

Air Quality Impact Analysis Rodeo Property Project City of Salinas, Monterey County, California

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ACRONYMS AND ABBREVIATIONS

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AB	Assembly Bill
AQI	air quality index
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BAAQMD	Bay Area Air Quality Management District
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CO	carbon monoxide
DPM	diesel particulate matter
EPA	United States Environmental Protection Agency
ft^2	square feet
H_2S	hydrogen sulfide
HAP	hazardous air pollutant
LEV	low emission vehicle
MBARD	Monterey Bay Air Resources District
NCCAB	North Central Coast Air Basin
NO_2	nitrogen dioxide
NO_x	oxides of nitrogen
O_3	ozone
PM_{10}	particulate matter less than 10 microns in diameter
$\text{PM}_{2.5}$	particulate matter less than 2.5 microns in diameter
ppb	parts per billion
ppm	parts per million
ROG	reactive organic gases
SB	Senate Bill
SFBAAB	San Francisco Bay Area Air Basin
SIP	state implementation plan
SO_2	sulfur dioxide
SO_x	oxides of sulfur
TOG	total organic gases
VOC	volatile organic compounds

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SECTION 1: EXECUTIVE SUMMARY

1.1 - Purpose and Methods of Analysis

The following analysis was prepared to evaluate whether the Project would cause significant air quality impacts. This assessment follows the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows Monterey Bay Air Resources District (MBARD) recommendations for quantification of emissions and evaluation of air quality impacts.

1.2 - Project Summary

1.2.1 - Site Location

The Rodeo Property Project is located at 295 Sun Way, south and west of US 101 in the central part of the City of Salinas, Monterey County, California (see Exhibit 1). North and south of the Project site are existing warehouse/light industrial uses. To the north of the Project site is Security Public Storage; to the south at 10 Simas Street is Celebration Church and at 34 Simas Street is a light industrial building containing an ambulance dispatch business and an electrical supply company. To the southwest of the Project at 8 Sun Street is Sun Street Centers Men's Residential Program. Adjacent to and west of the Project is open space; however, there is a mix of land uses further west of the Project, including St. James CME Church located at 285 Calle Cebu, Haciendas Place multi-family residential located at 245 Calle Cebu, and the Rancho Salinas Mobile Park located at 150 Sherwood Drive. The Project site is bounded by Sun Street and Sun Way to the west, US 101 to the east, Security Public Storage to the north, and light industrial uses to the south (see Exhibit 2).

1.2.2 - Project Description

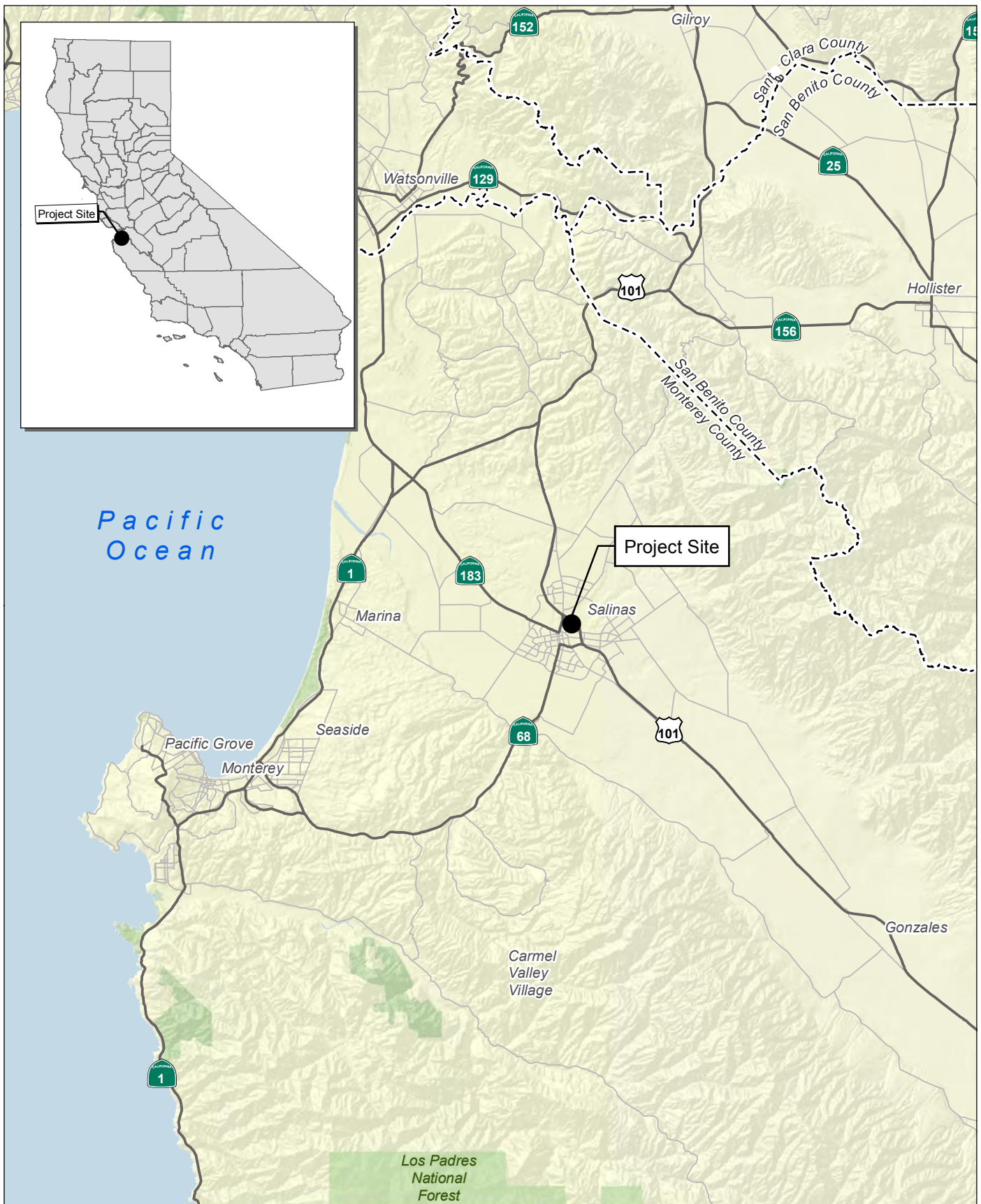
The project is a General Plan amendment and Rezone that would allow development of industrial and commercial uses on a 6.8-acre site located on Sun Street adjacent to US 101. The proposed land use designation would allow the site to be developed at a floor area ratio of 0.4, which would allow for the development of up to 118,600 square feet (sq.ft.) of industrial floor space. For purpose of this analysis, 4 percent of the floor space (4,700 sq.ft.) was assumed to be occupied by support office space which is categorized as general office space. The remaining floor area (113,900 sq.ft.) was modeled as light industrial space. The site is designated in the General Plan as Open Space. Access to the site is provided via Sun Street and its connections to Calle Cebu and E. Market Street.

1.3 - Summary of Analysis Results

Impact AIR-1: The Project would not conflict with or obstruct implementation of the applicable air quality plan. **Less than significant impact.**

Impact AIR-2: The Project would not violate air quality standards or contribute substantially to an existing or projected air quality violation. **Less than significant impact.**

- Impact AIR-3:** The Project 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 (including releasing emissions, which exceed quantitative thresholds for ozone precursors). **Less than significant impact.**
- Impact AIR-4:** The Project would not expose sensitive receptors to substantial pollutant concentrations. **Less than significant impact.**
- Impact AIR-5:** The Project would not create objectionable odors affecting a substantial number of people. **Less than significant impact.**



Source: Census 2000 Data, The CaSIL, FCS GIS 2016.

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Exhibit 1 Regional Location Map

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Source: ESRI Imagery

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Exhibit 2 Local Vicinity Map Aerial Base

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SECTION 2: AIR QUALITY SETTING

2.1 - Air Basin

The Project site is located in the City of Salinas, Monterey County, within the North Central Coast Air Basin (NCCAB or the Air Basin), and under the jurisdiction of the MBARD. The NCCAB consists of Monterey, San Benito, and Santa Cruz counties. The NCCAB includes an area of approximately 5,159 square miles along the central coast of California. The project site is located near the coast in the northern portion of the air basin.

Air quality in the NCCAB is regulated at the federal level by the United State Environmental Protection Agency (EPA), at the state level by the California Air Resources Board (ARB), and at the regional level by MBARD. The regulatory responsibilities of these agencies are discussed in the Regulatory Framework section.

Air quality conditions within the NCCAB are primarily influenced by the NCCAB's meteorology, topography, and climate conditions. These characteristics with respect to the NCCAB are discussed below. However, the main driver of air quality conditions in any is the amount and intensity of emission sources located within the region. In some cases such as for the NCCAB, transport of air pollutants from neighboring air basins can also affect air quality conditions within the air basin.

2.2 - Attainment Status

The EPA and the ARB designate an air basin in which ambient air quality standards are exceeded as a "nonattainment" area. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, the area is considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Each standard has a different definition, or "form," of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour carbon monoxide (CO) standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring value exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the 3-year average of the annual average PM_{2.5} concentration is less than or equal to the standard.

On March 12, 2008, the EPA adopted a new 8-hour ozone standard of 0.075 ppm. In April 2012, EPA designated the NCCAB as attainment/unclassified based on 2009-2011 data. This EPA rule suspends key State Implementation Plan (SIP) requirements as long as monitoring data continues to show that the Bay Area attains the standard. The current attainment designations for the basin are summarized in Table 1. The basin is nonattainment for state ozone and PM₁₀ standards.

Table 1: North Central Coast Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone (O ₃)	Nonattainment ²	Attainment/Unclassified ³
Inhalable particulates (PM ₁₀)	Nonattainment	Attainment
Fine particulates (PM _{2.5})	Attainment	Attainment/Unclassified ⁴
Carbon monoxide (CO)	Monterey Co.—Attainment San Benito Co.—Unclassified Santa Cruz Co.—Unclassified	Attainment/Unclassified
Nitrogen dioxide (NO ₂)	Attainment	Attainment/Unclassified ⁵
Sulfur dioxide (SO ₂)	Attainment	Attainment ⁶
Lead	Attainment	Attainment/Unclassified ⁷
Notes: ¹ State designations based on 2010 to 2012 air monitoring data. ² Effective July 26, 2007, the ARB designated the NCCAB a nonattainment area for the State ozone standard, which was revised in 2006 to include an 8-hour standard of 0.070 ppm. ³ On March 12, 2008, EPA adopted a new 8-hour ozone standard of 0.075 ppm. In April 2012, EPA designated the NCCAB attainment/unclassified based on 2009–2011 data. ⁴ This includes the 2006 24-hour standard of 35 µg/m ³ and the 2012 annual standard of 12 µg/m ³ . ⁵ In 2012, EPA designated the entire state as attainment/unclassified for the 2010 NO ₂ standard. ⁶ In June 2011, the ARB recommended to EPA that the entire state be designated as attainment for the 2010 primary SO ₂ standard. Final designations to be addressed in future EPA actions. ⁷ On October 15, 2008, EPA substantially strengthened the national ambient air quality standard for lead by lowering the level of the primary standard from 1.5 µg/m to 0.15µg/m ³ . Final designations were made by the EPA in November 2011.		

2.3 - Local Climate

Monterey County is bounded on the west by the Pacific Ocean, on the east by the San Joaquin Valley, on the south by San Luis Obispo County and on the north by the Santa Cruz and San Mateo Counties. Most of Monterey County's population lives in the western part of the County along the coast and in sheltered valleys. These valleys act like a series of miniature air basins, trapping air pollutants within the valley and limiting dispersion.

The Salinas Valley is a steep-sloped coastal valley that opens out on Monterey Bay and extends southeastward with mountain ranges (Gabilan Range to the east and Sierra de Salinas to the west) of 2,000 to 3,000 feet elevation on either side. The broad area of the valley floor near the mouth is 25 miles wide, narrowing to about 6 miles at Soledad, which is 40 miles inland, and to 3 miles wide at King City, which is about 60 miles from the coast. At Salinas, near the northern end of the Valley, west and northwest winds occur about one-half the time during the entire year.

Winds from the San Francisco Bay Area Air Basin (SFBAAB) tend to transport pollutants into the NCCAB, where surface winds move the pollutants to the eastern portion of the NCCAB. The NCCAB pollutant levels are influenced by the transport of pollutants from SFBAAB, and assessments have indicated that 50percent of NCCAB exceedances are the result of transport of pollutants from the

SFBAAB. Regional temperatures in the area typically range from the mid-forty degrees Fahrenheit (F°) to the low 70s, and average precipitation measures approximately 19.73 inches per year. August, September, and October are typically the warmest months.

2.4 - Local Air Quality Conditions

The existing local air quality is characterized by reviewing relevant air pollution concentration data near the Project area for comparison to the NAAQS and CAAQS. Air samples are either collected continuously or periodically depending on the pollutant and the type of monitoring equipment installed. Monitoring sites are usually chosen to be representative of emissions in a community. Ozone, CO, NO₂, toxics, and PM₁₀ and particulate matter of size 2.5 microns and smaller (PM_{2.5}) are monitored at the Salinas #3 Station, located approximately 1.3 miles northeast of the Project site. Table 2 summarizes 2014 through 2016 published air monitoring data, which is the most recent 3-year period available. The number of days each year that standards were exceeded and the amount of the exceedance provide a good indicator of severity of the air quality problems in the local area.

Table 2: Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2014	2015	2016
Ozone	1 Hour	Maximum 1 Hour (ppm)	0.066	0.068	0.066
		Days > State Standard (0.09 ppm)	0	0	0
	8 Hour	Maximum 8 Hour (ppm)	0.062	0.061	0.058
		Days > State Standard (0.07 ppm)	0	0	0
		Days > National Standard (0.070 ppm)	0	0	0
*Carbon monoxide	8 Hour	Maximum 8 Hour (ppm)	0.76 (2010)	0.99 (2011)	1.39 (2012)
		Days > State Standard (9.0 ppm)	0	0	0
		Days > National Standard (9 ppm)	0	0	0
Nitrogen dioxide	Annual	Annual Average (ppm)	5	5	4
	1 Hour	Maximum 1 Hour (ppm)	38.0	33.0	33.0
		Days > State Standard (0.18 ppm)	0	0	0
**PM ₁₀	Annual	Annual Average (µg/m ³)	16.4 (2009)	15.3 (2010)	4.9 (2011)
	24 Hour	24 Hour (µg/m ³)	41 (2009)	39 (2010)	18 (2011)
		Days > State Standard (50 µg/m ³)	0	0	0
		Days > National Standard (150 µg/m ³)	0	0	0

Table 2 (cont.): Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2014	2015	2016
PM _{2.5}	Annual	Annual Average (µg/m ³)	4.8	4.8	5.4
	24 Hour	24 Hour (µg/m ³)	20.2	22.8	28.7
		Days > National Standard (35 µg/m ³)	0	0	0

Notes:

> = exceed ppm = parts per million µg/m³ = micrograms per cubic meter

PM₁₀ = particulate matter of size 10 microns and below; PM_{2.5} = particulate matter of size 2.5 microns and below

State Standard = California Ambient Air Quality Standard

National Standard = National Ambient Air Quality Standard

All data from Salinas #3 Station

* Data from Salinas #3 Station for years 2010-2012

** Data from Salinas #3 Station for years 2009 to 2011

Sources: ARB 2016.

The health impacts of the various air pollutants of concern are presented in a number of ways. The clearest in comparison is to the state and federal ozone standards. If concentrations are below the standard, it is safe to say that no health impact would occur to anyone. When pollutant concentrations exceed the standard, health impacts will vary based on the magnitude of the exceedance. The EPA developed the Air Quality Index (AQI) as an easy to understand measure of health impact compared to concentrations in the air. Table 3 provides a description of the health impacts of ozone at different concentrations.

Table 3: Air Quality Index and Health Effects

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI-100—Moderate	Sensitive Groups: Children and people with asthma are the groups most at risk.
Concentration 70 ppb	Health Effects Statements: Unusually sensitive individuals may experience respiratory symptoms. Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI-150—Unhealthy for Sensitive Groups	Sensitive Groups: Children and people with asthma are the groups most at risk.
Concentration 85 ppb	Health Effects Statements: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma. Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.

Table 3 (cont.): Air Quality Index and Health Effects

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI-200—Unhealthy	Sensitive Groups: Children and people with asthma are the groups most at risk.
Concentration 105 ppb	Health Effects Statements: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population. Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI-210—Very Unhealthy	Sensitive Groups: Children and people with asthma are the groups most at risk.
Concentration 115 ppb	Health Effects Statements: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population. Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
Notes: AQI = air quality index ppb = parts per billion Source: EPA 2014b.	

Based on the AQI scale for the 8-hour ozone standard, the nearest monitoring station experienced no days in the last 3 years that would be categorized as unhealthy (AQI 200), and no days that would be considered moderate (AQI 100) as measured at the Salinas #3 Station. The highest reading was 68 parts per billion (ppb) in 2015 compared with the 70-ppb cut off point for moderate (AQI 100).

The other nonattainment pollutant of concern is PM₁₀. An AQI of 100 or lower is considered moderate and would be triggered by a 24-hour average concentration of 154 µg/m³, which is an exceedance of the federal PM₁₀ standard. The Salinas #3 Station did not exceed the standard in 2014 to 2016. People with respiratory or heart disease, the elderly and children are the groups most at risk. Unusually sensitive people should consider reducing prolonged or heavy exertion.

Table 4: Air Quality Index and Health Effects

Air Quality Index/ 24-hour PM ₁₀ Concentration	Health Effects Description
AQI-100—Moderate Concentration 154 µg/m ³	Sensitive Groups: People with respiratory disease are the group most at risk.
	Health Effects Statements: Unusually sensitive people should consider reducing prolonged or heavy exertion.
	Cautionary Statements: Unusually sensitive people should consider reducing prolonged or heavy exertion.
AQI-150—Unhealthy for Sensitive Groups Concentration 254 µg/m ³	Sensitive Groups: People with respiratory disease are the group most at risk.
	Health Effects Statements: Increasing likelihood of respiratory symptoms and aggravation of lung disease, such as asthma
	Cautionary Statements: People with respiratory disease, such as asthma, should limit outdoor exertion
AQI-200—Unhealthy Concentration 354 µg/m ³	Sensitive Groups: People with respiratory disease are the group most at risk.
	Health Effects Statements: Increased respiratory symptoms and aggravation of lung disease, such as asthma; possible respiratory effects in general population.
	Cautionary Statements: —
AQI-210—Very Unhealthy Concentration 361 µg/m ³	Sensitive Groups: People with respiratory disease are the group most at risk.
	Health Effects Statements: Significant increase in respiratory symptoms and aggravation of lung disease, such as asthma; increasing likelihood of respiratory effects in general population.
	Cautionary Statements: People with respiratory disease, such as asthma, should avoid any outdoor activity; everyone else, especially the elderly and children, should limit outdoor exertion.
Notes: AQI = air quality index µg/m ³ = micrograms (one-millionth of a gram) per cubic meter Source: EPA 2014b.	

SECTION 3: REGULATORY FRAMEWORK AND RULES

Air pollutants are regulated to protect human health and for secondary effects such as visibility and building soiling. The Clean Air Act of 1970 tasks the United States Environmental Protection Agency (EPA) with setting air quality standards. The State of California also sets air quality standards that, in some cases, are more stringent than federal standards and address additional pollutants. The ARB is the State agency responsible for setting air quality standards for California. The following section describes these federal and state standards and the health effects of the regulated pollutants.

Air pollutants are regulated at the national, state, and air basin or county level; each agency has a different level of regulatory responsibility. The EPA regulates at the national level, the ARB regulates at the state level, and the Air District regulates at the air basin level.

The EPA is responsible for national and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all SIPs, provides research and guidance for air pollution programs, and sets National Ambient Air Quality Standards, (also known as federal standards, described earlier).

A SIP is a document prepared by each state describing existing air quality conditions and measures followed to attain and maintain federal standards. The SIP for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for regional air districts—each air district prepares its federal attainment plan, which is sent to ARB to be approved and incorporated into the California SIP. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

Areas designated non-attainment must develop air quality plans and regulations to achieve standards by specified dates depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional state and local regulation is required to achieve the standards. Regulations adopted by California are summarized in the following sections.

3.1 - Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970, and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are in the CAA. These are particulate matter, ground-level ozone, CO, sulfur oxides, nitrogen oxides, and lead. EPA calls these pollutants criteria air pollutants because it regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health are primary standards. Another set of limits intended to prevent environmental and property damage are secondary standards (EPA 2014a). The federal standards are National Ambient Air Quality Standards (NAAQS). The air quality

standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone (O₃)
- Nitrogen dioxide (NO₂)
- Lead (Pb)
- Particulate matter (PM₁₀ and PM_{2.5})
- Carbon monoxide (CO)
- Sulfur dioxide (SO₂)

The federal standards were set to protect public health, including that of sensitive individuals; thus, EPA updates these standards when more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health (ARB 2013a).

3.2 - California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and are some of the most severe in the nation and required additional actions beyond the federal mandates. The ARB administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six federal standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are less stringent than federal CAA; therefore, consistency with the CAA will also demonstrate consistency with the CCAA.

3.3 - Toxic Air Contaminants

A toxic air contaminant (TAC) is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. There are no ambient air quality standards for TAC emissions. TACs are regulated in terms of health risks to individuals and populations exposed to the pollutants. The 1990 Clean Air Act Amendments, significantly expanded EPA's authority to regulate hazardous air pollutants (HAPs). Section 112 of the CAA lists 187 hazardous air pollutants regulated by source category. Authority to regulate these pollutants was delegated to the States. ARB and local air districts regulate TACs and HAPs in California.

3.4 - Air Pollutant Description and Health Effects

The federal and state ambient air quality standards, relevant effects, properties, and sources of the pollutants are summarized in Table 5.

Ozone

Ozone is not emitted directly into the air but is formed by a photochemical reaction in the atmosphere. Ozone precursors, which include reactive organic compounds (ROC) and nitrous oxides (NO_x), react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. Often, the effects of emitted ROC and NO_x are felt a distance downwind of the emission sources. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials.

Ozone can irritate lung airways and cause inflammation much like a sunburn. Other symptoms include wheezing, coughing, pain when taking a deep breath, and breathing difficulties during exercise or outdoor activities. People with respiratory problems are most vulnerable, but even healthy people who are active outdoors can be affected when ozone levels are high. Chronic ozone exposure can induce morphological (tissue) changes throughout the respiratory tract, particularly at the junction of the conducting airways and the gas exchange zone in the deep lung. Anyone who spends time outdoors in the summer is at risk, particularly children and other people who are more active outdoors. Even at very low levels, ground-level ozone triggers a variety of health problems, including aggravated asthma, reduced lung capacity, and increased susceptibility to such respiratory illnesses as pneumonia and bronchitis.

Ozone also damages vegetation and ecosystems. It leads to reduced agricultural crop and commercial forest yields; reduced growth and survivability of tree seedlings; and increased susceptibility to diseases, pests, and other stresses such as harsh weather. In the United States alone, ozone is responsible for an estimated \$500 million in reduced crop production each year. In addition, ozone causes damage to buildings, rubber, and some plastics.

Ozone is a regional pollutant, as the reactions forming it take place over time, and it materializes downwind from the sources of the emissions. As a photochemical pollutant, ozone is formed only during daylight hours under appropriate conditions, but is destroyed throughout the day and night. Thus, ozone concentrations vary depending upon both the time of day and the location. Even in pristine areas, some ambient ozone forms from natural emissions that are not controllable. This is termed background ozone. The average background ozone concentrations near sea level are in the range of 0.015 to 0.035 parts per million (ppm), with a maximum of about 0.04 ppm.

Reactive Organic Gases

Reactive organic gases (ROG) are defined as any compound of carbon, excluding CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participate in atmospheric photochemical reactions. ROG consist of nonmethane hydrocarbons and oxygenated hydrocarbons. Hydrocarbons are organic compounds that contain only hydrogen and carbon atoms. Nonmethane hydrocarbons are hydrocarbons that do not contain the unreactive hydrocarbon methane. Oxygenated hydrocarbons are hydrocarbons with oxygenated functional groups attached.

It should be noted that there are no state or national ambient air quality standards for ROG because ROG is not classified as criteria pollutant. ROG is regulated, however, because a reduction in ROG emissions reduces certain chemical reactions that contribute to the formulation of ozone. ROG is transformed into organic aerosols in the atmosphere, which contribute to higher PM₁₀ levels and lower visibility.

Nitrogen Oxides

During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides or NO_x. This occurs primarily in motor vehicle internal combustion engines and fossil fuel-fired electric utility facilities and industrial boilers. The pollutant NO_x is a concern because it is an ozone precursor, which means that it helps form ozone. When NO_x and ROG are released in the atmosphere, they can chemically react with one another in the presence of sunlight and heat to form ozone. NO_x can also be a precursor to PM₁₀ and PM_{2.5}.

Because NO_x and ROG are ozone precursors, the health effects associated with ozone (as discussed below in Table 5) are also indirect health effects associated with significant levels of NO_x and ROG emissions.

Particulate Matter (PM₁₀ and PM_{2.5})

PM is particulate matter in the air that includes a mixture of solids and liquid droplets. Some particles are emitted directly; others are formed in the atmosphere when other pollutants react. PM is so small that they can get into the lungs, potentially causing serious health problems. PM₁₀ is 10 microns in diameter, smaller than the width of a human hair. PM_{2.5} is 2.5 microns in diameter and consists of “fine” particles. These fine particles are so small they can be detected only with an electron microscope. Sources of fine particles include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes.

These particles come in many sizes and shapes and can be made up of hundreds of different chemicals. Some particles, known as primary particles, are emitted directly from a source, such as construction sites, unpaved roads, fields, smokestacks, or fires. Others form in complicated reactions in the atmosphere from chemicals such as sulfur dioxides and nitrogen oxides that are emitted from power plants, industrial activity, and automobiles. These particles, known as secondary particles, make up most of the fine particle pollution in the United States.

Particle exposure can lead to a variety of health effects. For example, numerous studies link particle levels to increased hospital admissions and emergency room visits—and even to death from heart or lung diseases. Both long- and short-term particle exposures have been linked to health problems. Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function, the development of chronic bronchitis, and even premature death. Short-term exposures to particles (hours or days) can aggravate lung disease, causing asthma attacks and acute bronchitis, and may increase susceptibility to respiratory infections. In people with heart disease, short-term exposures have been linked to heart attacks and arrhythmias. Healthy children and adults have not been reported

to suffer serious effects from short-term exposures, although they may experience temporary minor irritation when particle levels are elevated.

Carbon Monoxide

Carbon monoxide (CO) is of less concern in the NCCAB because it is classified as an attainment area. CO is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all CO emissions nationwide. Higher levels of CO generally occur in areas with heavy traffic congestion. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors.

Motor vehicles are the dominant source of CO emissions in most areas. CO is described as having only a local influence because it dissipates quickly. High CO levels develop primarily during winter, when periods of light winds combine with the formation of ground-level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Because CO is a product of incomplete combustion, motor vehicles exhibit increased CO emission rates at low air temperatures. High CO concentrations occur in areas of limited geographic size, sometimes referred to as hot spots. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin, reducing the amount of oxygen transported in the bloodstream. The health threat from relatively low levels of CO is most serious for those who suffer from such heart-related diseases as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

Toxic Air Contaminants

In addition to the criteria pollutants, discussed above, toxic air contaminants (TACs), also known as hazardous air pollutants (HAPs), are another group of pollutants of concern. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. In general, for those TACs that may cause cancer, there are thresholds set by

regulatory agencies below which adverse health impacts are not expected to occur. This contrasts with the criteria pollutants for which acceptable levels of exposure can be determined and for which the state and federal governments have set ambient air quality standards.

According to the California Almanac of Emissions and Air Quality, the majority of the estimated health risk from TACs for the State of California can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM) from diesel-fueled engines.

Diesel Particulate Matter

The ARB identified PM emissions from diesel-fueled engines as a TAC in August 1998 under California's TAC program. The State of California, after a 10-year research program, determined in 1998 that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic (long-term) health risk. According to ARB's 2013 Almanac, on-road diesel-fueled vehicles contribute approximately 42 percent of the statewide total inventory, with an additional 55 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units.¹ The remaining DPM inventory was generated by stationary point sources and aggregated stationary sources.

¹ The California Almanac of Emissions and Air Quality. 2013 Edition. Website: <https://www.arb.ca.gov/aqd/almanac/almanac13/almanac2013all.pdf>.

Table 5: Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1 Hour	0.09 ppm	—	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.	Ozone is a photochemical pollutant not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), oxides of nitrogen (NO _x), and sunlight. Ozone is a regional pollutant generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO _x) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm (parts per million)	0.070 ppm ^f			
Carbon monoxide	1 Hour	20 ppm	35 ppm	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.	Carbon monoxide is a colorless, odorless, toxic gas. Carbon monoxide is somewhat soluble in water; therefore, rainfall and fog can suppress carbon monoxide conditions. Carbon monoxide enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	Carbon monoxide is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.
	8 Hour	9.0 ppm	9 ppm			
Nitrogen dioxide ^b	1 Hour	0.18 ppm	0.100 ppm	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contribution to atmospheric discoloration; increased visits to hospital for respiratory illnesses.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO _x (NO, NO ₂ , NO ₃ , N ₂ O, N ₂ O ₃ , N ₂ O ₄ , and N ₂ O ₅). NO _x is a precursor to ozone, PM ₁₀ , and PM _{2.5} formation. NO _x can react with compounds to form nitric acid and related small particles and result in PM related health effects.	NO _x is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide (NO ₂) forms quickly from NO _x emissions. NO ₂ concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	Annual	0.030 ppm	0.053 ppm			

Table 5 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfur dioxide ^c	1 Hour	0.25 ppm	0.075 ppm	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO _x) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM ₁₀ .	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour	—	0.5 ppm			
	24 Hour	0.04 ppm	0.14 ppm (for certain areas)			
	Annual	—	0.030 ppm (for certain areas)			
Particulate matter (PM ₁₀)	24 hour	50 µg/m ³ (microgram per cubic meter)	150 µg/m ³	- Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. - Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM ₁₀ refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). PM _{2.5} refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.
	Mean	20 µg/m ³	—			
Particulate matter (PM _{2.5})	24 Hour	—	35 µg/m ³			
	Annual	12 µg/m ³	12.0 µg/m ³			
Visibility-reducing particles	8 Hour	See note below ^d				

Table 5 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfates	24 Hour	25 µg/m ³	—	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardio-pulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO ₄ ²⁻ . Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead ^e	30-day	1.5 µg/m ³	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.
	Quarter	—	1.5 µg/m ³			
	Rolling 3-month average	—	0.15 µg/m ³			
Vinyl chloride ^e	24 Hour	0.01 ppm	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, the Air Resources Board identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.

Table 5 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Hydrogen sulfide	1 Hour	0.03 ppm	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Hydrogen sulfide (H ₂ S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).
Volatile organic compounds (VOC)		There are no State or federal standards for VOCs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants.	Reactive organic gases (ROG), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROG and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM ₁₀ and lower visibility.
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. 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. Human studies on the carcinogenicity of	DPM is a source of PM _{2.5} —diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.

Table 5 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard ^a	Most Relevant Effects from Pollutant Exposure	Properties	Sources
				DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are in diesel exhaust.	
Notes: ppm = parts per million (concentration) $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter NO_x = oxides of nitrogen VOC = volatile organic compounds NO_2 = nitrogen dioxide SO_x = oxides of sulfur DPM = diesel particulate matter ROG = reactive organic gases PM_{10} = particulate matter of size 10 microns and below $\text{PM}_{2.5}$ = particulate matter of size 2.5 microns and below H_2S = hydrogen sulfide SO_4^{2-} = sulfate SO_2 = sulfur dioxide ^a Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. ^b To attain the 1-hour NO_2 national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (0.100 ppm). ^c On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 parts per billion (ppb). The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. ^d Visibility-reducing particles: In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are “extinction of 0.23 per kilometer” and “extinction of 0.07 per kilometer” for the statewide and Lake Tahoe Air Basin standards, respectively. ^e The ARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants. ^f The EPA Administrator approved a revised 8-hour ozone standard of 0.07 ppb on October 1, 2015. The new standard went into effect 60 days after publication of the Final Rule in the Federal Register. The Final Rule was published in the Federal Register on October 26, 2015 and became effective on December 28, 2015. Source of effects, properties, and sources: Bay Area Air Quality Management District 2011; California Environmental Protection Agency 2002; California Air Resources Board 2009a; U.S. Environmental Protection Agency 2003, 2009a, 2009b, 2010, 2011, and 2012a; National Toxicology Program 2011a and 2011b. Source of standards: ARB 2013a.						

Several pollutants listed in Table 5 are not discussed further in this analysis. Analysis of lead is not included in this report because the Project will not create any new sources of lead emissions. Particulate matter is addressed in this analysis, and therefore visibility-reducing particles are not explicitly addressed. The Project will not generate or expose residents to vinyl chloride because the proposed Project does not use the chemical processes that create this pollutant, and there are no such uses in the Project vicinity. The proposed Project will not expose people to hydrogen sulfide because it will not generate hydrogen sulfide in any substantial quantity.

Toxic Air Contaminants and their Health Effects

A TAC is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data. The ten TACs are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and DPM.

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and 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.

DPM differs from other TACs in that it is not a single substance but a complex mixture of hundreds of substances. Although diesel-fueled, internal combustion engines emit DPM, the composition of the emissions varies. The DPM exhaust composition depends on several items, including engine type, operating conditions, fuel composition, lubricating oil, and whether or not an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's particulate matter of sizes 10 microns and smaller (PM₁₀) database, ambient PM₁₀ monitoring data, and the results from several studies to estimate concentrations of DPM.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the

United States. Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs).

3.5 - Air Quality Plans and Regulations

3.5.1 - California Regulations

California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and are some of the most severe in the nation and required additional actions beyond the federal mandates. The ARB administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six federal standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are less stringent than federal CAA; therefore, consistency with the CAA will also demonstrate consistency with the CCAA.

Low-Emission Vehicle Program

The ARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan. In 2012, ARB adopted the LEV III amendments to California's Low-Emission Vehicle (LEV) regulations. These amendments include more stringent emission standards for both criteria pollutants and GHGs for new passenger vehicles (ARB 2012a).

On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others (ARB 2013b).

ARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the ARB adopted a regulation to reduce DPM and NO_x emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive

minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to \$10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NO_x emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

ARB Airborne Toxic Control Measure for Asbestos

In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on Projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These Projects require the submittal of a "Dust Mitigation Plan" and approval by the air district prior to the start of a Project.

Construction sometimes requires the demolition of existing buildings where construction occurs. Buildings often include materials containing asbestos. The demolition is associated with this Project would be subject to MBARD, Rule 1000 (Asbestos Demolition, Renovation, and Manufacturing). Asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentine) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

The ARB has an Air Toxics Control Measure for construction, grading, quarrying, and surface mining operations, requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps indicates that the Project site area are not likely to contain NOA.²

² A General Location Guide for Ultramafic Rocks in California. August 2010. http://ftp.consrv.ca.gov/pub/dmg/pubs/ofr/ofr_2000-019.pdf.

Diesel Risk Reduction Plan

The ARB's Diesel Risk Reduction Plan has led to the adoption of new state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The Projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020 (ARB 2000).

3.5.2 - Monterey Bay Air Resources District

The Project is located in Salinas City, Monterey County, NCCAB, and is under the jurisdiction of MBARD. Under the California CAA, the MBARD is required to develop an air quality plan for nonattainment criteria pollutants. As mentioned in Section 2.2, the NCCAB is designated nonattainment for state ozone and PM₁₀ standards.

MBARD is responsible for controlling emissions primarily from stationary sources and maintains air quality monitoring stations throughout the NCCAB. MBARD's responsibilities include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA. The MBARD is also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and for ensuring that NAAQS and CAAQS are met.

Through the attainment planning process, MBARD has developed rules and regulations for sources of air pollution. Specific regulations applicable to the Project may involve diesel construction equipment emissions, fugitive dust, on-road haul truck emissions, and general permit requirements. Listed below are the MBARD rules that would be applicable to the Project.

- Rule 402, Nuisances: Provide an explicit prohibition against sources creating public nuisances while operating within the District.
- Rule 403, Particulate Matter: Provide particulate matter emission limits for sources operating within the District.
- Rule 424, National Emission Standards for Hazardous Air Pollutants (NESHAPS): Provide clarity on the District's enforcement authority for the National Emissions for Hazardous Air Pollutants by incorporating those provisions of Parts 61 and 63 Chapter I, Title 40 of the Code of Federal Regulations (40 CFR Parts 61&63) into this Rule by reference.
- Rule 425, Use of Cutback Asphalt: Limit the emissions of vapors of organic compounds from the use of cutback and emulsified asphalts.
- Rule 439, Building Removals: Limit particulate emissions from the removal of buildings within the District.
- Rule 426, Architectural Coatings: Limit the emissions of Volatile Organic Compounds (VOC) from the use of architectural coatings.

- Rule 1000, Permit Guidelines and Requirements for Sources Emitting Toxic Air Contaminants:
 - prevent the emission into the atmosphere within the District of toxic air contaminants (referenced hereinafter as TACs), which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health; and,
 - prevent occurrences which may endanger the health and welfare of the public within the District and to assure that no person will suffer material impairment of health or functional capacity; and,
 - comply with the federal Clean Air Act §112(g) Toxic New Source Review requirements; and,
 - protect the public's health and welfare while allowing, where permitted, the continued operation of sources which do or may emit TACs; and,
 - Not to limit in any way the provisions, extent, intent, interpretation, or enforcement of District Rule 402 (Nuisances).
- Rule 1003, Air Toxics Emissions Inventory and Risk Assessments Comply with the California Health & Safety Code Part 6, Section 44300 et seq., by establishing and implementing a program to inventory air toxics emissions, to assess the risk to public health from exposure to these emissions, to notify the public of any known significant health risk associated with toxic emissions from any facility, and to prepare Risk Reduction Audits and Plans to effect risk reductions.

The District adopted the 2012-2015 Air Quality Management Plan in March 2017, which updates the 2013 Air Quality Management Plan (AQMP) for the Monterey Bay Region and documents progress towards attaining the ozone CAAQS. MBARD has adopted CEQA Air Quality Guidelines³ in 2008, which is the most recent applicable Guideline. The 2008 CEQA Guideline determined the regional project-level thresholds of significance for construction and operational-related emissions. Emissions that exceed the designated threshold levels are considered potentially significant impacts and further mitigation measures should be applied.

This assessment follows the 2008 MBARD CEQA Air Quality guidelines. The significance thresholds used in this analysis are based on the MBARD standards and as set forth in Table 6 below.

Current Air Quality Plans

A State Implementation Plan (SIP) is a federal requirement; each state prepares one to describe existing air quality conditions and measures that will be followed to attain and maintain the national ambient air quality standards. In addition in California, state ozone standards have planning requirements. However, state PM₁₀ standards have no attainment planning requirements, but air districts must demonstrate that all measures feasible for the area have been adopted.

Ozone Plans

Because the NCCAB is nonattainment for the state ozone standards, the MBARD AQMP is a transitional plan shifting focus of their efforts to achieving the new, more stringent 8-hour

³ MBUAPCD. February 2008. Monterey Bay Unified Air Pollution Control District 2008a.

requirement.⁴ The plan includes an updated air quality trends analysis, which now reflects both the 1- and 8-hour standards, as well as an updated emission inventory, which includes the latest information on stationary, area and mobile emission sources.

The 2008 AQMP documented that the air basin continued to attain the 1-hour standard and recommended adoption of the following five control measures to make progress towards achieving the 8-hour standard:

- A1—Solvent Cleaning Operations: reduce VOC emissions by the establishment of a 25 gram/liter VOC limit on general cleaning applications, cleaning of ink application equipment, and polyester resin application equipment.
- A2—Degreasing Operations: reduce VOC emissions from degreasing operations by the establishment of a 50 gram/liter VOC limit on the cleaning solution. As an alternative, an airtight/airless cleaning system could be used in lieu of complying with the 50 gram/liter VOC limit.
- A3—Spray Booths: Miscellaneous Coatings and Cleanup Solvents: require the reduction of VOC emissions from miscellaneous coating and cleanup solvents at spray booth operations, which are not affected by other coating regulations.
- A4—Adhesives and Sealants—reduce VOC emissions from the use of adhesives/sealants and cleanup solvents by requiring low-volatile organic compounds (VOC) adhesives/sealants and clean-up solvents and improved adhesive transfer efficiency.
- A5—Natural Gas-Fired Fan-Type Central Furnaces and Residential Water Heaters: reduce NO_x emissions by establishing a limit of 40 nanograms/joule (55 ppm (@ 3% O₂) for new and replacement installations.

For 2010, the combined emission reductions from these measures are estimated to be 1.65 tons per day of VOC and 0.17 tons per day of NO_x.

In March 2017, the MBARD adopted the 2012-2015 Air Quality Management Plan, which is the latest AQMP. It is an update to elements included in the 2013 AQMP and shows that the region continues to make progress toward meeting the state ozone standard. The recent changes that contributed to reducing estimated ROG emissions compared to the 2013 AQMP include lower vehicle miles traveled and aligning Rule 426 Architectural Coatings to the ARB's recommendations. In addition, Cleaner exhaust standards for mobile sources continue to be an important factor in reducing regional ROG and NO_x emissions over the lifetime of the AQMP series.

Particulate Matter Plans

MBARD planning related to attainment of the state's PM₁₀ standard is addressed in the 2005 Report on the Attainment of the California Particulate Matter Standards in the Monterey Bay Region (Senate Bill 656 Implementation Plan, dated December 1, 2005).⁵ This plan describes the greater

⁴ MBUAPCD. August 2008. <http://www.mbuapcd.org/mbuapcd/pdf/Planning/2008AirQualityManagementPlan1.pdf>. Accessed June 14, 2017.

⁵ MBUAPCD. 2005 Report on Attainment of the California Particulate Matter Standards in the Monterey Bay Region. December 2005. [http://mbard.org/pdf/358%20\(1\).pdf](http://mbard.org/pdf/358%20(1).pdf).

vulnerability of coastal locations within the NCCAB to PM₁₀ standard violations, due largely to the contribution from sea salt. It focuses primarily on controlling particles in fugitive dust and smoke related to combustion, but also addresses NO_x- and ROG-related particulate matter formation.

Rules

The following District Rules and Regulations address direct emissions for PM₁₀ from area sources requiring District permits:

- Rule 400 Visible Emissions: Limits opacity for visual emissions to 20%.
- Rule 403, Particulate Matter

3.5.3 - Monterey County General Plan

The 2010 Monterey County General Plan, adopted in October 2010, applies to the inland area of Monterey County, including the Project site. The 2010 Monterey County General Plan presents goals and policies that guide the general distribution and intensity of land uses, including residential, agricultural, commercial and industrial, public facilities, and open space uses, in the County. The Conservation and Open Space Element includes the following air quality goals and policies that are relevant to the Project.

- **Goal OS-10:** Provide for the protection and enhancement of Monterey County's air quality without constraining routine and ongoing agricultural activities.
- **Policy OS-10.1:** Land use policy and development decisions shall be consistent with the natural limitations of the County's air basins.
- **Policy OS-10.6:** The Monterey Bay Unified Air Pollution Control District's air pollution control strategies, air quality monitoring, and enforcement activities shall be supported.
- **Policy OS-10.7:** Use of the best available technology for reducing air pollution emissions shall be encouraged
- **Policy OS-10.9:** The County of Monterey shall require that future development implement applicable MBARD control measures...The County will require that future construction operate and implement MBUPACD control measures to ensure that construction-related PM₁₀ and NO_x emissions do not exceed the MBARD's daily thresholds.

3.6 - Thresholds of Significance

CEQA gives lead agencies discretion on how to determine if a particular environmental impact is considered significant. Ultimately, formulation of a standard or "threshold" of significance requires the lead agency to make a policy judgment about where the line should be drawn distinguishing adverse impacts it considers significant from those that are not deemed significant. This judgment must, however, be based on scientific information and other factual data to the extent possible. (CEQA Guidelines Section 15064(b)).

Pursuant to the MBARD 2008 Guidelines, implementation of the proposed Project would be considered significant if it would exceed any of the following criteria in Table 6.

Table 6: MBARD Thresholds of Significance

Pollutant	Construction-related Thresholds Emissions (pounds/day)	Operational Thresholds (pounds/day)
Criteria Air Pollutants		
ROG	NA	137
NO _x	NA	137
PM ₁₀	82	82 (on-site)
SO _x	NA	137
CO	NA	550
Health Risks and Hazards for Sensitive Receptors		
Excess Cancer Risk	10 per one million	10 per one million
Chronic or Acute Hazard Index	1	1
Notes: ROG = reactive organic gases, NO_x = nitrogen oxides, PM₁₀ = coarse particulate matter or particulates with an aerodynamic diameter of 10 µm or less, and SO_x= sulfur oxides NA = not applicable Source: MBARD 2008.		

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SECTION 4: MODELING PARAMETERS AND ASSUMPTIONS FOR CONSTRUCTION AND OPERATION EMISSIONS

4.1 - Model Selection and Guidance

The California Emissions Estimator Model (CalEEMod) version 2016.3.2 was used to estimate the Project's construction and operation-related air pollutant emissions. CalEEMod was developed in cooperation with air districts throughout the State. CalEEMod is designed as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with construction and operation from a variety of land uses.

4.2 - Construction

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions. Construction emissions result from on-site and off-site activities. On-site emissions principally consist of exhaust emissions from heavy-duty construction equipment and motor vehicle operation, and fugitive dust (mainly PM₁₀) from disturbed soil. Additionally, paving operations and application of architectural coatings would release volatile organic compounds (VOC) emissions. Off-site emissions are from motor vehicle exhaust from delivery vehicles, worker traffic, and road dust (mainly PM₁₀).

The activity for construction equipment is based on the hours of operation, horsepower of the engine, and load factors of the equipment. The load factor is the average power of a given piece of equipment while in operation compared with its maximum rated horsepower. A load factor of 1.0 indicates that a piece of equipment continually operates at its maximum operating capacity.

The total construction area would be 6.8 acres. Up to 4 percent of the floor space (4,700 sq.ft.) was assumed to be occupied by support office space which is categorized as general office space. The remaining floor area (113,900 sq.ft.) was modeled as light industrial space. The remaining area was assumed to be non-asphalt surfaces.

The construction equipment assumed for the Project is shown in the CalEEMod output contained in Appendix A. The CalEEMod default construction duration and equipment fleet mix was used in the analysis. It should be noted that default assumptions tend to result in more conservative estimates of emissions in order to avoid underestimating emissions when project-specific information is not available.

Construction was modeled to begin as early as September 2018 to meet the 2020 operation plan. Construction activities were assumed to occur 5 days per week throughout the construction period. The CalEEMod default construction schedule used to model construction emissions is shown in Table 7 below.

Table 7: Project Construction Schedule

Construction Phase	Project Construction Schedule		Working Days
	Start Date	End Date	
Demolition	9/3/2018	9/28/2018	20
Site Preparation	9/29/2018	10/12/2018	10
Grading	10/13/2018	11/9/2018	20
Building Construction	11/10/2018	9/27/2019	230
Paving	9/28/2019	10/25/2019	20
Architectural Coating	10/26/2019	11/22/2019	20
Source: FirstCarbon Solutions and CalEEMod			

Construction Equipment Emission Factors

CalEEMod contains a default inventory of construction equipment based on the size and types of land uses to be developed. For each construction phases, CalEEMod can estimate the number of equipment, their age, their horsepower, and equipment tier from which rates of emissions are developed. Table 8 presents the CalEEMod default construction equipment used on the Project.

Table 8: Project Construction Equipment Assumptions

Phase Name	Equipment	Number	Hours per day	Horsepower	Load Factor
Demolition	Excavators	3	8.00	158	0.38
	Concrete/Industrial Saws	1	8.00	81	0.73
	Rubber Tired Dozers	2	8.00	247	0.40
Site preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Excavators	1	8.00	158	0.38
	Rubber Tired Dozers	1	8.00	247	0.40
	Graders	1	8.00	187	0.41
	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building construction	Cranes	1	7.00	231	0.29
	Forklifts	3	8.00	89	0.20
	Generator Sets	1	8.00	84	0.74
	Tractors/Loaders/Backhoes	3	7.00	97	0.37
	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
	Rollers	2	8.00	80	0.38

Table 8 (cont.): Project Construction Equipment Assumptions

Phase Name	Equipment	Number	Hours per day	Horsepower	Load Factor
	Paving Equipment	2	8.00	132	0.36
Architectural coating	Air compressors	1	6	78	0.48
Source: CalEEMod and FirstCarbon Solutions, see Appendix A.					

Demolition and Grading

The Project includes demolition of an existing, 900-square-foot, one-story building. The Project would balance the soil on-site during grading phase. In others, no soil materials are anticipated to be imported or exported from the project site. Default trip lengths for material delivery trucks and construction workers were used in the modeling analysis.

During demolition and grading activities, fugitive dust would be generated from the movement of materials on the Project site. CalEEMod estimates dust from dozers moving dirt around, dust from graders or scrapers leveling the land, and loading or unloading construction debris and dirt into haul trucks. Each of those activities is calculated differently in CalEEMod based on the number of acres traversed by the grading equipment and amount of building to be demolished.

Construction Off-site Trips

Worker trips are accounted for during the construction phases based on 1.25 trips per piece of equipment (the CalEEMod default). The CalEEMod run used the default worker trip length of 10.8 miles and the default vehicle fleet (LD Mix) for employee trips.

The CalEEMod defaults for vendor trips, trip length, and vehicle fleet (Heavy Duty Truck Mix) were used.

Haul trips are based on the assumption that a truck can handle 20 tons (or 16 cubic yards) of material per load. Assuming one load of material, CalEEMod considers a haul truck importing material will have a return trip with an empty truck (2 trips). Similarly, the haul truck to take material away will have an arrival trip in an empty truck (2 trips). CalEEMod default haul trips for an assumed 900-square-foot building to be demolished were used.

A summary of the construction-related vehicle trips is shown in Table 9. Note that the total number of off-site construction trips would not necessarily occur on the same day since the various construction activities would vary each day.

Table 9: Construction Off-Site Trips

Activity	Construction Trips		
	Worker (per Day)	Vendor (per Day)	Haul (in total)
Demolition—Building	15	0	4
Site Preparation	18	0	0
Grading	15	0	0
Building Construction	124	49	0
Paving	15	0	0
Architectural Coating	25	0	0

Source: FirstCarbon Solutions and CalEEMod, see Appendix A.

4.3 - Operation

Operational emissions are those emissions that occur during operation of the Project. The major sources are summarized below.

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the automobiles that would travel to and from the Project site. Rodeo Property General Plan Amendment & Rezoning Traffic Impact Analysis prepared by Mott MacDonald (April 2018) utilized the trip rates from the Institute of Transportation Engineers (ITE) publication Trip Generation Manual, 10th Edition. The proposed Project would be served with daily truck deliveries. Trucks would consist of 2-axle, 3-axle, and 4+ axle combination units. Based on studies of truck percentages for high-cube warehouse and light industries, the assumptions for vehicle classification are summarized and shown in Table 10.⁶

Table 10: Vehicle Type Classification

Type	Passenger Vehicle	LHDT 2-Axle	MHDT 3-Axle	HHDT 4+ Axle	Total
General Light Industry	74.4%	8.4%	4.6%	12.6%	100%

Source: San Bernardino County Truck percentages for industrial and warehouse uses.

The vehicle fleet mix is the mix of motor vehicle classes active during the operation of the Project. Emission factors are assigned to the expected vehicle mix as a function of vehicle class, speed, and fuel use (gasoline and diesel-powered vehicles). The fleet mix for the proposed Project was a combination of CalEEMod default vehicle fleet mix shown in Table 11 (for passenger vehicles) and the vehicle type classifications (for truck deliveries) shown in Table 10.

⁶ San Bernardino County Truck Percentage for Industrial and Warehouse Uses. 2003.

Table 11: Vehicle Fleet Mix

Vehicle Type	CalEEMod Default Fleet Mix	Proposed Fleet Mix
LDA	0.533	0.437
LDT1	0.031	0.025
LDT2	0.203	0.166
MDV	0.141	0.116
LHDT ¹	0.025	0.068
LHDT ²	0.006	0.016
MHD	0.018	0.046
HHDT	0.026	0.126
OBUS	0.004	0.000
UBUS	0.003	0.000
NCT	0.008	0.000
SBUS	0.001	0.000
MH	0.001	0.000

Source:

¹ Default is from CalEEMod General Light Industry Land Use Type, Monterey County

² San Bernardino County Truck Percentages for Industrial and Warehouse Uses, 2003.

Architectural Coatings (Painting)

Paints release VOC emissions during application and drying. The buildings in the Project would be periodically repainted as warranted for maintenance needs. Default VOC content coatings were used in the CalEEMod modeling.

Landscape Equipment

CalEEMod estimated the landscaping equipment (leaf blowers, chainsaws, and mowers) using the statewide average of 3 percent electric powered equipment in the model.

4.4 - Health Risk Assessment

A Health Risk Assessment (HRA) is a guide that helps to determine whether current or future exposures to a chemical or substance in the environment could affect the health of a population. Currently the project site does not have a specific development plan. Therefore, a quantitative project-level health risk analysis is not available. A full construction and operation HRA technical study report including methodology and assumptions would be prepared when future site-specific development plans are determined.

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SECTION 5: AIR QUALITY IMPACT ANALYSIS

This section calculates the expected emissions from construction and operation of the Project as a requisite for assessing the regulatory significance of Project emissions on a regional and localized level.

5.1 - CEQA Guidelines

The CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in the environment.” To determine if a Project would have a significant impact on air quality, the type, level, and impact of emissions generated by the Project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines. A significant impact would occur if the Project would:

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

While the final determination of whether a Project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, MBARD recommends that its quantitative thresholds be used to determine the significance of Project emissions. If the Lead Agency finds that the Project has the potential to exceed these air pollution thresholds, the Project should be considered to have significant air quality impacts.

5.2 - Impact Analysis

Applicable Air Quality Plans

Impact AIR-1:	The Project would not conflict with or obstruct implementation of the applicable Air Quality Plan.
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Impact Analysis

MBARD prepares air quality plans that include projected emissions inventories and account for emission reductions strategies in order to demonstrate how the region will achieve the ambient air quality standards by the given deadlines. MBARD recommends that Projects consider the following

criteria to determine if a Project would conflict with or obstruct implementation of an applicable air quality plan:

1) Consistent with the AQMP?

The applicable AQMP for the Project is the 2012-2015 Air Quality Management Plan (AQMP), adopted in March 2017. The AQMP uses growth projections from local general plans to project future regional emissions. Thus, if a Project is consistent with the land use designations and growth projections of the applicable general plan, it would also be considered consistent with the regional AQMP.

This City of Salinas General Plan adopted in September 2002, and updated its land use designation in January 2014. The project site is designated in the General Plan as Open Space. The project is a General Plan amendment and Rezone change that would allow development of industrial and commercial uses on site. Furthermore, MBARD considers its thresholds of significance the allowable limit for each project to generate without impeding or conflicting with the AQMP's goal to achieve ambient air quality standards. As shown in Table 12 and Table 13, the project's short-term construction and long-term operational emissions would not exceed regional thresholds. Therefore, the proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. This impact would be less than significant.

2) Emit 137 or more of VOC or NO_x?

As shown in Table 12 and Table 13, the proposed Project construction and operational-related emissions would not exceed the MBARD-recommended regional significance thresholds. Therefore, the Project would not result in a significant impact.

Therefore, considering the consistency with the AQMP and that the Project's construction and operational emissions would not exceed MBARD's thresholds of significance, the Project would not conflict with or obstruct implementation of the applicable air quality plan. The impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None.

5.3 - Impact Analysis

Potential for Air Quality Standard Violation

Impact AIR-2: The Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact Analysis

This impact relates to regional criteria pollutant impacts. The thresholds of significance are considered the allowable limit that each Project can generate without substantially contributing to an existing or Project air quality violation. Based on the nonattainment status of the region with respect to the State particulate matter (PM₁₀), and state and federal for ozone, ozone precursors and particulate matter are of particular concern. The analysis below evaluates the potential for construction and operational activities to generate substantial air quality emissions.

MBARD recommends that Projects consider the following criteria to determine if a Project would violate any air quality standards:

1. Emit 137 or more of VOC or NO_x?
2. Directly emit 550 lbs/day or more of CO?
3. Generate traffic that significantly affects levels of service?
4. Directly emit 82 lbs/day or more of PM₁₀ on-site during construction or operation?
5. Generate traffic on unpaved roads of 82 lbs/day or more of PM₁₀?
6. Directly emit 150 lbs/day or more of SO_x?

Construction Emissions

Construction-related emissions were calculated using CalEEMod version 2016.3.2. CalEEMod outputs and assumptions are provided as Appendix A.

During building construction and grading, fugitive dust (PM_{2.5} and PM₁₀) would be generated from these and other related earth-moving activities. The majority of this fugitive dust will remain localized and be deposited near the Project site. Exhaust-related construction emissions would occur from construction equipment, material delivery trucks, haul trucks, and construction worker vehicles. The Project's estimated daily construction emissions are presented in Table 12.

Table 12: Unmitigated Maximum Daily Construction Emissions

Construction Activity	Emission (lbs/day)				
	ROG	NO _x	CO	SO ₂	PM ₁₀ (total)
Demolition -2018	3.81	38.48	23.05	0.04	2.09
Site Preparation—2018	4.67	48.30	23.40	0.04	10.86
Grading—2018	2.86	30.76	17.31	0.03	4.62

Table 12 (cont.): Unmitigated Construction Emissions

Construction Activity	Emission (lbs/day)				
	ROG	NOx	CO	SO ₂	PM ₁₀ (total)
Building Construction—2018	3.74	31.14	25.92	0.05	2.92
Building Construction—2019	3.30	28.45	24.51	0.05	2.70
Paving—2019	1.53	15.32	15.31	0.02	0.95
Architectural Coating—2019	86.56	1.96	2.92	0.01	0.34
Maximum daily Emissions (lbs/day)¹	86.56	48.30	25.92	0.05	10.86
MBARD- 2008 Average Daily Emissions Significance of Thresholds	NA	NA	NA	NA	82
Exceeding thresholds?	NA	NA	NA	NA	No
Notes: ROG = reactive organic gases; NO _x = oxides of nitrogen; CO = carbon monoxide; PM ₁₀ = particulate matter 10 microns in diameter; PM _{2.5} = particulate matter 2.5 microns in diameter ¹ The daily emissions presented in the table are the maximum of either the summer and winter outputs for each construction phase. Source: Monterey Bay Air Resources District, 2008					

As shown in Table 12, the Project would generate PM₁₀ emissions that do not exceed the 82 lbs/day threshold of significance during construction. Therefore, the construction-related emissions would result in a less-than-significant impact.

Operational Emissions

Operational emissions associated with the Project were calculated using CalEEMod. Operational emissions would be generated by area, energy, and mobile sources. Area sources would include activities such as landscape maintenance and occasional architectural coatings. Energy sources would include natural gas combustion for space and water heating. Mobile sources would include vehicle trips associated with employees, and delivery trucks. Table 13 shows the average daily operational emissions of the proposed Project.

Table 13: Average Daily Operational Emissions

Construction Activity	Emission (lbs/day)				
	ROG	NOx	CO	SO ₂	PM ₁₀ (total) On-site
Area	3.08	0.01	0.03	0.00	0.00
Energy	0.09	0.83	0.70	0.01	0.06
Mobile	1.64	18.77	18.57	0.07	3.93
Total daily Emissions (lbs/day)	4.80	19.60	19.30	0.08	3.99

Table 13 (cont.): Daily Operational Emissions

Construction Activity	Emission (lbs/day)				
	ROG	NO _x	CO	SO ₂	PM ₁₀ (total) On-site
MBARD—2008 Average Daily Emissions Significance of Thresholds	137	137	550	150	82
Exceeding thresholds?	No	No	No	No	No
Notes: ROG = reactive organic gases; NO _x = oxides of nitrogen; CO = carbon monoxide; SO _x = oxides of sulfur; PM ₁₀ = particulate matter 10 microns in diameter; PM _{2.5} = particulate matter 2.5 microns in diameter Source: Monterey Bay Air Resources District, 2008					

As noted in Table 13, the average daily and annual operational emissions from the Project would not exceed the MBARD operational thresholds for any criteria pollutant. Therefore, the Project-level operational-related emission impact would be less than significant. Thus, criteria 1, 2, 4, and 6 listed above are met.

In addition, there are no unpaved roads anticipated on the project site, therefore, the proposed Project would not generate traffic on unpaved roads. Thus, criterion 5 is also met. Thus, long-term operational emissions would not violate or contribute substantially an existing or projected air quality violation.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None.

5.4 - Cumulative Impacts

Impact AIR-3: The Project 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Impact Analysis

The Project's construction and operational emissions are below MBARD's Project-level thresholds of significance. The thresholds of significance represent the allowable amount of emissions each Project can generate without generating a cumulatively considerable contribution to regional air quality impacts. As discussed above, the region is nonattainment for state ozone standards, and the state PM₁₀ standards. MBARD recommends if the Project emissions which are not consistent with

the AQMP will have a significant cumulative impact unless offset.⁷ Therefore, a Project that would not exceed the MBARD thresholds of significance on a Project-level would also not be considered to result in a cumulatively considerable contribution to these regional air quality impacts. Considering this information, the Project's construction and operational emissions would not be considered a cumulatively considerable contribution to the existing regional air quality impacts. This impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None.

Level of Significance After Mitigation

Less than significant impact.

5.5 - Sensitive Receptors

Impact AIR-4:	The Project would not expose sensitive receptors to substantial pollutant concentrations.
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Impact Analysis

This discussion addresses whether the Project would expose sensitive receptors to substantial pollutant concentrations of CO or other toxic air contaminants of concern (including diesel particulate matter).

Two scenarios have the potential for exposing sensitive receptors to toxic air contaminants. The first is when a Project includes a new or modified source of toxic air contaminants and would be located near an existing or proposed sensitive receptor. The second scenario involves a residential or other sensitive receptor development locating near an existing or planned source of toxic air contaminants. The MBARD defines a sensitive receptor as:

Any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes.

Existing residences are located close to Project site. The nearest sensitive receptor is approximately 50 feet southwest of the Project site boundary. Therefore, this analysis examines potential exposure of off-site sensitive receptors from development of the Project site.

The health risk significance thresholds adopted for this assessment were derived from the MBARD significance thresholds shown in Table 6.

⁷ 2008 MBUAPCD CEQA Guidelines.

CO Hotspot

The CO emissions from traffic generated by the Project are a concern at the local level. Congested intersections can result in high, localized concentrations of CO.

At the time of this analysis, MBARD did not provide a screening threshold to evaluate the potential for CO hot spots. However, the Bay Area Air Quality Management District (BAAQMD) recommends the following screening analysis to determine if a Project has the potential to contribute to a CO hotspot. The screening criteria identify when site-specific CO dispersion modeling is necessary. The Project would result in a less than significant impact to air quality for local CO if the following screening criteria are met:

- The Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans; or
- The Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour; or
- The Project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

According to the Traffic Impact Study for the Project, the maximum peak-hour intersection volume would occur at the Sun Street and E Market Street during the AM peak hour. The estimated traffic volume at this intersection would be 40 AM peak-hour trips. Therefore, the maximum hourly traffic volumes with implementation of the Project would be substantially less than the screening threshold. Therefore, the proposed Project would not exceed the CO screening criteria. Accordingly, the Project would have less than significant impact related to CO hot spots.

Construction-Related Health Risk Assessment

MBARD considers projects that would not exceed the regional thresholds of significance during construction to also not result in potential health impacts on sensitive receptors (David Frisbey, Planning and Air Monitoring Manager, MBARD, pers. comm.). As shown in Table 12, the estimated Project-related construction emissions prior to mitigation measures would not exceed MBARD's thresholds of significance. Therefore, the Project's construction-related DPM emissions would likely not result in a significant health risk impact.

Operational-Related Health Risk Assessment

Since a specific development project is not proposed for the site at this time, the DPM emissions from motor vehicle trips and health risk impacts during project operation would be unknown. Therefore, this analysis does not include an operational HRA. A full health risk assessment would be required when future site-specific development details for the site are determined in order to estimate the health impacts on nearby sensitive receptors and ensure Rule 1003 is met.

In addition, Rule 1000 would be applied if project installs any stationary sources.

As discussed above, impacts from CO emissions and construction HRA on nearby sensitive receptors would be less than significant. A full operation HRA would be required once specific development details are determined.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None.

5.6 - Objectionable Odors

Impact AIR-5:	The Project would not create objectionable odors affecting a substantial number of people.
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Impact Analysis

There are two circumstances that have the potential to cause odor impacts:

- 1) A source of odors is proposed to be located near existing or planned receptors; or
- 2) A receptor land use is proposed near an existing or planned source of odor.

The MBARD does not provide any specific quantitative threshold or screening threshold to evaluate odor impacts from projects. Therefore, the screening method from nearby Lead Agency, the BAAQMD's CEQA Air Quality Guidelines is used. BAAQMD provides suggested screening distances for a variety of odor-generating land uses and operations. Projects that would site a new receptor farther than the applicable screening distances from an existing odor source would likely not result in a significant odor impact.

Project Analysis

The project is a General Plan amendment and Rezone that would allow development of industrial and commercial uses. The nearest sensitive receptor is approximately 50 feet away southwest of the Project site. Although diesel-fueled vehicles could be considered potential odor sources, it is anticipated that Project-related exhaust emissions would be dispersed along local and regional roadways. On-site diesel emissions would be limited to trucks traveling a short distance to the truck bays and all idling would be subject to ARB's Airborne Toxic Control Measure (ATCM) to Limit Diesel-Fueled Commercial Motor Vehicle Idling, which restricts diesel trucks from idling over 5 minutes when not in operational use. The project would not include any other substantial odor sources. Considering this, and the highly dispersive properties of DPM, it is not anticipated that the Project's operations would result in substantial odor emissions that would affect nearby receptors. Thus, the Project would not expose receptors or its proposed residents to substantial odor emissions during operations.

In addition to Project operations, construction activities would also involve diesel-fueled construction equipment and trucks. Furthermore, VOC emissions would be generated during architectural coating and asphalt paving phases, which could be objectionable odors to some populations. However, such odorous emissions would disperse rapidly from the Project site and would be intermittent during construction activities. Thus, it is highly unlikely that these intermittent odor sources would reach an objectionable level at nearby residences. Construction-related odor impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

None.

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SECTION 6: REFERENCES

The following references were used in the preparation of this analysis and are referenced in the text and/or were used to provide the author with background information necessary for the preparation of thresholds and content.

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Appendix A: CalEEMod Output

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CalEEMod Output

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Rodeo GPA - Monterey County, Annual

Rodeo GPA

Monterey County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	113.90	1000sqft	2.61	113,900.00	0
General Office Building	4.70	1000sqft	0.11	4,700.00	0
Other Non-Asphalt Surfaces	177.60	1000sqft	4.08	177,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.6	Precipitation Freq (Days)	55
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Rodeo GPA - Monterey County, Annual

Project Characteristics - Utility information adjusted based on Renewable Portfolio Standard

Land Use - info from Rodeo GPA TIA 041318. The project site is 6.8 acres. Therefore, the remaining area would be considered as non-asphalt surfaces.

Construction Phase - assume operation year is 2020. CalEEMod default schedule is applied.

Grading - assume balance onsite (old Rodeo project info, GPA does not specify if there would have cut and fill)

Demolition - info from client RFI response 5/26/2017

Vehicle Trips - Rodeo GPA TIA 041318 ITE 10th edition trip rates.

Fleet Mix - fleet mix adjusted based on CalEEMod default and San Bernadino 2003 study for truck percentages for industrial and warehouse uses

Energy Use -

Construction Off-road Equipment Mitigation -

Rodeo GPA - Monterey County, Annual

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.03	0.13
tblFleetMix	LDA	0.53	0.44
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT2	0.20	0.17
tblFleetMix	LHD1	0.02	0.07
tblFleetMix	LHD2	6.0270e-003	0.02
tblFleetMix	MCY	7.8900e-003	0.00
tblFleetMix	MDV	0.14	0.12
tblFleetMix	MH	9.0500e-004	0.00
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	4.1500e-003	0.00
tblFleetMix	SBUS	1.2530e-003	0.00
tblFleetMix	UBUS	2.9590e-003	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	ST_TR	1.32	1.99
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	SU_TR	0.68	5.00
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	WD_TR	6.97	4.96
tblVehicleTrips	WD_TR	11.03	9.74

2.0 Emissions Summary

Rodeo GPA - Monterey County, Annual

2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1558	1.4931	0.9789	1.8500e-003	0.1830	0.0761	0.2591	0.0906	0.0708	0.1615	0.0000	167.7018	167.7018	0.0364	0.0000	168.6118
2019	1.1943	2.9175	2.5259	5.3000e-003	0.1300	0.1406	0.2706	0.0353	0.1321	0.1674	0.0000	477.2599	477.2599	0.0734	0.0000	479.0939
Maximum	1.1943	2.9175	2.5259	5.3000e-003	0.1830	0.1406	0.2706	0.0906	0.1321	0.1674	0.0000	477.2599	477.2599	0.0734	0.0000	479.0939

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.1558	1.4931	0.9789	1.8500e-003	0.0970	0.0761	0.1732	0.0448	0.0708	0.1156	0.0000	167.7017	167.7017	0.0364	0.0000	168.6117
2019	1.1943	2.9175	2.5259	5.3000e-003	0.1300	0.1406	0.2706	0.0353	0.1321	0.1674	0.0000	477.2596	477.2596	0.0734	0.0000	479.0936
Maximum	1.1943	2.9175	2.5259	5.3000e-003	0.1300	0.1406	0.2706	0.0448	0.1321	0.1674	0.0000	477.2596	477.2596	0.0734	0.0000	479.0936

	ROG	NOx	CO	SO2	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	27.46	0.00	16.23	36.42	0.00	13.95	0.00	0.00	0.00	0.00	0.00	0.00

Rodeo GPA - Monterey County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-3-2018	12-2-2018	1.2800	1.2800
2	12-3-2018	3-2-2019	1.0507	1.0507
3	3-3-2019	6-2-2019	1.0333	1.0333
4	6-3-2019	9-2-2019	1.0303	1.0303
5	9-3-2019	9-30-2019	0.2980	0.2980
		Highest	1.2800	1.2800

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	0.5612	4.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.3500e-003	7.3500e-003	2.0000e-005	0.0000	7.8400e-003
Energy	0.0166	0.1511	0.1269	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	392.9451	392.9451	0.0134	5.3400e-003	394.8704
Mobile	0.2571	3.0905	2.9026	0.0117	0.6102	0.0174	0.6276	0.1651	0.0165	0.1816	0.0000	1,085.9409	1,085.9409	0.0494	0.0000	1,087.1765
Waste						0.0000	0.0000		0.0000	0.0000	29.5575	0.0000	29.5575	1.7468	0.0000	73.2275
Water						0.0000	0.0000		0.0000	0.0000	8.6213	33.1914	41.8127	0.8870	0.0213	70.3183
Total	0.8349	3.2416	3.0333	0.0126	0.6102	0.0289	0.6390	0.1651	0.0280	0.1931	38.1788	1,512.0847	1,550.2635	2.6966	0.0266	1,625.6005

Rodeo GPA - Monterey 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	0.5612	4.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.3500e-003	7.3500e-003	2.0000e-005	0.0000	7.8400e-003
Energy	0.0166	0.1511	0.1269	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	392.9451	392.9451	0.0134	5.3400e-003	394.8704
Mobile	0.2571	3.0905	2.9026	0.0117	0.6102	0.0174	0.6276	0.1651	0.0165	0.1816	0.0000	1,085.9409	1,085.9409	0.0494	0.0000	1,087.1765
Waste						0.0000	0.0000		0.0000	0.0000	29.5575	0.0000	29.5575	1.7468	0.0000	73.2275
Water						0.0000	0.0000		0.0000	0.0000	8.6213	33.1914	41.8127	0.8870	0.0213	70.3183
Total	0.8349	3.2416	3.0333	0.0126	0.6102	0.0289	0.6390	0.1651	0.0280	0.1931	38.1788	1,512.0847	1,550.2635	2.6966	0.0266	1,625.6005

	ROG	NOx	CO	SO2	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**

Rodeo GPA - Monterey County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/3/2018	9/28/2018	5	20	
2	Site Preparation	Site Preparation	9/29/2018	10/12/2018	5	10	
3	Grading	Grading	10/13/2018	11/9/2018	5	20	
4	Building Construction	Building Construction	11/10/2018	9/27/2019	5	230	
5	Paving	Paving	9/28/2019	10/25/2019	5	20	
6	Architectural Coating	Architectural Coating	10/26/2019	11/22/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 4.08

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 177,900; Non-Residential Outdoor: 59,300; Striped Parking Area: 10,656 (Architectural Coating – sqft)

OffRoad Equipment

Rodeo GPA - Monterey County, Annual

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

Trips and VMT

Rodeo GPA - Monterey 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	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	124.00	49.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.6000e-004	0.0000	4.6000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0372	0.3832	0.2230	3.9000e-004		0.0194	0.0194		0.0181	0.0181	0.0000	35.1241	35.1241	9.6800e-003	0.0000	35.3660
Total	0.0372	0.3832	0.2230	3.9000e-004	4.6000e-004	0.0194	0.0199	7.0000e-005	0.0181	0.0181	0.0000	35.1241	35.1241	9.6800e-003	0.0000	35.3660

Rodeo GPA - Monterey County, Annual

3.2 Demolition - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	7.0000e-004	1.4000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1587	0.1587	1.0000e-005	0.0000	0.1588
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	8.1000e-004	7.9000e-004	6.9900e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.2032	1.2032	6.0000e-005	0.0000	1.2048
Total	8.3000e-004	1.4900e-003	7.1300e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.3619	1.3619	7.0000e-005	0.0000	1.3637

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					2.1000e-004	0.0000	2.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0372	0.3832	0.2230	3.9000e-004		0.0194	0.0194		0.0181	0.0181	0.0000	35.1240	35.1240	9.6800e-003	0.0000	35.3660
Total	0.0372	0.3832	0.2230	3.9000e-004	2.1000e-004	0.0194	0.0196	3.0000e-005	0.0181	0.0181	0.0000	35.1240	35.1240	9.6800e-003	0.0000	35.3660

Rodeo GPA - Monterey County, Annual

3.2 Demolition - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	7.0000e-004	1.4000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1587	0.1587	1.0000e-005	0.0000	0.1588
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	8.1000e-004	7.9000e-004	6.9900e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.2032	1.2032	6.0000e-005	0.0000	1.2048
Total	8.3000e-004	1.4900e-003	7.1300e-003	1.0000e-005	1.2200e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.3619	1.3619	7.0000e-005	0.0000	1.3637

3.3 Site Preparation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0228	0.2410	0.1124	1.9000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	17.3800	17.3800	5.4100e-003	0.0000	17.5152
Total	0.0228	0.2410	0.1124	1.9000e-004	0.0903	0.0129	0.1032	0.0497	0.0119	0.0615	0.0000	17.3800	17.3800	5.4100e-003	0.0000	17.5152

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3.3 Site Preparation - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.9000e-004	4.7000e-004	4.1900e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.7219	0.7219	4.0000e-005	0.0000	0.7229
Total	4.9000e-004	4.7000e-004	4.1900e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.7219	0.7219	4.0000e-005	0.0000	0.7229

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					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0228	0.2410	0.1124	1.9000e-004		0.0129	0.0129		0.0119	0.0119	0.0000	17.3799	17.3799	5.4100e-003	0.0000	17.5152
Total	0.0228	0.2410	0.1124	1.9000e-004	0.0407	0.0129	0.0535	0.0223	0.0119	0.0342	0.0000	17.3799	17.3799	5.4100e-003	0.0000	17.5152

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3.3 Site Preparation - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.9000e-004	4.7000e-004	4.1900e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.7219	0.7219	4.0000e-005	0.0000	0.7229
Total	4.9000e-004	4.7000e-004	4.1900e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.2000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.7219	0.7219	4.0000e-005	0.0000	0.7229

3.4 Grading - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0655	0.0000	0.0655	0.0337	0.0000	0.0337	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0277	0.3067	0.1658	3.0000e-004		0.0155	0.0155		0.0143	0.0143	0.0000	27.1069	27.1069	8.4400e-003	0.0000	27.3178
Total	0.0277	0.3067	0.1658	3.0000e-004	0.0655	0.0155	0.0810	0.0337	0.0143	0.0479	0.0000	27.1069	27.1069	8.4400e-003	0.0000	27.3178

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3.4 Grading - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	8.1000e-004	7.9000e-004	6.9900e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.2032	1.2032	6.0000e-005	0.0000	1.2048
Total	8.1000e-004	7.9000e-004	6.9900e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.2032	1.2032	6.0000e-005	0.0000	1.2048

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					0.0295	0.0000	0.0295	0.0152	0.0000	0.0152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0277	0.3067	0.1658	3.0000e-004		0.0155	0.0155		0.0143	0.0143	0.0000	27.1068	27.1068	8.4400e-003	0.0000	27.3178
Total	0.0277	0.3067	0.1658	3.0000e-004	0.0295	0.0155	0.0450	0.0152	0.0143	0.0294	0.0000	27.1068	27.1068	8.4400e-003	0.0000	27.3178

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3.4 Grading - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	8.1000e-004	7.9000e-004	6.9900e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.2032	1.2032	6.0000e-005	0.0000	1.2048
Total	8.1000e-004	7.9000e-004	6.9900e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.2032	1.2032	6.0000e-005	0.0000	1.2048

3.5 Building Construction - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0482	0.4210	0.3165	4.8000e-004		0.0270	0.0270		0.0254	0.0254	0.0000	42.7981	42.7981	0.0105	0.0000	43.0602
Total	0.0482	0.4210	0.3165	4.8000e-004		0.0270	0.0270		0.0254	0.0254	0.0000	42.7981	42.7981	0.0105	0.0000	43.0602

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3.5 Building Construction - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	5.6300e-003	0.1267	0.0389	2.5000e-004	5.8000e-003	1.1500e-003	6.9500e-003	1.6800e-003	1.1000e-003	2.7800e-003	0.0000	24.1015	24.1015	1.2600e-003	0.0000	24.1331
Worker	0.0121	0.0117	0.1040	2.0000e-004	0.0177	1.7000e-004	0.0179	4.7200e-003	1.6000e-004	4.8700e-003	0.0000	17.9042	17.9042	9.5000e-004	0.0000	17.9280
Total	0.0177	0.1384	0.1429	4.5000e-004	0.0235	1.3200e-003	0.0249	6.4000e-003	1.2600e-003	7.6500e-003	0.0000	42.0057	42.0057	2.2100e-003	0.0000	42.0611

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	0.0482	0.4210	0.3165	4.8000e-004		0.0270	0.0270		0.0254	0.0254	0.0000	42.7981	42.7981	0.0105	0.0000	43.0602
Total	0.0482	0.4210	0.3165	4.8000e-004		0.0270	0.0270		0.0254	0.0254	0.0000	42.7981	42.7981	0.0105	0.0000	43.0602

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3.5 Building Construction - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	5.6300e-003	0.1267	0.0389	2.5000e-004	5.8000e-003	1.1500e-003	6.9500e-003	1.6800e-003	1.1000e-003	2.7800e-003	0.0000	24.1015	24.1015	1.2600e-003	0.0000	24.1331
Worker	0.0121	0.0117	0.1040	2.0000e-004	0.0177	1.7000e-004	0.0179	4.7200e-003	1.6000e-004	4.8700e-003	0.0000	17.9042	17.9042	9.5000e-004	0.0000	17.9280
Total	0.0177	0.1384	0.1429	4.5000e-004	0.0235	1.3200e-003	0.0249	6.4000e-003	1.2600e-003	7.6500e-003	0.0000	42.0057	42.0057	2.2100e-003	0.0000	42.0611

3.5 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2290	2.0446	1.6649	2.6100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	228.0511	228.0511	0.0556	0.0000	229.4400
Total	0.2290	2.0446	1.6649	2.6100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	228.0511	228.0511	0.0556	0.0000	229.4400

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3.5 Building Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0263	0.6449	0.1855	1.3600e-003	0.0313	5.0100e-003	0.0363	9.0400e-003	4.7900e-003	0.0138	0.0000	129.3235	129.3235	6.4400e-003	0.0000	129.4846
Worker	0.0582	0.0554	0.4941	1.0400e-003	0.0956	8.9000e-004	0.0965	0.0254	8.2000e-004	0.0262	0.0000	93.7395	93.7395	4.5200e-003	0.0000	93.8525
Total	0.0845	0.7002	0.6795	2.4000e-003	0.1269	5.9000e-003	0.1328	0.0345	5.6100e-003	0.0401	0.0000	223.0630	223.0630	0.0110	0.0000	223.3371

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	0.2290	2.0446	1.6649	2.6100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	228.0508	228.0508	0.0556	0.0000	229.4397
Total	0.2290	2.0446	1.6649	2.6100e-003		0.1251	0.1251		0.1176	0.1176	0.0000	228.0508	228.0508	0.0556	0.0000	229.4397

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3.5 Building Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0263	0.6449	0.1855	1.3600e-003	0.0313	5.0100e-003	0.0363	9.0400e-003	4.7900e-003	0.0138	0.0000	129.3235	129.3235	6.4400e-003	0.0000	129.4846
Worker	0.0582	0.0554	0.4941	1.0400e-003	0.0956	8.9000e-004	0.0965	0.0254	8.2000e-004	0.0262	0.0000	93.7395	93.7395	4.5200e-003	0.0000	93.8525
Total	0.0845	0.7002	0.6795	2.4000e-003	0.1269	5.9000e-003	0.1328	0.0345	5.6100e-003	0.0401	0.0000	223.0630	223.0630	0.0110	0.0000	223.3371

3.6 Paving - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371

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3.6 Paving - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	6.9000e-004	6.1600e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1690	1.1690	6.0000e-005	0.0000	1.1704
Total	7.3000e-004	6.9000e-004	6.1600e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1690	1.1690	6.0000e-005	0.0000	1.1704

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	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0145	0.1524	0.1467	2.3000e-004		8.2500e-003	8.2500e-003		7.5900e-003	7.5900e-003	0.0000	20.4752	20.4752	6.4800e-003	0.0000	20.6371

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3.6 Paving - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.3000e-004	6.9000e-004	6.1600e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1690	1.1690	6.0000e-005	0.0000	1.1704
Total	7.3000e-004	6.9000e-004	6.1600e-003	1.0000e-005	1.1900e-003	1.0000e-005	1.2000e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.1690	1.1690	6.0000e-005	0.0000	1.1704

3.7 Architectural Coating - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.8616					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587
Total	0.8643	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5587

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3.7 Architectural Coating - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	1.1500e-003	0.0103	2.0000e-005	1.9900e-003	2.0000e-005	2.0000e-003	5.3000e-004	2.0000e-005	5.5000e-004	0.0000	1.9484	1.9484	9.0000e-005	0.0000	1.9507
Total	1.2100e-003	1.1500e-003	0.0103	2.0000e-005	1.9900e-003	2.0000e-005	2.0000e-003	5.3000e-004	2.0000e-005	5.5000e-004	0.0000	1.9484	1.9484	9.0000e-005	0.0000	1.9507

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	0.8616					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6600e-003	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586
Total	0.8643	0.0184	0.0184	3.0000e-005		1.2900e-003	1.2900e-003		1.2900e-003	1.2900e-003	0.0000	2.5533	2.5533	2.2000e-004	0.0000	2.5586

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3.7 Architectural Coating - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2100e-003	1.1500e-003	0.0103	2.0000e-005	1.9900e-003	2.0000e-005	2.0000e-003	5.3000e-004	2.0000e-005	5.5000e-004	0.0000	1.9484	1.9484	9.0000e-005	0.0000	1.9507
Total	1.2100e-003	1.1500e-003	0.0103	2.0000e-005	1.9900e-003	2.0000e-005	2.0000e-003	5.3000e-004	2.0000e-005	5.5000e-004	0.0000	1.9484	1.9484	9.0000e-005	0.0000	1.9507

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2571	3.0905	2.9026	0.0117	0.6102	0.0174	0.6276	0.1651	0.0165	0.1816	0.0000	1,085.9409	1,085.9409	0.0494	0.0000	1,087.1765
Unmitigated	0.2571	3.0905	2.9026	0.0117	0.6102	0.0174	0.6276	0.1651	0.0165	0.1816	0.0000	1,085.9409	1,085.9409	0.0494	0.0000	1,087.1765

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	564.94	226.66	569.50	1,510,172	1,510,172
General Office Building	45.78	10.39	3.29	82,811	82,811
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	610.72	237.05	572.79	1,592,983	1,592,983

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	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

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Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.436895	0.025303	0.166081	0.115721	0.067659	0.016341	0.046000	0.126000	0.000000	0.000000	0.000000	0.000000	0.000000
General Office Building	0.533135	0.030877	0.202665	0.141212	0.024955	0.006027	0.018072	0.025901	0.004150	0.002959	0.007890	0.001253	0.000905
Other Non-Asphalt Surfaces	0.533135	0.030877	0.202665	0.141212	0.024955	0.006027	0.018072	0.025901	0.004150	0.002959	0.007890	0.001253	0.000905

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	228.4981	228.4981	0.0102	2.3200e-003	229.4462
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	228.4981	228.4981	0.0102	2.3200e-003	229.4462
NaturalGas Mitigated	0.0166	0.1511	0.1269	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.4470	164.4470	3.1500e-003	3.0100e-003	165.4243
NaturalGas Unmitigated	0.0166	0.1511	0.1269	9.1000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.4470	164.4470	3.1500e-003	3.0100e-003	165.4243

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5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	3.00468e+006	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.3413	160.3413	3.0700e-003	2.9400e-003	161.2941
General Office Building	76939	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1058	4.1058	8.0000e-005	8.0000e-005	4.1302
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0166	0.1511	0.1269	9.0000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.4470	164.4470	3.1500e-003	3.0200e-003	165.4243

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	3.00468e+006	0.0162	0.1473	0.1237	8.8000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	160.3413	160.3413	3.0700e-003	2.9400e-003	161.2941
General Office Building	76939	4.1000e-004	3.7700e-003	3.1700e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.1058	4.1058	8.0000e-005	8.0000e-005	4.1302
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0166	0.1511	0.1269	9.0000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	164.4470	164.4470	3.1500e-003	3.0200e-003	165.4243

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	940814	209.8097	9.3900e-003	2.1300e-003	210.6803
General Office Building	83801	18.6884	8.4000e-004	1.9000e-004	18.7659
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		228.4981	0.0102	2.3200e-003	229.4462

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	940814	209.8097	9.3900e-003	2.1300e-003	210.6803
General Office Building	83801	18.6884	8.4000e-004	1.9000e-004	18.7659
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		228.4981	0.0102	2.3200e-003	229.4462

6.0 Area Detail

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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	0.5612	4.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.3500e-003	7.3500e-003	2.0000e-005	0.0000	7.8400e-003
Unmitigated	0.5612	4.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.3500e-003	7.3500e-003	2.0000e-005	0.0000	7.8400e-003

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	0.0862					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	4.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.3500e-003	7.3500e-003	2.0000e-005	0.0000	7.8400e-003
Total	0.5612	4.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.3500e-003	7.3500e-003	2.0000e-005	0.0000	7.8400e-003

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0862					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4747					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.6000e-004	4.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.3500e-003	7.3500e-003	2.0000e-005	0.0000	7.8400e-003
Total	0.5612	4.0000e-005	3.8000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.3500e-003	7.3500e-003	2.0000e-005	0.0000	7.8400e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

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	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	41.8127	0.8870	0.0213	70.3183
Unmitigated	41.8127	0.8870	0.0213	70.3183

7.2 Water by Land Use**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	26.3394 / 0	40.1400	0.8597	0.0206	67.7677
General Office Building	0.835349 / 0.511988	1.6727	0.0273	6.6000e-004	2.5505
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		41.8126	0.8870	0.0213	70.3183

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	26.3394 / 0	40.1400	0.8597	0.0206	67.7677
General Office Building	0.835349 / 0.511988	1.6727	0.0273	6.6000e-004	2.5505
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		41.8126	0.8870	0.0213	70.3183

8.0 Waste Detail

8.1 Mitigation Measures Waste

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Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	29.5575	1.7468	0.0000	73.2275
Unmitigated	29.5575	1.7468	0.0000	73.2275

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	141.24	28.6704	1.6944	0.0000	71.0298
General Office Building	4.37	0.8871	0.0524	0.0000	2.1977
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		29.5575	1.7468	0.0000	73.2275

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8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	141.24	28.6704	1.6944	0.0000	71.0298
General Office Building	4.37	0.8871	0.0524	0.0000	2.1977
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		29.5575	1.7468	0.0000	73.2275

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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11.0 Vegetation

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Rodeo GPA
Monterey County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	113.90	1000sqft	2.61	113,900.00	0
General Office Building	4.70	1000sqft	0.11	4,700.00	0
Other Non-Asphalt Surfaces	177.60	1000sqft	4.08	177,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.6	Precipitation Freq (Days)	55
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	491.65	CH4 Intensity (lb/MWhr)	0.022	N2O Intensity (lb/MWhr)	0.005

1.3 User Entered Comments & Non-Default Data

Rodeo GPA - Monterey County, Summer

Project Characteristics - Utility information adjusted based on Renewable Portfolio Standard

Land Use - info from Rodeo GPA TIA 041318. The project site is 6.8 acres. Therefore, the remaining area would be considered as non-asphalt surfaces.

Construction Phase - assume operation year is 2020. CalEEMod default schedule is applied.

Grading - assume balance onsite (old Rodeo project info, GPA does not specify if there would have cut and fill)

Demolition - info from client RFI response 5/26/2017

Vehicle Trips - Rodeo GPA TIA 041318 ITE 10th edition trip rates.

Fleet Mix - fleet mix adjusted based on CalEEMod default and San Bernadino 2003 study for truck percentages for industrial and warehouse uses

Energy Use -

Construction Off-road Equipment Mitigation -

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Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.03	0.13
tblFleetMix	LDA	0.53	0.44
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT2	0.20	0.17
tblFleetMix	LHD1	0.02	0.07
tblFleetMix	LHD2	6.0270e-003	0.02
tblFleetMix	MCY	7.8900e-003	0.00
tblFleetMix	MDV	0.14	0.12
tblFleetMix	MH	9.0500e-004	0.00
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	4.1500e-003	0.00
tblFleetMix	SBUS	1.2530e-003	0.00
tblFleetMix	UBUS	2.9590e-003	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	ST_TR	1.32	1.99
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	SU_TR	0.68	5.00
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	WD_TR	6.97	4.96
tblVehicleTrips	WD_TR	11.03	9.74

2.0 Emissions Summary

Rodeo GPA - Monterey County, Summer

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6607	48.2813	25.6792	0.0528	18.2141	2.5783	20.7924	9.9699	2.3720	12.3419	0.0000	5,278.160 0	5,278.160 0	1.2017	0.0000	5,297.605 4
2019	86.5492	28.1239	24.3236	0.0524	1.3500	1.3502	2.7002	0.3656	1.2701	1.6357	0.0000	5,209.860 8	5,209.860 8	0.7557	0.0000	5,228.753 4
Maximum	86.5492	48.2813	25.6792	0.0528	18.2141	2.5783	20.7924	9.9699	2.3720	12.3419	0.0000	5,278.160 0	5,278.160 0	1.2017	0.0000	5,297.605 4

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6607	48.2813	25.6792	0.0528	8.2777	2.5783	10.8560	4.5080	2.3720	6.8801	0.0000	5,278.160 0	5,278.160 0	1.2017	0.0000	5,297.605 4
2019	86.5492	28.1239	24.3236	0.0524	1.3500	1.3502	2.7002	0.3656	1.2701	1.6357	0.0000	5,209.860 8	5,209.860 8	0.7557	0.0000	5,228.753 4
Maximum	86.5492	48.2813	25.6792	0.0528	8.2777	2.5783	10.8560	4.5080	2.3720	6.8801	0.0000	5,278.160 0	5,278.160 0	1.2017	0.0000	5,297.605 4

	ROG	NOx	CO	SO2	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	50.79	0.00	42.30	52.85	0.00	39.08	0.00	0.00	0.00	0.00	0.00	0.00

Rodeo GPA - Monterey 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	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692
Energy	0.0911	0.8277	0.6953	4.9700e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728
Mobile	1.6408	18.2005	17.9087	0.0729	3.8210	0.1041	3.9251	1.0307	0.0988	1.1294		7,482.8603	7,482.8603	0.3290		7,491.0845
Total	4.8077	19.0285	18.6344	0.0779	3.8210	0.1671	3.9881	1.0307	0.1618	1.1924		8,476.1953	8,476.1953	0.3482	0.0182	8,490.3264

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692
Energy	0.0911	0.8277	0.6953	4.9700e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728
Mobile	1.6408	18.2005	17.9087	0.0729	3.8210	0.1041	3.9251	1.0307	0.0988	1.1294		7,482.8603	7,482.8603	0.3290		7,491.0845
Total	4.8077	19.0285	18.6344	0.0779	3.8210	0.1671	3.9881	1.0307	0.1618	1.1924		8,476.1953	8,476.1953	0.3482	0.0182	8,490.3264

Rodeo GPA - Monterey 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	9/3/2018	9/28/2018	5	20	
2	Site Preparation	Site Preparation	9/29/2018	10/12/2018	5	10	
3	Grading	Grading	10/13/2018	11/9/2018	5	20	
4	Building Construction	Building Construction	11/10/2018	9/27/2019	5	230	
5	Paving	Paving	9/28/2019	10/25/2019	5	20	
6	Architectural Coating	Architectural Coating	10/26/2019	11/22/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 4.08

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 177,900; Non-Residential Outdoor: 59,300; Striped Parking Area: 10,656 (Architectural Coating – sqft)

OffRoad Equipment

Rodeo GPA - Monterey County, Summer

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

Trips and VMT

Rodeo GPA - Monterey 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	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	124.00	49.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0463	0.0000	0.0463	7.0200e-003	0.0000	7.0200e-003			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
Total	3.7190	38.3225	22.3040	0.0388	0.0463	1.9386	1.9849	7.0200e-003	1.8048	1.8119		3,871.7665	3,871.7665	1.0667		3,898.4344

Rodeo GPA - Monterey County, Summer

3.2 Demolition - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.1700e-003	0.0681	0.0139	1.7000e-004	3.4900e-003	4.2000e-004	3.9100e-003	9.6000e-004	4.0000e-004	1.3600e-003		17.6286	17.6286	6.8000e-004		17.6455
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	0.0816	0.0687	0.7324	1.4200e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		140.8075	140.8075	7.4000e-003		140.9926
Total	0.0838	0.1368	0.7463	1.5900e-003	0.1267	1.5700e-003	0.1283	0.0336	1.4600e-003	0.0351		158.4361	158.4361	8.0800e-003		158.6381

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					0.0209	0.0000	0.0209	3.1600e-003	0.0000	3.1600e-003			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	3.7190	38.3225	22.3040	0.0388	0.0209	1.9386	1.9594	3.1600e-003	1.8048	1.8080	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344

Rodeo GPA - Monterey County, Summer

3.2 Demolition - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.1700e-003	0.0681	0.0139	1.7000e-004	3.4900e-003	4.2000e-004	3.9100e-003	9.6000e-004	4.0000e-004	1.3600e-003		17.6286	17.6286	6.8000e-004		17.6455
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	0.0816	0.0687	0.7324	1.4200e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		140.8075	140.8075	7.4000e-003		140.9926
Total	0.0838	0.1368	0.7463	1.5900e-003	0.1267	1.5700e-003	0.1283	0.0336	1.4600e-003	0.0351		158.4361	158.4361	8.0800e-003		158.6381

3.3 Site Preparation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.623 9	3,831.623 9	1.1928		3,861.444 8
Total	4.5627	48.1988	22.4763	0.0380	18.0663	2.5769	20.6432	9.9307	2.3708	12.3014		3,831.623 9	3,831.623 9	1.1928		3,861.444 8

Rodeo GPA - Monterey County, Summer

3.3 Site Preparation - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0979	0.0825	0.8789	1.7000e-003	0.1479	1.3800e-003	0.1493	0.0392	1.2800e-003	0.0405		168.9691	168.9691	8.8800e-003		169.1911
Total	0.0979	0.0825	0.8789	1.7000e-003	0.1479	1.3800e-003	0.1493	0.0392	1.2800e-003	0.0405		168.9691	168.9691	8.8800e-003		169.1911

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	4.5627	48.1988	22.4763	0.0380	8.1298	2.5769	10.7067	4.4688	2.3708	6.8396	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448

Rodeo GPA - Monterey County, Summer

3.3 Site Preparation - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0979	0.0825	0.8789	1.7000e-003	0.1479	1.3800e-003	0.1493	0.0392	1.2800e-003	0.0405		168.9691	168.9691	8.8800e-003		169.1911
Total	0.0979	0.0825	0.8789	1.7000e-003	0.1479	1.3800e-003	0.1493	0.0392	1.2800e-003	0.0405		168.9691	168.9691	8.8800e-003		169.1911

3.4 Grading - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
Total	2.7733	30.6725	16.5770	0.0297	6.5523	1.5513	8.1037	3.3675	1.4272	4.7947		2,988.0216	2,988.0216	0.9302		3,011.2769

Rodeo GPA - Monterey County, Summer

3.4 Grading - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0816	0.0687	0.7324	1.4200e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		140.8075	140.8075	7.4000e-003		140.9926
Total	0.0816	0.0687	0.7324	1.4200e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		140.8075	140.8075	7.4000e-003		140.9926

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	2.7733	30.6725	16.5770	0.0297	2.9486	1.5513	4.4999	1.5154	1.4272	2.9426	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769

Rodeo GPA - Monterey County, Summer

3.4 Grading - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0816	0.0687	0.7324	1.4200e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		140.8075	140.8075	7.4000e-003		140.9926
Total	0.0816	0.0687	0.7324	1.4200e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		140.8075	140.8075	7.4000e-003		140.9926

3.5 Building Construction - 2018**Unmitigated Construction On-Site**

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

Rodeo GPA - Monterey County, Summer

3.5 Building Construction - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3069	6.9228	2.0440	0.0142	0.3314	0.0633	0.3947	0.0954	0.0606	0.1559		1,493.2158	1,493.2158	0.0745		1,495.0785
Worker	0.6747	0.5682	6.0548	0.0117	1.0186	9.5300e-003	1.0282	0.2702	8.8000e-003	0.2790		1,164.0090	1,164.0090	0.0612		1,165.5386
Total	0.9815	7.4911	8.0988	0.0259	1.3500	0.0728	1.4229	0.3656	0.0694	0.4349		2,657.2249	2,657.2249	0.1357		2,660.6171

Mitigated Construction On-Site

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

Rodeo GPA - Monterey County, Summer

3.5 Building Construction - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3069	6.9228	2.0440	0.0142	0.3314	0.0633	0.3947	0.0954	0.0606	0.1559		1,493.2158	1,493.2158	0.0745		1,495.0785
Worker	0.6747	0.5682	6.0548	0.0117	1.0186	9.5300e-003	1.0282	0.2702	8.8000e-003	0.2790		1,164.0090	1,164.0090	0.0612		1,165.5386
Total	0.9815	7.4911	8.0988	0.0259	1.3500	0.0728	1.4229	0.3656	0.0694	0.4349		2,657.2249	2,657.2249	0.1357		2,660.6171

3.5 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635

Rodeo GPA - Monterey County, Summer

3.5 Building Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2660	6.5460	1.8031	0.0141	0.3314	0.0512	0.3826	0.0954	0.0489	0.1443		1,487.250 0	1,487.250 0	0.0705		1,489.012 6
Worker	0.6044	0.4991	5.3567	0.0114	1.0186	9.1500e-003	1.0278	0.2702	8.4500e-003	0.2786		1,131.030 6	1,131.030 6	0.0539		1,132.377 3
Total	0.8704	7.0451	7.1598	0.0255	1.3500	0.0603	1.4104	0.3656	0.0574	0.4230		2,618.280 6	2,618.280 6	0.1244		2,621.389 9

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5

Rodeo GPA - Monterey County, Summer

3.5 Building Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2660	6.5460	1.8031	0.0141	0.3314	0.0512	0.3826	0.0954	0.0489	0.1443		1,487.2500	1,487.2500	0.0705		1,489.0126
Worker	0.6044	0.4991	5.3567	0.0114	1.0186	9.1500e-003	1.0278	0.2702	8.4500e-003	0.2786		1,131.0306	1,131.0306	0.0539		1,132.3773
Total	0.8704	7.0451	7.1598	0.0255	1.3500	0.0603	1.4104	0.3656	0.0574	0.4230		2,618.2806	2,618.2806	0.1244		2,621.3899

3.6 Paving - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548

Rodeo GPA - Monterey County, Summer

3.6 Paving - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0731	0.0604	0.6480	1.3800e-003	0.1232	1.1100e-003	0.1243	0.0327	1.0200e-003	0.0337		136.8182	136.8182	6.5200e-003		136.9811
Total	0.0731	0.0604	0.6480	1.3800e-003	0.1232	1.1100e-003	0.1243	0.0327	1.0200e-003	0.0337		136.8182	136.8182	6.5200e-003		136.9811

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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548

Rodeo GPA - Monterey County, Summer

3.6 Paving - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0731	0.0604	0.6480	1.3800e-003	0.1232	1.1100e-003	0.1243	0.0327	1.0200e-003	0.0337		136.8182	136.8182	6.5200e-003		136.9811
Total	0.0731	0.0604	0.6480	1.3800e-003	0.1232	1.1100e-003	0.1243	0.0327	1.0200e-003	0.0337		136.8182	136.8182	6.5200e-003		136.9811

3.7 Architectural Coating - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	86.1609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	86.4274	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

Rodeo GPA - Monterey County, Summer

3.7 Architectural Coating - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1219	0.1006	1.0800	2.2900e-003	0.2054	1.8400e-003	0.2072	0.0545	1.7000e-003	0.0562		228.0304	228.0304	0.0109		228.3019
Total	0.1219	0.1006	1.0800	2.2900e-003	0.2054	1.8400e-003	0.2072	0.0545	1.7000e-003	0.0562		228.0304	228.0304	0.0109		228.3019

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	86.1609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	86.4274	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

Rodeo GPA - Monterey County, Summer

3.7 Architectural Coating - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1219	0.1006	1.0800	2.2900e-003	0.2054	1.8400e-003	0.2072	0.0545	1.7000e-003	0.0562		228.0304	228.0304	0.0109		228.3019
Total	0.1219	0.1006	1.0800	2.2900e-003	0.2054	1.8400e-003	0.2072	0.0545	1.7000e-003	0.0562		228.0304	228.0304	0.0109		228.3019

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Rodeo GPA - Monterey County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.6408	18.2005	17.9087	0.0729	3.8210	0.1041	3.9251	1.0307	0.0988	1.1294		7,482.8603	7,482.8603	0.3290		7,491.0845
Unmitigated	1.6408	18.2005	17.9087	0.0729	3.8210	0.1041	3.9251	1.0307	0.0988	1.1294		7,482.8603	7,482.8603	0.3290		7,491.0845

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	564.94	226.66	569.50	1,510,172	1,510,172
General Office Building	45.78	10.39	3.29	82,811	82,811
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	610.72	237.05	572.79	1,592,983	1,592,983

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	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Rodeo GPA - Monterey County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.436895	0.025303	0.166081	0.115721	0.067659	0.016341	0.046000	0.126000	0.000000	0.000000	0.000000	0.000000	0.000000
General Office Building	0.533135	0.030877	0.202665	0.141212	0.024955	0.006027	0.018072	0.025901	0.004150	0.002959	0.007890	0.001253	0.000905
Other Non-Asphalt Surfaces	0.533135	0.030877	0.202665	0.141212	0.024955	0.006027	0.018072	0.025901	0.004150	0.002959	0.007890	0.001253	0.000905

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0911	0.8277	0.6953	4.9700e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728
NaturalGas Unmitigated	0.0911	0.8277	0.6953	4.9700e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728

Rodeo GPA - Monterey County, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	8232.01	0.0888	0.8071	0.6779	4.8400e-003		0.0613	0.0613		0.0613	0.0613		968.4712	968.4712	0.0186	0.0178	974.2264
General Office Building	210.792	2.2700e-003	0.0207	0.0174	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7990	24.7990	4.8000e-004	4.5000e-004	24.9464
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0911	0.8277	0.6953	4.9600e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	8.23201	0.0888	0.8071	0.6779	4.8400e-003		0.0613	0.0613		0.0613	0.0613		968.4712	968.4712	0.0186	0.0178	974.2264
General Office Building	0.210792	2.2700e-003	0.0207	0.0174	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7990	24.7990	4.8000e-004	4.5000e-004	24.9464
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0911	0.8277	0.6953	4.9600e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728

6.0 Area Detail

Rodeo GPA - Monterey County, Summer

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	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692
Unmitigated	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8600e-003	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692
Total	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692

Rodeo GPA - Monterey County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8600e-003	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692
Total	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Rodeo GPA - Monterey County, Summer

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

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

Equipment Type	Number
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11.0 Vegetation

Rodeo GPA - Monterey County, Winter

Rodeo GPA
Monterey County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	113.90	1000sqft	2.61	113,900.00	0
General Office Building	4.70	1000sqft	0.11	4,700.00	0
Other Non-Asphalt Surfaces	177.60	1000sqft	4.08	177,600.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.6	Precipitation Freq (Days)	55
Climate Zone	4			Operational Year	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	491.65	CH4 Intensity (lb/MW hr)	0.022	N2O Intensity (lb/MW hr)	0.005

1.3 User Entered Comments & Non-Default Data

Rodeo GPA - Monterey County, Winter

Project Characteristics - Utility information adjusted based on Renewable Portfolio Standard

Land Use - info from Rodeo GPA TIA 041318. The project site is 6.8 acres. Therefore, the remaining area would be considered as non-asphalt surfaces.

Construction Phase - assume operation year is 2020. CalEEMod default schedule is applied.

Grading - assume balance onsite (old Rodeo project info, GPA does not specify if there would have cut and fill)

Demolition - info from client RFI response 5/26/2017

Vehicle Trips - Rodeo GPA TIA 041318 ITE 10th edition trip rates.

Fleet Mix - fleet mix adjusted based on CalEEMod default and San Bernadino 2003 study for truck percentages for industrial and warehouse uses

Energy Use -

Construction Off-road Equipment Mitigation -

Rodeo GPA - Monterey County, Winter

Table Name	Column Name	Default Value	New Value
tblFleetMix	HHD	0.03	0.13
tblFleetMix	LDA	0.53	0.44
tblFleetMix	LDT1	0.03	0.03
tblFleetMix	LDT2	0.20	0.17
tblFleetMix	LHD1	0.02	0.07
tblFleetMix	LHD2	6.0270e-003	0.02
tblFleetMix	MCY	7.8900e-003	0.00
tblFleetMix	MDV	0.14	0.12
tblFleetMix	MH	9.0500e-004	0.00
tblFleetMix	MHD	0.02	0.05
tblFleetMix	OBUS	4.1500e-003	0.00
tblFleetMix	SBUS	1.2530e-003	0.00
tblFleetMix	UBUS	2.9590e-003	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	641.35	491.65
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblVehicleTrips	ST_TR	1.32	1.99
tblVehicleTrips	ST_TR	2.46	2.21
tblVehicleTrips	SU_TR	0.68	5.00
tblVehicleTrips	SU_TR	1.05	0.70
tblVehicleTrips	WD_TR	6.97	4.96
tblVehicleTrips	WD_TR	11.03	9.74

2.0 Emissions Summary

Rodeo GPA - Monterey County, Winter

2.1 Overall Construction (Maximum Daily Emission)**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6698	48.3026	25.9218	0.0517	18.2141	2.5783	20.7924	9.9699	2.3720	12.3419	0.0000	5,163.211 2	5,163.2112	1.2014	0.0000	5,182.756 5
2019	86.5602	28.3479	24.5119	0.0513	1.3500	1.3513	2.7013	0.3656	1.2712	1.6367	0.0000	5,096.007 4	5,096.007 4	0.7597	0.0000	5,115.0005
Maximum	86.5602	48.3026	25.9218	0.0517	18.2141	2.5783	20.7924	9.9699	2.3720	12.3419	0.0000	5,163.211 2	5,163.211 2	1.2014	0.0000	5,182.756 5

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	4.6698	48.3026	25.9218	0.0517	8.2777	2.5783	10.8560	4.5080	2.3720	6.8801	0.0000	5,163.2112	5,163.2112	1.2014	0.0000	5,182.756 5
2019	86.5602	28.3479	24.5119	0.0513	1.3500	1.3513	2.7013	0.3656	1.2712	1.6367	0.0000	5,096.007 4	5,096.007 4	0.7597	0.0000	5,115.0005
Maximum	86.5602	48.3026	25.9218	0.0517	8.2777	2.5783	10.8560	4.5080	2.3720	6.8801	0.0000	5,163.211 2	5,163.211 2	1.2014	0.0000	5,182.756 5

	ROG	NOx	CO	SO2	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	50.79	0.00	42.29	52.85	0.00	39.07	0.00	0.00	0.00	0.00	0.00	0.00

Rodeo GPA - Monterey 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	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692
Energy	0.0911	0.8277	0.6953	4.9700e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728
Mobile	1.5750	18.7741	18.5671	0.0698	3.8210	0.1063	3.9273	1.0307	0.1009	1.1316		7,156.2210	7,156.2210	0.3404		7,164.7315
Total	4.7420	19.6021	19.2929	0.0747	3.8210	0.1694	3.9903	1.0307	0.1639	1.1946		8,149.5561	8,149.5561	0.3596	0.0182	8,163.9735

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692
Energy	0.0911	0.8277	0.6953	4.9700e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728
Mobile	1.5750	18.7741	18.5671	0.0698	3.8210	0.1063	3.9273	1.0307	0.1009	1.1316		7,156.2210	7,156.2210	0.3404		7,164.7315
Total	4.7420	19.6021	19.2929	0.0747	3.8210	0.1694	3.9903	1.0307	0.1639	1.1946		8,149.5561	8,149.5561	0.3596	0.0182	8,163.9735

Rodeo GPA - Monterey 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	9/3/2018	9/28/2018	5	20	
2	Site Preparation	Site Preparation	9/29/2018	10/12/2018	5	10	
3	Grading	Grading	10/13/2018	11/9/2018	5	20	
4	Building Construction	Building Construction	11/10/2018	9/27/2019	5	230	
5	Paving	Paving	9/28/2019	10/25/2019	5	20	
6	Architectural Coating	Architectural Coating	10/26/2019	11/22/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 10

Acres of Paving: 4.08

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 177,900; Non-Residential Outdoor: 59,300; Striped Parking Area: 10,656 (Architectural Coating – sqft)

OffRoad Equipment

Rodeo GPA - Monterey County, Winter

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

Trips and VMT

Rodeo GPA - Monterey 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	4.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	124.00	49.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	25.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0463	0.0000	0.0463	7.0200e-003	0.0000	7.0200e-003			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048		3,871.7665	3,871.7665	1.0667		3,898.4344
Total	3.7190	38.3225	22.3040	0.0388	0.0463	1.9386	1.9849	7.0200e-003	1.8048	1.8119		3,871.7665	3,871.7665	1.0667		3,898.4344

Rodeo GPA - Monterey County, Winter

3.2 Demolition - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2400e-003	0.0699	0.0150	1.6000e-004	3.4900e-003	4.3000e-004	3.9200e-003	9.6000e-004	4.1000e-004	1.3600e-003		17.3034	17.3034	7.2000e-004		17.3215
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	0.0892	0.0865	0.7294	1.3300e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		131.8660	131.8660	7.1300e-003		132.0443
Total	0.0915	0.1564	0.7444	1.4900e-003	0.1267	1.5800e-003	0.1283	0.0336	1.4700e-003	0.0351		149.1694	149.1694	7.8500e-003		149.3658

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0209	0.0000	0.0209	3.1600e-003	0.0000	3.1600e-003			0.0000			0.0000
Off-Road	3.7190	38.3225	22.3040	0.0388		1.9386	1.9386		1.8048	1.8048	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344
Total	3.7190	38.3225	22.3040	0.0388	0.0209	1.9386	1.9594	3.1600e-003	1.8048	1.8080	0.0000	3,871.7665	3,871.7665	1.0667		3,898.4344

Rodeo GPA - Monterey County, Winter

3.2 Demolition - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.2400e-003	0.0699	0.0150	1.6000e-004	3.4900e-003	4.3000e-004	3.9200e-003	9.6000e-004	4.1000e-004	1.3600e-003		17.3034	17.3034	7.2000e-004		17.3215
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	0.0892	0.0865	0.7294	1.3300e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		131.8660	131.8660	7.1300e-003		132.0443
Total	0.0915	0.1564	0.7444	1.4900e-003	0.1267	1.5800e-003	0.1283	0.0336	1.4700e-003	0.0351		149.1694	149.1694	7.8500e-003		149.3658

3.3 Site Preparation - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708		3,831.6239	3,831.6239	1.1928		3,861.4448
Total	4.5627	48.1988	22.4763	0.0380	18.0663	2.5769	20.6432	9.9307	2.3708	12.3014		3,831.6239	3,831.6239	1.1928		3,861.4448

Rodeo GPA - Monterey County, Winter

3.3 Site Preparation - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1071	0.1038	0.8753	1.5900e-003	0.1479	1.3800e-003	0.1493	0.0392	1.2800e-003	0.0405		158.2392	158.2392	8.5600e-003		158.4532
Total	0.1071	0.1038	0.8753	1.5900e-003	0.1479	1.3800e-003	0.1493	0.0392	1.2800e-003	0.0405		158.2392	158.2392	8.5600e-003		158.4532

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					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.5627	48.1988	22.4763	0.0380		2.5769	2.5769		2.3708	2.3708	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448
Total	4.5627	48.1988	22.4763	0.0380	8.1298	2.5769	10.7067	4.4688	2.3708	6.8396	0.0000	3,831.6239	3,831.6239	1.1928		3,861.4448

Rodeo GPA - Monterey County, Winter

3.3 Site Preparation - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1071	0.1038	0.8753	1.5900e-003	0.1479	1.3800e-003	0.1493	0.0392	1.2800e-003	0.0405		158.2392	158.2392	8.5600e-003		158.4532
Total	0.1071	0.1038	0.8753	1.5900e-003	0.1479	1.3800e-003	0.1493	0.0392	1.2800e-003	0.0405		158.2392	158.2392	8.5600e-003		158.4532

3.4 Grading - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272		2,988.0216	2,988.0216	0.9302		3,011.2769
Total	2.7733	30.6725	16.5770	0.0297	6.5523	1.5513	8.1037	3.3675	1.4272	4.7947		2,988.0216	2,988.0216	0.9302		3,011.2769

Rodeo GPA - Monterey County, Winter

3.4 Grading - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0892	0.0865	0.7294	1.3300e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		131.8660	131.8660	7.1300e-003		132.0443
Total	0.0892	0.0865	0.7294	1.3300e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		131.8660	131.8660	7.1300e-003		132.0443

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	2.7733	30.6725	16.5770	0.0297		1.5513	1.5513		1.4272	1.4272	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769
Total	2.7733	30.6725	16.5770	0.0297	2.9486	1.5513	4.4999	1.5154	1.4272	2.9426	0.0000	2,988.0216	2,988.0216	0.9302		3,011.2769

Rodeo GPA - Monterey County, Winter

3.4 Grading - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0892	0.0865	0.7294	1.3300e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		131.8660	131.8660	7.1300e-003		132.0443
Total	0.0892	0.0865	0.7294	1.3300e-003	0.1232	1.1500e-003	0.1244	0.0327	1.0600e-003	0.0338		131.8660	131.8660	7.1300e-003		132.0443

3.5 Building Construction - 2018**Unmitigated Construction On-Site**

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

Rodeo GPA - Monterey County, Winter

3.5 Building Construction - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3225	7.0364	2.3119	0.0138	0.3314	0.0645	0.3959	0.0954	0.0617	0.1571		1,452.184 0	1,452.184 0	0.0807		1,454.201 9
Worker	0.7376	0.7151	6.0295	0.0110	1.0186	9.5300e-003	1.0282	0.2702	8.8000e-003	0.2790		1,090.092 2	1,090.092 2	0.0590		1,091.566 3
Total	1.0600	7.7515	8.3414	0.0248	1.3500	0.0741	1.4241	0.3656	0.0705	0.4361		2,542.276 1	2,542.276 1	0.1397		2,545.768 3

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.935 1	2,620.935 1	0.6421		2,636.988 3
Total	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099	0.0000	2,620.935 1	2,620.935 1	0.6421		2,636.988 3

Rodeo GPA - Monterey County, Winter

3.5 Building Construction - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3225	7.0364	2.3119	0.0138	0.3314	0.0645	0.3959	0.0954	0.0617	0.1571		1,452.184 0	1,452.184 0	0.0807		1,454.201 9
Worker	0.7376	0.7151	6.0295	0.0110	1.0186	9.5300e-003	1.0282	0.2702	8.8000e-003	0.2790		1,090.092 2	1,090.092 2	0.0590		1,091.566 3
Total	1.0600	7.7515	8.3414	0.0248	1.3500	0.0741	1.4241	0.3656	0.0705	0.4361		2,542.276 1	2,542.276 1	0.1397		2,545.768 3

3.5 Building Construction - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.580 2	2,591.580 2	0.6313		2,607.363 5

Rodeo GPA - Monterey County, Winter

3.5 Building Construction - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2798	6.6406	2.0477	0.0138	0.3314	0.0523	0.3837	0.0954	0.0500	0.1454		1,445.349 2	1,445.349 2	0.0767		1,447.265 4
Worker	0.6590	0.6285	5.3004	0.0107	1.0186	9.1500e-003	1.0278	0.2702	8.4500e-003	0.2786		1,059.078 0	1,059.078 0	0.0517		1,060.371 6
Total	0.9387	7.2691	7.3481	0.0244	1.3500	0.0614	1.4115	0.3656	0.0585	0.4240		2,504.427 3	2,504.427 3	0.1284		2,507.637 0

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5
Total	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.580 2	2,591.580 2	0.6313		2,607.363 5

Rodeo GPA - Monterey County, Winter

3.5 Building Construction - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2798	6.6406	2.0477	0.0138	0.3314	0.0523	0.3837	0.0954	0.0500	0.1454		1,445.349 2	1,445.349 2	0.0767		1,447.265 4
Worker	0.6590	0.6285	5.3004	0.0107	1.0186	9.1500e-003	1.0278	0.2702	8.4500e-003	0.2786		1,059.078 0	1,059.078 0	0.0517		1,060.371 6
Total	0.9387	7.2691	7.3481	0.0244	1.3500	0.0614	1.4115	0.3656	0.0585	0.4240		2,504.427 3	2,504.427 3	0.1284		2,507.637 0

3.6 Paving - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.002 5	2,257.002 5	0.7141		2,274.854 8
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.002 5	2,257.002 5	0.7141		2,274.854 8

Rodeo GPA - Monterey County, Winter

3.6 Paving - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0797	0.0760	0.6412	1.2900e-003	0.1232	1.1100e-003	0.1243	0.0327	1.0200e-003	0.0337		128.1143	128.1143	6.2600e-003		128.2708
Total	0.0797	0.0760	0.6412	1.2900e-003	0.1232	1.1100e-003	0.1243	0.0327	1.0200e-003	0.0337		128.1143	128.1143	6.2600e-003		128.2708

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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548

Rodeo GPA - Monterey County, Winter

3.6 Paving - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0797	0.0760	0.6412	1.2900e-003	0.1232	1.1100e-003	0.1243	0.0327	1.0200e-003	0.0337		128.1143	128.1143	6.2600e-003		128.2708
Total	0.0797	0.0760	0.6412	1.2900e-003	0.1232	1.1100e-003	0.1243	0.0327	1.0200e-003	0.0337		128.1143	128.1143	6.2600e-003		128.2708

3.7 Architectural Coating - 2019**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	86.1609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	86.4274	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

Rodeo GPA - Monterey County, Winter

3.7 Architectural Coating - 2019**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1329	0.1267	1.0686	2.1500e-003	0.2054	1.8400e-003	0.2072	0.0545	1.7000e-003	0.0562		213.5238	213.5238	0.0104		213.7846
Total	0.1329	0.1267	1.0686	2.1500e-003	0.2054	1.8400e-003	0.2072	0.0545	1.7000e-003	0.0562		213.5238	213.5238	0.0104		213.7846

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	86.1609					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	86.4274	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423

Rodeo GPA - Monterey County, Winter

3.7 Architectural Coating - 2019**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1329	0.1267	1.0686	2.1500e-003	0.2054	1.8400e-003	0.2072	0.0545	1.7000e-003	0.0562		213.5238	213.5238	0.0104		213.7846
Total	0.1329	0.1267	1.0686	2.1500e-003	0.2054	1.8400e-003	0.2072	0.0545	1.7000e-003	0.0562		213.5238	213.5238	0.0104		213.7846

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Rodeo GPA - Monterey County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5750	18.7741	18.5671	0.0698	3.8210	0.1063	3.9273	1.0307	0.1009	1.1316		7,156.2210	7,156.2210	0.3404		7,164.7315
Unmitigated	1.5750	18.7741	18.5671	0.0698	3.8210	0.1063	3.9273	1.0307	0.1009	1.1316		7,156.2210	7,156.2210	0.3404		7,164.7315

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	564.94	226.66	569.50	1,510,172	1,510,172
General Office Building	45.78	10.39	3.29	82,811	82,811
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	610.72	237.05	572.79	1,592,983	1,592,983

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	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Rodeo GPA - Monterey County, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.436895	0.025303	0.166081	0.115721	0.067659	0.016341	0.046000	0.126000	0.000000	0.000000	0.000000	0.000000	0.000000
General Office Building	0.533135	0.030877	0.202665	0.141212	0.024955	0.006027	0.018072	0.025901	0.004150	0.002959	0.007890	0.001253	0.000905
Other Non-Asphalt Surfaces	0.533135	0.030877	0.202665	0.141212	0.024955	0.006027	0.018072	0.025901	0.004150	0.002959	0.007890	0.001253	0.000905

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0911	0.8277	0.6953	4.9700e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728
NaturalGas Unmitigated	0.0911	0.8277	0.6953	4.9700e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728

Rodeo GPA - Monterey County, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	8232.01	0.0888	0.8071	0.6779	4.8400e-003		0.0613	0.0613		0.0613	0.0613		968.4712	968.4712	0.0186	0.0178	974.2264
General Office Building	210.792	2.2700e-003	0.0207	0.0174	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7990	24.7990	4.8000e-004	4.5000e-004	24.9464
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0911	0.8277	0.6953	4.9600e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	8.23201	0.0888	0.8071	0.6779	4.8400e-003		0.0613	0.0613		0.0613	0.0613		968.4712	968.4712	0.0186	0.0178	974.2264
General Office Building	0.210792	2.2700e-003	0.0207	0.0174	1.2000e-004		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003		24.7990	24.7990	4.8000e-004	4.5000e-004	24.9464
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0911	0.8277	0.6953	4.9600e-003		0.0629	0.0629		0.0629	0.0629		993.2703	993.2703	0.0190	0.0182	999.1728

6.0 Area Detail

Rodeo GPA - Monterey County, Winter

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	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692
Unmitigated	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8600e-003	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692
Total	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692

Rodeo GPA - Monterey County, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4721					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6010					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.8600e-003	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692
Total	3.0759	2.8000e-004	0.0304	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0648	0.0648	1.7000e-004		0.0692

7.0 Water Detail**7.1 Mitigation Measures Water****8.0 Waste Detail****8.1 Mitigation Measures Waste****9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

Rodeo GPA - Monterey County, Winter

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

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

Equipment Type	Number
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11.0 Vegetation
