AIR QUALITY & GREENHOUSE GAS IMPACT ASSESSMENT

FOR

CARMEL LAGOON EPB, SRPS, AND ISMP PROJECT

MONTEREY COUNTY, CA

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PREPARED FOR:

DENISE DUFFY & ASSOCIATES, INC.
947 CASS STREET, SUITE 5
MONTEREY, CA 93940

PREPARED BY:

612 12TH STREET, SUITE 201
PASO ROBLES, CA 93446

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AAM	Annual Arithmetic Mean
AHERA	Asbestos Hazard Emergency Response Act
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CBSC	California Building Standards Code
CCAA	California Clean Air Act
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
DPM	Diesel-Exhaust Particulate Matter or Diesel-Exhaust PM
DRRP	Diesel Risk Reduction Plan
FCAA	Federal Clean Air Act
GHG	Greenhouse Gases
HAP	Hazardous Air Pollutant
MBUAPCD	Monterey Bay Unified Air Pollution Control District
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NCCAB	North Central Coast Air Basin
NO_x	Oxides of Nitrogen
O_3	Ozone
Pb	Lead
PM	Particulate Matter
PM_{10}	Particulate Matter (less than 10 µm)
$PM_{2.5}$	Particulate Matter (less than 2.5 µm)
ppb	Parts per Billion
ppm	Parts per Million
ROG	Reactive Organic Gases
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
sq.ft.	Square Feet
TAC	Toxic Air Contaminant
TBACT	Toxic Best Available Control Technology
TOG	Total Organic Gases
µg/m^3	Micrograms per cubic meter
UNFCCC	United Nations Framework Convention on Climate Change
U.S. EPA	United State Environmental Protection Agency
VOC	Volatile Organic Gases

INTRODUCTION

This report describes the existing environment in the project vicinity and identifies potential air quality and greenhouse gas (GHG) impacts associated with the proposed project. Air quality and GHG impacts were evaluated based on project-specific construction and operational information. The analysis was prepared in accordance with Monterey Bay Unified Air Quality Management District (MBUAPCD)-recommended guidance. No significant long-term air quality or GHG impacts were identified for the proposed project.

PROPOSED PROJECT OVERVIEW

The proposed project would be located within and adjacent to the Carmel River State Beach and Lagoon between State Route 1 and the Pacific Ocean in the unincorporated Carmel area of Monterey County, California (refer to Figure 1).

The proposed project involves implementing three project components: 1) Ecosystem Protective Barrier (EPB); 2) Scenic Road Protection Structure (SRPS); and 3) Interim Sandbar Management Plan (ISMP). The construction requirements associated with these project components are summarized, as follows:

EPB Project Component

The EPB would maintain or improve existing flood protection to low-lying homes and public infrastructure along the north edge of the Lagoon, while the frequency of mechanical management of the sandbar is reduced in compliance with regulatory requirements. The EPB would consist of approximately 2,000 linear feet (lf) of sheet pile wall and the reconstruction of 400 lf of Carmelo Street to a 17.5' elevation (EPB project components are depicted in Figure 2).

Construction of the proposed EPB project component would last approximately 90 days and, anticipated from approximately July through September. Temporary grading would be required to construct the EPB, pump station, outfall structure(s), and Carmelo Street. No fill would be required between the Fourth Addition Neighborhood and the EPB, which minimizes the amount of fill placed in any wetland and/or riparian areas and maintains the existing wetlands in that area. No access road for the purpose of long-term operation and maintenance activities is proposed as part of the Proposed Project. Approximately 700 cubic yards (cy) of the existing Carmelo Road would be demolished in order to raise the road elevation. Approximately 1,000 cy of fill would be imported and roughly 200 cy would be exported for the construction of the proposed EPB.

SRPS Project Component

The proposed SRPS project component consists of rock slope protection, also known as rock rip-rap or revetment, placed at the toe of the road embankment. The placement of armor rock would be determined through analyses to extend above existing grade as needed to protect Scenic Road from river scour and would extend below the anticipated outlet channel scour elevation. The outer rock layer would be sized to withstand extreme ocean wave and river current forces (e.g., 1 to 2-ton sized rock) with a layer of smaller rock and/or geotextile fabric underneath to prevent underlying soils from being eroding through the revetment. (SRPS project components are depicted in Figure 2).

The purpose of the proposed SRPS would be to prevent erosion of the bluff below Scenic Road by preventing erosion at the bluff's toe of slope. Above the top of the revetment, the slope would be permanently planted and maintained to control erosion.

Figure 1
Project Location

Image Source: Denise Duffy & Associates, 2015

Figure 2
Project Component Summary Map & Nearby Land Uses

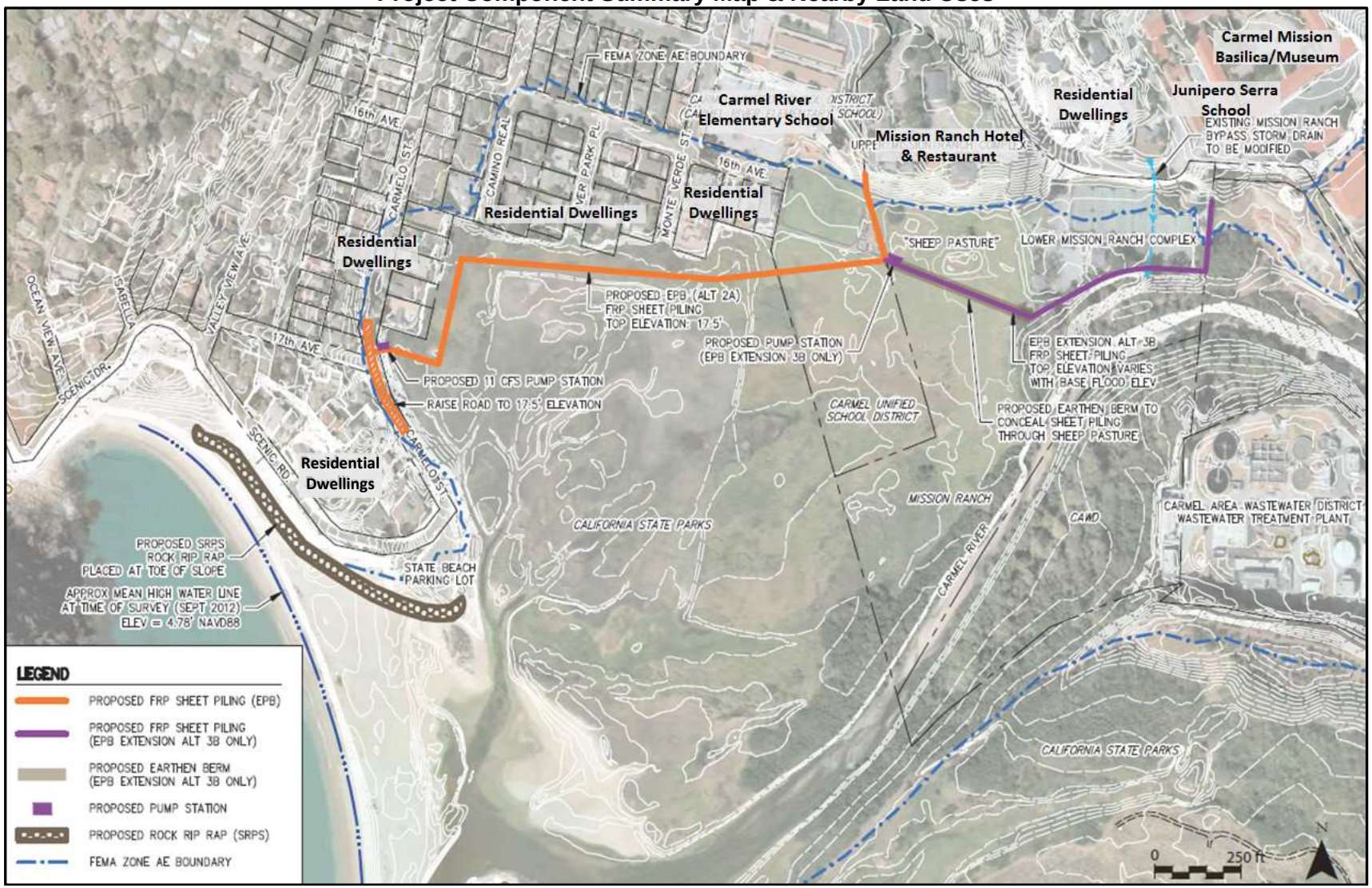


Image Source: Denise Duffy & Associates, 2015; Whitson Engineers, 2015

Construction of the proposed SRPS project component would last approximately 60 days, anticipated from approximately July through August. The construction of the proposed SRPS would require the excavation of approximately 25,000 cy of soil/sand and importation of approximately 15,000 tons of rock. Once rock placement is complete, the previously excavated material may be re-placed over the revetment.

ISMP Project Component

The ISMP would involve implementing management activities until the design, environmental review, permitting, and construction of the project is completed, which is currently anticipated in 2023. Managing the Lagoon would include pre-mobilization requirements, including the placement of sand bags and public outreach.

AIR QUALITY

EXISTING SETTING

The proposed Project is located within the North Central Coast Air Basin (NCCAB) and within the jurisdiction of the Monterey Bay Unified Air Pollution Control District (MBUAPCD). Air quality in a region is affected by its topography, meteorology, and climate. These factors are discussed in more detail in the following sections:

TOPOGRAPHY

The NCCAB encompasses Santa Cruz, San Benito, and Monterey counties. The NCCAB is generally bounded by the Diablo Range to the northeast, which together with the southern portion of the Santa Cruz Mountains forms the Santa Clara Valley which extends into the northeastern tip of the NCCAB. Farther south, the Santa Clara Valley transitions into the San Benito Valley, which runs northwest-southeast and has the Gabilan Range as its western boundary. To the west of the Gabilan Range is the Salinas Valley that extends from Salinas at the northwest end to King City at the southeast end. The northwest portion of the NCCAB is dominated by the Santa Cruz Mountains.

METEOROLOGY AND CLIMATE

The climate of the NCCAB is dominated by a semi-permanent high pressure cell over the Pacific Ocean. In the summer, the dominant high pressure cell results in persistent west and northwest winds across the majority of coastal California. As air descends in the Pacific high pressure cell, a stable temperature inversion is formed. As temperatures increase, the warmer air aloft expands, forcing the coastal layer of air to move onshore producing a moderate sea breeze over the coastal plains and valleys. Temperature inversions inhibit vertical air movement and often result in increased transport of air pollutants to inland receptor areas.

In the winter, when the high pressure cell is weakest and farthest south, the inversion associated with the Pacific high pressure cell is typically absent in the NCCAB. Air frequently flows in a southeasterly direction out of the Salinas and San Benito valleys in the NCCAB. The predominant offshore flow during this time of year tends to aid in pollutant dispersal producing relatively healthful to moderate air quality throughout the majority of the region. Conditions during this time are often characterized by afternoon and evening land breezes and occasional rain storms. However, local inversions caused by the cooling of air close to the ground can form in some areas during the evening and early morning hours. Winter daytime temperatures in the NCCAB typically average in the mid 50s during the day, with nighttime temperatures averaging in the low 40s. Summer daytime temperatures typically average in the 60s during the day, with nighttime temperatures averaging in the 50s. Precipitation varies within the region, but in general, annual rainfall is lowest in the coastal plain and inland valley, higher in the foothills, and highest in the mountains.

CRITERIA AIR POLLUTANTS

For the protection of public health and welfare, the Federal Clean Air Act (FCAA) required that the United States Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards

(NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the U.S. EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of an air pollutant that can be present in ambient air. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. Standards established for the protection of human health are referred to as primary standards; whereas, standards established for the prevention of environmental and property damage are called secondary standards. The FCAA allows states to adopt additional or more health-protective standards. The air quality regulatory framework and ambient air quality standards are discussed in greater detail later in this report.

The following provides a summary discussion of the primary and secondary criteria air pollutants of primary concern. In general, primary pollutants are directly emitted into the atmosphere, and secondary pollutants are formed by chemical reactions in the atmosphere.

Ozone (O_3) is a reactive gas consisting of three atoms of oxygen. In the troposphere, it is a product of the photochemical process involving the sun's energy. It is a secondary pollutant that is formed when NO_X and volatile organic compounds (VOC), also referred to as reactive organic gases (ROG) react in the presence of sunlight. Ozone at the earth's surface causes numerous adverse health effects and is a criteria pollutant. It is a major component of smog. In the stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation.

High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments. Ozone also damages natural ecosystems such as forests and foothill communities, agricultural crops, and some man-made materials, such as rubber, paint, and plastics.

Reactive Organic Gas (ROG) is a reactive chemical gas, composed of hydrocarbon compounds that may contribute to the formation of smog by their involvement in atmospheric chemical reactions. No separate health standards exist for ROG as a group. Because some compounds that make up ROG are also toxic, like the carcinogen benzene, they are often evaluated as part of a toxic risk assessment. Total Organic Gases (TOGs) includes all of the ROGs, in addition to low reactivity organic compounds like methane and acetone. ROGs and VOC are subsets of TOG.

Volatile Organic Compounds (VOC) are hydrocarbon compounds that exist in the ambient air. VOCs contribute to the formation of smog and may also be toxic. VOC emissions are a major precursor to the formation of ozone. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints.

Oxides of Nitrogen (NO_X) are a family of gaseous nitrogen compounds and is a precursor to the formation of ozone and particulate matter. The major component of NO_X, nitrogen dioxide (NO_2), is a reddish-brown gas that is toxic at high concentrations. NO_X results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of this air pollutant.

Particulate Matter (PM), also known as particle pollution, is a complex mixture of extremely small particles and liquid droplets. Particle pollution is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. U.S. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. U.S. EPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles ($PM_{2.5}$- PM_{10})," such as those found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. $PM_{2.5-10}$ is deposited in the thoracic region of the lungs.

- "Fine particles ($PM_{2.5}$)," such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- "Ultrafine particles (UFP)," are very small particles less than 0.1 micrometers in diameter largely resulting from the combustion of fossils fuels, meat, wood and other hydrocarbons. While UFP mass is a small portion of $PM_{2.5}$, its high surface area, deep lung penetration, and transfer into the bloodstream can result in disproportionate health impacts relative to their mass.

PM_{10}, $PM_{2.5}$, and UFP include primary pollutants (emitted directly to the atmosphere) as well as secondary pollutants (formed in the atmosphere by chemical reactions among precursors). Generally speaking, $PM_{2.5}$ and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM_{10} sources include these same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust.

Numerous scientific studies have linked both long- and short-term particle pollution exposure to a variety of 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 and 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 also acute (short-term) bronchitis, and may also 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 (CO) is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone). The main source of CO is on-road motor vehicles. Other CO sources include other mobile sources, miscellaneous processes, and fuel combustion from stationary sources. Because of the local nature of CO problems, California Air Resources Board (ARB) and U.S. EPA designate urban areas as CO nonattainment areas instead of the entire basin as with ozone and PM_{10}. Motor vehicles are by far the largest source of CO emissions. Emissions from motor vehicles have been declining since 1985, despite increases in vehicle miles traveled, with the introduction of new automotive emission controls and fleet turnover.

Sulfur Dioxide (SO_2) is a colorless, irritating gas with a "rotten egg" smell formed primarily by the combustion of sulfur-containing fossil fuels. However, like airborne NO_X, suspended SO_X particles contribute to the poor visibility. These SO_X particles can also combine with other pollutants to form $PM_{2.5}$. The prevalence of low-sulfur fuel use has minimized problems from this pollutant.

Lead (Pb) is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. The health effects of lead poisoning include loss of appetite, weakness, apathy, and miscarriage. Lead can also cause lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically.

Hydrogen Sulfide (H_2S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations; especially in enclosed spaces (800 ppm can cause death). OSHA regulates workplace exposure to H_2S.

Other Pollutants

The State of California has established air quality standards for some pollutants not addressed by Federal standards. The ARB has established State standards for hydrogen sulfide, sulfates, vinyl chloride, and visibility

reducing particles. The following section summarizes these pollutants and provides a description of the pollutants' physical properties, health and other effects, sources, and the extent of the problems.

Sulfates (SO_4^{2-}) are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The ARB sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilator function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Visibility Reducing Particles: Are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Vinyl Chloride (C_2H_3Cl or **VCM)** is a colorless gas that does not occur naturally. It is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloro-ethylene are broken down. Vinyl chloride is used to make polyvinyl chloride which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

ODORS

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

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

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

Neither the state nor the federal governments have adopted rules or regulations for the control of odor sources. The MBUAPCD does not have an individual rule or regulation that specifically addresses odors;

however, odors would be subject to MBUAPCD *Rule 402, Nuisance*. Any actions related to odors would be based on citizen complaints to local governments and the MBUAPCD.

TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered "criteria pollutants" under either the FCAA or the California Clean Air Act (CCAA), and are thus not subject to National or California ambient air quality standards (NAAQS and CAAQS, respectively). Instead, the U.S. EPA and the ARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with MBUAPCD rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national levels, the U.S. EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. The following provides a summary of the primary TACs of concern within the State of California and related health effects:

Diesel Exhaust Particulate Matter (Diesel Exhaust PM or DPM) was identified as a TAC by the ARB in August 1998. DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 40 percent of the statewide total, with an additional 57 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about 3 percent of emissions, include shipyards, warehouses, heavy equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities (ARB 2013).

In October 2000, the ARB issued a report entitled: "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles", which is commonly referred to as the Diesel Risk Reduction Plan (DRRP). The DRRP provides a mechanism for combating the DPM problem. The goal of the DRRP is to reduce concentrations of DPM by 85 percent by the year 2020, in comparison to year 2000 baseline emissions. The key elements of the DRRP are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel engines, and to lower the sulfur content of diesel fuel to protect new, and very effective, advanced technology emission control devices on diesel engines. When fully implemented, the DRPP will significantly reduce emissions from both old and new diesel fueled motor vehicles and from stationary sources that burn diesel fuel. In addition to these strategies, the ARB continues to promote the use of alternative fuels and electrification. As a result of these actions, DPM concentrations and associated health risks in future years are projected to decline (ARB 2013).

Exposure to DPM can have immediate health effects. DPM can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, Exposure to DPM also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. Because children's lungs and respiratory systems are still developing, they are also more susceptible than healthy adults to fine particles. Exposure to fine particles is associated with increased frequency of

childhood illnesses and can also reduce lung function in children. In California, DPM has been identified as a carcinogen.

Acetaldehyde is a federal hazardous air pollutant. The ARB identified acetaldehyde as a TAC in April 1993. Acetaldehyde is both directly emitted into the atmosphere and formed in the atmosphere as a result of photochemical oxidation. Sources of acetaldehyde include emissions from combustion processes such as exhaust from mobile sources and fuel combustion from stationary internal combustion engines, boilers, and process heaters. A majority of the statewide acetaldehyde emissions can be attributed to mobile sources, including on-road motor vehicles, construction and mining equipment, aircraft, recreational boats, and agricultural equipment. Area sources of emissions include the burning of wood in residential fireplaces and wood stoves. The primary stationary sources of acetaldehyde are from fuel combustion from the petroleum industry (ARB 2013).

Acute exposure to acetaldehyde results in effects including irritation of the eyes, skin, and respiratory tract. Symptoms of chronic intoxication of acetaldehyde resemble those of alcoholism. The U.S. EPA has classified acetaldehyde as a probable human carcinogen. In California, acetaldehyde was classified on April 1, 1988, as a chemical known to the state to cause cancer (U.S. EPA 2014; ARB 2013).

Benzene is highly carcinogenic and occurs throughout California. The ARB identified benzene as a TAC in January 1985. A majority of benzene emitted in California (roughly 88 percent) comes from motor vehicles, including evaporative leakage and unburned fuel exhaust. These sources include on-road motor vehicles, recreational boats, off-road recreational vehicles, and lawn and garden equipment. Benzene is also formed as a partial combustion product of larger aromatic fuel components. To a lesser extent, industry-related stationary sources are also sources of benzene emissions. The primary stationary sources of reported benzene emissions are crude petroleum and natural gas mining, petroleum refining, and electric generation that involves the use of petroleum products. The primary area sources include residential combustion of various types such as cooking and water heating (ARB 2013).

Acute inhalation exposure of humans to benzene may cause drowsiness, dizziness, headaches, as well as eye, skin, and respiratory tract irritation, and, at high levels, unconsciousness. Chronic inhalation exposure has caused various disorders in the blood, including reduced numbers of red blood cells and aplastic anemia, in occupational settings. Reproductive effects have been reported for women exposed by inhalation to high levels, and adverse effects on the developing fetus have been observed in animal tests. Increased incidences of leukemia (cancer of the tissues that form white blood cells) have been observed in humans occupationally exposed to benzene. The U.S. EPA has classified benzene as known human carcinogen for all routes of exposure (U.S. EPA 2014).

1,3-butadiene was identified by the ARB as a TAC in 1992. Most of the emissions of 1,3-butadiene are from incomplete combustion of gasoline and diesel fuels. Mobile sources account for a majority of the total statewide emissions. Additional sources include agricultural waste burning, open burning associated with forest management, petroleum refining, manufacturing of synthetics and man-made materials, and oil and gas extraction. The primary natural sources of 1,3-butadiene emissions are wildfires (ARB 2013).

Acute exposure to 1,3-butadiene by inhalation in humans results in irritation of the eyes, nasal passages, throat, and lungs. Epidemiological studies have reported a possible association between 1,3-butadiene exposure and cardiovascular diseases. Epidemiological studies of workers in rubber plants have shown an association between 1,3-butadiene exposure and increased incidence of leukemia. Animal studies have reported tumors at various sites from 1,3-butadiene exposure. In California, 1,3-butadiene has been identified as a carcinogen.

Carbon Tetrachloride was identified by the ARB as a TAC in 1987 under California's TAC program (ARB 2013). The primary stationary sources reporting emissions of carbon tetrachloride include chemical and allied product manufacturers and petroleum refineries. In the past, carbon tetrachloride was used for dry cleaning and as a grain-fumigant. Usage for these purposes is no longer allowed in the United States. Carbon tetrachloride has not been registered for pesticidal use in California since 1987. Also, the use of carbon tetrachloride in products to be used indoors has been discontinued in the United States. The

statewide emissions of carbon tetrachloride are small (about 1.96 tons per year), and background concentrations account for most of the health risk (ARB 2013).

The primary effects of carbon tetrachloride in humans are on the liver, kidneys, and central nervous system. Human symptoms of acute inhalation and oral exposures to carbon tetrachloride include headache, weakness, lethargy, nausea, and vomiting. Acute exposures to higher levels and chronic (long-term) inhalation or oral exposure to carbon tetrachloride produces liver and kidney damage in humans. Human data on the carcinogenic effects of carbon tetrachloride are limited. Studies in animals have shown that ingestion of carbon tetrachloride increases the risk of liver cancer. In California, carbon tetrachloride has been identified as a carcinogen.

Hexavalent chromium was identified as a TAC in 1986. Sources of Hexavalent chromium include industrial metal finishing processes, such as chrome plating and chromic acid anodizing, and firebrick lining of glass furnaces. Other sources include mobile sources, including gasoline motor vehicles, trains, and ships (ARB 2013).

The respiratory tract is the major target organ for hexavalent chromium toxicity, for acute and chronic inhalation exposures. Shortness of breath, coughing, and wheezing were reported from a case of acute exposure to hexavalent chromium, while perforations and ulcerations of the septum, bronchitis, decreased pulmonary function, pneumonia, and other respiratory effects have been noted from chronic exposure. Human studies have clearly established that inhaled hexavalent chromium is a human carcinogen, resulting in an increased risk of lung cancer. In California, hexavalent chromium has been identified as a carcinogen.

Para-Dichlorobenzene was identified by the ARB as a TAC in April 1993. The primary area-wide sources that have reported emissions of para-dichlorobenzene include consumer products such as non-aerosol insect repellants and solid/gel air fresheners. These sources contribute nearly all of the statewide para-dichlorobenzene emissions (ARB 2013).

Acute exposure to paradichlorobenzene via inhalation results in irritation to the eyes, skin, and throat in humans. In addition, long-term inhalation exposure may affect the liver, skin, and central nervous system in humans. The U.S. EPA has classified para-dichlorobenzene as a possible human carcinogen.

Formaldehyde was identified by the ARB as a TAC in 1992. Formaldehyde is both directly emitted into the atmosphere and formed in the atmosphere as a result of photochemical oxidation. Photochemical oxidation is the largest source of formaldehyde concentrations in California ambient air. Directly emitted formaldehyde is a product of incomplete combustion. One of the primary sources of directly-emitted formaldehyde is vehicular exhaust. Formaldehyde is also used in resins, can be found in many consumer products as an antimicrobial agent, and is also used in fumigants and soil disinfectants. The primary area sources of formaldehyde emissions include wood burning in residential fireplaces and wood stoves (ARB 2013).

Exposure to formaldehyde may occur by breathing contaminated indoor air, tobacco smoke, or ambient urban air. Acute and chronic inhalation exposure to formaldehyde in humans can result in respiratory symptoms, and eye, nose, and throat irritation. Limited human studies have reported an association between formaldehyde exposure and lung and nasopharyngeal cancer. Animal inhalation studies have reported an increased incidence of nasal squamous cell cancer. Formaldehyde is classified as a probable human carcinogen.

Methylene Chloride was identified by the ARB as a TAC in 1987. Methylene chloride is used as a solvent, a blowing and cleaning agent in the manufacture of polyurethane foam and plastic fabrication, and as a solvent in paint stripping operations. Paint removers account for the largest use of methylene chloride in California, where methylene chloride is the main ingredient in many paint stripping formulations. Plastic product manufacturers, manufacturers of synthetics, and aircraft and parts manufacturers are stationary sources reporting emissions of methylene chloride (ARB 2013).

The acute effects of methylene chloride inhalation in humans consist mainly of nervous system effects including decreased visual, auditory, and motor functions, but these effects are reversible once exposure ceases. The effects of chronic exposure to methylene chloride suggest that the central nervous system is a potential target in humans and animals. Human data are inconclusive regarding methylene chloride and cancer. Animal studies have shown increases in liver and lung cancer and benign mammary gland tumors following the inhalation of methylene chloride. In California, methylene chloride has been identified as a carcinogen.

Perchloroethylene was identified by the ARB as a TAC in 1991. Perchloroethylene is used as a solvent, primarily in dry cleaning operations. Perchloroethylene is also used in degreasing operations, paints and coatings, adhesives, aerosols, specialty chemical production, printing inks, silicones, rug shampoos, and laboratory solvents. In California, the stationary sources that have reported emissions of perchloroethylene are dry cleaning plants, aircraft part and equipment manufacturers, and fabricated metal product manufacturers. The primary area sources include consumer products such as automotive brake cleaners and tire sealants and inflators (ARB 2013).

Acute inhalation exposure to perchloroethylene vapors can result in irritation of the upper respiratory tract and eyes, kidney dysfunction, and at lower concentrations, neurological effects, such as reversible mood and behavioral changes, impairment of coordination, dizziness, headaches sleepiness, and unconsciousness. Chronic inhalation exposure can result in neurological effects, including sensory symptoms such as headaches, impairments in cognitive and motor neurobehavioral functioning, and color vision decrements. Cardiac arrhythmia, liver damage, and possible kidney damage may also occur. In California, perchloroethylene has been identified as a carcinogen.

ASBESTOS

Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. The most common type of asbestos is chrysotile, but other types are also found in California. Serpentine rock often contains chrysotile asbestos. Serpentine rock, and its parent material, ultramafic rock, is abundant in the Sierra foothills, the Klamath Mountains, and Coast Ranges. The project site, however, is not located in an area of known ultramafic rock.

Additional sources of asbestos include building materials and other manmade materials, which are commonly referred to as asbestos-containing building materials (ACBMs). The most common sources are heat-resistant insulators, cement, furnace or pipe coverings, inert filler material, fireproof gloves and clothing, and brake linings. Asbestos has been used in the United States since the early 1900's; however, asbestos is no longer allowed as a constituent in most home products and materials. Many older buildings, schools, and homes still have asbestos containing products.

All types of asbestos are hazardous and may cause lung disease and cancer. Health risks to people are dependent upon their exposure to asbestos. The longer a person is exposed to asbestos and the greater the intensity of the exposure, the greater the chances for a health problem. Asbestos-related disease, such as lung cancer, may not occur for decades after breathing asbestos fibers. Cigarette smoking increases the risk of lung cancer from asbestos exposure.

REGULATORY FRAMEWORK

Air quality within the NCCAB is regulated by several jurisdictions including the U.S. EPA, ARB, and the MBUAPCD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although U.S. EPA regulations may not be superseded, both state and local regulations may be more stringent.

FEDERAL

U.S. Environmental Protection Agency

At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act

The FCAA required the U.S. EPA to establish NAAQS, and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in Table 1.

The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The FCAA Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The U.S. EPA has responsibility to review all state SIPs to determine conformance with the mandates of the FCAA, and the amendments thereof, and determine if implementation will achieve air quality goals. If the U.S. EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the FCAA of 1970, the U.S. EPA established the National Emission Standards for Hazardous Air Pollutants. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

STATE

California Air Resources Board

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts, establishing California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The CAAQS are summarized in Table 1. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

California Clean Air Act

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a five percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Table 1
Summary of Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards*	National Standards* (Primary)
Ozone (O_3)	1-hour	0.09 ppm	–
	8-hour	0.070 ppm	0.075 ppm
Particulate Matter (PM_{10})	AAM	20 µg/m^3	–
	24-hour	50 µg/m^3	150 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m^3	12 µg/m^3
	24-hour	No Standard	35 µg/m^3
Carbon Monoxide (CO)	1-hour	20 ppm	35 ppm
	8-hour	9 ppm	9 ppm
	8-hour (Lake Tahoe)	6 ppm	–
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	0.053 ppm
	1-hour	0.18 ppm	0.100 ppb
Sulfur Dioxide (SO_2)	AAM	–	0.03 ppm
	24-hour	0.04 ppm	0.14 ppm
	3-hour	–	0.5 ppm (1300 µg/m^3)**
	1-hour	0.25 ppm	75 ppb
Lead	30-day Average	1.5 µg/m^3	–
	Calendar Quarter	–	1.5 µg/m^3
	Rolling 3-Month Average	–	0.15 µg/m^3
Sulfates	24-hour	25 µg/m^3	No Federal Standards
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)	
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m^3)	
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/kilometer-visibility of 10 miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70 percent.	

** For more information on standards visit :http//ww.arb.ca.gov.research/aaqs/aaqs2.pdf*
***Secondary Standard*
Source: ARB 2015c

California Assembly Bill 170

Assembly Bill 170, Reyes (AB 170), was adopted by state lawmakers in 2003 creating Government Code Section 65302.1 which requires cities and counties in the San Joaquin Valley to amend their general plans to include data and analysis, comprehensive goals, policies and feasible implementation strategies designed to improve air quality.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

California Building Standards Code

The California Building Standards Code (CBSC), commonly referred to as Title 24, contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. Included in the CBSC are energy efficiency standards, which are commonly referred to as green building standards or CalGreen standards. The CBSC is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBSC was most recently updated in 2013. The 2013 energy-efficiency standards are 25 percent more efficient than previous standards for residential construction and 30 percent more efficient for non-residential construction (CEC 2015).

Portable Equipment Registration Program

Owners or operators of portable engines and certain other types of equipment can register their units under the ARB's Statewide Portable Equipment Registration Program (PERP). PERP allows registered equipment to be operated throughout California without having to obtain individual permits from local air districts. To qualify, equipment must meet eligibility requirements, including applicable emissions standards.

MONTEREY BAY UNIFIED AIR POLLUTION CONTROL DISTRICT

The MBUAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the NCCAB, within which the project is located. Responsibilities of the MBUAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA. In an attempt to achieve NAAQS and CAAQS and maintain air quality, the MBUAPCD has most recently completed the *2008 Air Quality Management Plan (AQMP)* for achieving the state ozone standards and the *2007 Federal Maintenance Plan* for maintaining federal ozone standards (MBUAPCD 2015b).

To achieve and maintain ambient air quality standards, the MBUAPCD has adopted various rules and regulations for the control of airborne pollutants. The MBUAPCD Rules and Regulations that are applicable to the proposed project include, but are not limited to, the following:

- **Rule 402 (Nuisances).** The purpose of this rule is to prohibit emissions that may create a public nuisance. Applies to any source operation that emits or may emit air contaminants or other materials.

- **Rule 426 (Architectural Coatings).** The purposed of this rule is to limit emissions of volatile organic compounds from architectural coatings.
- **Rule 425 (Use of Cutback Asphalt).** The purposed of this rule is to limit emissions of vapors of organic compounds from the use of cutback and emulsified asphalt. This rule applies to the manufacture and use of cutback, slow cure, and emulsified asphalt during paving and maintenance operations.
- **Rule 207 (New and Modified Source Review).** Rule 207 regulates new and modified stationary sources. The rule incorporates State and federal requirements for new and modified stationary sources, as well as, MBUAPCD-specific regulations. Rule 207 provides mechanisms by which permits may be granted to sources without interfering with the attainment or maintenance of ambient air quality standards.
- **Rule 1010 (Air Toxic Control Measure for Stationary Compression Ignition Engines).** Rule 1010 regulates emissions of toxic air contaminants emitted from stationary sources, specifically emissions of diesel PM, consistent with State requirements. Rule 1010 provides mechanisms by which permits may be granted to sources to ensure that resultant emissions would not exceed applicable human health risk thresholds.

REGULATORY ATTAINMENT DESIGNATIONS

The attainment status of the NCCAB is summarized in Table 2. An attainment designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A nonattainment designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation(s) was caused by an exceptional event, as defined in the criteria. Unclassified designations indicate insufficient data is available to determine attainment status.

Under the California Clean Air Act, the basin is designated as a nonattainment transitional area for the state ozone AAQS. The NCCAB is also designated a nonattainment area for the state PM_{10} AAQS. Under the FCAA, the NCCAB is currently designated attainment for the recently established eight-hour ozone federal AAQS. The NCCAB is designated either attainment or unclassified for the remaining state and federal AAQS.

AMBIENT AIR QUALITY

Air pollutant concentrations are measured at several monitoring stations in Monterey County. The "Salinas #3 Monitoring Station" is the closest representative monitoring site to the proposed project site with sufficient data to meet U.S. EPA and/or ARB criteria for quality assurance. This monitoring station monitors ambient concentrations of ozone, NO_2, CO, and $PM_{2.5}$. Ambient monitoring data was obtained for the last three years of available measurement data (i.e., 2012 through 2014) and are summarized in Table 3. As depicted, state and federal standards for ozone, NO_2, CO, and $PM_{2.5}$ have not been exceeded during the past 3 years.

SENSITIVE RECEPTORS

One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, termed "sensitive receptors." The term sensitive receptors refer to specific population groups, as well as the land uses where individuals would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses would include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Residential dwellings, schools, parks, playgrounds, childcare centers, convalescent homes, and hospitals are examples of sensitive land uses.

The nearest sensitive receptors consist predominantly of residential dwellings, the nearest of which are generally located adjacent to and north of the project area. Carmel River Elementary School and the

Mission Ranch Hotel is located adjacent to and north of the project site, south of 14th Avenue. In addition, Junipero Serra School and Carmel Mission Basilica/Museum are also located north of the project site, east of Dolores Street. The nearest land uses are depicted in Figure 2.

Table 2
NCCAB Attainment Status Designations

Pollutant	State Designation [1]	National Designation
Ozone (O_3)	Nonattainment [2]	Attainment/Unclassified[3]
Inhalable Particulates (PM_{10})	Nonattainment	Attainment
Fine Attainment ($PM_{2.5}$)	Attainment	Unclassified/Attainment [4]
Carbon Monoxide (CO)	Monterey County-Attainment San Benito County-Unclassified Santa Cruz County-Unclassified	Attainment/Unclassified
Nitrogen Dioxide (NO_2)	Attainment	Attainment/Unclassified[5]
Sulfur Dioxide (SO_2)	Attainment	Attainment[6]
Lead	Attainment	Unclassified/Attainment[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/m3 and the 2012 annual standard of 12 µg/m3.*
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 lowered the NAAQS for lead to 0.15 µg/m^3. Final designations were made by EPA in November 2011.*

Source: MBUAPCD 2015a.

Table 3
Summary of Ambient Air Quality Monitoring Data[1]

	2012	2013	2014
Ozone			
Maximum concentration, ppm (1-hour/8-hour average)	0.071/0.055	0.065/0.062	0.066/0.062
Number of days state/national 1-hour standard exceeded	0/0	0/0	0/0
Number of days state/national 8-hour standard exceeded	0/0	0/0	0/0
Nitrogen Dioxide (NO_2)			
Maximum concentration, ppm (1-hour average)	42.0	42.0	38.0
Annual average	5	5	5
Number of days state standard exceeded	0	0	0
Carbon Monoxide (CO)			
Maximum concentration, ppm (1-hour/8-hour average)	1.6/1.39	1.7/1.2	1.8/1.1
Number of days state/national 1-hour standard exceeded	0	0	0
Number of days state/national 8-hour standard exceeded	0	0	0
Suspended Particulate Matter ($PM_{2.5}$)			
Maximum concentration, µg/m^3 (state/national)	16.2	19.7	20.2
Number of days national standard exceeded (measured/calculated[2])	0/0	0/0	0/0

ppm = parts per million by volume, µg/m^3 = micrograms per cubic meter
1. *Ambient data was obtained from the Salinas #3 Monitoring Station.*
2. *Measured days are those days that an actual measurement was greater than the standard. Calculated days are the number of days that a measurement would have been greater than the standard had measurements been collected every day.*

Source: ARB 2015b, EPA 2015

PROJECT IMPACTS

THRESHOLDS OF SIGNIFICANCE

Criteria for determining the significance of air quality impacts were developed based on information contained in the California Environmental Quality Act Guidelines (CEQA Guidelines, Appendix G). According to those guidelines, a project may have a significant effect on the environment if it would result in the following conditions:

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

To assist local jurisdictions in the evaluation of air quality impacts, the MBUAPCD has published the *CEQA Air Quality Guidelines* (MBUAPCD 2008). This guidance document includes recommended thresholds of significance to be used for the evaluation of short-term construction, long-term operational, odor, toxic air contaminant, and cumulative air quality impacts. The following MBUAPCD-recommended thresholds of significance were relied upon for determination of impact significance:

- **Short-term Emissions of Criteria Air Pollutants**. Construction impacts would be significant if the proposed project would emit greater than 82 pounds per day (lbs/day) of PM_{10}, or will cause a violation of PM_{10} National or State AAQS at nearby receptors. Construction-generated emissions of ozone precursors (i.e., ROG or NO_X) are accommodated in the emission inventories of State and federally-required air plans. For this reason, the MBUAPCD has not identified recommended thresholds of significance for construction-generated ozone precursors.
- **Long-Term Emissions of Criteria Air Pollutants**. Operational impacts would be considered potentially significant if direct and indirect emissions would exceed 137 lbs/day of either ROG or NO_X, 82 lbs/day of PM_{10}, or if the project would contribute to local PM_{10} concentrations that exceed Ambient Air Quality Standards. Emissions of SO_X would be significant if the project generates direct emissions of greater than 150 lbs/day;
- **Local Mobile-Source CO Concentrations**. Local mobile-source impacts would be significant if the project generates direct emissions of greater than 550 lbs/day of CO or if the project would contribute to local CO concentrations that exceed the State Ambient Air Quality Standard of 9.0 ppm for 8 hours or 20 ppm for 1 hour. (Indirect emissions are typically considered to include mobile sources that access the project site but generally emit off-site; direct emissions typically include sources that emitted on-site (e.g., stationary sources, on-site mobile equipment).
- **Toxic Air Contaminants**. TAC impacts would be significant if the project would expose the public to substantial levels of TACs so that the probability of contracting cancer for the Maximally Exposed Individual would exceed 10 in 1 million or if concentratons would result in a Hazard Index greater than 1 for the Maximally Exposed Individual.
- **Odorous Emissions**. Odor impacts would be significant if the project has the potential to frequently expose members of the public to objectionable odors.

METHODOLOGY

Short-term construction and long-term operational emissions of were quantified using the California Emissions Estimator Model (CalEEMod), version 2013.2.2. Short-term construction emissions were quantified based on estimated construction schedules, off-road equipment use, material handing activities, and on-road vehicle trips provided for the proposed project components (i.e., EPB, SRPS, and ISMP). Refer to Appendix A for emissions modeling assumptions and results.

Long-term operational emissions were quantified based on energy/equipment usage requirements and maintenance-related vehicle trips associated with the project. Energy usage associated with the prposed pumps were quantified based on calculated annual electricity use and emission factors derived from the CalEEMod computer program and South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook. Operational mobile-source emisisons associated with maintenance worker trips were quantified using the CalEEMod computer program assuming a total of four worker trips/day, one day per week. Actual maintenance related vehicle trips would likely be less. Evaporative VOC emissions associated with the occasional maintenance/recoating of metal project components were also quantified based on an estimated 100 square feet of surface area recoated on any given day. Off-road equipment use associated with occasional maintenance activities assumed the operation of one tractor for landscape maintenance and one generator for metal recoating applications could potentially occur on the same day. Refer to Appendix A for emissions modeling assumptions and results.

A screening-level health risk assessment was conducted for the proposed emergency generator utilizing a risk screening spreadsheet provided by the MBUAPCD. The emergency generator required for the proposed project was estimated to be 240 bhp in size and the fuel source has not yet been identified. To ensure a conservative analysis, the generator was assumed to be diesel fueled. 250 bhp in size, and without the inclusion of toxic best available control technology (TBACT). The generator would be required to comply with MBUAPCD permitting requirements (Rule 207 – New and Modified Source Review) or be registered under California Code of Regulations Title 13, Article 5, Sections 2450 through 2465 (Portable Equipment Registration Program), if applicable. These regulations would limit new generator operations for testing and maintenance to a maximum of 50 hours annually. No daily limit for testing and maintenance is identified. To ensure a conservative analysis, daily operational period was assumed to be 24 hours. Actual daily testing periods are typically limited to a few hours.

PROJECT IMPACTS

Impact AQ-1: Conflict with or obstruct implementation of any applicable air quality plan.

Consistency with the AQMP is assessed by comparing the proposed growth associated with a proposed project with the population and dwelling unit forecasts adopted by the Association of Monterey Bay Area Governments (AMBAG). These projections are used to generate emission forecasts upon which the AQMP is based. Project's which are consistent with AMBAG's regional forecasts would be considered consistent with the AQMP (MBUAPCD 2008). In addition, projects that would result in a signficant increase in emissions, in excess of MBUAPCD significance thresholds, would also be considered to potentially conflict with or obstruct implementation of the AQMP.

The proposed project would not result in a substantial increase in employment, or population growth, nor would the project result in significant short-term or long-term increases of criteria air pollutants. For these reasons, implementation of the proposed project is not anticipated to result in a substantial increase in either direct or indirect emissions that would conflict with or obstruct implementation of the AQMP. This impact is considered less than significant. No mitigation is required. (Refer to Impacts AQ-3 for a more detailed discussion of air quality impacts.)

Impact AQ-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

As discussed in Impacts AQ-3 and AQ-4, implementation of the proposed project would not result in short-term or long-term increases in emissions that would violate any air quality standard or contribute to an existing or projected air quality violation. As a result, this impact is considered less than significant. No mitigation is required. (Refer to Impacts AQ-3 and AQ-4 for additional discussion of air quality impacts.)

Impact AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Construction Emissions

Construction-generated emissions are short-term and of temporary duration, lasting only as long as construction activities occur, but possess the potential to represent a significant air quality impact. The construction of the proposed uses would result in the temporary generation of emissions resulting primarily from site preparation and excavation, asphalt paving, as well as, motor vehicle exhaust associated with off-road construction equipment and on-road vehicle trips. Emissions of PM are largely associated with ground disturbance and the movement of construction vehicles and equipment on unpaved surfaces.

Construction-generated emissions associated with development of the proposed project are summarized in Table 4. As depicted, development of the proposed project would generate maximum daily emissions of approximately 7 lbs/day of ROG, 73 lbs/day of NO_X, 12 lbs/day of PM_{10} and 7 lbs/day of $PM_{2.5}$. Emissions of PM would largely occur during the initial site preparation and excavation activities. Construction activities would not generate PM_{10} emissions that would exceed the MBUAPCD's significance threshold of 82 lbs/day. Furthermore, compliance with existing MBUAPCD rules and regulations, such as Rule 402 (Nuisances) and Rule 425 (Use of Cutback Asphalt) would further minimize potential short-term air quality impacts. As a result, short-term construction activities would be considered to have a less-than-significant air quality impact. No mitigation is required.

Operational Emissions

Operational emissions associated with the proposed project would be primarily associated with routine maintenance activities and electricity use. The testing/maintenance of the proposed emergency generator would also contribute intermittently to operational emissions. Daily operational emissions are summarized in Table 5. Assuming that all maintenance and operational activities at both the EPS and SRPS locations were to occur on the same day, the proposed project would generate emissions of approximately 4.7 lbs/day of ROG, 58.0 lbs/day of NO_X, 23.1 lbs/day of CO, 1.1 lbs/day of SO_X, 2.3 lbs.day of PM_{10}, and 2.3 lbs/day of $PM_{2.5}$. Daily operational emissions would not exceed applicable MBUAPCD significance thresholds. In addition, it is important to note the proposed emergency generator would be subject to MBUAPCD permitting requirements for stationary emissions sources, in accordance with MBUAPCD Rule 207. Compliance with MBUAPCD permitting requirements would include limitations on the emissions generated and hours of testing and operation sufficient to ensure that operational emissions from this source would not exceed stationary-source permitting thresholds. For these reasons long-term operation of the proposed project would have a less-than-significant impact. No mitigation is required.

Table 4
Construction Emissions - Uncontrolled

Project Components/Construction Activity	Emissions (lbs/day)[1]			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
EPB				
Site Preparation/Excavation/Road Removal[2]	3.11	32.74	7.97	4.93
Subgrade	2.38	23.25	1.78	1.28
Paving	1.44	14.53	0.96	0.83
Sheet Pile Wall Installation	2.36	20.98	1.55	1.17
Pump Station/Generator Building Install	1.33	14.59	0.85	0.72
Architectural Coating[3]	1.03	6.17	0.50	0.46
Highest Daily Emissions for EPB:	3.11	32.74	7.97	4.93
SRPS				
Site Preparation / Excavation	2.87	30.97	1.83	1.57
Rock Placement	3.16	31.88	2.25	1.52
Backfilling	1.11	10.86	0.78	0.66
Highest Daily Emissions for SRPS:	3.16	31.88	2.25	1.52
ISMP[5]				
Sand Bag Placement	0.91	8.31	1.77	0.61
Sand Bag Removal	0.91	8.31	1.77	0.61
Sand Bar Management	0.05	0.08	0.08	0.02
Highest Daily Emissions for ISMP:	0.91	8.31	1.77	0.61
Maximum Daily Emissions[4]:	7.18	72.93	11.99	7.11
MBUAPCD Significance Threshold[5]:	-	-	82	-
Exceeds Threshold/Significant Impact?	NA	NA	No	NA

1. Estimated emissions include onsite off-road equipment use, material handling, and off-site motor vehicle use.

2. Includes demolition/removal of roughly 400 linear feet of Carmelo Street.

3. Assumes equivalent of 1,200 sq.ft. painted daily, 250 g/L VOC content.

4. Assumes highest daily emissions from each project component could potentially occur simultaneously on the same day.

5. ISMP would only occur during short-term/construction, prior to completion of EPB and SRPS

Refer to Appendix A for emissions modeling assumptions and results.

Table 5
Operational Emissions

Project Component/Source	Emissions (lbs/day) [1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
EPB						
Repainting[1]	0.27	--	--	--	--	--
Off-road Maintenance Equipment[2]	0.74	6.14	4.98	0.01	0.47	0.45
Maintenance Worker Motor Vehicles[3]	0.02	0.03	0.25	0.00	0.03	0.01
Electricity Use[4]	0.08	9.65	1.68	1.01	0.34	0.34
Emergency Generator [5]	2.8	36.0	11.0	0.10	1.00	1.00
Total EPB Emissions:	3.9	51.8	17.9	1.1	1.8	1.8
SRPS						
Off-road Maintenance Equipment[2]	0.74	6.14	4.98	0.01	0.47	0.45
Maintenance Worker Motor Vehicles[3]	0.02	0.03	0.25	0.00	0.03	0.01
Total SRPS Emissions:	0.8	6.2	5.2	0.0	0.5	0.5
Maximum Daily Emissions:	4.7	58.0	23.1	1.1	2.3	2.3
MBUAPCD Significance Thresholds:	137	137	550	150	82	-
Exceeds Threshold/Significant Impact?	No	No	No	No	No	NA

1. Includes evaporative emissions for repainting. Assumes equivalent of 1,200 sqft painted per day, maximum VOC content of 250 g/L for industrial maintenance coatings.

2. Off-road maintenance equipment includes the use of one compressor for painting applications and one off-road tractor for landscape maintenance. Assumes both activities were to occur simultaneously on a given day. Emissions were calculated using the CalEEMod computer program.

3. Maintenance worker trips assume 4 trips per day based on CalEEMod default parameters for worker commute trips in Monterey County.

4. Energy use was calculated based on SCAQMD-recommended emissions factors assuming the operation of one 100-hp duty pump and one 25-hp jockey pump, each operating an average of four hours per 24-hour period.

5. Based on pump electrical demand an approximate 240-bhp generator would be required. To be conservative, a 250 bhp diesel-fueled generator operating 24-hours at 0.75 load was assumed.Generator testing typically operate at lower load levels and for shorter periods of time.

6. Maximum daily emissions assumes EPB and SRPS emissions were to occur simultaneously on the same day.

Refer to Appendix A for emissions modeling assumptions and results.

Impact AQ-4: Expose sensitive receptors to substantial pollutant concentrations.

Short-term Exposure

Implementation of the proposed project would result in short-term emissions of fugitive PM associated with project construction. Localized pollutants of primary concern typically associated with construction projects are commonly associated with increased emissions of PM generated by ground disturbance, including site preparation and grading. However, as previously noted, the proposed project would not require the demolition of existing structures, nor would the proposed project result in emissions that would exceed MBUAPCD significance thresholds. Compliance with applicable MBUAPCD rules and regulations, including but not limited to Rule 402, would minimize potential nuisance impacts to occupants of nearby

land uses. For these reasons, construction activities would be considered to have a less-than-significant short-term impact to nearby sensitive receptors. No mitigation is required.

Long-term Exposure

Potential sources of long-term exposure to pollutant concentrations associated with the proposed project would be primarily associated with the installation of the proposed emergency generator. The proposed generator would be housed within a proposed control building to be located adjacent to and east of Carmelo Street, approximately 40 feet north of the proposed pump station. The nearest receptors in the vicinity of the proposed control building are located approximately 35 feet to the northeast and approximately 40 feet to the west, across Carmelo Street. The size of the proposed generator would be approximately 240 brake horsepower. The fuel source for the generator has not yet been identified.

A screening-level health risk assessment was conducted for the proposed emergency generator based on updated methodologies contained in the MBUAPCD's health-risk screening spreadsheet to include recent changes in health risk assessment guidance to account for changes in breathing rates based on age sensitivity. To ensure a conservative analysis, the generator was assumed to be diesel fueled, without the inclusion of TBACT. As noted earlier in this report, diesel-exhaust PM has been identified as a toxic air contaminant (TAC). Based on the analysis conducted, the proposed generator would result in a cancer risk of approximately 4.8 in a million and a hazard index of 0.72.

For the assessment of potential health-related impacts assocated with TACs, the MBUAPCD has established stationary source cancer-risk thresholds of one in 100,000 (i.e, 10 in one million) and a non-cancer risk hazard index of one. Stationary emission sources that exceed these thresholds would be considererd to have a potentially significant impact. Based on the screening health risk assessment conducted, the proposed emergency generator would not result in increased health risks to the nearest receptors that would exceed MBUAPCD's significance thresholds. It is also important to note that the proposed emergency generator would be required to comply with MBUAPCD permitting requirements, including but not limited to Rule 207–New and Modified Source Review and Rule 1010–Air Toxic Control Measure for Stationary Compression Ignition Engines. Depending on the generator to be installed, TBACT may also be required, which would further reduce potential health risks associated with the operation of the emergency generator. For these reasons, this impact would be considered less than significant.

Impact AQ-5: Create objectionable odors affecting a substantial number of people.

Implementation of the proposed project would not result in the installation of any major sources of odors. In addition, no major sources of odors have been identified in the vicinity of the project site. As a result, implementation of the proposed project would not result in the long-term exposure of a substantial number of individuals to increased concentrations of odors. However, construction of the proposed facilities would involve the use of a variety of gasoline and diesel-powered equipment, as well as, paving activities that would emit odors. In addition, operation of the emergency generator could result intermittent short-term emissions of diesel exhaust, if diesel fueled. However, these sources are not considered major odor sources of concern by the MBUAPCD (MBUAPCD 2008). In addition, emissions from these sources would occur intermittently throughout the workday and would dissipate rapidly within increasing distance from the source. As a result, short-term construction activities would not expose a substantial number of people to frequent odorous emissions. For these reasons, this impact would be considered less than significant. No mitigation is required.

GREENHOUSE GASES AND CLIMATE CHANGE

EXISTING SETTING

To fully understand global climate change, it is important to recognize the naturally occurring "greenhouse effect" and to define the greenhouse gases (GHGs) that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Primary GHGs attributed to global climate change, are discussed, as follows:

- **Carbon Dioxide**. Carbon dioxide (CO_2) is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere (U.S. EPA 2008).

- **Methane**. Methane (CH_4) is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87percent by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years (U.S. EPA 2015a).

- **Nitrous Oxide**. Nitrous oxide (N_2O) is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years (U.S. EPA 2015b).

- **Hydrofluorocarbons.** Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (U.S. EPA 2015c).

- **Perfluorocarbons.** Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F1_4). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for CF_4 and C_2F_6 are 50,000 and 10,000 years, respectively (U.S. EPA 2015a).

- **Nitrogen Trifluoride**. Nitrogen trifluoride (NF_3) is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. Nitrogen trifluoride is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin film solar cells. It has a global warming potential of 17,200 carbon dioxide equivalents (CO_2e). While NF_3 may have a lower global warming potential than other chemical etchants, it is still a potent GHG. In 2009, NF_3 was listed by California as a high global warming potential GHG to be listed and regulated under Assembly Bill (AB) 32 (Section 38505 Health and Safety Code).

- **Sulfur Hexafluoride**. Sulfur hexafluoride (SF_6) is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80percent of all SF_6 produced worldwide. Leaks of SF_6 occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (U.S. EPA 2015e).

- **Black Carbon**. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global-warming potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands). California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (ARB 2014).

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential (GWP). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. Table 6 shows the GWP for the GHG emissions of typical concern with regard to community development projects, based on a 100-year time horizon. As indicated, Methane traps over 25 times more heat per molecule than CO_2, and N_2O absorbs roughly 298 times more heat per molecule than CO_2. Additional GHG with high GWP include Nitrogen trifluoride, Sulfur hexafluoride, Perfluorocarbons, and black carbon.

Table 6
Global Warming Potential for Greenhouse Gases

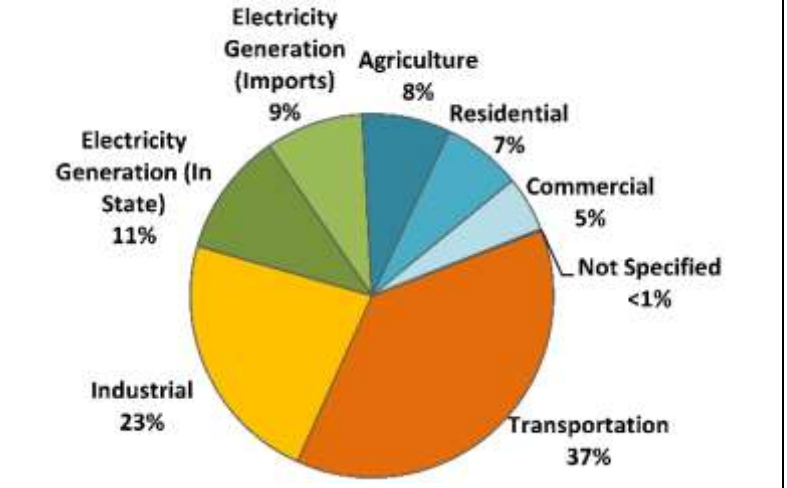
Greenhouse Gas	Global Warming Potential (100-year)
Carbon Dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous Dioxide (N_2O)	298
**Based on IPCC GWP values for 100-year time horizon*	

SOURCES OF GHG EMISSIONS

On a global scale, GHG emissions are predominantly associated with activities related to energy production; changes in land use, such as deforestation and land clearing; industrial sources; agricultural activities; transportation; waste and wastewater generation; and commercial and residential land uses. World-wide, energy production including the burning of coal, natural gas, and oil for electricity and heat is the largest single source of global GHG emissions (U.S. EPA 2015d).

In 2013, GHG emissions within California totaled 459 million metric tons (MMT) of CO_2e. GHG emissions, by sector, are summarized in Figure 3. Within California, the transportation sector is the largest contributor, accounting for approximately 37 percent of the total state-wide GHG emissions. Emissions associated with industrial uses are the second largest contributor, totaling roughly 23 percent. Electricity generation totaled roughly 20 percent (ARB 2014a).

Figure 3
California Greenhouse Gas Emissions Inventory



Source: ARB 2014a.

EFFECTS OF GLOBAL CLIMATE CHANGE

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the state. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of precipitation. For instance, historical records are depicting an increasing trend toward earlier snowmelt in the Sierra Nevada. This snow pack is a principal supply of water for the state, providing roughly 50 percent of state's annual runoff. If this trend continues, some areas of the state may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during spring and summer months. An earlier snowmelt would also impact the State's energy resources. Currently, approximately 20 percent of California's electricity comes from hydropower. An early exhaustion of the Sierra snowpack, may force electricity producers to switch to more costly or non-renewable forms of electricity generation during spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity. As a result, resultant changes in climate

will likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry (CCCC 2015).

REGULATORY FRAMEWORK

FEDERAL

INTERNATIONAL REGULATION AND THE KYOTO PROTOCOL

The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC). While the United States signed the Kyoto Protocol, which would have required reductions in GHGs, Congress never ratified the protocol. The federal government chose voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science. In 2002, the United States announced a strategy to reduce the greenhouse gas intensity of the American economy by 18 percent over a 10-year period from 2002 to 2012.

As part of the commitments to the UNFCCC, the U.S. EPA has developed an inventory of anthropogenic emissions by sources and removals by sinks of all GHGs. This inventory is periodically updated, with the latest update in 2010. The U.S. EPA reports that total US emissions rose by 14 percent from 1990 to 2007, while the US gross domestic product increased by 59 percent over the same period. A 2.9 percent decrease in emissions was noted from 2007 to 2008, which is reported to be attributable to climate conditions, reduced use of petroleum products for transportation, and increased use of natural gas over other fuel sources. The inventory notes that the transportation sector emits about 32 percent of CO_2 emissions, with 53 percent of those emissions coming from personal automobile use. Residential uses, primarily from energy use, accounted for 21 percent of CO_2 emissions (U.S. EPA 2015a).

As a part of the U.S. EPA's responsibility to develop and update an inventory of U.S. GHG emissions and sinks, the U.S. EPA compared trends of other various US data. Over the period between 1990 and 2008, GHG emissions grew at an average rate of about 0.7 percent per year. Population growth was slightly higher at 1.1 percent, while energy and fossil fuel consumption grew at 0.9 and 0.8 percent, respectively. Gross domestic product and energy generation grew at much higher rates.

Executive Order 13514

Executive Order 13514 is focused on reducing GHGs internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

On April 2, 2007, in Massachusetts v. U.S. EPA, 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision.

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009. On May 7, 2010 the final *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards* was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, (the equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements). Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On November 16, 2011, U.S. EPA and NHTSA issued their joint proposal to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles (Caltrans 2015).

STATE

Assembly Bill 1493

AB 1493 (Pavley) of 2002 (Health and Safety Code Sections 42823 and 43018.5) requires the ARB to develop and adopt the nation's first GHG emission standards for automobiles. These standards are also known as Pavley I. The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the state's water supply, an increase in air pollution caused by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. The bill also states that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the State of California submitted a request for a waiver from federal clean air regulations, as the State is authorized to do under the Clean Air Act, to allow the State to require reduced tailpipe emissions of CO_2. In late 2007, the U.S. EPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the State brought suit against the U.S. EPA related to this denial.

In January 2009, President Obama instructed the U.S. EPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars and trucks. In June 2009, the U.S. EPA granted California's waiver request, enabling the State to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

Also in 2009, President Obama announced a national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the US. The new standards would cover model years 2012 to 2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. When the national program takes effect, California has committed to allowing automakers who show compliance with the national program to also be deemed in compliance with state requirements. California is committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from the 2020 model year vehicles.

Executive Order No. S-3-05

Executive Order S-3-05 (State of California) proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the

Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The Executive Order directed the secretary of the California Environmental Protection Agency to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The secretary will also submit biannual reports to the governor and state legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the secretary of CalEPA created a Climate Action Team made up of members from various state agencies and commissions. The Climate Action Team released its first report in March 2006 and continues to release periodic reports on progress. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Executive Order S-6-06

Executive Order S-6-06 (State of California), signed on April 25, 2006, established two primary goals related to the use of biofuels within California, including: (1) by 2010, 20 percent of its biofuels need to be produced within California; increasing to 40 percent by 2020 and 75 percent by 2050; and (2) by 2010, 20 percent of the renewable electricity should be generated from biomass resources within the state, maintaining this level through 2020.

Executive Order No. S-01-07

Executive Order S-1-07, the Low Carbon Fuel Standard (LCFS) was issued on January 18, 2007 and called for a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. This order instructed the CalEPA to coordinate activities between the University of California, the California Energy Commission (CEC) and other state agencies to develop and propose a draft compliance schedule to meet the 2020 target. Furthermore, it directed ARB to consider initiating a regulatory proceedings to establish and implement the LCFS. In response, ARB adopted the LCFS regulation in 2010.

Assembly Bill 32 - California Global Warming Solutions Act of 2006

AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32 (ARB 2014b).

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Climate Change Scoping Plan

In October 2008, ARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. The Scoping Plan contains the main strategies California will implement to achieve reduction of roughly 169 million metric tons of CO_2e, or approximately 29 percent from the state's projected 2020 emissions level in comparison to business-as-usual (BAU) 2002–

2004 conditions. The Scoping Plan also includes ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations are from improving emissions standards for light-duty vehicles (estimated reductions of 31.7 $MMTCO_2e$), implementation of the Low Carbon Fuel Standard (15.0 $MMTCO_2e$) program, energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 $MMTCO_2e$), and a renewable portfolio standard for electricity production (21.3 $MMTCO_2e$). The Scoping Plan identifies the local equivalent of AB 32 targets as a 15 percent reduction below baseline GHG emissions level, with baseline interpreted as GHG emissions levels between 2003 and 2008.

Key components of the Scoping Plan focus on energy efficiency, conservation, and use of renewable energy. For instance, the Renewable Portfolio Standard, which is intended to increase the percentage of renewables in California's electricity mix to 33 percent by year 2020, would result in a reduction of 21.3 $MMTCO_2e$. Sources of renewable energy include, but are not limited to, biomass, wind, solar, geothermal, hydroelectric, and anaerobic digestion. Increasing the use of renewables will decrease California's reliance on fossil fuels, thus reducing GHG emissions. The Scoping Plan also recognizes that land use planning and urban growth decisions will play important roles in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions.

The Scoping Plan was first approved by the Board in 2008 and must be updated every five years. The first update of the Scoping Plan was approved by ARB on May 22, 2014, which looked past 2020 to set mid-term goals to reach post 2020 emission-reduction targets.

Executive Order B-30-15

On April 29, 2015, the Governor issued Executive Order B-30-15 establishing a mid-term GHG reduction target for California of 40 percent below 1990 levels by 2030. All state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. ARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to achieve continue reductions in GHG emissions.

Senate Bill 1368

Senate Bill (SB) 1368 (codified at Public Utilities Code Chapter 3) is the companion bill of AB 32. SB 1368 required the California Public Utilities Commission (CPUC) to establish a greenhouse gas emissions performance standard for baseload generation from investor-owned utilities by February 1, 2007. The bill also required the CEC to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural-gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and the CEC.

Senate Bill 1078 and Governor's Order S-14-08 (California Renewables Portfolio Standards)

Senate Bill 1078 (Public Utilities Code Sections 387, 390.1, 399.25 and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20 percent of their supply from renewable sources by 2017. This Senate Bill will affect statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed Executive Order S-14-08, which set the Renewables Portfolio Standard target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target. Executive Order S-14-08 was later superseded by Executive Order S-21-09 on September 15, 2009. Executive Order S-21-09 directed ARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. This Executive Order was superseded by statute SB X1-2 in 2011, which obligates all California electricity providers, including investor-owned utilities and publicly owned utilities, to obtain at least 33 percent of their energy from renewable electrical generation facilities by 2020, with interim targets of 20 percent by 2013 and 25 percent by 2016.

ARB is required by current law, AB 32 of 2006, to regulate sources of GHGs to meet a state goal of reducing greenhouse gas emissions to 1990 levels by 2020 and an 80 percent reduction of 1990 levels by 2050. The CEC and CPUC serve in advisory roles to help ARB develop the regulations to administer the 33 percent by 2020 requirement. ARB is also authorized to increase the target and accelerate and expand the time frame.

Mandatory Reporting of Greenhouse Gas Emissions

Reporting of GHGs by major sources is required by the California Global Warming Solutions Act (AB 32, 2006). Revisions to the existing ARB mandatory GHG reporting regulation were considered at the board hearing on December 16, 2010. The revised regulation was approved by the California Office of Administrative Law and became effective on January 1, 2012. The revised regulation affects industrial facilities, suppliers of transportation fuels, natural gas, natural gas liquids, liquefied petroleum gas, and carbon dioxide, operators of petroleum and natural gas systems, and electricity retail providers and marketers.

Cap-and-Trade Regulation

The cap-and-trade regulation is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013 and apply to large electric power plants and large industrial plants. In 2015, they will extend to fuel distributors (including distributors of heating and transportation fuels). At that stage, the program will encompass around 360 businesses throughout California and nearly 85 percent of the state's total greenhouse gas emissions.

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions, and are free to buy and sell allowances on the open market. California held its first auction of greenhouse gas allowances on November 14, 2012. California's GHG cap-and-trade system will reduce GHG emissions from regulated entities by approximately 16 percent, or more, by 2020.

California Building Code

The California Building Code (CBC) contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The California Building Code is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

Green Building Standards

In essence, green buildings standards are indistinguishable from any other building standards. Both are contained in the California Building Code and regulate the construction of new buildings and improvements. The only practical distinction between the two is that whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance.

AB 32, which mandates the reduction in greenhouse gas emissions in California to 1990 levels by 2020, increased the urgency around the adoption of green building standards. In its scoping plan for the implementation of AB 32, ARB identified energy use as the second largest contributor to California's GHG emissions, constituting roughly 25 percent of all such emissions. In recommending a green building strategy as one element of the scoping plan, ARB estimated that green building standards would reduce GHG emissions by approximately 26 million metric tons of CO_2e ($MMTCO_2e$) by 2020.

The green buildings standards, commonly referred to as CalGreen standards, were most recently updated in 2013. The 2013 building energy efficiency standards are 25 percent more efficient than previous standards for residential construction and 30 percent more efficient for non-residential construction (CEC 2015).

PROJECT IMPACTS

THRESHOLDS OF SIGNIFICANCE

In accordance with CEQA Guidelines, a project would be considered to have a significant impact to climate change if it would:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or,

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

Neither the State of California nor the MBUAPCD have identified quantitative thresholds of significance for the evaluation of project-generated GHGs. In addition, it is important to note that neither AB 32, SB 375 nor SB 97 establish a statutory mandate that requires local air pollution control districts to establish GHG significance thresholds for CEQA purposes. However, to date, several air districts have identified GHG significance thresholds. Most recently, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has identified recommended GHG thresholds of significance to be used for the analysis of project-related impacts. For construction and operational activities, the SMAQMD recommends a GHG mass-emissions threshold of 1,100 $MTCO_2e$/year to be applied for the assessment of short-term construction and long-term operational impacts. The SMAQMD's recommended GHG significance threshold is generally consistent with mass-emissions thresholds recommended by other air districts for the evaluation of GHG impacts. For instance, the San Luis Obispo County Air Pollution Control District (SLOAPCD) has identified a recommended GHG significance threshold of 1,150 $MTCO_2e$/year and the Bay Area Air Quality Management District (BAAQMD) has identified a recommended GHG mass-emissions threshold of 1,100 $MTCO_2e$/year.

Unlike criteria air pollutants that primarily affect the local or regional environment within which they are emitted, GHG emissions are evaluated based on potential impacts to the global environment and, hence, are inherently a cumulative impact. For this reason, some air districts have advocated for consideration of more regional GHG emission thresholds that are not necessarily limited to air district boundaries or air basins. For instance, the Ventura County Air Pollution Control District is coordinating with the South Coast Air Quality Management District to identify GHG emission thresholds that would help to streamline CEQA project-level analysis and be consistent with those applied within other areas of Southern California (VCAPCD 2011). Similarly, the Monterey Bay Unified Air Pollution Control District (MBUAPCD) worked with SLOAPCD on a work plan for development of a regional CEQA GHG threshold, which was the basis for the GHG thresholds currently adopted by SLOAPCD. The MBUAPCD currently considers the use of CEQA thresholds identified by other air districts, including the neighboring SLOAPCD- or BAAQMD-recommended GHG significance thresholds, to be adequate for the analysis of CEQA GHG impacts. It is also importrant to note that the GHG significance thresholds currently being recommended by the above-discussed air districts are based on AB 32 GHG emission reduction goals, which take into consideration the emission reduction strategies outlined in ARB's Scoping Plan. As such, project-generated emissions that would exceed these thresholds would be considered to have a potentially significant impact on the environment that could conflict with the GHG-reduction goals of AB 32. For purposes of this analysis, project-generated emissions in excess of 1,100 $MTCO_2e$/year would be considered to have a potentially significant impact on the environment that could conflict with the GHG-reduction goals of AB 32.

PROJECT IMPACTS

Impact GHG-1: ***Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? and***

Would the project conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Implementation of the proposed project would result in short-term construction and long-term operational emissions of GHGs. Short-term construction and long-term operational emissions of GHGs are discussed, as follows:

Short-term Construction GHG Emissions

Estimated increases in GHG emissions associated with construction of the proposed project are summarized in Table 7. Assuming that all project components were to be constructed within a single year, annual emissions of greenhouse gases associated with project construction would total approximately 255 $MTCO_2e$. Amortized GHG emissions, when averaged over an assumed 25-year project life, would total approximately 10.2 $MTCO_2e$/year. There would also be a small amount of GHG emissions from waste generated during construction; however, this amount is speculative. Actual emissions may vary, depending on the final construction schedules, equipment required, and activities conducted. Assuming that all construction activities were to occur in the same year, construction-generated GHG emissions would not exceed 1,100 MTCO2e/year and would be considered to have a less-than-significant impact. To ensure a conservative analysis, amortized construction-generated emissions were also included in the operational GHG emissions assessment discussed in the following section.

Table 7
Construction GHG Emissions

Project Component	Annual Emissions ($MTCO_2e$/Year)[1]
EPB	112
SRPS	141
ISMP	2
Total Emissions all Project Components:	255
Amortized Net Change in Construction Emissions[2]:	10.2

1. Assumes all construction components would occur within a single year.
2. Amortized emissions are quantified based on an estimated 25-year project life.

Long-term Operational GHG Emissions

Operational emissions would be primarily assocated with occasional maintenance-related activities, emergency generator operation, and electricity use associated with the operation of the pumps. Operational emissions are summarized in Table 8. With the inclusion of amortized construction emissions the project would generate an estimated total 59.6 $MTCO_2e$/year. Annual GHG emissions would not exceed the threshold of 1,100 $MTCO_2e$. The proposed project would not result in GHG emissions that would have a significant impact on the environment, nor would the proposed project conflict with applicable GHG-reduction plans, policies or regulations. This impact would be considered ***less than significant***. No mitigation is required.

Table 8
Operational GHG Emissions

Project Component/Source	Annual Emissions ($MTCO_2e$/year) [1]
EPB	
Architectural Coatings[2]	0.0
Off-road Maintenance Equipment[3]	16.5
Maintenance Worker On-road Motor Vehicles [4]	0.8
Electricity Use[5]	9.5
Emergency Generator [6]	5.3
Total EPB Emissions:	32.1
SRPS	
Off-road Maintenance Equipment[3]	16.5
Maintenance Worker On-road Motor Vehicles [4]	0.8
Total SRPS Emissions:	17.3
Amortized Construction Emissions[1]:	10.2
Maximum Annual Emissions [7]:	59.6
Significance Threshold:	1,100
Exceed Significance Threshold/Significant Impact?	No

1. *Assumes all operational activities would occur within a given year.*
2. *Assumes equivalent of 1,200 square feet repainted annually, based on the estimated total interior/exterior wall area of the proposed control building, assuming all surfaces would be painted. Includes on-site and off-site emissions.*
3. *Includes 1 tractor for landscape maintenance and 1 portable generator for architectural coating application.*
4. *Assumes four worker trips/day, one day/week, 52 weeks/year (208 worker trips annually).*
5. *Assumes operation of one duty pump (100 hp) and one jockey pump (25 hp) approximately 360 operational hours annually.*
6. *Assumes 250 bhp, diesel-fueled emergency generator. 50 operational hours annuallyper MBUAPCD permitting requirements.*
7. *Amortized emissions are quantified based on an estimated 25-year project life (refer to Table 7).*

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APPENDIX A

Emissions Modeling

Summary of Maximum Daily Construction Emissions By Project Component/Alternative - Uncontrolled

	Emissions (lbs/day)[1]				MTCO2e	MTCO2e Amortized
	ROG	NO_X	PM_{10}	$PM_{2.5}$		
EPB	3.11	32.74	7.97	4.93	112	4.48
SRPS	3.16	31.88	2.25	1.52	141	5.64
ISMP	0.91	8.31	1.77	0.61	2	0.08
Total EPB+SRPS+ISMP	7.18	72.93	11.99	7.06	255	10.2
EPB+ISMP ONLY	4.02	41.05	9.74	5.54	114	4.56
SRPS+ISMP ONLY	4.07	40.19	4.02	2.13	143	5.72

**Amortized CO2e assumes 25-years.*

Summary of Operational Emissions By Project Component/Alternative

Project Component/Source	Emissions (lbs/day) [1]						Annual MTCO2e
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	
EPB							
Repainting[1]	0.27	--	--	--	--	--	0
Off-road Maintenance Equipment[2]	0.74	6.14	4.98	0.01	0.47	0.45	16.5
Maintenance Worker Motor Vehicles[3]	0.02	0.03	0.25	0	0.03	0.01	0.8
Electricity Use[4]	0.08	9.65	1.68	1.01	0.34	0.34	9.5
Emergency Generator [5]	2.8	36	11	0.1	1	1	5.3
						Total:	32.1
						Amortized Construction Emissions (ISMP)	0.08
						Amortized Construction Emissions (EPB)	4.48
Total EPB Emissions:	**3.91**	**51.82**	**17.91**	**1.12**	**1.84**	**1.8**	**36.66**
SRPS							
Off-road Maintenance Equipment[2]	0.74	6.14	4.98	0.01	0.47	0.45	16.5
Maintenance Worker Motor Vehicles[3]	0.02	0.03	0.25	0	0.03	0.01	0.8
						Total:	17.3
						Amortized Construction Emissions (ISMP)	0.08
						Amortized Construction Emissions (SRPS)	5.64
Total SRPS Emissions:	**0.76**	**6.17**	**5.23**	**0.01**	**0.5**	**0.46**	**23.02**
EPB+SRPS							
Maximum Operational Emissions:	4.67	57.99	23.14	1.13	2.34	2.26	49.4
						Amortized Construction Emissions (ISMP)	0.08
						Amortized Construction Emissions (EPB)	4.48
						Amortized Construction Emissions (SRPS)	5.64
						Maximum Operational Emissions with Amortized Construction:	**59.6**

CONSTRUCTION EMISSIONS SUMMARY

	Emissions (lbs/day)				Annual MTCO2e
	ROG	NO_X	PM_{10}	$PM_{2.5}$	
EPB					
Site Preparation / Excavation					
Onsite	2.99	31.96	7.83	4.89	
Offsite	0.12	0.78	0.14	0.04	
Total	3.11	32.74	7.97	4.93	
Subgrade					
Onsite	1.95	19.67	1.40	1.14	
Offsite	0.43	3.58	0.38	0.14	
Total	2.38	23.25	1.78	1.28	
Paving					
Onsite	1.39	14.45	0.88	0.81	
Offsite	0.05	0.08	0.08	0.02	
Total	1.44	14.53	0.96	0.83	
Sheet Pile Wall Installation					
Onsite	2.23	20.76	1.15	1.07	
Offsite	0.13	0.22	0.40	0.10	
Total	2.36	20.98	1.55	1.17	
Coating					
Onsite	1.01	6.14	0.47	0.45	
Offsite	0.02	0.03	0.03	0.01	
Total	1.03	6.17	0.50	0.46	
Pump Station/Generator Building Install					
Onsite	1.28	14.51	0.77	0.70	
Offsite	0.05	0.08	0.08	0.02	
Total	1.33	14.59	0.85	0.72	112
SRPS					
Site Preparation / Excavation					
Onsite	2.80	30.86	1.72	1.54	
Offsite	0.07	0.11	0.11	0.03	
Total	2.87	30.97	1.83	1.57	
Rock Placement					
Onsite	2.03	21.48	1.35	1.17	
Offsite	1.13	10.40	0.90	0.35	
Total	3.16	31.88	2.25	1.52	
Backfilling					
Onsite	1.06	10.78	0.70	0.64	
Offsite	0.05	0.08	0.08	0.02	
Total	1.11	10.86	0.78	0.66	141
ISMP					
Sand Bag Placement					
Onsite	0.57	5.22	1.49	0.50	
Offsite	0.34	3.09	0.28	0.11	
Total	0.91	8.31	1.77	0.61	
Sand Bag Removal					
Onsite	0.57	5.22	1.49	0.50	
Offsite	0.34	3.09	0.28	0.11	
Total	0.91	8.31	1.77	0.61	
Sand Bar Management					
Onsite	0.00	0.00	0.00	0.00	
Offsite	0.05	0.08	0.08	0.02	
Total	0.05	0.08	0.08	0.02	2

Carmel River Lagoon Scenic Road Protection - EPB

Monterey County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Construction emissions for EPB only.

Construction Phase - Overall construction period is 90 days. Schedule does not reflect overlapping activities. (Site Prep: 10 days, Subgrade: 10 days; Paving: 10 days; Sheeting: 75 days; Bldg Install: 5 days)

Off-road Equipment - 1 grader, 1 dozer, 1 tractor, 1 excavator

Off-road Equipment - 1 grader, 1 tractor, 1 plate compactor, 1 forklift, 1 roller

Off-road Equipment - 1 paver, 1 paving equipment, 1 roller, 1 tractor

Off-road Equipment - 1 crane, 1 tractor, 1 excavator mounted driver, 1 welder, 1 rt forklift

Off-road Equipment - 1 crane, 1 excavator, 1 tractor, 1 rt forklift

Grading - Assumes 1,000 cyd imported, 200 cy exported

Trips and VMT - Construction vehicle trips based on estimated equipment requirements/model defaults.

Vehicle Trips - Operational emissions do not apply.

Construction Off-road Equipment Mitigation - Includes CE of 50% for unpaved roads and 61% for exposed surface area with water application, 15 mph limit for onroad vehicle travel on unpaved surfaces.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstructionPhase	NumDays	4.00	10.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	PhaseEndDate	11/24/2016	12/1/2016
tblConstructionPhase	PhaseEndDate	7/28/2016	7/21/2016
tblConstructionPhase	PhaseStartDate	11/18/2016	11/25/2016
tblConstructionPhase	PhaseStartDate	7/15/2016	7/8/2016
tblGrading	AcresOfGrading	5.00	1.50
tblGrading	AcresOfGrading	5.00	1.00
tblGrading	MaterialExported	0.00	200.00
tblGrading	MaterialImported	0.00	1,000.00
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	HorsePower	100.00	89.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.20

tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
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tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

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					
2016	0.1257	1.1744	0.8325	1.2300e-003	0.0486	0.0644	0.1130	0.0211	0.0597	0.0808	0.0000	111.2077	111.2077	0.0296	0.0000	111.8298
Total	**0.1257**	**1.1744**	**0.8325**	**1.2300e-003**	**0.0486**	**0.0644**	**0.1130**	**0.0211**	**0.0597**	**0.0808**	**0.0000**	**111.2077**	**111.2077**	**0.0296**	**0.0000**	**111.8298**

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					
2016	0.0349	0.5760	0.8218	1.2300e-003	0.0293	0.0305	0.0598	0.0109	0.0305	0.0414	0.0000	111.2076	111.2076	0.0296	0.0000	111.8297
Total	**0.0349**	**0.5760**	**0.8218**	**1.2300e-003**	**0.0293**	**0.0305**	**0.0598**	**0.0109**	**0.0305**	**0.0414**	**0.0000**	**111.2076**	**111.2076**	**0.0296**	**0.0000**	**111.8297**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**72.26**	**50.96**	**1.29**	**0.00**	**39.61**	**52.68**	**47.07**	**48.27**	**48.99**	**48.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation & Rd Excavation	Site Preparation	7/1/2016	7/14/2016	5	10	Site Preparation/Road Excavation
2	Subgrade	Grading	7/8/2016	7/21/2016	5	10	Subgrade
3	Paving	Paving	7/22/2016	8/4/2016	5	10	Paving
4	Sheet Pile Driving	Trenching	8/5/2016	11/17/2016	5	75	Sheet Pile Driving
5	Pump Station/Gen Bldg Install	Building Construction	11/25/2016	12/1/2016	5	5	Pump Station/Gen Bldg Install

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Pump Station/Gen Bldg Install	Cranes	1	6.00	226	0.29
Pump Station/Gen Bldg Install	Forklifts	0	6.00	89	0.20
Site Preparation & Rd Excavation	Graders	1	8.00	174	0.41
Site Preparation & Rd Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sheet Pile Driving	Generator Sets	0	8.00	84	0.74
Subgrade	Rubber Tired Dozers	0	6.00	255	0.40
Subgrade	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sheet Pile Driving	Cranes	1	8.00	226	0.29
Sheet Pile Driving	Forklifts	0	6.00	89	0.20
Sheet Pile Driving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sheet Pile Driving	Cement and Mortar Mixers	0	6.00	9	0.56
Sheet Pile Driving	Pavers	0	6.00	125	0.42

Sheet Pile Driving	Rollers	0	7.00	80	0.38
Sheet Pile Driving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Pump Station/Gen Bldg Install	Air Compressors	0	6.00	78	0.48
Subgrade	Graders	1	8.00	174	0.41
Sheet Pile Driving	Paving Equipment	0	8.00	130	0.36
Site Preparation & Rd Excavation	Rubber Tired Dozers	1	8.00	255	0.40
Sheet Pile Driving	Welders	1	8.00	46	0.45
Pump Station/Gen Bldg Install	Generator Sets	0	8.00	84	0.74
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Pump Station/Gen Bldg Install	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pump Station/Gen Bldg Install	Welders	0	8.00	46	0.45
Site Preparation & Rd Excavation	Excavators	1	8.00	162	0.38
Subgrade	Plate Compactors	1	8.00	8	0.43
Subgrade	Rough Terrain Forklifts	1	8.00	100	0.40
Subgrade	Rollers	1	8.00	80	0.38
Sheet Pile Driving	Excavators	1	8.00	162	0.38
Sheet Pile Driving	Rough Terrain Forklifts	1	8.00	100	0.40
Pump Station/Gen Bldg Install	Excavators	1	8.00	162	0.38
Pump Station/Gen Bldg Install	Rough Terrain Forklifts	1	8.00	89	0.20

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation & Rd Excavation	4	10.00	0.00	25.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Subgrade	5	13.00	0.00	125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sheet Pile Driving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sheet Pile Driving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station/Gen Bldg Install	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation & Rd Excavation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0307	0.0000	0.0307	0.0166	0.0000	0.0166	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0149	0.1598	0.1064	1.2000e-004		8.4900e-003	8.4900e-003		7.8100e-003	7.8100e-003	0.0000	11.1093	11.1093	3.3500e-003	0.0000	11.1797
Total	**0.0149**	**0.1598**	**0.1064**	**1.2000e-004**	**0.0307**	**8.4900e-003**	**0.0392**	**0.0166**	**7.8100e-003**	**0.0244**	**0.0000**	**11.1093**	**11.1093**	**3.3500e-003**	**0.0000**	**11.1797**

3.2 Site Preparation & Rd Excavation - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2000e-004	3.4100e-003	4.0900e-003	1.0000e-005	2.1000e-004	5.0000e-005	2.6000e-004	6.0000e-005	5.0000e-005	1.0000e-004	0.0000	0.8396	0.8396	1.0000e-005	0.0000	0.8397
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	2.4000e-004	3.8000e-004	3.3900e-003	1.0000e-005	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3823	0.3823	3.0000e-005	0.0000	0.3829
Total	**5.6000e-004**	**3.7900e-003**	**7.4800e-003**	**2.0000e-005**	**6.1000e-004**	**5.0000e-005**	**6.6000e-004**	**1.7000e-004**	**5.0000e-005**	**2.1000e-004**	**0.0000**	**1.2219**	**1.2219**	**4.0000e-005**	**0.0000**	**1.2226**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0120	0.0000	0.0120	6.4800e-003	0.0000	6.4800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8700e-003	0.0568	0.0786	1.2000e-004		2.7100e-003	2.7100e-003		2.7100e-003	2.7100e-003	0.0000	11.1093	11.1093	3.3500e-003	0.0000	11.1797
Total	**2.8700e-003**	**0.0568**	**0.0786**	**1.2000e-004**	**0.0120**	**2.7100e-003**	**0.0147**	**6.4800e-003**	**2.7100e-003**	**9.1900e-003**	**0.0000**	**11.1093**	**11.1093**	**3.3500e-003**	**0.0000**	**11.1797**

3.2 Site Preparation & Rd Excavation - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.2000e-004	3.4100e-003	4.0900e-003	1.0000e-005	2.1000e-004	5.0000e-005	2.6000e-004	6.0000e-005	5.0000e-005	1.0000e-004	0.0000	0.8396	0.8396	1.0000e-005	0.0000	0.8397
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	2.4000e-004	3.8000e-004	3.3900e-003	1.0000e-005	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3823	0.3823	3.0000e-005	0.0000	0.3829
Total	**5.6000e-004**	**3.7900e-003**	**7.4800e-003**	**2.0000e-005**	**6.1000e-004**	**5.0000e-005**	**6.6000e-004**	**1.7000e-004**	**5.0000e-005**	**2.1000e-004**	**0.0000**	**1.2219**	**1.2219**	**4.0000e-005**	**0.0000**	**1.2226**

3.3 Subgrade - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.7000e-004	0.0000	8.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.0983	0.0595	8.0000e-005		6.1000e-003	6.1000e-003		5.6200e-003	5.6200e-003	0.0000	7.4132	7.4132	2.2100e-003	0.0000	7.4595
Total	**9.7200e-003**	**0.0983**	**0.0595**	**8.0000e-005**	**8.7000e-004**	**6.1000e-003**	**6.9700e-003**	**1.0000e-004**	**5.6200e-003**	**5.7200e-003**	**0.0000**	**7.4132**	**7.4132**	**2.2100e-003**	**0.0000**	**7.4595**

3.3 Subgrade - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6200e-003	0.0171	0.0204	5.0000e-005	1.0600e-003	2.6000e-004	1.3100e-003	2.9000e-004	2.3000e-004	5.2000e-004	0.0000	4.1979	4.1979	3.0000e-005	0.0000	4.1985
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	4.9000e-004	4.4100e-003	1.0000e-005	5.2000e-004	1.0000e-005	5.2000e-004	1.4000e-004	1.0000e-005	1.4000e-004	0.0000	0.4970	0.4970	4.0000e-005	0.0000	0.4978
Total	**1.9300e-003**	**0.0176**	**0.0249**	**6.0000e-005**	**1.5800e-003**	**2.7000e-004**	**1.8300e-003**	**4.3000e-004**	**2.4000e-004**	**6.6000e-004**	**0.0000**	**4.6949**	**4.6949**	**7.0000e-005**	**0.0000**	**4.6963**

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					3.4000e-004	0.0000	3.4000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8800e-003	0.0402	0.0578	8.0000e-005		2.5000e-003	2.5000e-003		2.5000e-003	2.5000e-003	0.0000	7.4132	7.4132	2.2100e-003	0.0000	7.4595
Total	**1.8800e-003**	**0.0402**	**0.0578**	**8.0000e-005**	**3.4000e-004**	**2.5000e-003**	**2.8400e-003**	**4.0000e-005**	**2.5000e-003**	**2.5400e-003**	**0.0000**	**7.4132**	**7.4132**	**2.2100e-003**	**0.0000**	**7.4595**

3.3 Subgrade - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6200e-003	0.0171	0.0204	5.0000e-005	1.0600e-003	2.6000e-004	1.3100e-003	2.9000e-004	2.3000e-004	5.2000e-004	0.0000	4.1979	4.1979	3.0000e-005	0.0000	4.1985
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	4.9000e-004	4.4100e-003	1.0000e-005	5.2000e-004	1.0000e-005	5.2000e-004	1.4000e-004	1.0000e-005	1.4000e-004	0.0000	0.4970	0.4970	4.0000e-005	0.0000	0.4978
Total	**1.9300e-003**	**0.0176**	**0.0249**	**6.0000e-005**	**1.5800e-003**	**2.7000e-004**	**1.8300e-003**	**4.3000e-004**	**2.4000e-004**	**6.6000e-004**	**0.0000**	**4.6949**	**4.6949**	**7.0000e-005**	**0.0000**	**4.6963**

3.4 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.9300e-003	0.0722	0.0491	7.0000e-005		4.4100e-003	4.4100e-003		4.0500e-003	4.0500e-003	0.0000	6.7216	6.7216	2.0300e-003	0.0000	6.7642
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.9300e-003**	**0.0722**	**0.0491**	**7.0000e-005**		**4.4100e-003**	**4.4100e-003**		**4.0500e-003**	**4.0500e-003**	**0.0000**	**6.7216**	**6.7216**	**2.0300e-003**	**0.0000**	**6.7642**

3.4 Paving - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	2.4000e-004	3.8000e-004	3.3900e-003	1.0000e-005	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3823	0.3823	3.0000e-005	0.0000	0.3829
Total	**2.4000e-004**	**3.8000e-004**	**3.3900e-003**	**1.0000e-005**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3823**	**0.3823**	**3.0000e-005**	**0.0000**	**0.3829**

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	1.7500e-003	0.0363	0.0540	7.0000e-005		2.1000e-003	2.1000e-003		2.1000e-003	2.1000e-003	0.0000	6.7216	6.7216	2.0300e-003	0.0000	6.7642
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.7500e-003**	**0.0363**	**0.0540**	**7.0000e-005**		**2.1000e-003**	**2.1000e-003**		**2.1000e-003**	**2.1000e-003**	**0.0000**	**6.7216**	**6.7216**	**2.0300e-003**	**0.0000**	**6.7642**

3.4 Paving - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	2.4000e-004	3.8000e-004	3.3900e-003	1.0000e-005	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3823	0.3823	3.0000e-005	0.0000	0.3829
Total	**2.4000e-004**	**3.8000e-004**	**3.3900e-003**	**1.0000e-005**	**4.0000e-004**	**0.0000**	**4.0000e-004**	**1.1000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3823**	**0.3823**	**3.0000e-005**	**0.0000**	**0.3829**

3.5 Sheet Pile Driving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0835	0.7787	0.4943	7.5000e-004		0.0431	0.0431		0.0401	0.0401	0.0000	69.0448	69.0448	0.0204	0.0000	69.4735
Total	**0.0835**	**0.7787**	**0.4943**	**7.5000e-004**		**0.0431**	**0.0431**		**0.0401**	**0.0401**	**0.0000**	**69.0448**	**69.0448**	**0.0204**	**0.0000**	**69.4735**

3.5 Sheet Pile Driving - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.6900e-003	7.3900e-003	0.0661	1.0000e-004	0.0145	8.0000e-005	0.0145	3.7000e-003	8.0000e-005	3.7800e-003	0.0000	7.4556	7.4556	5.5000e-004	0.0000	7.4671
Total	**4.6900e-003**	**7.3900e-003**	**0.0661**	**1.0000e-004**	**0.0145**	**8.0000e-005**	**0.0145**	**3.7000e-003**	**8.0000e-005**	**3.7800e-003**	**0.0000**	**7.4556**	**7.4556**	**5.5000e-004**	**0.0000**	**7.4671**

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	0.0201	0.3968	0.5064	7.5000e-004		0.0219	0.0219		0.0219	0.0219	0.0000	69.0448	69.0448	0.0204	0.0000	69.4734
Total	**0.0201**	**0.3968**	**0.5064**	**7.5000e-004**		**0.0219**	**0.0219**		**0.0219**	**0.0219**	**0.0000**	**69.0448**	**69.0448**	**0.0204**	**0.0000**	**69.4734**

3.5 Sheet Pile Driving - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.6900e-003	7.3900e-003	0.0661	1.0000e-004	0.0145	8.0000e-005	0.0145	3.7000e-003	8.0000e-005	3.7800e-003	0.0000	7.4556	7.4556	5.5000e-004	0.0000	7.4671
Total	**4.6900e-003**	**7.3900e-003**	**0.0661**	**1.0000e-004**	**0.0145**	**8.0000e-005**	**0.0145**	**3.7000e-003**	**8.0000e-005**	**3.7800e-003**	**0.0000**	**7.4556**	**7.4556**	**5.5000e-004**	**0.0000**	**7.4671**

3.6 Pump Station/Gen Bldg Install - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2000e-003	0.0363	0.0214	3.0000e-005		1.9100e-003	1.9100e-003		1.7600e-003	1.7600e-003	0.0000	3.1640	3.1640	9.5000e-004	0.0000	3.1840
Total	**3.2000e-003**	**0.0363**	**0.0214**	**3.0000e-005**		**1.9100e-003**	**1.9100e-003**		**1.7600e-003**	**1.7600e-003**	**0.0000**	**3.1640**	**3.1640**	**9.5000e-004**	**0.0000**	**3.1840**

3.6 Pump Station/Gen Bldg Install - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction 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	8.2000e-004	0.0168	0.0230	3.0000e-005		8.8000e-004	8.8000e-004		8.8000e-004	8.8000e-004	0.0000	3.1640	3.1640	9.5000e-004	0.0000	3.1840
Total	**8.2000e-004**	**0.0168**	**0.0230**	**3.0000e-005**		**8.8000e-004**	**8.8000e-004**		**8.8000e-004**	**8.8000e-004**	**0.0000**	**3.1640**	**3.1640**	**9.5000e-004**	**0.0000**	**3.1840**

3.6 Pump Station/Gen Bldg Install - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466367	0.039941	0.201694	0.176131	0.050793	0.007244	0.019307	0.021320	0.004510	0.001931	0.007565	0.000935	0.002260

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Vegetation

Carmel River Lagoon Scenic Road Protection - ISMP

Monterey County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Construction emissions for ISMP only.

Construction Phase - Overall construction period is 3 days.

Off-road Equipment - 1 grader, 1 dozer, 1 tractor, 1 excavator

Grading - Assumes 115 tons of sand to be imported, 115 tons to be exported

Trips and VMT - Construction vehicle trips based on estimated equipment requirements/model defaults.

Vehicle Trips - Operational emissions do not apply.

Construction Off-road Equipment Mitigation - .

Off-road Equipment - Assumes 1 forklift and 1 fe loader

Off-road Equipment - Assumes 1 forklift and 1 fe loader

Off-road Equipment - No off-road equipment required

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	NumDays	2.00	1.00
tblGrading	AcresOfGrading	0.00	1.50
tblGrading	AcresOfGrading	0.00	1.00
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	MaterialExported	0.00	115.00
tblGrading	MaterialImported	0.00	115.00
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

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					
2016	8.8000e-004	8.2600e-003	7.6200e-003	1.0000e-005	1.8300e-003	4.6000e-004	2.2900e-003	2.4000e-004	4.2000e-004	6.6000e-004	0.0000	1.2154	1.2154	1.4000e-004	0.0000	1.2184
Total	**8.8000e-004**	**8.2600e-003**	**7.6200e-003**	**1.0000e-005**	**1.8300e-003**	**4.6000e-004**	**2.2900e-003**	**2.4000e-004**	**4.2000e-004**	**6.6000e-004**	**0.0000**	**1.2154**	**1.2154**	**1.4000e-004**	**0.0000**	**1.2184**

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					
2016	8.8000e-004	8.2600e-003	7.6200e-003	1.0000e-005	1.8300e-003	4.6000e-004	2.2900e-003	2.4000e-004	4.2000e-004	6.6000e-004	0.0000	1.2154	1.2154	1.4000e-004	0.0000	1.2184
Total	**8.8000e-004**	**8.2600e-003**	**7.6200e-003**	**1.0000e-005**	**1.8300e-003**	**4.6000e-004**	**2.2900e-003**	**2.4000e-004**	**4.2000e-004**	**6.6000e-004**	**0.0000**	**1.2154**	**1.2154**	**1.4000e-004**	**0.0000**	**1.2184**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Sand Bag Placement	Site Preparation	6/1/2016	6/1/2016	5	1	Sand Bag Placement
2	Sand Bag Removal	Site Preparation	6/2/2016	6/2/2016	5	1	Sand Bag Removal
3	Sand Bar Management	Site Preparation	6/3/2016	6/3/2016	5	1	Sand Bar Management

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Sand Bar Management	Graders	0	8.00	174	0.41
Sand Bar Management	Cranes	0	6.00	226	0.29
Sand Bar Management	Forklifts	0	6.00	89	0.20
Sand Bag Placement	Graders	0	8.00	174	0.41
Sand Bag Placement	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sand Bar Management	Rubber Tired Dozers	0	7.00	255	0.40
Sand Bag Removal	Rubber Tired Dozers	0	6.00	255	0.40
Sand Bag Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sand Bag Placement	Forklifts	1	8.00	89	0.20
Sand Bag Removal	Forklifts	1	8.00	89	0.20
Sand Bag Removal	Graders	0	6.00	174	0.41
Sand Bag Placement	Rubber Tired Dozers	0	7.00	255	0.40
Sand Bar Management	Generator Sets	0	8.00	84	0.74
Sand Bar Management	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Sand Bar Management	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Sand Bag Placement	2	5.00	0.00	11.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sand Bag Removal	2	5.00	0.00	11.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sand Bar Management	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 Sand Bag Placement - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.4000e-004	0.0000	5.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	2.6100e-003	1.8400e-003	0.0000		2.1000e-004	2.1000e-004		1.9000e-004	1.9000e-004	0.0000	0.2192	0.2192	7.0000e-005	0.0000	0.2206
Total	**2.8000e-004**	**2.6100e-003**	**1.8400e-003**	**0.0000**	**5.4000e-004**	**2.1000e-004**	**7.5000e-004**	**6.0000e-005**	**1.9000e-004**	**2.5000e-004**	**0.0000**	**0.2192**	**0.2192**	**7.0000e-005**	**0.0000**	**0.2206**

3.2 Sand Bag Placement - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	1.5000e-003	1.8000e-003	0.0000	9.0000e-005	2.0000e-005	1.2000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.3694	0.3694	0.0000	0.0000	0.3695
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	1.0000e-005	2.0000e-005	1.7000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0191	0.0191	0.0000	0.0000	0.0192
Total	**1.5000e-004**	**1.5200e-003**	**1.9700e-003**	**0.0000**	**1.1000e-004**	**2.0000e-005**	**1.4000e-004**	**4.0000e-005**	**2.0000e-005**	**6.0000e-005**	**0.0000**	**0.3885**	**0.3885**	**0.0000**	**0.0000**	**0.3886**

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					5.4000e-004	0.0000	5.4000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	2.6100e-003	1.8400e-003	0.0000		2.1000e-004	2.1000e-004		1.9000e-004	1.9000e-004	0.0000	0.2192	0.2192	7.0000e-005	0.0000	0.2206
Total	**2.8000e-004**	**2.6100e-003**	**1.8400e-003**	**0.0000**	**5.4000e-004**	**2.1000e-004**	**7.5000e-004**	**6.0000e-005**	**1.9000e-004**	**2.5000e-004**	**0.0000**	**0.2192**	**0.2192**	**7.0000e-005**	**0.0000**	**0.2206**

3.2 Sand Bag Placement - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	1.5000e-003	1.8000e-003	0.0000	9.0000e-005	2.0000e-005	1.2000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.3694	0.3694	0.0000	0.0000	0.3695
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	1.0000e-005	2.0000e-005	1.7000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0191	0.0191	0.0000	0.0000	0.0192
Total	**1.5000e-004**	**1.5200e-003**	**1.9700e-003**	**0.0000**	**1.1000e-004**	**2.0000e-005**	**1.4000e-004**	**4.0000e-005**	**2.0000e-005**	**6.0000e-005**	**0.0000**	**0.3885**	**0.3885**	**0.0000**	**0.0000**	**0.3886**

3.3 Sand Bag Removal - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.0000e-004	0.0000	8.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	2.6100e-003	1.8400e-003	0.0000		2.1000e-004	2.1000e-004		1.9000e-004	1.9000e-004	0.0000	0.2192	0.2192	7.0000e-005	0.0000	0.2206
Total	**2.8000e-004**	**2.6100e-003**	**1.8400e-003**	**0.0000**	**8.0000e-004**	**2.1000e-004**	**1.0100e-003**	**9.0000e-005**	**1.9000e-004**	**2.8000e-004**	**0.0000**	**0.2192**	**0.2192**	**7.0000e-005**	**0.0000**	**0.2206**

3.3 Sand Bag Removal - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	1.5000e-003	1.8000e-003	0.0000	9.0000e-005	2.0000e-005	1.2000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.3694	0.3694	0.0000	0.0000	0.3695
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	1.0000e-005	2.0000e-005	1.7000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0191	0.0191	0.0000	0.0000	0.0192
Total	**1.5000e-004**	**1.5200e-003**	**1.9700e-003**	**0.0000**	**1.1000e-004**	**2.0000e-005**	**1.4000e-004**	**4.0000e-005**	**2.0000e-005**	**6.0000e-005**	**0.0000**	**0.3885**	**0.3885**	**0.0000**	**0.0000**	**0.3886**

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					8.0000e-004	0.0000	8.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-004	2.6100e-003	1.8400e-003	0.0000		2.1000e-004	2.1000e-004		1.9000e-004	1.9000e-004	0.0000	0.2192	0.2192	7.0000e-005	0.0000	0.2206
Total	**2.8000e-004**	**2.6100e-003**	**1.8400e-003**	**0.0000**	**8.0000e-004**	**2.1000e-004**	**1.0100e-003**	**9.0000e-005**	**1.9000e-004**	**2.8000e-004**	**0.0000**	**0.2192**	**0.2192**	**7.0000e-005**	**0.0000**	**0.2206**

3.3 Sand Bag Removal - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	1.5000e-003	1.8000e-003	0.0000	9.0000e-005	2.0000e-005	1.2000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.3694	0.3694	0.0000	0.0000	0.3695
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	1.0000e-005	2.0000e-005	1.7000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0191	0.0191	0.0000	0.0000	0.0192
Total	**1.5000e-004**	**1.5200e-003**	**1.9700e-003**	**0.0000**	**1.1000e-004**	**2.0000e-005**	**1.4000e-004**	**4.0000e-005**	**2.0000e-005**	**6.0000e-005**	**0.0000**	**0.3885**	**0.3885**	**0.0000**	**0.0000**	**0.3886**

3.4 Sand Bar Management - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Sand Bar Management - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction 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					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 Sand Bar Management - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466367	0.039941	0.201694	0.176131	0.050793	0.007244	0.019307	0.021320	0.004510	0.001931	0.007565	0.000935	0.002260

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Vegetation

Carmel River Lagoon Scenic Road Protection - SRPS

Monterey County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Construction emissions for SRPS only.

Construction Phase - Overall construction period is 60 days. Schedule does not reflect overlapping activities. (Site Prep/Excavation: 20 days, Rock Placement: 40 days; Backfilling: 40 days

Off-road Equipment - 1 grader, 1 dozer, 1 tractor, 1 excavator

Grading - Assumes 15,000 tons imported

Trips and VMT - Construction vehicle trips based on estimated equipment requirements/model defaults.

Vehicle Trips - Operational emissions do not apply.

Construction Off-road Equipment Mitigation - Includes CE of 50% for unpaved roads and 61% for exposed surface area with water application, 15 mph limit for onroad vehicle travel on unpaved surfaces.

Off-road Equipment - 1 grader, 2 tractors, 1 excavator, 1 crawler tractor

Off-road Equipment - 2 tractors, 2 excavators, 1 other material handling equipment

Off-road Equipment - 1 tractor, 1 excavator, 1 roller, 1 compactor

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstructionPhase	NumDays	200.00	40.00
tblConstructionPhase	NumDays	4.00	40.00
tblConstructionPhase	NumDays	2.00	20.00
tblGrading	AcresOfGrading	0.00	1.50
tblGrading	AcresOfGrading	20.00	1.00
tblGrading	MaterialImported	0.00	15,000.00
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	HorsePower	8.00	80.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.43	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

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					
2016	0.1110	1.1593	0.9001	1.5100e-003	0.0179	0.0590	0.0769	4.5400e-003	0.0543	0.0588	0.0000	140.0815	140.0815	0.0269	0.0000	140.6467
Total	**0.1110**	**1.1593**	**0.9001**	**1.5100e-003**	**0.0179**	**0.0590**	**0.0769**	**4.5400e-003**	**0.0543**	**0.0588**	**0.0000**	**140.0815**	**140.0815**	**0.0269**	**0.0000**	**140.6467**

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					
2016	0.0438	0.6701	0.9517	1.5100e-003	0.0165	0.0288	0.0453	4.3700e-003	0.0285	0.0329	0.0000	140.0814	140.0814	0.0269	0.0000	140.6466
Total	**0.0438**	**0.6701**	**0.9517**	**1.5100e-003**	**0.0165**	**0.0288**	**0.0453**	**4.3700e-003**	**0.0285**	**0.0329**	**0.0000**	**140.0814**	**140.0814**	**0.0269**	**0.0000**	**140.6466**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**60.50**	**42.20**	**-5.73**	**0.00**	**7.67**	**51.22**	**41.09**	**3.74**	**47.42**	**44.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation & Excavation	Site Preparation	6/1/2016	6/28/2016	5	20	Site Preparation/Excavation
2	Rock Placement	Grading	6/29/2016	8/23/2016	5	40	Rock Placement
3	Backfilling	Building Construction	8/24/2016	10/18/2016	5	40	Backfilling

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation & Excavation	Excavators	1	8.00	162	0.38
Backfilling	Cranes	0	6.00	226	0.29
Backfilling	Forklifts	0	6.00	89	0.20
Site Preparation & Excavation	Graders	1	8.00	174	0.41
Site Preparation & Excavation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation & Excavation	Crawler Tractors	1	8.00	208	0.43
Rock Placement	Rubber Tired Dozers	0	6.00	255	0.40
Rock Placement	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Rock Placement	Excavators	2	8.00	162	0.38
Rock Placement	Other Material Handling Equipment	1	8.00	167	0.40
Backfilling	Excavators	1	8.00	162	0.38
Backfilling	Rollers	1	8.00	80	0.38
Backfilling	Plate Compactors	1	8.00	80	0.38
Rock Placement	Graders	0	6.00	174	0.41
Site Preparation & Excavation	Rubber Tired Dozers	0	7.00	255	0.40
Backfilling	Generator Sets	0	8.00	84	0.74
Backfilling	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Backfilling	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation & Excavation	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rock Placement	5	13.00	0.00	1,483.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Backfilling	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation & Excavation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-004	0.0000	5.3000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.3086	0.1603	2.5000e-004		0.0167	0.0167		0.0154	0.0154	0.0000	24.0179	24.0179	7.2400e-003	0.0000	24.1701
Total	**0.0280**	**0.3086**	**0.1603**	**2.5000e-004**	**5.3000e-004**	**0.0167**	**0.0172**	**6.0000e-005**	**0.0154**	**0.0154**	**0.0000**	**24.0179**	**24.0179**	**7.2400e-003**	**0.0000**	**24.1701**

3.2 Site Preparation & Excavation - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	9.9000e-004	8.8200e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9941	0.9941	7.0000e-005	0.0000	0.9956
Total	**6.3000e-004**	**9.9000e-004**	**8.8200e-003**	**1.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0400e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.9941**	**0.9941**	**7.0000e-005**	**0.0000**	**0.9956**

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	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.2300e-003	0.1257	0.1747	2.5000e-004		6.4500e-003	6.4500e-003		6.4500e-003	6.4500e-003	0.0000	24.0179	24.0179	7.2400e-003	0.0000	24.1700
Total	**6.2300e-003**	**0.1257**	**0.1747**	**2.5000e-004**	**2.1000e-004**	**6.4500e-003**	**6.6600e-003**	**2.0000e-005**	**6.4500e-003**	**6.4700e-003**	**0.0000**	**24.0179**	**24.0179**	**7.2400e-003**	**0.0000**	**24.1700**

3.2 Site Preparation & Excavation - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.3000e-004	9.9000e-004	8.8200e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9941	0.9941	7.0000e-005	0.0000	0.9956
Total	**6.3000e-004**	**9.9000e-004**	**8.8200e-003**	**1.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0400e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.9941**	**0.9941**	**7.0000e-005**	**0.0000**	**0.9956**

3.3 Rock Placement - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7100e-003	0.0000	1.7100e-003	2.2000e-004	0.0000	2.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0406	0.4297	0.3139	4.5000e-004		0.0253	0.0253		0.0233	0.0233	0.0000	42.4963	42.4963	0.0128	0.0000	42.7655
Total	**0.0406**	**0.4297**	**0.3139**	**4.5000e-004**	**1.7100e-003**	**0.0253**	**0.0270**	**2.2000e-004**	**0.0233**	**0.0235**	**0.0000**	**42.4963**	**42.4963**	**0.0128**	**0.0000**	**42.7655**

3.3 Rock Placement - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0193	0.2024	0.2425	5.5000e-004	0.0125	3.0300e-003	0.0156	3.4400e-003	2.7900e-003	6.2200e-003	0.0000	49.8036	49.8036	3.6000e-004	0.0000	49.8112
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	1.2500e-003	1.9700e-003	0.0176	3.0000e-005	2.0700e-003	2.0000e-005	2.0900e-003	5.5000e-004	2.0000e-005	5.7000e-004	0.0000	1.9882	1.9882	1.5000e-004	0.0000	1.9912
Total	**0.0205**	**0.2044**	**0.2601**	**5.8000e-004**	**0.0146**	**3.0500e-003**	**0.0176**	**3.9900e-003**	**2.8100e-003**	**6.7900e-003**	**0.0000**	**51.7918**	**51.7918**	**5.1000e-004**	**0.0000**	**51.8025**

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					6.7000e-004	0.0000	6.7000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0111	0.2247	0.3413	4.5000e-004		0.0124	0.0124		0.0124	0.0124	0.0000	42.4962	42.4962	0.0128	0.0000	42.7654
Total	**0.0111**	**0.2247**	**0.3413**	**4.5000e-004**	**6.7000e-004**	**0.0124**	**0.0130**	**9.0000e-005**	**0.0124**	**0.0125**	**0.0000**	**42.4962**	**42.4962**	**0.0128**	**0.0000**	**42.7654**

3.3 Rock Placement - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0193	0.2024	0.2425	5.5000e-004	0.0125	3.0300e-003	0.0156	3.4400e-003	2.7900e-003	6.2200e-003	0.0000	49.8036	49.8036	3.6000e-004	0.0000	49.8112
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	1.2500e-003	1.9700e-003	0.0176	3.0000e-005	2.0700e-003	2.0000e-005	2.0900e-003	5.5000e-004	2.0000e-005	5.7000e-004	0.0000	1.9882	1.9882	1.5000e-004	0.0000	1.9912
Total	**0.0205**	**0.2044**	**0.2601**	**5.8000e-004**	**0.0146**	**3.0500e-003**	**0.0176**	**3.9900e-003**	**2.8100e-003**	**6.7900e-003**	**0.0000**	**51.7918**	**51.7918**	**5.1000e-004**	**0.0000**	**51.8025**

3.4 Backfilling - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0213	0.2156	0.1569	2.2000e-004		0.0139	0.0139		0.0128	0.0128	0.0000	20.7814	20.7814	6.2700e-003	0.0000	20.9131
Total	**0.0213**	**0.2156**	**0.1569**	**2.2000e-004**		**0.0139**	**0.0139**		**0.0128**	**0.0128**	**0.0000**	**20.7814**	**20.7814**	**6.2700e-003**	**0.0000**	**20.9131**

3.4 Backfilling - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction 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	5.4100e-003	0.1143	0.1668	2.2000e-004		6.9100e-003	6.9100e-003		6.9100e-003	6.9100e-003	0.0000	20.7814	20.7814	6.2700e-003	0.0000	20.9131
Total	**5.4100e-003**	**0.1143**	**0.1668**	**2.2000e-004**		**6.9100e-003**	**6.9100e-003**		**6.9100e-003**	**6.9100e-003**	**0.0000**	**20.7814**	**20.7814**	**6.2700e-003**	**0.0000**	**20.9131**

3.4 Backfilling - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466367	0.039941	0.201694	0.176131	0.050793	0.007244	0.019307	0.021320	0.004510	0.001931	0.007565	0.000935	0.002260

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Vegetation

Carmel River Lagoon Scenic Road Protection - EPB

Monterey County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Construction emissions for EPB only.

Construction Phase - Overall construction period is 90 days. Schedule does not reflect overlapping activities. (Site Prep: 10 days, Subgrade: 10 days; Paving: 10 days; Sheeting: 75 days; Bldg Install: 5 days)

Off-road Equipment - 1 grader, 1 dozer, 1 tractor, 1 excavator

Off-road Equipment - 1 grader, 1 tractor, 1 plate compactor, 1 forklift, 1 roller

Off-road Equipment - 1 paver, 1 paving equipment, 1 roller, 1 tractor

Off-road Equipment - 1 crane, 1 tractor, 1 excavator mounted driver, 1 welder, 1 rt forklift

Off-road Equipment - 1 crane, 1 excavator, 1 tractor, 1 rt forklift

Grading - Assumes 1,000 cyd imported, 200 cy exported

Trips and VMT - Construction vehicle trips based on estimated equipment requirements/model defaults.

Vehicle Trips - Operational emissions do not apply.

Construction Off-road Equipment Mitigation - Includes CE of 50% for unpaved roads and 61% for exposed surface area with water application, 15 mph limit for onroad vehicle travel on unpaved surfaces.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	200.00	5.00
tblConstructionPhase	NumDays	4.00	10.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	PhaseEndDate	11/24/2016	12/1/2016
tblConstructionPhase	PhaseEndDate	7/28/2016	7/21/2016
tblConstructionPhase	PhaseStartDate	11/18/2016	11/25/2016
tblConstructionPhase	PhaseStartDate	7/15/2016	7/8/2016
tblGrading	AcresOfGrading	5.00	1.50
tblGrading	AcresOfGrading	5.00	1.00
tblGrading	MaterialExported	0.00	200.00
tblGrading	MaterialImported	0.00	1,000.00
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	HorsePower	100.00	89.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.20

tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	5.3986	55.7058	38.6854	0.0529	6.7556	2.9816	9.7372	3.4632	2.7438	6.2070	0.0000	5,400.9098	5,400.9098	1.2472	0.0000	5,427.1000
Total	**5.3986**	**55.7058**	**38.6854**	**0.0529**	**6.7556**	**2.9816**	**9.7372**	**3.4632**	**2.7438**	**6.2070**	**0.0000**	**5,400.9098**	**5,400.9098**	**1.2472**	**0.0000**	**5,427.1000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.4150	23.4739	32.7972	0.0529	2.9090	1.1057	4.0147	1.4248	1.1006	2.5254	0.0000	5,400.9098	5,400.9098	1.2472	0.0000	5,427.1000
Total	**1.4150**	**23.4739**	**32.7972**	**0.0529**	**2.9090**	**1.1057**	**4.0147**	**1.4248**	**1.1006**	**2.5254**	**0.0000**	**5,400.9098**	**5,400.9098**	**1.2472**	**0.0000**	**5,427.1000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**73.79**	**57.86**	**15.22**	**0.00**	**56.94**	**62.92**	**58.77**	**58.86**	**59.89**	**59.31**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation & Rd Excavation	Site Preparation	7/1/2016	7/14/2016	5	10	Site Preparation/Road Excavation
2	Subgrade	Grading	7/8/2016	7/21/2016	5	10	Subgrade
3	Paving	Paving	7/22/2016	8/4/2016	5	10	Paving
4	Sheet Pile Driving	Trenching	8/5/2016	11/17/2016	5	75	Sheet Pile Driving
5	Pump Station/Gen Bldg Install	Building Construction	11/25/2016	12/1/2016	5	5	Pump Station/Gen Bldg Install

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Pump Station/Gen Bldg Install	Cranes	1	6.00	226	0.29
Pump Station/Gen Bldg Install	Forklifts	0	6.00	89	0.20
Site Preparation & Rd Excavation	Graders	1	8.00	174	0.41
Site Preparation & Rd Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sheet Pile Driving	Generator Sets	0	8.00	84	0.74

Subgrade	Rubber Tired Dozers	0	6.00	255	0.40
Subgrade	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sheet Pile Driving	Cranes	1	8.00	226	0.29
Sheet Pile Driving	Forklifts	0	6.00	89	0.20
Sheet Pile Driving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sheet Pile Driving	Cement and Mortar Mixers	0	6.00	9	0.56
Sheet Pile Driving	Pavers	0	6.00	125	0.42
Sheet Pile Driving	Rollers	0	7.00	80	0.38
Sheet Pile Driving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Pump Station/Gen Bldg Install	Air Compressors	0	6.00	78	0.48
Subgrade	Graders	1	8.00	174	0.41
Sheet Pile Driving	Paving Equipment	0	8.00	130	0.36
Site Preparation & Rd Excavation	Rubber Tired Dozers	1	8.00	255	0.40
Sheet Pile Driving	Welders	1	8.00	46	0.45
Pump Station/Gen Bldg Install	Generator Sets	0	8.00	84	0.74
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Pump Station/Gen Bldg Install	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pump Station/Gen Bldg Install	Welders	0	8.00	46	0.45
Site Preparation & Rd Excavation	Excavators	1	8.00	162	0.38
Subgrade	Plate Compactors	1	8.00	8	0.43
Subgrade	Rough Terrain Forklifts	1	8.00	100	0.40
Subgrade	Rollers	1	8.00	80	0.38
Sheet Pile Driving	Excavators	1	8.00	162	0.38
Sheet Pile Driving	Rough Terrain Forklifts	1	8.00	100	0.40
Pump Station/Gen Bldg Install	Excavators	1	8.00	162	0.38

Pump Station/Gen Bldg Install	Rough Terrain Forklifts	1	8.00	89	0.20

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation & Rd Excavation	4	10.00	0.00	25.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Subgrade	5	13.00	0.00	125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sheet Pile Driving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sheet Pile Driving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station/Gen Bldg Install	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation & Rd Excavation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1312	0.0000	6.1312	3.3222	0.0000	3.3222			0.0000			0.0000
Off-Road	2.9877	31.9586	21.2706	0.0236		1.6983	1.6983		1.5624	1.5624		2,449.1839	2,449.1839	0.7388		2,464.6979
Total	**2.9877**	**31.9586**	**21.2706**	**0.0236**	**6.1312**	**1.6983**	**7.8295**	**3.3222**	**1.5624**	**4.8845**		**2,449.1839**	**2,449.1839**	**0.7388**		**2,464.6979**

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	0.0590	0.6544	0.6525	1.8400e-003	0.0435	0.0102	0.0537	0.0119	9.3800e-003	0.0213		185.2802	185.2802	1.3400e-003		185.3083
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	0.0489	0.0662	0.6973	1.0700e-003	0.0822	8.6000e-004	0.0830	0.0218	7.9000e-004	0.0226		89.4437	89.4437	6.1800e-003		89.5736
Total	**0.1078**	**0.7205**	**1.3498**	**2.9100e-003**	**0.1256**	**0.0111**	**0.1367**	**0.0337**	**0.0102**	**0.0439**		**274.7239**	**274.7239**	**7.5200e-003**		**274.8819**

3.2 Site Preparation & Rd Excavation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3912	0.0000	2.3912	1.2956	0.0000	1.2956			0.0000			0.0000
Off-Road	0.5738	11.3586	15.7121	0.0236		0.5430	0.5430		0.5430	0.5430	0.0000	2,449.1839	2,449.1839	0.7388		2,464.6979
Total	**0.5738**	**11.3586**	**15.7121**	**0.0236**	**2.3912**	**0.5430**	**2.9342**	**1.2956**	**0.5430**	**1.8386**	**0.0000**	**2,449.1839**	**2,449.1839**	**0.7388**		**2,464.6979**

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	0.0590	0.6544	0.6525	1.8400e-003	0.0435	0.0102	0.0537	0.0119	9.3800e-003	0.0213		185.2802	185.2802	1.3400e-003		185.3083
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	0.0489	0.0662	0.6973	1.0700e-003	0.0822	8.6000e-004	0.0830	0.0218	7.9000e-004	0.0226		89.4437	89.4437	6.1800e-003		89.5736
Total	**0.1078**	**0.7205**	**1.3498**	**2.9100e-003**	**0.1256**	**0.0111**	**0.1367**	**0.0337**	**0.0102**	**0.0439**		**274.7239**	**274.7239**	**7.5200e-003**		**274.8819**

3.3 Subgrade - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1746	0.0000	0.1746	0.0195	0.0000	0.0195			0.0000			0.0000
Off-Road	1.9448	19.6688	11.8962	0.0159		1.2202	1.2202		1.1234	1.1234		1,634.3242	1,634.3242	0.4862		1,644.5333
Total	**1.9448**	**19.6688**	**11.8962**	**0.0159**	**0.1746**	**1.2202**	**1.3947**	**0.0195**	**1.1234**	**1.1429**		**1,634.3242**	**1,634.3242**	**0.4862**		**1,644.5333**

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	0.2948	3.2718	3.2624	9.2100e-003	0.2174	0.0510	0.2683	0.0595	0.0469	0.1064		926.4010	926.4010	6.6900e-003		926.5413
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	0.0635	0.0860	0.9064	1.3900e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		116.2768	116.2768	8.0400e-003		116.4457
Total	**0.3583**	**3.3578**	**4.1689**	**0.0106**	**0.3242**	**0.0521**	**0.3762**	**0.0878**	**0.0479**	**0.1357**		**1,042.6778**	**1,042.6778**	**0.0147**		**1,042.9870**

3.3 Subgrade - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0681	0.0000	0.0681	7.6100e-003	0.0000	7.6100e-003			0.0000			0.0000
Off-Road	0.3751	8.0370	11.5665	0.0159		0.4996	0.4996		0.4996	0.4996	0.0000	1,634.3242	1,634.3242	0.4862		1,644.5333
Total	**0.3751**	**8.0370**	**11.5665**	**0.0159**	**0.0681**	**0.4996**	**0.5676**	**7.6100e-003**	**0.4996**	**0.5072**	**0.0000**	**1,634.3242**	**1,634.3242**	**0.4862**		**1,644.5333**

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	0.2948	3.2718	3.2624	9.2100e-003	0.2174	0.0510	0.2683	0.0595	0.0469	0.1064		926.4010	926.4010	6.6900e-003		926.5413
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	0.0635	0.0860	0.9064	1.3900e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		116.2768	116.2768	8.0400e-003		116.4457
Total	**0.3583**	**3.3578**	**4.1689**	**0.0106**	**0.3242**	**0.0521**	**0.3762**	**0.0878**	**0.0479**	**0.1357**		**1,042.6778**	**1,042.6778**	**0.0147**		**1,042.9870**

3.4 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3855	14.4480	9.8214	0.0143		0.8811	0.8811		0.8106	0.8106		1,481.8657	1,481.8657	0.4470		1,491.2523
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3855**	**14.4480**	**9.8214**	**0.0143**		**0.8811**	**0.8811**		**0.8106**	**0.8106**		**1,481.8657**	**1,481.8657**	**0.4470**		**1,491.2523**

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	0.0489	0.0662	0.6973	1.0700e-003	0.0822	8.6000e-004	0.0830	0.0218	7.9000e-004	0.0226		89.4437	89.4437	6.1800e-003		89.5736
Total	**0.0489**	**0.0662**	**0.6973**	**1.0700e-003**	**0.0822**	**8.6000e-004**	**0.0830**	**0.0218**	**7.9000e-004**	**0.0226**		**89.4437**	**89.4437**	**6.1800e-003**		**89.5736**

3.4 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3505	7.2666	10.8059	0.0143		0.4206	0.4206		0.4206	0.4206	0.0000	1,481.8657	1,481.8657	0.4470		1,491.2523
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3505**	**7.2666**	**10.8059**	**0.0143**		**0.4206**	**0.4206**		**0.4206**	**0.4206**	**0.0000**	**1,481.8657**	**1,481.8657**	**0.4470**		**1,491.2523**

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	0.0489	0.0662	0.6973	1.0700e-003	0.0822	8.6000e-004	0.0830	0.0218	7.9000e-004	0.0226		89.4437	89.4437	6.1800e-003		89.5736
Total	**0.0489**	**0.0662**	**0.6973**	**1.0700e-003**	**0.0822**	**8.6000e-004**	**0.0830**	**0.0218**	**7.9000e-004**	**0.0226**		**89.4437**	**89.4437**	**6.1800e-003**		**89.5736**

3.5 Sheet Pile Driving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2268	20.7643	13.1819	0.0201		1.1500	1.1500		1.0693	1.0693		2,029.5705	2,029.5705	0.6000		2,042.1703
Total	**2.2268**	**20.7643**	**13.1819**	**0.0201**		**1.1500**	**1.1500**		**1.0693**	**1.0693**		**2,029.5705**	**2,029.5705**	**0.6000**		**2,042.1703**

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	0.1271	0.1720	1.8129	2.7900e-003	0.3992	2.2400e-003	0.4015	0.1022	2.0500e-003	0.1043		232.5537	232.5537	0.0161		232.8913
Total	**0.1271**	**0.1720**	**1.8129**	**2.7900e-003**	**0.3992**	**2.2400e-003**	**0.4015**	**0.1022**	**2.0500e-003**	**0.1043**		**232.5537**	**232.5537**	**0.0161**		**232.8913**

3.5 Sheet Pile Driving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5366	10.5807	13.5050	0.0201		0.5838	0.5838		0.5838	0.5838	0.0000	2,029.5705	2,029.5705	0.6000		2,042.1703
Total	**0.5366**	**10.5807**	**13.5050**	**0.0201**		**0.5838**	**0.5838**		**0.5838**	**0.5838**	**0.0000**	**2,029.5705**	**2,029.5705**	**0.6000**		**2,042.1703**

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	0.1271	0.1720	1.8129	2.7900e-003	0.3992	2.2400e-003	0.4015	0.1022	2.0500e-003	0.1043		232.5537	232.5537	0.0161		232.8913
Total	**0.1271**	**0.1720**	**1.8129**	**2.7900e-003**	**0.3992**	**2.2400e-003**	**0.4015**	**0.1022**	**2.0500e-003**	**0.1043**		**232.5537**	**232.5537**	**0.0161**		**232.8913**

3.6 Pump Station/Gen Bldg Install - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2807	14.5045	8.5480	0.0134		0.7647	0.7647		0.7035	0.7035		1,395.0850	1,395.0850	0.4208		1,403.9220
Total	**1.2807**	**14.5045**	**8.5480**	**0.0134**		**0.7647**	**0.7647**		**0.7035**	**0.7035**		**1,395.0850**	**1,395.0850**	**0.4208**		**1,403.9220**

Unmitigated Construction Off-Site

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

3.6 Pump Station/Gen Bldg Install - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3298	6.7081	9.2153	0.0134		0.3502	0.3502		0.3502	0.3502	0.0000	1,395.0850	1,395.0850	0.4208		1,403.9220
Total	**0.3298**	**6.7081**	**9.2153**	**0.0134**		**0.3502**	**0.3502**		**0.3502**	**0.3502**	**0.0000**	**1,395.0850**	**1,395.0850**	**0.4208**		**1,403.9220**

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466367	0.039941	0.201694	0.176131	0.050793	0.007244	0.019307	0.021320	0.004510	0.001931	0.007565	0.000935	0.002260

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Carmel River Lagoon Scenic Road Protection - ISMP

Monterey County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Construction emissions for ISMP only.

Construction Phase - Overall construction period is 3 days.

Off-road Equipment - 1 grader, 1 dozer, 1 tractor, 1 excavator

Grading - Assumes 115 tons of sand to be imported, 115 tons to be exported

Trips and VMT - Construction vehicle trips based on estimated equipment requirements/model defaults.

Vehicle Trips - Operational emissions do not apply.

Construction Off-road Equipment Mitigation - .

Off-road Equipment - Assumes 1 forklift and 1 fe loader

Off-road Equipment - Assumes 1 forklift and 1 fe loader

Off-road Equipment - No off-road equipment required

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	NumDays	2.00	1.00
tblGrading	AcresOfGrading	0.00	1.50
tblGrading	AcresOfGrading	0.00	1.00
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	MaterialExported	0.00	115.00
tblGrading	MaterialImported	0.00	115.00
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.8525	8.1304	6.9015	0.0133	1.8372	0.4601	2.2972	0.2371	0.4233	0.6604	0.0000	1,343.1475	1,343.1475	0.1547	0.0000	1,346.3967
Total	**0.8525**	**8.1304**	**6.9015**	**0.0133**	**1.8372**	**0.4601**	**2.2972**	**0.2371**	**0.4233**	**0.6604**	**0.0000**	**1,343.1475**	**1,343.1475**	**0.1547**	**0.0000**	**1,346.3967**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.8525	8.1304	6.9015	0.0133	1.8372	0.4601	2.2972	0.2371	0.4233	0.6604	0.0000	1,343.1475	1,343.1475	0.1547	0.0000	1,346.3967
Total	**0.8525**	**8.1304**	**6.9015**	**0.0133**	**1.8372**	**0.4601**	**2.2972**	**0.2371**	**0.4233**	**0.6604**	**0.0000**	**1,343.1475**	**1,343.1475**	**0.1547**	**0.0000**	**1,346.3967**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Sand Bag Placement	Site Preparation	6/1/2016	6/1/2016	5	1	Sand Bag Placement
2	Sand Bag Removal	Site Preparation	6/2/2016	6/2/2016	5	1	Sand Bag Removal
3	Sand Bar Management	Site Preparation	6/3/2016	6/3/2016	5	1	Sand Bar Management

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Sand Bar Management	Graders	0	8.00	174	0.41
Sand Bar Management	Cranes	0	6.00	226	0.29
Sand Bar Management	Forklifts	0	6.00	89	0.20
Sand Bag Placement	Graders	0	8.00	174	0.41
Sand Bag Placement	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sand Bar Management	Rubber Tired Dozers	0	7.00	255	0.40
Sand Bag Removal	Rubber Tired Dozers	0	6.00	255	0.40
Sand Bag Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sand Bag Placement	Forklifts	1	8.00	89	0.20
Sand Bag Removal	Forklifts	1	8.00	89	0.20
Sand Bag Removal	Graders	0	6.00	174	0.41
Sand Bag Placement	Rubber Tired Dozers	0	7.00	255	0.40
Sand Bar Management	Generator Sets	0	8.00	84	0.74
Sand Bar Management	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Sand Bar Management	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Sand Bag Placement	2	5.00	0.00	11.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sand Bag Removal	2	5.00	0.00	11.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sand Bar Management	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 Sand Bag Placement - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0746	0.0000	1.0746	0.1166	0.0000	0.1166			0.0000			0.0000
Off-Road	0.5687	5.2181	3.6819	4.6500e-003		0.4148	0.4148		0.3816	0.3816		483.1928	483.1928	0.1458		486.2536
Total	**0.5687**	**5.2181**	**3.6819**	**4.6500e-003**	**1.0746**	**0.4148**	**1.4894**	**0.1166**	**0.3816**	**0.4982**		**483.1928**	**483.1928**	**0.1458**		**486.2536**

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	0.2594	2.8792	2.8709	8.1000e-003	0.1913	0.0449	0.2361	0.0524	0.0413	0.0936		815.2328	815.2328	5.8800e-003		815.3564
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	0.0244	0.0331	0.3486	5.4000e-004	0.0411	4.3000e-004	0.0415	0.0109	3.9000e-004	0.0113		44.7219	44.7219	3.0900e-003		44.7868
Total	**0.2838**	**2.9123**	**3.2196**	**8.6400e-003**	**0.2323**	**0.0453**	**0.2776**	**0.0632**	**0.0417**	**0.1049**		**859.9547**	**859.9547**	**8.9700e-003**		**860.1432**

3.2 Sand Bag Placement - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0746	0.0000	1.0746	0.1166	0.0000	0.1166			0.0000			0.0000
Off-Road	0.5687	5.2181	3.6819	4.6500e-003		0.4148	0.4148		0.3816	0.3816	0.0000	483.1928	483.1928	0.1458		486.2535
Total	**0.5687**	**5.2181**	**3.6819**	**4.6500e-003**	**1.0746**	**0.4148**	**1.4894**	**0.1166**	**0.3816**	**0.4982**	**0.0000**	**483.1928**	**483.1928**	**0.1458**		**486.2535**

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	0.2594	2.8792	2.8709	8.1000e-003	0.1913	0.0449	0.2361	0.0524	0.0413	0.0936		815.2328	815.2328	5.8800e-003		815.3564
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	0.0244	0.0331	0.3486	5.4000e-004	0.0411	4.3000e-004	0.0415	0.0109	3.9000e-004	0.0113		44.7219	44.7219	3.0900e-003		44.7868
Total	**0.2838**	**2.9123**	**3.2196**	**8.6400e-003**	**0.2323**	**0.0453**	**0.2776**	**0.0632**	**0.0417**	**0.1049**		**859.9547**	**859.9547**	**8.9700e-003**		**860.1432**

3.3 Sand Bag Removal - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.6048	0.0000	1.6048	0.1739	0.0000	0.1739			0.0000			0.0000
Off-Road	0.5687	5.2181	3.6819	4.6500e-003		0.4148	0.4148		0.3816	0.3816		483.1928	483.1928	0.1458		486.2536
Total	**0.5687**	**5.2181**	**3.6819**	**4.6500e-003**	**1.6048**	**0.4148**	**2.0196**	**0.1739**	**0.3816**	**0.5555**		**483.1928**	**483.1928**	**0.1458**		**486.2536**

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	0.2594	2.8792	2.8709	8.1000e-003	0.1913	0.0449	0.2361	0.0524	0.0413	0.0936		815.2328	815.2328	5.8800e-003		815.3564
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	0.0244	0.0331	0.3486	5.4000e-004	0.0411	4.3000e-004	0.0415	0.0109	3.9000e-004	0.0113		44.7219	44.7219	3.0900e-003		44.7868
Total	**0.2838**	**2.9123**	**3.2196**	**8.6400e-003**	**0.2323**	**0.0453**	**0.2776**	**0.0632**	**0.0417**	**0.1049**		**859.9547**	**859.9547**	**8.9700e-003**		**860.1432**

3.3 Sand Bag Removal - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.6048	0.0000	1.6048	0.1739	0.0000	0.1739			0.0000			0.0000
Off-Road	0.5687	5.2181	3.6819	4.6500e-003		0.4148	0.4148		0.3816	0.3816	0.0000	483.1928	483.1928	0.1458		486.2535
Total	**0.5687**	**5.2181**	**3.6819**	**4.6500e-003**	**1.6048**	**0.4148**	**2.0196**	**0.1739**	**0.3816**	**0.5555**	**0.0000**	**483.1928**	**483.1928**	**0.1458**		**486.2535**

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	0.2594	2.8792	2.8709	8.1000e-003	0.1913	0.0449	0.2361	0.0524	0.0413	0.0936		815.2328	815.2328	5.8800e-003		815.3564
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	0.0244	0.0331	0.3486	5.4000e-004	0.0411	4.3000e-004	0.0415	0.0109	3.9000e-004	0.0113		44.7219	44.7219	3.0900e-003		44.7868
Total	**0.2838**	**2.9123**	**3.2196**	**8.6400e-003**	**0.2323**	**0.0453**	**0.2776**	**0.0632**	**0.0417**	**0.1049**		**859.9547**	**859.9547**	**8.9700e-003**		**860.1432**

3.4 Sand Bar Management - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.5303**	**0.0000**	**0.5303**	**0.0573**	**0.0000**	**0.0573**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

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

3.4 Sand Bar Management - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.5303**	**0.0000**	**0.5303**	**0.0573**	**0.0000**	**0.0573**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466367	0.039941	0.201694	0.176131	0.050793	0.007244	0.019307	0.021320	0.004510	0.001931	0.007565	0.000935	0.002260

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Carmel River Lagoon Scenic Road Protection - SRPS

Monterey County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Construction emissions for SRPS only.

Construction Phase - Overall construction period is 60 days. Schedule does not reflect overlapping activities. (Site Prep/Excavation: 20 days, Rock Placement: 40 days; Backfilling: 40 days

Off-road Equipment - 1 grader, 1 dozer, 1 tractor, 1 excavator

Grading - Assumes 15,000 tons imported

Trips and VMT - Construction vehicle trips based on estimated equipment requirements/model defaults.

Vehicle Trips - Operational emissions do not apply.

Construction Off-road Equipment Mitigation - Includes CE of 50% for unpaved roads and 61% for exposed surface area with water application, 15 mph limit for onroad vehicle travel on unpaved surfaces.

Off-road Equipment - 1 grader, 2 tractors, 1 excavator, 1 crawler tractor

Off-road Equipment - 2 tractors, 2 excavators, 1 other material handling equipment

Off-road Equipment - 1 tractor, 1 excavator, 1 roller, 1 compactor

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstructionPhase	NumDays	200.00	40.00
tblConstructionPhase	NumDays	4.00	40.00
tblConstructionPhase	NumDays	2.00	20.00
tblGrading	AcresOfGrading	0.00	1.50
tblGrading	AcresOfGrading	20.00	1.00
tblGrading	MaterialImported	0.00	15,000.00
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	HorsePower	8.00	80.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.43	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	2.9684	31.2741	26.2790	0.0513	0.8371	1.6714	2.2543	0.2160	1.5377	1.5717	0.0000	5,206.1886	5,206.1886	0.8066	0.0000	5,223.1278
Total	**2.9684**	**31.2741**	**26.2790**	**0.0513**	**0.8371**	**1.6714**	**2.2543**	**0.2160**	**1.5377**	**1.5717**	**0.0000**	**5,206.1886**	**5,206.1886**	**0.8066**	**0.0000**	**5,223.1278**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.4914	21.0232	27.6495	0.0513	0.7849	0.7702	1.5551	0.2092	0.7580	0.9672	0.0000	5,206.1886	5,206.1886	0.8066	0.0000	5,223.1278
Total	**1.4914**	**21.0232**	**27.6495**	**0.0513**	**0.7849**	**0.7702**	**1.5551**	**0.2092**	**0.7580**	**0.9672**	**0.0000**	**5,206.1886**	**5,206.1886**	**0.8066**	**0.0000**	**5,223.1278**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**49.76**	**32.78**	**-5.21**	**0.00**	**6.24**	**53.92**	**31.02**	**3.18**	**50.70**	**38.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation & Excavation	Site Preparation	6/1/2016	6/28/2016	5	20	Site Preparation/Excavation
2	Rock Placement	Grading	6/29/2016	8/23/2016	5	40	Rock Placement
3	Backfilling	Building Construction	8/24/2016	10/18/2016	5	40	Backfilling

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation & Excavation	Excavators	1	8.00	162	0.38
Backfilling	Cranes	0	6.00	226	0.29
Backfilling	Forklifts	0	6.00	89	0.20
Site Preparation & Excavation	Graders	1	8.00	174	0.41
Site Preparation & Excavation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation & Excavation	Crawler Tractors	1	8.00	208	0.43
Rock Placement	Rubber Tired Dozers	0	6.00	255	0.40
Rock Placement	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Rock Placement	Excavators	2	8.00	162	0.38
Rock Placement	Other Material Handling Equipment	1	8.00	167	0.40
Backfilling	Excavators	1	8.00	162	0.38
Backfilling	Rollers	1	8.00	80	0.38
Backfilling	Plate Compactors	1	8.00	80	0.38
Rock Placement	Graders	0	6.00	174	0.41
Site Preparation & Excavation	Rubber Tired Dozers	0	7.00	255	0.40
Backfilling	Generator Sets	0	8.00	84	0.74
Backfilling	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Backfilling	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation & Excavation	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rock Placement	5	13.00	0.00	1,483.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Backfilling	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation & Excavation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0530	0.0000	0.0530	5.7300e-003	0.0000	5.7300e-003			0.0000			0.0000
Off-Road	2.7959	30.8559	16.0344	0.0255		1.6703	1.6703		1.5367	1.5367		2,647.5237	2,647.5237	0.7986		2,664.2940
Total	**2.7959**	**30.8559**	**16.0344**	**0.0255**	**0.0530**	**1.6703**	**1.7233**	**5.7300e-003**	**1.5367**	**1.5424**		**2,647.5237**	**2,647.5237**	**0.7986**		**2,664.2940**

3.2 Site Preparation & Excavation - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0860	0.9064	1.3900e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		116.2768	116.2768	8.0400e-003		116.4457
Total	**0.0635**	**0.0860**	**0.9064**	**1.3900e-003**	**0.1068**	**1.1200e-003**	**0.1079**	**0.0283**	**1.0300e-003**	**0.0294**		**116.2768**	**116.2768**	**8.0400e-003**		**116.4457**

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					0.0207	0.0000	0.0207	2.2300e-003	0.0000	2.2300e-003			0.0000			0.0000
Off-Road	0.6226	12.5688	17.4668	0.0255		0.6446	0.6446		0.6446	0.6446	0.0000	2,647.5237	2,647.5237	0.7986		2,664.2940
Total	**0.6226**	**12.5688**	**17.4668**	**0.0255**	**0.0207**	**0.6446**	**0.6653**	**2.2300e-003**	**0.6446**	**0.6469**	**0.0000**	**2,647.5237**	**2,647.5237**	**0.7986**		**2,664.2940**

3.2 Site Preparation & Excavation - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0860	0.9064	1.3900e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		116.2768	116.2768	8.0400e-003		116.4457
Total	**0.0635**	**0.0860**	**0.9064**	**1.3900e-003**	**0.1068**	**1.1200e-003**	**0.1079**	**0.0283**	**1.0300e-003**	**0.0294**		**116.2768**	**116.2768**	**8.0400e-003**		**116.4457**

3.3 Rock Placement - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0857	0.0000	0.0857	0.0112	0.0000	0.0112			0.0000			0.0000
Off-Road	2.0305	21.4839	15.6963	0.0225		1.2649	1.2649		1.1637	1.1637		2,342.2066	2,342.2066	0.7065		2,357.0429
Total	**2.0305**	**21.4839**	**15.6963**	**0.0225**	**0.0857**	**1.2649**	**1.3505**	**0.0112**	**1.1637**	**1.1749**		**2,342.2066**	**2,342.2066**	**0.7065**		**2,357.0429**

3.3 Rock Placement - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8743	9.7042	9.6764	0.0273	0.6447	0.1512	0.7959	0.1765	0.1391	0.3156		2,747.7052	2,747.7052	0.0198		2,748.1216
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	0.0635	0.0860	0.9064	1.3900e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		116.2768	116.2768	8.0400e-003		116.4457
Total	**0.9379**	**9.7902**	**10.5828**	**0.0287**	**0.7515**	**0.1523**	**0.9038**	**0.2048**	**0.1401**	**0.3449**		**2,863.9821**	**2,863.9821**	**0.0279**		**2,864.5673**

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					0.0334	0.0000	0.0334	4.3900e-003	0.0000	4.3900e-003			0.0000			0.0000
Off-Road	0.5535	11.2330	17.0667	0.0225		0.6179	0.6179		0.6179	0.6179	0.0000	2,342.2066	2,342.2066	0.7065		2,357.0429
Total	**0.5535**	**11.2330**	**17.0667**	**0.0225**	**0.0334**	**0.6179**	**0.6513**	**4.3900e-003**	**0.6179**	**0.6223**	**0.0000**	**2,342.2066**	**2,342.2066**	**0.7065**		**2,357.0429**

3.3 Rock Placement - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8743	9.7042	9.6764	0.0273	0.6447	0.1512	0.7959	0.1765	0.1391	0.3156		2,747.7052	2,747.7052	0.0198		2,748.1216
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	0.0635	0.0860	0.9064	1.3900e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		116.2768	116.2768	8.0400e-003		116.4457
Total	**0.9379**	**9.7902**	**10.5828**	**0.0287**	**0.7515**	**0.1523**	**0.9038**	**0.2048**	**0.1401**	**0.3449**		**2,863.9821**	**2,863.9821**	**0.0279**		**2,864.5673**

3.4 Backfilling - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0633	10.7815	7.8463	0.0110		0.6961	0.6961		0.6404	0.6404		1,145.3811	1,145.3811	0.3455		1,152.6363
Total	**1.0633**	**10.7815**	**7.8463**	**0.0110**		**0.6961**	**0.6961**		**0.6404**	**0.6404**		**1,145.3811**	**1,145.3811**	**0.3455**		**1,152.6363**

3.4 Backfilling - 2016

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2704	5.7164	8.3381	0.0110		0.3454	0.3454		0.3454	0.3454	0.0000	1,145.3811	1,145.3811	0.3455		1,152.6363
Total	**0.2704**	**5.7164**	**8.3381**	**0.0110**		**0.3454**	**0.3454**		**0.3454**	**0.3454**	**0.0000**	**1,145.3811**	**1,145.3811**	**0.3455**		**1,152.6363**

3.4 Backfilling - 2016

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466367	0.039941	0.201694	0.176131	0.050793	0.007244	0.019307	0.021320	0.004510	0.001931	0.007565	0.000935	0.002260

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Carmel River Lagoon Scenic Road Protection - EPB

Monterey County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Construction emissions for EPB only.

Construction Phase - Overall construction period is 90 days. Schedule does not reflect overlapping activities. (Site Prep: 10 days, Subgrade: 10 days; Paving: 10 days; Sheeting: 75 days; Bldg Install: 5 days)

Off-road Equipment - 1 grader, 1 dozer, 1 tractor, 1 excavator

Off-road Equipment - 1 grader, 1 tractor, 1 plate compactor, 1 forklift, 1 roller

Off-road Equipment - 1 paver, 1 paving equipment, 1 roller, 1 tractor

Off-road Equipment - 1 crane, 1 tractor, 1 excavator mounted driver, 1 welder, 1 rt forklift

Off-road Equipment - 1 crane, 1 excavator, 1 tractor, 1 rt forklift

Grading - Assumes 1,000 cyd imported, 200 cy exported

Trips and VMT - Construction vehicle trips based on estimated equipment requirements/model defaults.

Vehicle Trips - Operational emissions do not apply.

Construction Off-road Equipment Mitigation - Includes CE of 50% for unpaved roads and 61% for exposed surface area with water application, 15 mph limit for onroad vehicle travel on unpaved surfaces.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	200.00	5.00
tblConstructionPhase	NumDays	4.00	10.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	PhaseEndDate	11/24/2016	12/1/2016
tblConstructionPhase	PhaseEndDate	7/28/2016	7/21/2016
tblConstructionPhase	PhaseStartDate	11/18/2016	11/25/2016
tblConstructionPhase	PhaseStartDate	7/15/2016	7/8/2016
tblGrading	AcresOfGrading	5.00	1.50
tblGrading	AcresOfGrading	5.00	1.00
tblGrading	MaterialExported	0.00	200.00
tblGrading	MaterialImported	0.00	1,000.00
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	HorsePower	100.00	89.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.20

tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	5.4801	55.9815	40.7944	0.0528	6.7556	2.9818	9.7374	3.4632	2.7440	6.2072	0.0000	5,385.2961	5,385.2961	1.2473	0.0000	5,411.4887
Total	**5.4801**	**55.9815**	**40.7944**	**0.0528**	**6.7556**	**2.9818**	**9.7374**	**3.4632**	**2.7440**	**6.2072**	**0.0000**	**5,385.2961**	**5,385.2961**	**1.2473**	**0.0000**	**5,411.4887**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.4965	23.7497	34.9063	0.0528	2.9090	1.1059	4.0149	1.4248	1.1008	2.5256	0.0000	5,385.2961	5,385.2961	1.2473	0.0000	5,411.4887
Total	**1.4965**	**23.7497**	**34.9063**	**0.0528**	**2.9090**	**1.1059**	**4.0149**	**1.4248**	**1.1008**	**2.5256**	**0.0000**	**5,385.2961**	**5,385.2961**	**1.2473**	**0.0000**	**5,411.4887**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**72.69**	**57.58**	**14.43**	**0.00**	**56.94**	**62.91**	**58.77**	**58.86**	**59.88**	**59.31**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation & Rd Excavation	Site Preparation	7/1/2016	7/14/2016	5	10	Site Preparation/Road Excavation
2	Subgrade	Grading	7/8/2016	7/21/2016	5	10	Subgrade
3	Paving	Paving	7/22/2016	8/4/2016	5	10	Paving
4	Sheet Pile Driving	Trenching	8/5/2016	11/17/2016	5	75	Sheet Pile Driving
5	Pump Station/Gen Bldg Install	Building Construction	11/25/2016	12/1/2016	5	5	Pump Station/Gen Bldg Install

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Pump Station/Gen Bldg Install	Cranes	1	6.00	226	0.29
Pump Station/Gen Bldg Install	Forklifts	0	6.00	89	0.20
Site Preparation & Rd Excavation	Graders	1	8.00	174	0.41
Site Preparation & Rd Excavation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sheet Pile Driving	Generator Sets	0	8.00	84	0.74

Subgrade	Rubber Tired Dozers	0	6.00	255	0.40
Subgrade	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sheet Pile Driving	Cranes	1	8.00	226	0.29
Sheet Pile Driving	Forklifts	0	6.00	89	0.20
Sheet Pile Driving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sheet Pile Driving	Cement and Mortar Mixers	0	6.00	9	0.56
Sheet Pile Driving	Pavers	0	6.00	125	0.42
Sheet Pile Driving	Rollers	0	7.00	80	0.38
Sheet Pile Driving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Pump Station/Gen Bldg Install	Air Compressors	0	6.00	78	0.48
Subgrade	Graders	1	8.00	174	0.41
Sheet Pile Driving	Paving Equipment	0	8.00	130	0.36
Site Preparation & Rd Excavation	Rubber Tired Dozers	1	8.00	255	0.40
Sheet Pile Driving	Welders	1	8.00	46	0.45
Pump Station/Gen Bldg Install	Generator Sets	0	8.00	84	0.74
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	8.00	80	0.38
Pump Station/Gen Bldg Install	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Pump Station/Gen Bldg Install	Welders	0	8.00	46	0.45
Site Preparation & Rd Excavation	Excavators	1	8.00	162	0.38
Subgrade	Plate Compactors	1	8.00	8	0.43
Subgrade	Rough Terrain Forklifts	1	8.00	100	0.40
Subgrade	Rollers	1	8.00	80	0.38
Sheet Pile Driving	Excavators	1	8.00	162	0.38
Sheet Pile Driving	Rough Terrain Forklifts	1	8.00	100	0.40
Pump Station/Gen Bldg Install	Excavators	1	8.00	162	0.38

Pump Station/Gen Bldg Install	Rough Terrain Forklifts	1	8.00	89	0.20

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Paving	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation & Rd Excavation	4	10.00	0.00	25.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Subgrade	5	13.00	0.00	125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sheet Pile Driving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sheet Pile Driving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Pump Station/Gen Bldg Install	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation & Rd Excavation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.1312	0.0000	6.1312	3.3222	0.0000	3.3222			0.0000			0.0000
Off-Road	2.9877	31.9586	21.2706	0.0236		1.6983	1.6983		1.5624	1.5624		2,449.1839	2,449.1839	0.7388		2,464.6979
Total	**2.9877**	**31.9586**	**21.2706**	**0.0236**	**6.1312**	**1.6983**	**7.8295**	**3.3222**	**1.5624**	**4.8845**		**2,449.1839**	**2,449.1839**	**0.7388**		**2,464.6979**

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	0.0715	0.6938	0.9961	1.8400e-003	0.0435	0.0102	0.0537	0.0119	9.4100e-003	0.0213		184.8388	184.8388	1.3600e-003		184.8673
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	0.0516	0.0832	0.7179	1.0100e-003	0.0822	8.6000e-004	0.0830	0.0218	7.9000e-004	0.0226		83.8066	83.8066	6.1800e-003		83.9365
Total	**0.1231**	**0.7770**	**1.7140**	**2.8500e-003**	**0.1256**	**0.0111**	**0.1367**	**0.0337**	**0.0102**	**0.0439**		**268.6454**	**268.6454**	**7.5400e-003**		**268.8037**

3.2 Site Preparation & Rd Excavation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3912	0.0000	2.3912	1.2956	0.0000	1.2956			0.0000			0.0000
Off-Road	0.5738	11.3586	15.7121	0.0236		0.5430	0.5430		0.5430	0.5430	0.0000	2,449.1839	2,449.1839	0.7388		2,464.6979
Total	**0.5738**	**11.3586**	**15.7121**	**0.0236**	**2.3912**	**0.5430**	**2.9342**	**1.2956**	**0.5430**	**1.8386**	**0.0000**	**2,449.1839**	**2,449.1839**	**0.7388**		**2,464.6979**

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	0.0715	0.6938	0.9961	1.8400e-003	0.0435	0.0102	0.0537	0.0119	9.4100e-003	0.0213		184.8388	184.8388	1.3600e-003		184.8673
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	0.0516	0.0832	0.7179	1.0100e-003	0.0822	8.6000e-004	0.0830	0.0218	7.9000e-004	0.0226		83.8066	83.8066	6.1800e-003		83.9365
Total	**0.1231**	**0.7770**	**1.7140**	**2.8500e-003**	**0.1256**	**0.0111**	**0.1367**	**0.0337**	**0.0102**	**0.0439**		**268.6454**	**268.6454**	**7.5400e-003**		**268.8037**

3.3 Subgrade - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1746	0.0000	0.1746	0.0195	0.0000	0.0195			0.0000			0.0000
Off-Road	1.9448	19.6688	11.8962	0.0159		1.2202	1.2202		1.1234	1.1234		1,634.3242	1,634.3242	0.4862		1,644.5333
Total	**1.9448**	**19.6688**	**11.8962**	**0.0159**	**0.1746**	**1.2202**	**1.3947**	**0.0195**	**1.1234**	**1.1429**		**1,634.3242**	**1,634.3242**	**0.4862**		**1,644.5333**

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	0.3574	3.4689	4.9805	9.2200e-003	0.2174	0.0512	0.2685	0.0595	0.0471	0.1066		924.1940	924.1940	6.7800e-003		924.3364
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	0.0671	0.1082	0.9332	1.3100e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		108.9486	108.9486	8.0400e-003		109.1174
Total	**0.4245**	**3.5771**	**5.9137**	**0.0105**	**0.3242**	**0.0523**	**0.3764**	**0.0878**	**0.0481**	**0.1359**		**1,033.1426**	**1,033.1426**	**0.0148**		**1,033.4538**

3.3 Subgrade - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0681	0.0000	0.0681	7.6100e-003	0.0000	7.6100e-003			0.0000			0.0000
Off-Road	0.3751	8.0370	11.5665	0.0159		0.4996	0.4996		0.4996	0.4996	0.0000	1,634.3242	1,634.3242	0.4862		1,644.5333
Total	**0.3751**	**8.0370**	**11.5665**	**0.0159**	**0.0681**	**0.4996**	**0.5676**	**7.6100e-003**	**0.4996**	**0.5072**	**0.0000**	**1,634.3242**	**1,634.3242**	**0.4862**		**1,644.5333**

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	0.3574	3.4689	4.9805	9.2200e-003	0.2174	0.0512	0.2685	0.0595	0.0471	0.1066		924.1940	924.1940	6.7800e-003		924.3364
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	0.0671	0.1082	0.9332	1.3100e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		108.9486	108.9486	8.0400e-003		109.1174
Total	**0.4245**	**3.5771**	**5.9137**	**0.0105**	**0.3242**	**0.0523**	**0.3764**	**0.0878**	**0.0481**	**0.1359**		**1,033.1426**	**1,033.1426**	**0.0148**		**1,033.4538**

3.4 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3855	14.4480	9.8214	0.0143		0.8811	0.8811		0.8106	0.8106		1,481.8657	1,481.8657	0.4470		1,491.2523
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.3855**	**14.4480**	**9.8214**	**0.0143**		**0.8811**	**0.8811**		**0.8106**	**0.8106**		**1,481.8657**	**1,481.8657**	**0.4470**		**1,491.2523**

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	0.0516	0.0832	0.7179	1.0100e-003	0.0822	8.6000e-004	0.0830	0.0218	7.9000e-004	0.0226		83.8066	83.8066	6.1800e-003		83.9365
Total	**0.0516**	**0.0832**	**0.7179**	**1.0100e-003**	**0.0822**	**8.6000e-004**	**0.0830**	**0.0218**	**7.9000e-004**	**0.0226**		**83.8066**	**83.8066**	**6.1800e-003**		**83.9365**

3.4 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3505	7.2666	10.8059	0.0143		0.4206	0.4206		0.4206	0.4206	0.0000	1,481.8657	1,481.8657	0.4470		1,491.2523
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3505**	**7.2666**	**10.8059**	**0.0143**		**0.4206**	**0.4206**		**0.4206**	**0.4206**	**0.0000**	**1,481.8657**	**1,481.8657**	**0.4470**		**1,491.2523**

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	0.0516	0.0832	0.7179	1.0100e-003	0.0822	8.6000e-004	0.0830	0.0218	7.9000e-004	0.0226		83.8066	83.8066	6.1800e-003		83.9365
Total	**0.0516**	**0.0832**	**0.7179**	**1.0100e-003**	**0.0822**	**8.6000e-004**	**0.0830**	**0.0218**	**7.9000e-004**	**0.0226**		**83.8066**	**83.8066**	**6.1800e-003**		**83.9365**

3.5 Sheet Pile Driving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2268	20.7643	13.1819	0.0201		1.1500	1.1500		1.0693	1.0693		2,029.5705	2,029.5705	0.6000		2,042.1703
Total	**2.2268**	**20.7643**	**13.1819**	**0.0201**		**1.1500**	**1.1500**		**1.0693**	**1.0693**		**2,029.5705**	**2,029.5705**	**0.6000**		**2,042.1703**

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	0.1343	0.2164	1.8665	2.6100e-003	0.3992	2.2400e-003	0.4015	0.1022	2.0500e-003	0.1043		217.8972	217.8972	0.0161		218.2348
Total	**0.1343**	**0.2164**	**1.8665**	**2.6100e-003**	**0.3992**	**2.2400e-003**	**0.4015**	**0.1022**	**2.0500e-003**	**0.1043**		**217.8972**	**217.8972**	**0.0161**		**218.2348**

3.5 Sheet Pile Driving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5366	10.5807	13.5050	0.0201		0.5838	0.5838		0.5838	0.5838	0.0000	2,029.5705	2,029.5705	0.6000		2,042.1703
Total	**0.5366**	**10.5807**	**13.5050**	**0.0201**		**0.5838**	**0.5838**		**0.5838**	**0.5838**	**0.0000**	**2,029.5705**	**2,029.5705**	**0.6000**		**2,042.1703**

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	0.1343	0.2164	1.8665	2.6100e-003	0.3992	2.2400e-003	0.4015	0.1022	2.0500e-003	0.1043		217.8972	217.8972	0.0161		218.2348
Total	**0.1343**	**0.2164**	**1.8665**	**2.6100e-003**	**0.3992**	**2.2400e-003**	**0.4015**	**0.1022**	**2.0500e-003**	**0.1043**		**217.8972**	**217.8972**	**0.0161**		**218.2348**

3.6 Pump Station/Gen Bldg Install - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2807	14.5045	8.5480	0.0134		0.7647	0.7647		0.7035	0.7035		1,395.0850	1,395.0850	0.4208		1,403.9220
Total	**1.2807**	**14.5045**	**8.5480**	**0.0134**		**0.7647**	**0.7647**		**0.7035**	**0.7035**		**1,395.0850**	**1,395.0850**	**0.4208**		**1,403.9220**

Unmitigated Construction Off-Site

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

3.6 Pump Station/Gen Bldg Install - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3298	6.7081	9.2153	0.0134		0.3502	0.3502		0.3502	0.3502	0.0000	1,395.0850	1,395.0850	0.4208		1,403.9220
Total	**0.3298**	**6.7081**	**9.2153**	**0.0134**		**0.3502**	**0.3502**		**0.3502**	**0.3502**	**0.0000**	**1,395.0850**	**1,395.0850**	**0.4208**		**1,403.9220**

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466367	0.039941	0.201694	0.176131	0.050793	0.007244	0.019307	0.021320	0.004510	0.001931	0.007565	0.000935	0.002260

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Carmel River Lagoon Scenic Road Protection - ISMP

Monterey County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Construction emissions for ISMP only.

Construction Phase - Overall construction period is 3 days.

Off-road Equipment - 1 grader, 1 dozer, 1 tractor, 1 excavator

Grading - Assumes 115 tons of sand to be imported, 115 tons to be exported

Trips and VMT - Construction vehicle trips based on estimated equipment requirements/model defaults.

Vehicle Trips - Operational emissions do not apply.

Construction Off-road Equipment Mitigation - .

Off-road Equipment - Assumes 1 forklift and 1 fe loader

Off-road Equipment - Assumes 1 forklift and 1 fe loader

Off-road Equipment - No off-road equipment required

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	NumDays	2.00	1.00
tblConstructionPhase	NumDays	2.00	1.00
tblGrading	AcresOfGrading	0.00	1.50
tblGrading	AcresOfGrading	0.00	1.00
tblGrading	AcresOfGrading	0.00	0.50
tblGrading	MaterialExported	0.00	115.00
tblGrading	MaterialImported	0.00	115.00
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	LoadFactor	0.20	0.20
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.9090	8.3123	8.4237	0.0133	1.8372	0.4602	2.2974	0.2371	0.4234	0.6605	0.0000	1,338.3869	1,338.3869	0.1548	0.0000	1,341.6378
Total	**0.9090**	**8.3123**	**8.4237**	**0.0133**	**1.8372**	**0.4602**	**2.2974**	**0.2371**	**0.4234**	**0.6605**	**0.0000**	**1,338.3869**	**1,338.3869**	**0.1548**	**0.0000**	**1,341.6378**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.9090	8.3123	8.4237	0.0133	1.8372	0.4602	2.2974	0.2371	0.4234	0.6605	0.0000	1,338.3869	1,338.3869	0.1548	0.0000	1,341.6378
Total	**0.9090**	**8.3123**	**8.4237**	**0.0133**	**1.8372**	**0.4602**	**2.2974**	**0.2371**	**0.4234**	**0.6605**	**0.0000**	**1,338.3869**	**1,338.3869**	**0.1548**	**0.0000**	**1,341.6378**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Sand Bag Placement	Site Preparation	6/1/2016	6/1/2016	5	1	Sand Bag Placement
2	Sand Bag Removal	Site Preparation	6/2/2016	6/2/2016	5	1	Sand Bag Removal
3	Sand Bar Management	Site Preparation	6/3/2016	6/3/2016	5	1	Sand Bar Management

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Sand Bar Management	Graders	0	8.00	174	0.41
Sand Bar Management	Cranes	0	6.00	226	0.29
Sand Bar Management	Forklifts	0	6.00	89	0.20
Sand Bag Placement	Graders	0	8.00	174	0.41
Sand Bag Placement	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sand Bar Management	Rubber Tired Dozers	0	7.00	255	0.40
Sand Bag Removal	Rubber Tired Dozers	0	6.00	255	0.40
Sand Bag Removal	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Sand Bag Placement	Forklifts	1	8.00	89	0.20
Sand Bag Removal	Forklifts	1	8.00	89	0.20
Sand Bag Removal	Graders	0	6.00	174	0.41
Sand Bag Placement	Rubber Tired Dozers	0	7.00	255	0.40
Sand Bar Management	Generator Sets	0	8.00	84	0.74
Sand Bar Management	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Sand Bar Management	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Sand Bag Placement	2	5.00	0.00	11.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sand Bag Removal	2	5.00	0.00	11.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Sand Bar Management	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

3.2 Sand Bag Placement - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0746	0.0000	1.0746	0.1166	0.0000	0.1166			0.0000			0.0000
Off-Road	0.5687	5.2181	3.6819	4.6500e-003		0.4148	0.4148		0.3816	0.3816		483.1928	483.1928	0.1458		486.2536
Total	**0.5687**	**5.2181**	**3.6819**	**4.6500e-003**	**1.0746**	**0.4148**	**1.4894**	**0.1166**	**0.3816**	**0.4982**		**483.1928**	**483.1928**	**0.1458**		**486.2536**

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	0.3145	3.0526	4.3828	8.1100e-003	0.1913	0.0450	0.2363	0.0524	0.0414	0.0938		813.2907	813.2907	5.9700e-003		813.4160
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	0.0258	0.0416	0.3589	5.0000e-004	0.0411	4.3000e-004	0.0415	0.0109	3.9000e-004	0.0113		41.9033	41.9033	3.0900e-003		41.9682
Total	**0.3403**	**3.0942**	**4.7417**	**8.6100e-003**	**0.2323**	**0.0455**	**0.2778**	**0.0632**	**0.0418**	**0.1051**		**855.1940**	**855.1940**	**9.0600e-003**		**855.3843**

3.2 Sand Bag Placement - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0746	0.0000	1.0746	0.1166	0.0000	0.1166			0.0000			0.0000
Off-Road	0.5687	5.2181	3.6819	4.6500e-003		0.4148	0.4148		0.3816	0.3816	0.0000	483.1928	483.1928	0.1458		486.2535
Total	**0.5687**	**5.2181**	**3.6819**	**4.6500e-003**	**1.0746**	**0.4148**	**1.4894**	**0.1166**	**0.3816**	**0.4982**	**0.0000**	**483.1928**	**483.1928**	**0.1458**		**486.2535**

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	0.3145	3.0526	4.3828	8.1100e-003	0.1913	0.0450	0.2363	0.0524	0.0414	0.0938		813.2907	813.2907	5.9700e-003		813.4160
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	0.0258	0.0416	0.3589	5.0000e-004	0.0411	4.3000e-004	0.0415	0.0109	3.9000e-004	0.0113		41.9033	41.9033	3.0900e-003		41.9682
Total	**0.3403**	**3.0942**	**4.7417**	**8.6100e-003**	**0.2323**	**0.0455**	**0.2778**	**0.0632**	**0.0418**	**0.1051**		**855.1940**	**855.1940**	**9.0600e-003**		**855.3843**

3.3 Sand Bag Removal - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.6048	0.0000	1.6048	0.1739	0.0000	0.1739			0.0000			0.0000
Off-Road	0.5687	5.2181	3.6819	4.6500e-003		0.4148	0.4148		0.3816	0.3816		483.1928	483.1928	0.1458		486.2536
Total	**0.5687**	**5.2181**	**3.6819**	**4.6500e-003**	**1.6048**	**0.4148**	**2.0196**	**0.1739**	**0.3816**	**0.5555**		**483.1928**	**483.1928**	**0.1458**		**486.2536**

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	0.3145	3.0526	4.3828	8.1100e-003	0.1913	0.0450	0.2363	0.0524	0.0414	0.0938		813.2907	813.2907	5.9700e-003		813.4160
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	0.0258	0.0416	0.3589	5.0000e-004	0.0411	4.3000e-004	0.0415	0.0109	3.9000e-004	0.0113		41.9033	41.9033	3.0900e-003		41.9682
Total	**0.3403**	**3.0942**	**4.7417**	**8.6100e-003**	**0.2323**	**0.0455**	**0.2778**	**0.0632**	**0.0418**	**0.1051**		**855.1940**	**855.1940**	**9.0600e-003**		**855.3843**

3.3 Sand Bag Removal - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.6048	0.0000	1.6048	0.1739	0.0000	0.1739			0.0000			0.0000
Off-Road	0.5687	5.2181	3.6819	4.6500e-003		0.4148	0.4148		0.3816	0.3816	0.0000	483.1928	483.1928	0.1458		486.2535
Total	**0.5687**	**5.2181**	**3.6819**	**4.6500e-003**	**1.6048**	**0.4148**	**2.0196**	**0.1739**	**0.3816**	**0.5555**	**0.0000**	**483.1928**	**483.1928**	**0.1458**		**486.2535**

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	0.3145	3.0526	4.3828	8.1100e-003	0.1913	0.0450	0.2363	0.0524	0.0414	0.0938		813.2907	813.2907	5.9700e-003		813.4160
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	0.0258	0.0416	0.3589	5.0000e-004	0.0411	4.3000e-004	0.0415	0.0109	3.9000e-004	0.0113		41.9033	41.9033	3.0900e-003		41.9682
Total	**0.3403**	**3.0942**	**4.7417**	**8.6100e-003**	**0.2323**	**0.0455**	**0.2778**	**0.0632**	**0.0418**	**0.1051**		**855.1940**	**855.1940**	**9.0600e-003**		**855.3843**

3.4 Sand Bar Management - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.5303**	**0.0000**	**0.5303**	**0.0573**	**0.0000**	**0.0573**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

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

3.4 Sand Bar Management - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.5303**	**0.0000**	**0.5303**	**0.0573**	**0.0000**	**0.0573**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466367	0.039941	0.201694	0.176131	0.050793	0.007244	0.019307	0.021320	0.004510	0.001931	0.007565	0.000935	0.002260

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Carmel River Lagoon Scenic Road Protection - SRPS

Monterey County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.50	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Construction emissions for SRPS only.

Construction Phase - Overall construction period is 60 days. Schedule does not reflect overlapping activities. (Site Prep/Excavation: 20 days, Rock Placement: 40 days; Backfilling: 40 days

Off-road Equipment - 1 grader, 1 dozer, 1 tractor, 1 excavator

Grading - Assumes 15,000 tons imported

Trips and VMT - Construction vehicle trips based on estimated equipment requirements/model defaults.

Vehicle Trips - Operational emissions do not apply.

Construction Off-road Equipment Mitigation - Includes CE of 50% for unpaved roads and 61% for exposed surface area with water application, 15 mph limit for onroad vehicle travel on unpaved surfaces.

Off-road Equipment - 1 grader, 2 tractors, 1 excavator, 1 crawler tractor

Off-road Equipment - 2 tractors, 2 excavators, 1 other material handling equipment

Off-road Equipment - 1 tractor, 1 excavator, 1 roller, 1 compactor

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3

tblConstructionPhase	NumDays	200.00	40.00
tblConstructionPhase	NumDays	4.00	40.00
tblConstructionPhase	NumDays	2.00	20.00
tblGrading	AcresOfGrading	0.00	1.50
tblGrading	AcresOfGrading	20.00	1.00
tblGrading	MaterialImported	0.00	15,000.00
tblLandUse	LotAcreage	0.00	1.50
tblOffRoadEquipment	HorsePower	8.00	80.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.43	0.43
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.43	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Crawler Tractors
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Plate Compactors
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	3.1577	31.8807	31.4015	0.0512	0.8371	1.6714	2.2549	0.2160	1.5377	1.5717	0.0000	5,192.3146	5,192.3146	0.8066	0.0000	5,209.2538
Total	**3.1577**	**31.8807**	**31.4015**	**0.0512**	**0.8371**	**1.6714**	**2.2549**	**0.2160**	**1.5377**	**1.5717**	**0.0000**	**5,192.3146**	**5,192.3146**	**0.8066**	**0.0000**	**5,209.2538**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.6807	21.6298	32.7719	0.0512	0.7849	0.7708	1.5556	0.2092	0.7585	0.9677	0.0000	5,192.3146	5,192.3146	0.8066	0.0000	5,209.2538
Total	**1.6807**	**21.6298**	**32.7719**	**0.0512**	**0.7849**	**0.7708**	**1.5556**	**0.2092**	**0.7585**	**0.9677**	**0.0000**	**5,192.3146**	**5,192.3146**	**0.8066**	**0.0000**	**5,209.2538**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**46.77**	**32.15**	**-4.36**	**0.00**	**6.24**	**53.89**	**31.01**	**3.18**	**50.67**	**38.43**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation & Excavation	Site Preparation	6/1/2016	6/28/2016	5	20	Site Preparation/Excavation
2	Rock Placement	Grading	6/29/2016	8/23/2016	5	40	Rock Placement
3	Backfilling	Building Construction	8/24/2016	10/18/2016	5	40	Backfilling

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation & Excavation	Excavators	1	8.00	162	0.38
Backfilling	Cranes	0	6.00	226	0.29
Backfilling	Forklifts	0	6.00	89	0.20
Site Preparation & Excavation	Graders	1	8.00	174	0.41
Site Preparation & Excavation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation & Excavation	Crawler Tractors	1	8.00	208	0.43
Rock Placement	Rubber Tired Dozers	0	6.00	255	0.40
Rock Placement	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Rock Placement	Excavators	2	8.00	162	0.38
Rock Placement	Other Material Handling Equipment	1	8.00	167	0.40
Backfilling	Excavators	1	8.00	162	0.38
Backfilling	Rollers	1	8.00	80	0.38
Backfilling	Plate Compactors	1	8.00	80	0.38
Rock Placement	Graders	0	6.00	174	0.41
Site Preparation & Excavation	Rubber Tired Dozers	0	7.00	255	0.40
Backfilling	Generator Sets	0	8.00	84	0.74
Backfilling	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Backfilling	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation & Excavation	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Rock Placement	5	13.00	0.00	1,483.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Backfilling	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation & Excavation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0530	0.0000	0.0530	5.7300e-003	0.0000	5.7300e-003			0.0000			0.0000
Off-Road	2.7959	30.8559	16.0344	0.0255		1.6703	1.6703		1.5367	1.5367		2,647.5237	2,647.5237	0.7986		2,664.2940
Total	**2.7959**	**30.8559**	**16.0344**	**0.0255**	**0.0530**	**1.6703**	**1.7233**	**5.7300e-003**	**1.5367**	**1.5424**		**2,647.5237**	**2,647.5237**	**0.7986**		**2,664.2940**

3.2 Site Preparation & Excavation - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0671	0.1082	0.9332	1.3100e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		108.9486	108.9486	8.0400e-003		109.1174
Total	**0.0671**	**0.1082**	**0.9332**	**1.3100e-003**	**0.1068**	**1.1200e-003**	**0.1079**	**0.0283**	**1.0300e-003**	**0.0294**		**108.9486**	**108.9486**	**8.0400e-003**		**109.1174**

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					0.0207	0.0000	0.0207	2.2300e-003	0.0000	2.2300e-003			0.0000			0.0000
Off-Road	0.6226	12.5688	17.4668	0.0255		0.6446	0.6446		0.6446	0.6446	0.0000	2,647.5237	2,647.5237	0.7986		2,664.2940
Total	**0.6226**	**12.5688**	**17.4668**	**0.0255**	**0.0207**	**0.6446**	**0.6653**	**2.2300e-003**	**0.6446**	**0.6469**	**0.0000**	**2,647.5237**	**2,647.5237**	**0.7986**		**2,664.2940**

3.2 Site Preparation & Excavation - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0671	0.1082	0.9332	1.3100e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		108.9486	108.9486	8.0400e-003		109.1174
Total	**0.0671**	**0.1082**	**0.9332**	**1.3100e-003**	**0.1068**	**1.1200e-003**	**0.1079**	**0.0283**	**1.0300e-003**	**0.0294**		**108.9486**	**108.9486**	**8.0400e-003**		**109.1174**

3.3 Rock Placement - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0857	0.0000	0.0857	0.0112	0.0000	0.0112			0.0000			0.0000
Off-Road	2.0305	21.4839	15.6963	0.0225		1.2649	1.2649		1.1637	1.1637		2,342.2066	2,342.2066	0.7065		2,357.0429
Total	**2.0305**	**21.4839**	**15.6963**	**0.0225**	**0.0857**	**1.2649**	**1.3505**	**0.0112**	**1.1637**	**1.1749**		**2,342.2066**	**2,342.2066**	**0.7065**		**2,357.0429**

3.3 Rock Placement - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0601	10.2886	14.7720	0.0273	0.6447	0.1517	0.7964	0.1765	0.1396	0.3161		2,741.1594	2,741.1594	0.0201		2,741.5817
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	0.0671	0.1082	0.9332	1.3100e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		108.9486	108.9486	8.0400e-003		109.1174
Total	**1.1272**	**10.3968**	**15.7053**	**0.0286**	**0.7515**	**0.1529**	**0.9043**	**0.2048**	**0.1406**	**0.3454**		**2,850.1080**	**2,850.1080**	**0.0282**		**2,850.6991**

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					0.0334	0.0000	0.0334	4.3900e-003	0.0000	4.3900e-003			0.0000			0.0000
Off-Road	0.5535	11.2330	17.0667	0.0225		0.6179	0.6179		0.6179	0.6179	0.0000	2,342.2066	2,342.2066	0.7065		2,357.0429
Total	**0.5535**	**11.2330**	**17.0667**	**0.0225**	**0.0334**	**0.6179**	**0.6513**	**4.3900e-003**	**0.6179**	**0.6223**	**0.0000**	**2,342.2066**	**2,342.2066**	**0.7065**		**2,357.0429**

3.3 Rock Placement - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0601	10.2886	14.7720	0.0273	0.6447	0.1517	0.7964	0.1765	0.1396	0.3161		2,741.1594	2,741.1594	0.0201		2,741.5817
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	0.0671	0.1082	0.9332	1.3100e-003	0.1068	1.1200e-003	0.1079	0.0283	1.0300e-003	0.0294		108.9486	108.9486	8.0400e-003		109.1174
Total	**1.1272**	**10.3968**	**15.7053**	**0.0286**	**0.7515**	**0.1529**	**0.9043**	**0.2048**	**0.1406**	**0.3454**		**2,850.1080**	**2,850.1080**	**0.0282**		**2,850.6991**

3.4 Backfilling - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0633	10.7815	7.8463	0.0110		0.6961	0.6961		0.6404	0.6404		1,145.3811	1,145.3811	0.3455		1,152.6363
Total	**1.0633**	**10.7815**	**7.8463**	**0.0110**		**0.6961**	**0.6961**		**0.6404**	**0.6404**		**1,145.3811**	**1,145.3811**	**0.3455**		**1,152.6363**

3.4 Backfilling - 2016

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2704	5.7164	8.3381	0.0110		0.3454	0.3454		0.3454	0.3454	0.0000	1,145.3811	1,145.3811	0.3455		1,152.6363
Total	**0.2704**	**5.7164**	**8.3381**	**0.0110**		**0.3454**	**0.3454**		**0.3454**	**0.3454**	**0.0000**	**1,145.3811**	**1,145.3811**	**0.3455**		**1,152.6363**

3.4 Backfilling - 2016

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466367	0.039941	0.201694	0.176131	0.050793	0.007244	0.019307	0.021320	0.004510	0.001931	0.007565	0.000935	0.002260

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

ELECTRICITY USE

DUTY PUMP

NUMBER OF DUTY PUMPS	1	
OPERATIONAL MONTHS PER YEAR	3	
OPERATIONAL HOURS/DAY	4	
OPERATIONAL HOURS/YR	360	
NUMBER OF PUMPS	1	
PUMP POWER SOURCE	ELECTRIC	
PUMP SIZE	100	HP
ANNUAL ELECTRICITY USE	26,845	KWhr/year

JOCKEY PUMP

NUMBER OF DUTY PUMPS	1	
OPERATIONAL MONTHS PER YEAR	3	
OPERATIONAL HOURS/DAY	4	
OPERATIONAL HOURS/YR	360	
NUMBER OF PUMPS	1	
PUMP POWER SOURCE	ELECTRIC	
PUMP SIZE	25	HP
ANNUAL ELECTRICITY USE	6,711	KWhr/year

TOTAL ANNUAL ENERGY USE (KWH):	33,557
TOTAL ANNUAL ENERGY USE (MWH):	33.56

	INTENSITY FACTORS (LB/MWH)	EMISSIONS (LBS/YR)	EMISSIONS (LBS/DAY)	EMISSIONS (TONS/YR)	GWP	CO2e
CO2	564.6	18946.00	4736.50	9.47	1	9.47
CH4	0.025	0.84	0.21	0.00	25	0.01
N2O	0.005	0.17	0.04	0.00	298	0.02
ROG	0.01	0.34	0.08	0.00		
NOX	1.15	38.59	9.65	0.02		
CO	0.2	6.71	1.68	0.00		
SOX	0.12	4.03	1.01	0.00		
PM10	0.04	1.34	0.34	0.00		
						9.51

Criteria pollutant intensity factors derived from SCAQMD's CEQA Air Quality Handbook, Table A9-11-B (SCAQMD, 1993)

**CO2 intensity factors derived from CalEEMod for PG&E, includes RPS adjustment.*

Specific pumps to be installed/specifications not yet identified.

EMERGENCY GENERATOR

Size	250	BHP	*(Estimated based on pump size. Actual size may vary.)*
Hrs/Day Operation/Testing	1		
Hrs/Year Operation/Testing	50		
Hours/Day Emergency Use	24		
Sulfur content	0.0015 wt% S		
Load Factor Testing:	0.50		
Load Factor Operational:	0.75		

	g/hp-hr	lb/day	lb/yr
NOX	3.63	36.0	75.0
CO	1.104	11.0	22.8
PM10	0.1	1.0	2.1
SO2	0.006	0.1	0.1
ROG	0.287	2.8	5.9
CO2	568.3	5637.9	11745.6
CH4	0.025	0.2	0.5
MTCO2e/YR			5.3

Daily emissions are conservatively based on 24 hours of daily operation and operational load factor of 0.75. Annual emissions assume 50 hours of operation, 0.75 load factor. Testing-related emissions typically operate at lower load levels and would be less. Emissions factors derived from CalEEMod User Manual, Appendix D, Table 3.4 for generators up to 250 bhp. Specific genset to be installed/specifications not yet identified.

AB2588 Health Risk Screening/Facility Risk Prioritization

AB2588 requires the prioritization of facilities as either high, intermediate, or low priority to determine if a facility needs to conduct a health risk assessment. Facilities exceeding total facility score of 10 are considered to potentially exceed the MBUAPCD's significance thresholds for human health risk and would be considered "high priority." A more detailed health risk assessment would be required for "high priority" facilities. Toxics Best Control Technology (TBACT) is typically required for facilities identified as "intermediate priority" facilities. "Low priority" facilities are typically not considered to result in a significant impact.

Project: Carmel Lagoon
Source: Emergency Generator
Receptor Distance: 12 m
Release Height: 4 m
Facility Risk Category: Intermediate Priority
Exceeds Thresholds/High Priority?: No

Total Facility Score	Category
TS > 10	High Priority
1 < TS ≤ 10	Intermediate Priority
TS ≤ 1	Low Priority

The spreadsheet below was based on the CAPCOA - Dispersion Adjustment Procedure.

cancer $TS = \{\Sigma (E_C) * (P_C) * (RP) * (D_h)\} * (128)$
acute $TS = \Sigma (E_C) / (P_C) * (RP) * (D_h) * (25)$
chronic $TS = \Sigma (E_C) / (P_C) * (RP) * (D_h) * (2.5)$

			E_c			P_c	Chronic		Acute		D_h	RP	Total Scrores		
			Emissions										Cancer	Chronic	Acute
													4.84	0.72	0.00
													Individual Priority Scores		
Emittent ID No. (CAS)	Substance Name	Degree of Accuracy (lb/yr)	Annual (lb/yr) (a)	Avg Hourly (lb/hr) (b)	Max Hourly (lb/hr) (c)	Unit Risk Value $(ug/m^3)^{-1}$ (d)	Chronic REL (ug/m3) (e)	Target Organ (f)	Acute REL (ug/m3) (g)	Target Organ (f)	Dispersion Adjustment Factors (h)	Receptor Proximity (i)	Cancer T_{cancer} (j)	Chronic $T_{chronic}$ (k)	Acute T_{acute} (l)
9901	diesel exhaust (particulate emissions)	2	2.10E+00	2.40E-02	2.40E-02	3.00E-04	5.00E+00	R	0.00E+00		60	1.00	4.84E+00	7.20E-01	
						0.00E+00	0.00E+00		0.00E+00		60	1.00			
						0.00E+00	0.00E+00		0.00E+00		60	1.00			
						0.00E+00	0.00E+00		0.00E+00		60	1.00			

	Facility Prioritization Scores		
Target Organs (TO)	cancer	chronic	acute
Alimentary Tract (A)		**0.00**	**0.00**
Cardiovascular (C)		**0.00**	**0.00**
Eye (E)		**0.00**	**0.00**
gastrointestinal/liver (G)		**0.00**	**0.00**
Headache/Nausea (HN)		**0.00**	**0.00**
Hematological (H)		**0.00**	**0.00**
Immune System (I)		**0.00**	**0.00**
Kidney (K)		**0.00**	**0.00**
Nervous System (N)		**0.00**	**0.00**
Reproductive/Developmental (RD)		**0.00**	**0.00**
Respiratory (R)		**0.72**	**0.00**
Skin (S)		**0.00**	**0.00**
Total Cancer:	**4.838**		

Notes:
(d) URVs = OEHHA/ARB Consolidated Table, updated May 13, 2015
(e) Chronic RELs = OEHHA/ARB Consolidated Table, updated May 13, 2015
(f) The impacts of acute and chronic non-cancer compounds are organ-specific. Therefore chronic non-cancer and acute prioritization scores are organ-specific. Those facility scores include the total contributions to specific target organs (TO) and are not just totals for each category.
(g) Acute RELs = OEHHA/ARB Consolidated Table, updated May 13, 2015

* chromium 6+ (hexavalent) includes barium chromate, calcium chromate, lead chromate, sodium dichromate or strontium chromate assuming exposure by inhalation
** unit risk value for dioxins and furans is listed for the worst case. If information on individual compounds is known, look up specific risk values in the Consolidated Table of OEHHA/ARB approved risk assessment health values
*** low risk, for use in cases where congeners with more than four chlorines comprise less than one-half percent of total polychlorinated biphenyls
**** high risk, for use in cases where congeners with more than four chlorines do not comprise less than one-half percent of total polychlorinated biphenyls

Source: MBUAPCD 2/29/2016

Carmel Lagoon - Maintenance

Monterey County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	1.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes maintenance related vehicle trips, painting of metal components, and off-road equipment use. Operational energy use is calculated separately.

Land Use - .

Construction Phase - Maintenance trips assume 4 trips/day, one day per week (52 days/year).

Off-road Equipment - Maintenance activities include use of 1 air compressor for painting of metal components and 1 off-road piece of equipment for landscape maintenance.

Trips and VMT - Assumes 4 worker trips per day.

Architectural Coating - Assumes an estimated 600 sqft repainted annually

Vehicle Trips - Operational emissions module not used for this model run. Refer to construction module for maintenance-related emissions.

Vechicle Emission Factors -

Vechicle Emission Factors - ,

Vechicle Emission Factors - .

Consumer Products - .

Area Coating - .

Landscape Equipment - .

Energy Use - .

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1.00	600.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2.00	600.00
tblAreaCoating	Area_Nonresidential_Interior	2	0
tblConstructionPhase	NumDays	5.00	52.00
tblLandUse	LandUseSquareFeet	0.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	LoadFactor	0.37	0.74
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	WorkerTripNumber	0.00	4.00

2.0 Emissions Summary

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					
2017	0.0267	0.1603	0.1357	1.9000e-004	8.3000e-004	0.0123	0.0131	2.2000e-004	0.0116	0.0119	0.0000	17.1547	17.1547	3.7400e-003	0.0000	17.2333
Total	**0.0267**	**0.1603**	**0.1357**	**1.9000e-004**	**8.3000e-004**	**0.0123**	**0.0131**	**2.2000e-004**	**0.0116**	**0.0119**	**0.0000**	**17.1547**	**17.1547**	**3.7400e-003**	**0.0000**	**17.2333**

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					
2017	0.0267	0.1603	0.1357	1.9000e-004	8.3000e-004	0.0123	0.0131	2.2000e-004	0.0116	0.0119	0.0000	17.1547	17.1547	3.7400e-003	0.0000	17.2333
Total	**0.0267**	**0.1603**	**0.1357**	**1.9000e-004**	**8.3000e-004**	**0.0123**	**0.0131**	**2.2000e-004**	**0.0116**	**0.0119**	**0.0000**	**17.1547**	**17.1547**	**3.7400e-003**	**0.0000**	**17.2333**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0000e-005**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	3/14/2017	5	52	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 600; Non-Residential Outdoor: 600 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Tractors/Loaders/Backhoes	1	6.00	84	0.74

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	2	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	6.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0193	0.1596	0.1294	1.8000e-004		0.0122	0.0122		0.0116	0.0116	0.0000	16.3896	16.3896	3.6900e-003	0.0000	16.4671
Total	**0.0263**	**0.1596**	**0.1294**	**1.8000e-004**		**0.0122**	**0.0122**		**0.0116**	**0.0116**	**0.0000**	**16.3896**	**16.3896**	**3.6900e-003**	**0.0000**	**16.4671**

3.2 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.3000e-004	7.0000e-004	6.2400e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7651	0.7651	5.0000e-005	0.0000	0.7662
Total	**4.3000e-004**	**7.0000e-004**	**6.2400e-003**	**1.0000e-005**	**8.3000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.7651**	**0.7651**	**5.0000e-005**	**0.0000**	**0.7662**

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	6.9500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0193	0.1596	0.1294	1.8000e-004		0.0122	0.0122		0.0116	0.0116	0.0000	16.3896	16.3896	3.6900e-003	0.0000	16.4671
Total	**0.0263**	**0.1596**	**0.1294**	**1.8000e-004**		**0.0122**	**0.0122**		**0.0116**	**0.0116**	**0.0000**	**16.3896**	**16.3896**	**3.6900e-003**	**0.0000**	**16.4671**

3.2 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	4.3000e-004	7.0000e-004	6.2400e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7651	0.7651	5.0000e-005	0.0000	0.7662
Total	**4.3000e-004**	**7.0000e-004**	**6.2400e-003**	**1.0000e-005**	**8.3000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.7651**	**0.7651**	**5.0000e-005**	**0.0000**	**0.7662**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466577	0.039911	0.201733	0.176253	0.050904	0.007245	0.019183	0.021019	0.004490	0.001936	0.007540	0.000947	0.002261

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	1.0000e-005	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Unmitigated	0.0000	0.0000	0.0000	0.0000
Mitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Vegetation

Carmel Lagoon - Maintenance

Monterey County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	1.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes maintenance related vehicle trips, painting of metal components, and off-road equipment use. Operational energy use is calculated separately.

Land Use - .

Construction Phase - Maintenance trips assume 4 trips/day, one day per week (52 days/year).

Off-road Equipment - Maintenance activities include use of 1 air compressor for painting of metal components and 1 off-road piece of equipment for landscape maintenance.

Trips and VMT - Assumes 4 worker trips per day.

Architectural Coating - Assumes an estimated 600 sqft repainted annually

Vehicle Trips - Operational emissions module not used for this model run. Refer to construction module for maintenance-related emissions.

Vechicle Emission Factors -

Vechicle Emission Factors - ,

Vechicle Emission Factors - .

Consumer Products - .

Area Coating - .

Landscape Equipment - .

Energy Use - .

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1.00	600.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2.00	600.00
tblAreaCoating	Area_Nonresidential_Interior	2	0
tblConstructionPhase	NumDays	5.00	52.00
tblLandUse	LandUseSquareFeet	0.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	LoadFactor	0.37	0.74
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	WorkerTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.0283	6.1625	5.2255	7.4400e-003	0.0329	0.4710	0.5039	8.7200e-003	0.4472	0.4559	0.0000	729.2887	729.2887	0.1586	0.0000	732.6200
Total	**1.0283**	**6.1625**	**5.2255**	**7.4400e-003**	**0.0329**	**0.4710**	**0.5039**	**8.7200e-003**	**0.4472**	**0.4559**	**0.0000**	**729.2887**	**729.2887**	**0.1586**	**0.0000**	**732.6200**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.0283	6.1625	5.2255	7.4400e-003	0.0329	0.4710	0.5039	8.7200e-003	0.4472	0.4559	0.0000	729.2887	729.2887	0.1586	0.0000	732.6200
Total	**1.0283**	**6.1625**	**5.2255**	**7.4400e-003**	**0.0329**	**0.4710**	**0.5039**	**8.7200e-003**	**0.4472**	**0.4559**	**0.0000**	**729.2887**	**729.2887**	**0.1586**	**0.0000**	**732.6200**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	3.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	3/14/2017	5	52	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 600; Non-Residential Outdoor: 600 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Tractors/Loaders/Backhoes	1	6.00	84	0.74

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	2	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2674					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7438	6.1389	4.9776	7.0100e-003		0.4707	0.4707		0.4469	0.4469		694.8644	694.8644	0.1564		698.1485
Total	**1.0112**	**6.1389**	**4.9776**	**7.0100e-003**		**0.4707**	**0.4707**		**0.4469**	**0.4469**		**694.8644**	**694.8644**	**0.1564**		**698.1485**

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	0.0171	0.0236	0.2479	4.3000e-004	0.0329	3.3000e-004	0.0332	8.7200e-003	3.0000e-004	9.0100e-003		34.4243	34.4243	2.2500e-003		34.4715
Total	**0.0171**	**0.0236**	**0.2479**	**4.3000e-004**	**0.0329**	**3.3000e-004**	**0.0332**	**8.7200e-003**	**3.0000e-004**	**9.0100e-003**		**34.4243**	**34.4243**	**2.2500e-003**		**34.4715**

3.2 Architectural Coating - 2017

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	0.2674					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7438	6.1389	4.9776	7.0100e-003		0.4707	0.4707		0.4469	0.4469	0.0000	694.8644	694.8644	0.1564		698.1485
Total	**1.0112**	**6.1389**	**4.9776**	**7.0100e-003**		**0.4707**	**0.4707**		**0.4469**	**0.4469**	**0.0000**	**694.8644**	**694.8644**	**0.1564**		**698.1485**

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	0.0171	0.0236	0.2479	4.3000e-004	0.0329	3.3000e-004	0.0332	8.7200e-003	3.0000e-004	9.0100e-003		34.4243	34.4243	2.2500e-003		34.4715
Total	**0.0171**	**0.0236**	**0.2479**	**4.3000e-004**	**0.0329**	**3.3000e-004**	**0.0332**	**8.7200e-003**	**3.0000e-004**	**9.0100e-003**		**34.4243**	**34.4243**	**2.2500e-003**		**34.4715**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466577	0.039911	0.201733	0.176253	0.050904	0.007245	0.019183	0.021019	0.004490	0.001936	0.007540	0.000947	0.002261

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	3.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**3.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**3.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Carmel Lagoon - Maintenance

Monterey County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	1.00	1.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.8	**Precipitation Freq (Days)**	55
Climate Zone	4			**Operational Year**	2017
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes maintenance related vehicle trips, painting of metal components, and off-road equipment use. Operational energy use is calculated separately.

Land Use - .

Construction Phase - Maintenance trips assume 4 trips/day, one day per week (52 days/year).

Off-road Equipment - Maintenance activities include use of 1 air compressor for painting of metal components and 1 off-road piece of equipment for landscape maintenance.

Trips and VMT - Assumes 4 worker trips per day.

Architectural Coating - Assumes an estimated 600 sqft repainted annually

Vehicle Trips - Operational emissions module not used for this model run. Refer to construction module for maintenance-related emissions.

Vechicle Emission Factors -

Vechicle Emission Factors - ,

Vechicle Emission Factors - .

Consumer Products - .

Area Coating - .

Landscape Equipment - .

Energy Use - .

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1.00	600.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2.00	600.00
tblAreaCoating	Area_Nonresidential_Interior	2	0
tblConstructionPhase	NumDays	5.00	52.00
tblLandUse	LandUseSquareFeet	0.00	1.00
tblLandUse	LotAcreage	0.00	1.00
tblOffRoadEquipment	HorsePower	97.00	84.00
tblOffRoadEquipment	LoadFactor	0.37	0.74
tblProjectCharacteristics	OperationalYear	2014	2017
tblTripsAndVMT	WorkerTripNumber	0.00	4.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.0291	6.1687	5.2306	7.4100e-003	0.0329	0.4710	0.5039	8.7200e-003	0.4472	0.4559	0.0000	727.1147	727.1147	0.1586	0.0000	730.4460
Total	**1.0291**	**6.1687**	**5.2306**	**7.4100e-003**	**0.0329**	**0.4710**	**0.5039**	**8.7200e-003**	**0.4472**	**0.4559**	**0.0000**	**727.1147**	**727.1147**	**0.1586**	**0.0000**	**730.4460**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	1.0291	6.1687	5.2306	7.4100e-003	0.0329	0.4710	0.5039	8.7200e-003	0.4472	0.4559	0.0000	727.1147	727.1147	0.1586	0.0000	730.4460
Total	**1.0291**	**6.1687**	**5.2306**	**7.4100e-003**	**0.0329**	**0.4710**	**0.5039**	**8.7200e-003**	**0.4472**	**0.4559**	**0.0000**	**727.1147**	**727.1147**	**0.1586**	**0.0000**	**730.4460**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	3.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**3.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	1/1/2017	3/14/2017	5	52	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 600; Non-Residential Outdoor: 600 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Architectural Coating	Tractors/Loaders/Backhoes	1	6.00	84	0.74

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	2	4.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.2674					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7438	6.1389	4.9776	7.0100e-003		0.4707	0.4707		0.4469	0.4469		694.8644	694.8644	0.1564		698.1485
Total	**1.0112**	**6.1389**	**4.9776**	**7.0100e-003**		**0.4707**	**0.4707**		**0.4469**	**0.4469**		**694.8644**	**694.8644**	**0.1564**		**698.1485**

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	0.0179	0.0297	0.2530	4.0000e-004	0.0329	3.3000e-004	0.0332	8.7200e-003	3.0000e-004	9.0100e-003		32.2504	32.2504	2.2500e-003		32.2976
Total	**0.0179**	**0.0297**	**0.2530**	**4.0000e-004**	**0.0329**	**3.3000e-004**	**0.0332**	**8.7200e-003**	**3.0000e-004**	**9.0100e-003**		**32.2504**	**32.2504**	**2.2500e-003**		**32.2976**

3.2 Architectural Coating - 2017

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	0.2674					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7438	6.1389	4.9776	7.0100e-003		0.4707	0.4707		0.4469	0.4469	0.0000	694.8644	694.8644	0.1564		698.1485
Total	**1.0112**	**6.1389**	**4.9776**	**7.0100e-003**		**0.4707**	**0.4707**		**0.4469**	**0.4469**	**0.0000**	**694.8644**	**694.8644**	**0.1564**		**698.1485**

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	0.0179	0.0297	0.2530	4.0000e-004	0.0329	3.3000e-004	0.0332	8.7200e-003	3.0000e-004	9.0100e-003		32.2504	32.2504	2.2500e-003		32.2976
Total	**0.0179**	**0.0297**	**0.2530**	**4.0000e-004**	**0.0329**	**3.3000e-004**	**0.0332**	**8.7200e-003**	**3.0000e-004**	**9.0100e-003**		**32.2504**	**32.2504**	**2.2500e-003**		**32.2976**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.466577	0.039911	0.201733	0.176253	0.050904	0.007245	0.019183	0.021019	0.004490	0.001936	0.007540	0.000947	0.002261

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	3.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**3.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.0000e-005					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**3.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation