0.0112 | 9.0100e-003 | 0.0996 | 2.7000e-004 | 0.0173 | 2.3000e-004 | 0.0176 | 4.7900e-003 | 2.1000e-004 | 4.9900e-003 | 0.0000 | 24.7167 | 24.7167 | 7.8000e-004 | 0.0000 | 24.7362 |
| Total | 0.0112 | 9.0100e-003 | 0.0996 | 2.7000e-004 | 0.0173 | 2.3000e-004 | 0.0176 | 4.7900e-003 | 2.1000e-004 | 4.9900e-003 | 0.0000 | 24.7167 | 24.7167 | 7.8000e-004 | 0.0000 | 24.7362 |

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 1.7220 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0285 | 0.1985 | 0.2363 | 3.9000e-004 | | 0.0122 | 0.0122 | | 0.0122 | 0.0122 | 0.0000 | 33.1923 | 33.1923 | 2.2800e-003 | 0.0000 | 33.2492 |
| Total | 1.7505 | 0.1985 | 0.2363 | 3.9000e-004 | | 0.0122 | 0.0122 | | 0.0122 | 0.0122 | 0.0000 | 33.1923 | 33.1923 | 2.2800e-003 | 0.0000 | 33.2492 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0246 | 0.0192 | 0.2163 | 6.3000e-004 | 0.0627 | 5.2000e-004 | 0.0632 | 0.0167 | 4.8000e-004 | 0.0171 | 0.0000 | 56.5661 | 56.5661 | 1.6600e-003 | 0.0000 | 56.6077 |
| Total | 0.0246 | 0.0192 | 0.2163 | 6.3000e-004 | 0.0627 | 5.2000e-004 | 0.0632 | 0.0167 | 4.8000e-004 | 0.0171 | 0.0000 | 56.5661 | 56.5661 | 1.6600e-003 | 0.0000 | 56.6077 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Archit. Coating | 1.7220 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0285 | 0.1985 | 0.2363 | 3.9000e-004 | | 0.0122 | 0.0122 | | 0.0122 | 0.0122 | 0.0000 | 33.1923 | 33.1923 | 2.2800e-003 | 0.0000 | 33.2492 |
| Total | 1.7505 | 0.1985 | 0.2363 | 3.9000e-004 | | 0.0122 | 0.0122 | | 0.0122 | 0.0122 | 0.0000 | 33.1923 | 33.1923 | 2.2800e-003 | 0.0000 | 33.2492 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 0.0246 | 0.0192 | 0.2163 | 6.3000e-004 | 0.0410 | 5.2000e-004 | 0.0415 | 0.0113 | 4.8000e-004 | 0.0118 | 0.0000 | 56.5661 | 56.5661 | 1.6600e-003 | 0.0000 | 56.6077 |
| Total | 0.0246 | 0.0192 | 0.2163 | 6.3000e-004 | 0.0410 | 5.2000e-004 | 0.0415 | 0.0113 | 4.8000e-004 | 0.0118 | 0.0000 | 56.5661 | 56.5661 | 1.6600e-003 | 0.0000 | 56.6077 |

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------|---------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-------------|-------------|--------|--------|-------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 4.1813 | 48.1456 | 74.2371 | 0.3688 | 24.1786 | 0.2990 | 24.4776 | 6.5170 | 0.2813 | 6.7983 | 0.0000 | 34,459.7207 | 34,459.7207 | 1.3446 | 0.0000 | 34,493.3352 |
| Unmitigated | 4.1813 | 48.1456 | 74.2371 | 0.3688 | 24.1786 | 0.2990 | 24.4776 | 6.5170 | 0.2813 | 6.7983 | 0.0000 | 34,459.7207 | 34,459.7207 | 1.3446 | 0.0000 | 34,493.3352 |

4.2 Trip Summary Information

| Land Use | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|------------------------|-------------------------|----------|----------|-------------|------------|
| | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Light Industry | 3,458.82 | 3,458.82 | 3,458.82 | 62,698,737 | 62,698,737 |
| Total | 3,458.82 | 3,458.82 | 3,458.82 | 62,698,737 | 62,698,737 |

4.3 Trip Type Information

| Land Use | Miles | | | Trip % | | | Trip Purpose % | | |
|------------------------|------------|------------|-------------|------------|------------|-------------|----------------|----------|---------|
| | H-W or C-W | H-S or C-C | H-O or C-NW | H-W or C-W | H-S or C-C | H-O or C-NW | Primary | Diverted | Pass-by |
| General Light Industry | 49.80 | 49.80 | 49.80 | 59.00 | 28.00 | 13.00 | 100 | 0 | 0 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| General Light Industry | 0.441202 | 0.045177 | 0.202743 | 0.121510 | 0.016147 | 0.006143 | 0.061000 | 0.101000 | 0.000000 | 0.000000 | 0.005078 | 0.000000 | 0.000000 |

5.0 Energy Detail

Historical Energy Use: N

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

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 | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Electricity Mitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1,361.5275 | 1,361.5275 | 0.0772 | 0.0160 | 1,368.2171 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 1,361.5275 | 1,361.5275 | 0.0772 | 0.0160 | 1,368.2171 |
| NaturalGas Mitigated | 0.0516 | 0.4691 | 0.3940 | 2.8100e-003 | | 0.0357 | 0.0357 | | 0.0357 | 0.0357 | 0.0000 | 510.6730 | 510.6730 | 9.7900e-003 | 9.3600e-003 | 513.7077 |
| NaturalGas Unmitigated | 0.0516 | 0.4691 | 0.3940 | 2.8100e-003 | | 0.0357 | 0.0357 | | 0.0357 | 0.0357 | 0.0000 | 510.6730 | 510.6730 | 9.7900e-003 | 9.3600e-003 | 513.7077 |

5.2 Energy by Land Use - NaturalGas

Unmitigated

| | NaturalGas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|------------------------|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| General Light Industry | 9.56965e+006 | 0.0516 | 0.4691 | 0.3940 | 2.8100e-003 | | 0.0357 | 0.0357 | | 0.0357 | 0.0357 | 0.0000 | 510.6730 | 510.6730 | 9.7900e-003 | 9.3600e-003 | 513.7077 |
| Total | | 0.0516 | 0.4691 | 0.3940 | 2.8100e-003 | | 0.0357 | 0.0357 | | 0.0357 | 0.0357 | 0.0000 | 510.6730 | 510.6730 | 9.7900e-003 | 9.3600e-003 | 513.7077 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

5.2 Energy by Land Use - Natural Gas

Mitigated

| | Natural Gas Use | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|------------------------|-----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-----------------|-----------------|--------------------|--------------------|-----------------|
| Land Use | kBTU/yr | tons/yr | | | | | | | | | | MT/yr | | | | | |
| General Light Industry | 9.56965e+006 | 0.0516 | 0.4691 | 0.3940 | 2.8100e-003 | | 0.0357 | 0.0357 | | 0.0357 | 0.0357 | 0.0000 | 510.6730 | 510.6730 | 9.7900e-003 | 9.3600e-003 | 513.7077 |
| Total | | 0.0516 | 0.4691 | 0.3940 | 2.8100e-003 | | 0.0357 | 0.0357 | | 0.0357 | 0.0357 | 0.0000 | 510.6730 | 510.6730 | 9.7900e-003 | 9.3600e-003 | 513.7077 |

5.3 Energy by Land Use - Electricity

Unmitigated

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|------------------------|-----------------|-------------------|---------------|---------------|-------------------|
| Land Use | kWh/yr | MT/yr | | | |
| General Light Industry | 5.86868e+006 | 1,361.5275 | 0.0772 | 0.0160 | 1,368.2171 |
| Total | | 1,361.5275 | 0.0772 | 0.0160 | 1,368.2171 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

5.3 Energy by Land Use - Electricity

Mitigated

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|------------------------|-----------------|-------------------|---------------|---------------|-------------------|
| Land Use | kWh/yr | MT/yr | | | |
| General Light Industry | 5.86868e+006 | 1,361.5275 | 0.0772 | 0.0160 | 1,368.2171 |
| Total | | 1,361.5275 | 0.0772 | 0.0160 | 1,368.2171 |

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 | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 2.1562 | 6.0000e-005 | 6.7700e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 0.0131 | 0.0131 | 3.0000e-005 | 0.0000 | 0.0140 |
| Unmitigated | 2.1562 | 6.0000e-005 | 6.7700e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 0.0131 | 0.0131 | 3.0000e-005 | 0.0000 | 0.0140 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

6.2 Area by SubCategory

Unmitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.2451 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 1.9105 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 6.3000e-004 | 6.0000e-005 | 6.7700e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 0.0131 | 0.0131 | 3.0000e-005 | 0.0000 | 0.0140 |
| Total | 2.1562 | 6.0000e-005 | 6.7700e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 0.0131 | 0.0131 | 3.0000e-005 | 0.0000 | 0.0140 |

Mitigated

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|-----------------------|---------------|--------------------|--------------------|---------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.2451 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 1.9105 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 6.3000e-004 | 6.0000e-005 | 6.7700e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 0.0131 | 0.0131 | 3.0000e-005 | 0.0000 | 0.0140 |
| Total | 2.1562 | 6.0000e-005 | 6.7700e-003 | 0.0000 | | 2.0000e-005 | 2.0000e-005 | | 2.0000e-005 | 2.0000e-005 | 0.0000 | 0.0131 | 0.0131 | 3.0000e-005 | 0.0000 | 0.0140 |

7.0 Water Detail

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|--------|--------|---------|
| Category | MT/yr | | | |
| Mitigated | 74.7595 | 0.7336 | 0.0180 | 98.4709 |
| Unmitigated | 74.7595 | 0.7336 | 0.0180 | 98.4709 |

7.2 Water by Land Use

Unmitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|------------------------|--------------------|----------------|---------------|---------------|----------------|
| Land Use | Mgal | MT/yr | | | |
| General Light Industry | 22.3957 / 0 | 74.7595 | 0.7336 | 0.0180 | 98.4709 |
| Total | | 74.7595 | 0.7336 | 0.0180 | 98.4709 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

7.2 Water by Land Use

Mitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|------------------------|--------------------|----------------|---------------|---------------|----------------|
| Land Use | Mgal | MT/yr | | | |
| General Light Industry | 22.3957 / 0 | 74.7595 | 0.7336 | 0.0180 | 98.4709 |
| Total | | 74.7595 | 0.7336 | 0.0180 | 98.4709 |

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

| | Total CO2 | CH4 | N2O | CO2e |
|-------------|-----------|---------|--------|----------|
| | MT/yr | | | |
| Mitigated | 190.5273 | 11.2598 | 0.0000 | 472.0234 |
| Unmitigated | 190.5273 | 11.2598 | 0.0000 | 472.0234 |

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

8.2 Waste by Land Use

Unmitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|------------------------|----------------|-----------------|----------------|---------------|-----------------|
| Land Use | tons | MT/yr | | | |
| General Light Industry | 938.6 | 190.5273 | 11.2598 | 0.0000 | 472.0234 |
| Total | | 190.5273 | 11.2598 | 0.0000 | 472.0234 |

Mitigated

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|------------------------|----------------|-----------------|----------------|---------------|-----------------|
| Land Use | tons | MT/yr | | | |
| General Light Industry | 938.6 | 190.5273 | 11.2598 | 0.0000 | 472.0234 |
| Total | | 190.5273 | 11.2598 | 0.0000 | 472.0234 |

9.0 Operational Offroad

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

13131 Los Angeles Street Industrial Project - Los Angeles-South Coast County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

| Equipment Type | Number |
|----------------|--------|
|----------------|--------|

11.0 Vegetation
