HELIX Environmental Planning

Bernardo Shores Project

Air Quality and Greenhouse Gas Technical Report

September 15, 2014

Prepared for:
The Bernardo Shores Project Owner, LLC
c/o Integral Communities (as its agent)
2235 Encinitas Boulevard, Suite 216
Encinitas, CA 92024

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A Emission Calculations (Provided in a CD in back of report)

LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADT	average daily trips
AEP	Association of Environmental Professionals
APCD	Air Pollution Control District
API	American Petroleum Institute
BAU	business as usual
CAAQS	California Ambient Air Quality Standards
CAA	Clean Air Act
CAFE	corporate average fuel economy
CalEPA	California Environmental Protection Agency
CalEEMod	California Emission Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEC	California Energy Commission
CFC	chlorofluorocarbon
CEQA	California Environmental Quality Act
City	City of Imperial Beach
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
DPM	diesel particulate matter
DU	dwelling unit
EPIC	Energy Policy Initiative Center
^oF	Fahrenheit
FHWA	Federal Highway Administration
g/l	gallons per liter
g/L	grams per liter
GCC	global climate change
GHG	greenhouse gas
GWP	global warming potential
GVWR	gross vehicle weight rating

LIST OF ACRONYMS AND ABBREVIATIONS (cont.)

HAPs	Hazardous Air Pollutants
HFCs	hydrofluorocarbons
HI	hazard index
hp	horsepower
H_2S	hydrogen sulfide
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LOS	level of service
mg/m^3	milligrams per cubic meter
MMT	million metric tons
MT	metric tons
MPOs	Metropolitan Planning Organizations
MSAT	mobile source air toxics
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NALF	Naval Air Landing Field
NDIR	Non-Dispersive Infrared Photometry
NLEV	National Low Emission Vehicle
NOA	Naturally Occurring Asbestos
NO	nitrogen oxide
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
NSHP	New Solar Home Partnership
O_3	ozone
OAL	Office of Administrative Law
OEHHA	Office of Environmental Health Hazard Assessment
OPR	Office of Planning and Research
Panel	United Nations Intergovernmental Panel on Climate Change
Pb	lead
PFCs	perfluorocarbons
$PM_{2.5}$	particulate matter of less than 2.5 microns in size
PM_{10}	particulate matter of less than 10 microns in size
Ppb	parts per billion
ppm	parts per million
Protocol	Transportation Project-Level Carbon Monoxide Protocol
PUC	Public Utilities Commission

LIST OF ACRONYMS AND ABBREVIATIONS (cont.)

RAQS	Regional Air Quality Strategy
RELs	reference exposure levels
RFG	reformulated gasoline
ROG	reactive organic gases
RTAC	Regional Targets Advisory Committee
RV	recreational vehicle
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SF_6	sulfur hexafluoride
SO_2	sulfur dioxide
SO_X	oxides of sulfur
SR	State Route
TACs	toxic air contaminants
Tg	teragrams
TIA	Traffic Impact Analysis
$\mu g/m^3$	micrograms per cubic meter
UNFCCC	United Nations Framework Convention on Climate Change
USEPA	U.S. Environmental Protection Agency
U.S.	United States
VOCs	Volatile Organic Compounds
VMT	vehicle miles traveled
WRCC	Western Regional Climate Center

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1.0 INTRODUCTION

This report presents an assessment of potential air pollutant and greenhouse gas impacts associated with proposed Bernardo Shores Project. The Bernardo Shores Project is located in the northwestern portion of the City of Imperial Beach (City) in San Diego County (Figure 1, *Regional Location Map*).

The Bernardo Shores Project Owner, LLC (Project applicant) is acquiring 9.31 acres (plus a contiguous 0.76 acre parcel that is narrow 20 feet by 1,400 feet parcel) of land currently designated for the development of up to 43 dwelling units (DUs) per acre. The Project consists of a gated residential townhouse community with 193 DUs and related facilities, including the phased construction of a new bike path connection to the Bayshore Bikeway. The property is located along the north side of State Route 75 (also known as SR-75/Palm Avenue) at the intersection of Rainbow Drive approximately ¾ of mile from the Pacific Ocean. Principal site access is from SR-75. Figure 1 provides the regional location map of the Project, and Figure 2, *Project Location Map*, provides the site location map of the Project site.

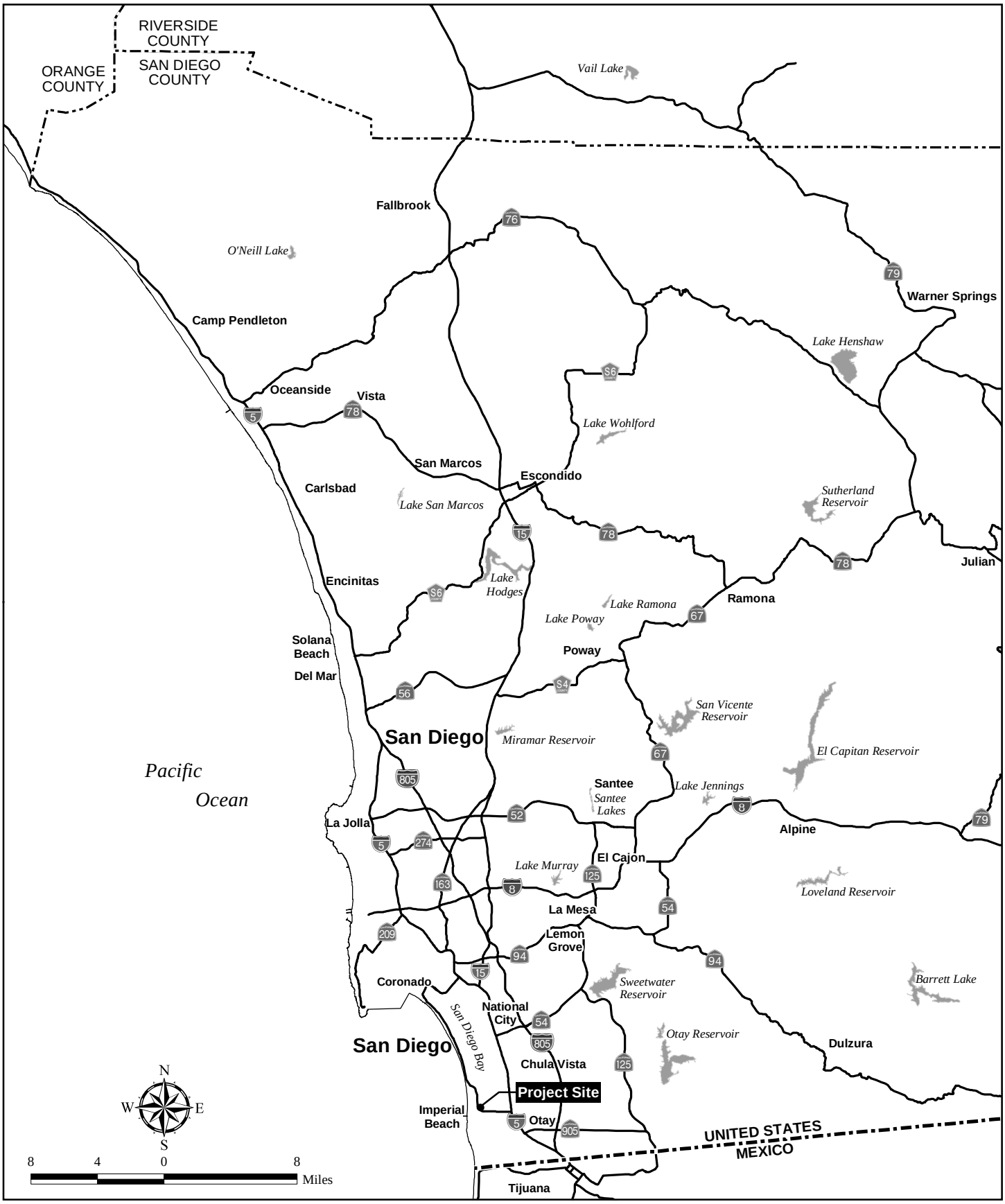
The site is currently operating as a 124-space recreational vehicle (RV) park, called the Bernardo Shores RV park. The property is zoned C/MU-1 (General Commercial & Mixed Use). According to the City, attached multi-family residential units are permitted within C/MU-1 at a maximum density of one DU per 1,000 square feet.

2.0 EXISTING CONDITIONS

2.1 CLIMATE AND METEOROLOGY

The climate in southern California, including the San Diego Air Basin (SDAB), is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast experience moderate temperatures and comfortable humidity. Precipitation is limited to a few storms during the winter season. The climate of San Diego County is characterized by hot, dry summers, and mild, wet winters.

Figure 3, *Wind Rose – Imperial Beach NALF Monitoring Station***,** presents a wind rose from the Imperial Beach Naval Air Landing Field (NALF) meteorological monitoring station, which represents general meteorological trends in the Project area. Imperial Beach NALF is the closest meteorological monitoring station to the Project site. Wind monitoring data recorded at the Imperial Beach NALF station indicate that the predominant wind direction in the vicinity of proposed Project is from the west. Average wind speed in the vicinity is approximately seven miles per hour. The annual average temperature in the project area is approximately 54 degrees Fahrenheit (ºF) during the winter and approximately 68ºF during the summer. Total precipitation in the Project area averages approximately eight inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center 2013).



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Regional Location Map

BERNARDO SHORES

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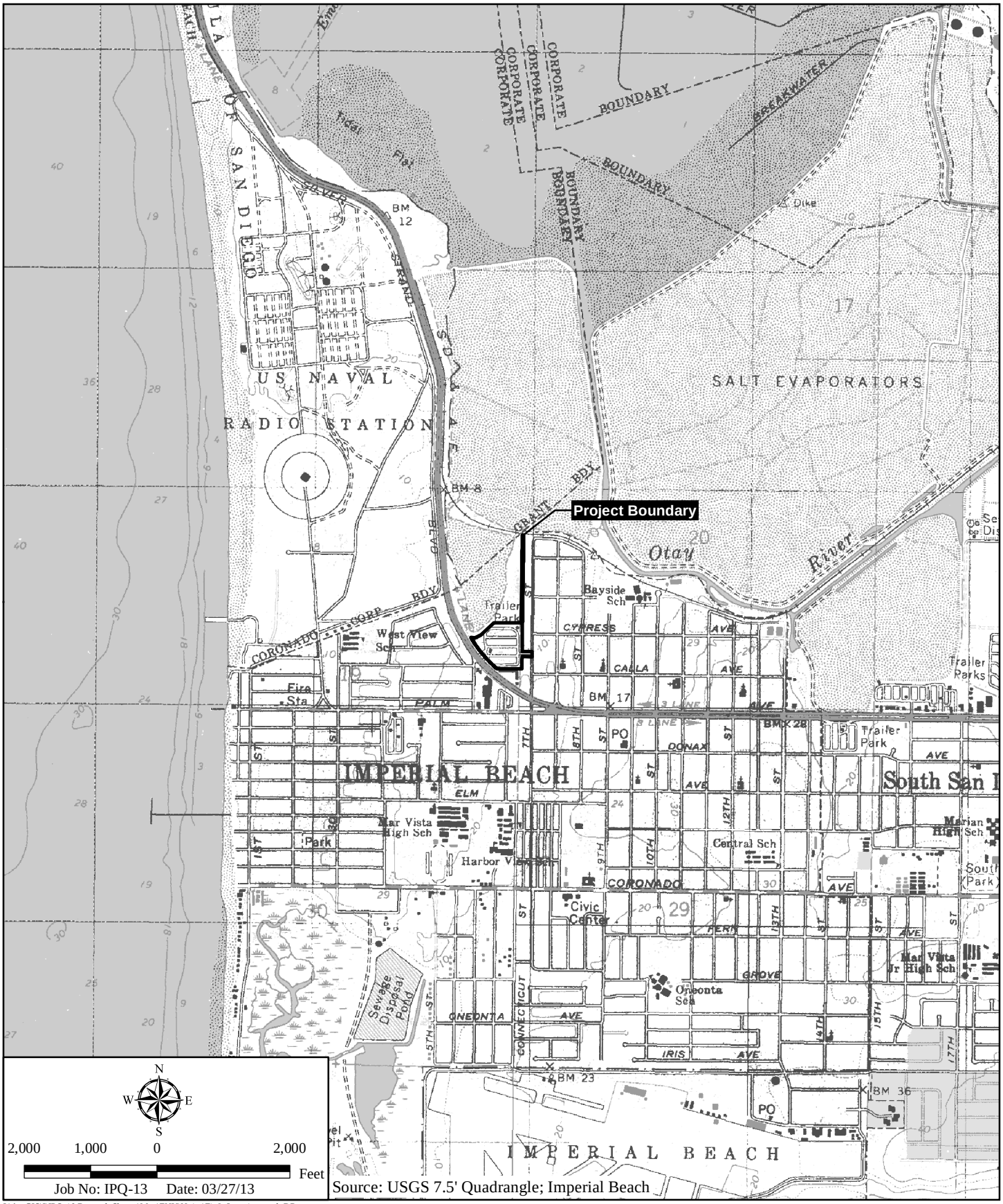
Figure 1



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Project Location Map

BERNARDO SHORES

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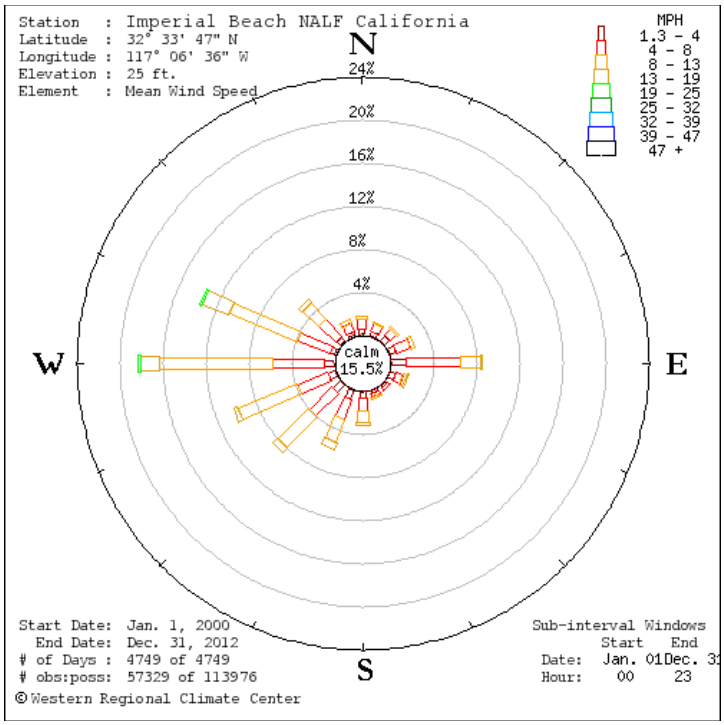
Figure 2



Source: WRCC 2013.

Figure 3
Wind Rose – Imperial Beach NALF Monitoring Station

The atmospheric conditions of the SDAB contribute to the region's air quality problems. Due to its climate, the SDAB experiences frequent temperature inversions (temperature increases as altitude increases). Temperature inversions prevent air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere, creating a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and nitrogen dioxide (NO_2) react under strong sunlight, creating smog. Light, daytime winds, predominately from the west, further aggravate the condition by driving the air pollutants inland, toward the foothills. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and NO_2 emissions. High NO_2 levels usually occur during autumn or winter, on days with summer-like conditions (SDAPCD 2008a).

High air pollution levels in coastal communities of San Diego often occur when polluted air from the South Coast Air Basin, particularly Los Angeles, travels southwest over the ocean at night, and is brought onshore into San Diego by the sea breeze during the day. Smog transported from the Los Angeles area is a key factor on more than 50-percent of the days San Diego exceeds clean air standards. Ozone (O_3) and precursor emissions are transported to San Diego during relatively mild Santa Ana weather conditions. However, during strong Santa Ana weather conditions, pollutants are pushed far out to sea and miss San Diego. When smog is blown in from the South Coast Air Basin at ground level, the highest O_3 concentrations are measured at coastal and near-coastal monitoring stations. When the transported smog is elevated, coastal

sites may be passed over, and the transported O_3 is measured further inland and on the mountain slopes.

Current Climate Change Effects

Many researchers studying California's climate believe that changes in the earth's climate have already affected California, and will continue to do so in the future. Projected future climate change may affect California in a variety of ways. Public health may suffer due to greater temperature extremes and more frequent extreme weather events, increases in transmission of infectious disease, and increases in air pollution. Agriculture is especially vulnerable to altered temperature and rainfall patterns and related pest problems. Forest ecosystems would face increased fire hazards and would be more susceptible to pests and diseases. The Sierra snowpack that functions as the state's largest reservoir could shrink by a third by the year 2060, and to half its historic size by the year 2090. Runoff that fills reservoirs is expected to start in midwinter, not spring, and rain falling on snow is expected to trigger more flooding. The California coast is likely to face a rise in sea level that could threaten the shorelines. Sea-level rise and storm surges could lead to flooding of low-lying property, loss of coastal wetlands, erosion of cliffs and beaches, saltwater contamination of drinking water, and damage to roads, causeways, and bridges.

2.2 AIR POLLUTANTS OF CONCERN

This section provides an introduction to the air pollution of concern, with more details regarding each category provided in Sections 2.3 through 2.5.

2.2.1 Criteria Pollutants

Federal and state laws regulate the air pollutants emitted into the ambient air by stationary and mobile sources. These regulated air pollutants are known as "criteria pollutants" and are categorized as primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. CO, reactive organic gases (ROG), nitrogen oxides (NO_X), sulfur dioxide (SO_2), and most inhalable particulate matter (PM_{10}, $PM_{2.5}$), including lead (Pb) and fugitive dust, are primary air pollutants. Of these, CO, SO_2, $PM_{10,}$ and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone and NO_2 are the principal secondary pollutants.

2.2.2 Toxic Air Contaminants

The public's exposure to toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Clean Air Act (42 USC Sec. 7412[b]) is a TAC. Under State law,

the California Environmental Protection Agency (CalEPA), acting through the California Air Resources Board (CARB), is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health.

Cancer Risk

One of the primary health risks of concern due to exposure to TACs is the risk of contracting cancer. The carcinogenic potential of TACs is a particular public health concern because it is currently believed by many scientists that there is no "safe" level of exposure to carcinogens, that is, any exposure to a carcinogen poses some risk of causing cancer. Health statistics show that one in four people will contract cancer over their lifetime, or 250,000 in one million, from all causes including diet, genetic factors and lifestyle choices.

Noncancer Health Risks

Unlike carcinogens, for most noncarcinogens it is believed that there is a threshold level of exposure to the compound below which it will not pose a health risk. The CalEPA and California Office of Environmental Health Hazard Assessment (OEHHA) have developed reference exposure levels (RELs) for noncarcinogenic TACs that are health-conservative estimates of the levels of exposure at or below which health effects are not expected. The noncancer health risk due to exposure to a TAC is assessed by comparing the estimated level of exposure to the REL. The comparison is expressed as the ratio of the estimated exposure level to the REL, called the hazard index (HI).

2.2.3 Greenhouse Gases

Parts of the Earth's atmosphere act as an insulating blanket of just the right thickness, trapping sufficient solar energy to keep the global average temperature in a suitable range. The "blanket" is a collection of atmospheric gases called "greenhouse gases" (GHGs) based on the idea that the gases also 'trap' heat like the glass wall of a greenhouse. These gases, mainly water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), O_3, and hydrofluorocarbons (HFCs), all act effective global insulators, reflecting back to earth heat and infrared radiation. Without these natural greenhouse gases, Earth's temperature would be about 61ºF cooler. Human activities such as producing electricity with fossil fuels and driving vehicles have contributed to the elevated concentration of these gases in the atmosphere. This is turn, is causing the Earth's temperature to rise. A warmer Earth may lead to changes in rainfall patterns, much smaller polar ice caps, a rise in sea level, and a wide range of impacts on plants, wildlife, and humans (CalEPA 2006).

2.3 CRITERIA POLLUTANTS

2.3.1 Background

Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public. The following specific descriptions of health effects for each of these air

pollutants associated with project construction and operations are based on U.S. Environmental Protection Agency (USEPA 2007) and CARB (2009) information.

Ozone

O_3 is considered a photochemical oxidant, which is a chemical that is formed when Volatile Organic Compounds (VOCs) and NO_X, both by-products of fuel combustion, react in the presence of ultraviolet light. O_3 is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to O_3.

Carbon Monoxide

CO is a product of fuel combustion, and the main source of CO in the SDAB is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and can also affect mental alertness and vision.

Nitrogen Dioxide

NO_2 is also a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitrogen oxide (NO) with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter

Respirable particulate matter, or PM_{10}, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or $PM_{2.5}$, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in these size ranges have been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs.

Sulfur Dioxide

SO_2 is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead

Lead in the atmosphere occurs as particulate matter. Lead has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Lead has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Lead is also classified as a probable human carcinogen.

Sulfates

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

Hydrogen Sulfide

Hydrogen Sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the standard would result in exposure to a very disagreeable odor. In 1984, a CARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride

Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer, in humans.

2.3.2 <u>Air Quality Regulations (Criteria Pollutants)</u>

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. The USEPA is

responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called "criteria" pollutants). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

The USEPA established NAAQS for the protection of human health and the public welfare for six criteria pollutants: CO, SO_2, NO_2, O_3, PM_{10}, $PM_{2.5}$, and Pb. Ozone is not emitted directly, but is formed from a complex set of reactions involving O_3 precursors such as NO_X and ROG. Regulations relating to O_3, therefore, address emissions of NO_X and ROG.

The federal CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California CAA of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant.

On April 15, 2004, the SDAB was classified as a basic nonattainment area for the 8-hour NAAQS for O_3. The SDAB is an attainment area for the NAAQS for all other criteria pollutants. The SDAB currently falls under a national "maintenance plan" for CO, following a 1998 redesignation as a CO attainment area (SDAPCD 2008b). The SDAB is currently classified as a nonattainment area under the CAAQS for O_3 (serious nonattainment), PM_{10}, and $PM_{2.5}$ (CARB 2012a).

The CARB is the state regulatory agency with authority to enforce regulations to achieve and maintain the NAAQS and CAAQS. The CARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The CARB also reviews operations and programs of the local air districts, and requires each air district that is considered a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. Each local air district has the primary responsibility for the development and implementation of rules and regulations that reflect the strategy to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. In San Diego County, the attainment planning process is embodied in a regional air quality management plan developed jointly by the San Diego Air Pollution Control District (SDAPCD) and the San Diego Association of Governments (SANDAG).

Table 1, *Ambient Air Quality Standards*, presents a summary of the ambient air quality standards adopted by the federal and California CAAs.

Table 1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		-		
Fine Particulate Matter ($PM_{2.5}$)[8]	24-Hour	-	-	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3		
Carbon Monoxide (CO)	1-Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3	-	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	-	
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		-	-	-
Nitrogen Dioxide (NO_2)[9]	1-Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	0.100 ppm (188 µg/m^3)	-	Gas Phase Chemilumi-nescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[10]	1-Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m$^{3)}$	-	Ultraviolet Fluorescence; Spectro-photometry (Pararo-saniline Method
	3-Hour	-		-	0.5 ppm (1300 µg/m^3)	
	24-Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3) (for certain areas)[9]	-	
	Annual Arithmetic Mean	-		0.030 ppm (80 µg/m^3) (for certain areas)[9]	-	
Lead[11,12]	30-Day Average	1.5 µg/m^3	Atomic Absorption	-	-	- High Volume Sampler and Atomic Absorption
	Calendar Quarter	-		1.5 µg/m^3	Same as Primary Standard	
	Rolling 3-Month Average	-		0.15 µg/m^3		
Visibility Reducing Particles[13]	8-Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	**No Federal Standards**		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[11]	24-Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Notes for Table 1:

[1] California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM_{10}, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current federal policies.

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

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

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

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

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

[8] In 2012 the federal standard for $PM_{2.5}$ was decreased from 15 µg/m^3 to 12 µg/m^3.

[9] To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 and 0.100 ppm, respectively.

[10] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-hour average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards have are approved.

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

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

[13] In 1989, the ARB converted both the general statewide 10-mile visibility standards and the Lake Tahoe 20-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

ppm = parts per million; µg/m^3 = micrograms per cubic meter;
mg/m^3 = milligrams per cubic meter
Source: CARB June 6, 2012b with December 2012 $PM_{2.5}$ revisions.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The CARB has established the more stringent CAAQS for the six criteria pollutants through the California Clean Air Act of 1988 (CCAA), and also has established CAAQS for additional pollutants, including sulfates, H_2S, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant.

San Diego County Regional Air Quality Strategy

In San Diego, the SDAPCD is responsible for attainment planning required by the CCAA. The SDAPCD develops the Regional Air Quality Strategy (RAQS) to address strategies within the SDAB to attain and maintain air quality standards. The RAQS was initially adopted by the San Diego County Air Pollution Control Board on June 30, 1992, and amended on March 2, 1993, in response to CARB comments. SDAPCD further updated the RAQS on December 12, 1995; June 17, 1998; August 8, 2001; July 28, 2004, and April 22, 2009. The local RAQS, in combination with those from all other California nonattainment areas with serious (or worse) air quality problems, is submitted to the CARB, which develops the California State Implementation Plan (SIP).

The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the General Plan. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the General Plan and SANDAG's growth projections, the project might be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the SDAPCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for O_3.

On April 30, 2012, the SDAB was classified as a marginal nonattainment area for the 8-hour NAAQS for ozone. The SDAB is an attainment area for the NAAQS for all other criteria pollutants. The SDAB currently falls under a national "maintenance plan" for CO, following a 1998 redesignation as a CO attainment area (SDAPCD 2012). The SDAB is currently classified as a nonattainment area under the CAAQS for ozone (serious nonattainment), PM_{10}, and $PM_{2.5}$ (CARB 2012a). As of June 2013, no changes have been made to the information above.

2.3.3 Existing Criteria Pollutant Levels

The SDAPCD operates a network of 10 ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The closest monitoring station within proximity to the proposed Project area is the Chula Vista station located on 80 East J Street. Because the Chula Vista station discontinued monitoring 8-hour CO in 2010, data for 8-hour CO is obtained from the second closest available station: the San Diego station located at 1110 Beardsley Street.

Table 2, *Ambient Background Concentrations*, presents a summary of the ambient pollutant concentrations monitored at these stations during the years 2011 to 2013, the most recent years for which data are available (CARB 2014). The SDAB is currently designated as a nonattainment area for the state standards for PM_{10}, $PM_{2.5}$, 1-hour ozone, and 8-hour ozone, and the federal 8-hour standard for ozone. As shown, a violation of the state and federal 8-hour standards for O_3 occurred once in 2012; however, no other violations of state or federal standards occurred during this time frame.

Table 2 AMBIENT BACKGROUND CONCENTRATIONS			
Air Pollutant	**2011**	**2012**	**2013**
Ozone			
Max 1 Hour (ppm)	0.083	0.085	0.073
Days > CAAQS (0.09 ppm)	0	0	0
Max 8 Hour (ppm)	0.057	0.078	0.062
Days > NAAQS (0.075 ppm)	0	1	0
Days > CAAQS (0.070 ppm)	0	1	0
Particulate Matter (PM_{10})			
Max Daily (µg/m^3)	45.0	37.0	38.0
Days > NAAQS (150 µg/m^3)	0	0	0
Days > CAAQS (50 µg/m^3)	0	0	0
Particulate Matter ($PM_{2.5}$)			
Max Daily (µg/m^3)	27.9	34.3	21.9
Days > NAAQS (35 µg/m^3)	0	0	0
Nitrogen Dioxide (NO_2)			
Max 1 Hour (ppm)	0.057	0.057	0.057
Days > NAAQS (0.10 ppm)	0	0	0
Days > CAAQS (0.18 ppm)	0	0	0
Carbon Monoxide (CO)			
Max 8 Hour (ppm)	2.44	1.81	No Data
Days > NAAQS (9 ppm)	0	0	0
Days > CAAQS (9.0 ppm)	0	0	0
Max 1 Hour (ppm)	2.8	2.6	3.0
Days > NAAQS (35 ppm)	0	0	0
Days > CAAQS (20 ppm)	0	0	0
Sulfur Dioxide (SO_2)			
Max Daily Measurement (ppm)	0.002	No Data	No Data
Days > CAAQS (0.04 ppm)	0	0	0

Abbreviations:
> = exceed, ppm = parts per million, µg/m^3 = micrograms per cubic meter,
CAAQS = California Ambient Air Quality Standard, NAAQS = National Ambient Air Quality,
Standard Mean = Annual Arithmetic Mean
* No Data/Insufficient Data
Sources: www.arb.ca.gov (all pollutants except 1-hour CO), http://www.epa.gov/airdata/ (1-hour CO)

2.4 TOXIC AIR CONTAMINANTS

2.4.1 Toxic Air Contaminant Background

In addition to the criteria pollutants for which there are NAAQS and CAAQS, USEPA and CARB also regulate a list of air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners), and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics identified by the USEPA. MSATs are emitted from vehicle and non-road equipment. Some toxic compounds are present

in fuel and are emitted to the air when the fuel evaporates or passes through the engine unburned. Other toxics are emitted from the incomplete combustion of fuels or as by-products. Metal air toxics result from engine wear or from impurities in oil or gasoline.

The USEPA is the lead federal agency for administering the Federal CAA and has certain responsibilities regarding the health effects of MSATs. The USEPA issued a Final Rule on Controlling Emissions of Hazardous Air Pollutants from Mobile Sources 66 FR 17229 (March 29, 2001). In the 2001 rulemaking, 6 of the 21 MSATs were identified by USEPA as priority MSATs: *acetaldehyde, benzene, formaldehyde, diesel exhaust, acrolein,* and *1,3-butadiene* (66 FR 17230).

In its rule, USEPA also examined the impacts of existing and newly promulgated mobile source control programs, including its reformulated gasoline (RFG) program, its national low emission vehicle (NLEV) standards, its Tier 2 motor vehicle emissions standards and gasoline sulfur control requirements, and its proposed heavy duty engine and vehicle standards and on-highway diesel fuel sulfur control requirements. Between 2000 and 2020, the Federal Highway Administration (FHWA) projects that even with a 64 percent increase in vehicle miles traveled (VMT), these programs will reduce on-highway emissions of benzene, formaldehyde, 1,3-butadiene, and acetaldehyde by 57 to 65 percent, and will reduce on-highway diesel particulate matter (DPM) emissions by 87 percent.

In 1998, California identified DPM as a TAC based on its potential to cause cancer and other adverse health impacts. In addition to DPM, emissions from diesel-fueled engines include over 40 other cancer-causing substances. In September 2000, the CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled engines and vehicles. The goal of the Plan is to reduce DPM emissions and the associated health risk by 75 percent in 2010 and 85 percent or more by 2020 (from the base year 2000 level).

2.4.2 Toxic Air Contaminant Regulations

The CARB is responsible for developing statewide programs and strategies to reduce the emission of smog-forming pollutants and toxics by diesel-fueled mobile sources. The identification of DPM as a TAC in 1998 led the CARB to adopt the *Diesel Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles* in 2000 (CARB 2000). Included below are some of the resultant regulations that may be pertinent to this project.

California Diesel Fuel Regulations

This rule sets sulfur limitations for diesel fuel sold in California for use in on-road and off-road motor vehicles (CARB 2005). Under this rule, diesel fuel used in motor vehicles had been limited to 500 ppm sulfur since 1993. The sulfur limit was reduced to 15 ppm beginning September 1, 2006. (A federal diesel rule similarly limits sulfur content nationwide for on-road vehicles to 15 ppm, beginning October 15, 2006).

California In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, the CARB adopted a regulation to reduce DPM and NO_X emissions from in-use (existing) off-road heavy-duty diesel vehicles in California (CARB 2007c). Any person, business, or government agency that owns or operates diesel-powered off-road vehicles in California (except for agricultural or personal use, or for use at ports or intermodal rail yards) with engines with maximum power of 25 horsepower or greater are subject to the regulation. The regulation applies to vehicles commonly used in construction, mining, rental, airport ground support, and other industries. Out-of-state companies doing business in California are also subject to the regulation.

California On-road Heavy-duty Diesel Vehicles (In-use) Regulation

In 2008, the CARB approved a regulation (CARB 2008) to significantly reduce emissions from existing trucks and buses operating in California. Affected vehicles include on-road, heavy-duty, diesel-fueled vehicles with a gross vehicle weight rating (GVWR) greater than 14,000 pounds; yard trucks with off-road certified engines; and diesel-fueled shuttle vehicles of any GVWR. Out-of-state trucks and buses that operate in California are also subject to the regulation. Approximately 170,000 businesses in nearly all industry sectors in California, and almost a million vehicles that operate on California roads each year, are affected. Some common industry sectors that operate vehicles subject to the regulation include for-hire transportation; construction, manufacturing, retail, and wholesale trade; vehicle leasing and rental; bus lines; and agriculture.

Naturally Occurring Asbestos (NOA)

In July 2002, the CARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize naturally occurring asbestos emissions (CARB 2007d). The regulation requires application of best management practices to control fugitive dust in areas known to have NOA, and it requires notification to the local air district prior to commencement of ground-disturbing activities.

2.4.3 Existing Toxic Air Contaminant Levels

Ambient levels of selected TACs are measured by the CARB at several locations in southern California. The closest TAC monitoring stations to San Diego are in El Cajon and Chula Vista, approximately 10 miles northeast and 5 miles southwest of the proposed Project site, respectively. Both of these stations may potentially contain higher, as well as different, TAC concentrations than those near the proposed Project because of the distance from the project site and the myriad of land uses in those areas. Because DPM is not collected at the two monitoring stations, background concentrations for this TAC were obtained from the 2010 California Almanac of Emissions and Air Quality (CARB 2010). The annual average concentration for DPM in the SDAB is 1.4 micrograms per cubic meters ($\mu g/m^3$) with an estimated cancer risk of 420 chances in one million.

2.5 GREENHOUSE GASES

2.5.1 Greenhouse Gas Background

Global climate change refers to changes in average climatic conditions on Earth, as a whole, including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases that include water vapor, CO_2, CH_4 and N_2O. In addition to the naturally occurring gases, man-made compounds also act as greenhouse gases; common examples include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These compounds are the result of a number of activities including vehicular use, energy consumption/production, manufacturing, and cattle farming. These man-made compounds increase the natural concentration of GHGs in the atmosphere and are commonly believed to result in a phenomenon referred to as "global warming." A summary of the types of GHGs is provided below.

Types of Greenhouse Gases

Water vapor is the most abundant and variable GHG in the atmosphere. It is not considered a pollutant; it maintains a climate necessary for life. The main source of water vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other water bodies, sublimation (change from solid to gas) from ice and snow, and transpiration from plant leaves (Association of Environmental Professionals [AEP] 2007).

CO_2 is an odorless, colorless GHG. Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human-caused) sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. CO_2 concentrations are currently around 379 ppm of the total earth's atmosphere; some scientists say that concentrations may increase to 1,130 CO_2 equivalent (CO_2e) ppm by 2100 as a direct result of anthropogenic sources (United Nations Intergovernmental Panel on Climate Change [IPCC] 2006). Some predict that this will result in an average global temperature rise of at least 7.2^{o}F.

Greenhouse gases have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere, and is defined as the "cumulative radiative forcing effect of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas" (USEPA 2006a). The reference gas for GWP is CO_2; therefore, CO_2 has a GWP factor of 1. The other main greenhouse gases that have been attributed to human activity include CH_4 which has a GWP factor of 21, and N_2O which has a GWP factor of 310.

Methane (CH_4) is a gas and is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

N_2O, also known as laughing gas, is a colorless gas. N_2O is produced by microbial processes in soil and water, including reactions that occur in fertilizer containing nitrogen. In addition to

agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N_2O. It is used in rocket engines, as an aerosol spray propellant, and in race cars. During combustion, NO_X (NO_X is a generic term for mono-nitrogen oxides, NO and NO_2) is produced as a criteria pollutant and is not the same as N_2O. Very small quantities of N_2O may be formed during fuel combustion by nitrogen and oxygen (American Petroleum Institute [API] 2004).

Hydrofluorocarbons (HFCs) are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons (CFCs) are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the Montreal Protocol. Today, HFCs replace the CFCs. HFC compounds have a GWP of between 140 and 11,700, with the lower end being for HFC-152a and the higher end being for HFC-23.

Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It has the highest GWP of any gas (23,900). SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing and as a tracer gas for leak detection.

Ozone is a GHG; however, unlike the other GHGs, ozone in the troposphere (i.e., the lowest portion of the earth's atmosphere, up to 12 miles from the surface of the earth) is relatively short-lived and, therefore, not global in nature. According to the CARB, it is difficult to make an accurate determination of the contribution of ozone precursors (NO_X and VOCs) to global warming (CARB 2007a).

2.5.2 Greenhouse Gas Regulations

International Greenhouse Gas Treaties

The United States (U.S.) participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). The Kyoto Protocol is a treaty made under the UNFCCC, and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated five percent from 1990 levels during the first commitment period of 2008-2012. Notably, while the U.S. is a signatory to the Kyoto Protocol, Congress has not ratified the Protocol and the U.S. is not bound by the Protocol's commitments.

In December 2012, the United Nations representatives met in Doha, Qatar and reached an agreement on the continuation of the Kyoto Protocol. The Doha conference included an agreement in principle on the concept of losses and damages in which richer nations could be financially responsible to other nations for their failure to reduce carbon emissions.

Federal Greenhouse Gas Regulations

Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* that CO_2 is an air pollutant, as defined under the Clean Air Act (CAA), and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO_2, CH_4, N_2O, HFC, PFC and SF_6) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA's proposed GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) on September 15, 2009.

Corporate Average Fuel Economy Standards

The federal Corporate Average Fuel Economy (CAFE) standard determines the fuel efficiency of certain vehicle classes in the U.S. In 2007, as part of the Energy and Security Act of 2007, CAFE standards were increased for new light-duty vehicles to 35 miles per gallon by 2020. In May 2009, President Obama announced plans to increase CAFE standards to require light duty vehicles to meet an average fuel economy of 35.5 miles per gallons by 2016. Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued new standards in summer 2012 for model years 2017–2025, which will require a fleet average in 2025 of 54.5 mpg.

California Greenhouse Gas Regulations

California has adopted a number of regulations related to GHGs, as summarized below.

California Code of Regulations, Title 24, Part 6

Although not originally intended to reduce GHG emissions, California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The GHG emission inventory was based on Title 24 standards as of October 2005; however, Title 24 has been updated as of 2008 and standards were phased in as of January 2010. The latest Title 24 standards are anticipated to increase energy efficiency by 15 percent, thereby reducing GHG emissions from energy use by 15 percent. Energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in GHG emissions. Therefore, increased energy efficiency results in decreased GHG emissions.

Assembly Bill 75

Assembly Bill (AB) 75 was passed in 1999 and mandates state agencies to develop and implement an integrated waste management plan to reduce GHG emissions related to solid waste disposal. In addition, the bill mandates that community service districts providing solid waste services report the disposal and diversion information to the appropriate city, county or regional jurisdiction. Since 2004, the bill requires diversion of at least 50 percent of the solid waste from landfills and transformation facilities, and submission to the California Department of Resources Recycling and Recovery (formerly known as California Integrated Waste Management Board) of an annual report describing the diversion rates.

Executive Order D-16-00

This executive order signed by Governor Gray Davis on August 2, 2000, established a state sustainable building goal. The sustainable building goal is to site, design, deconstruct, construct, renovate, operate, and maintain state buildings that are models of energy, water, and materials efficiency; while providing healthy, productive, and comfortable indoor environments and long-term benefits to Californians. As with the California Energy Code, reductions in energy usage provided by sustainable building design would result in reduced GHG emissions.

Senate Bill 1771

Senate Bill (SB) 1771 (Sher), enacted on September 30, 2000, requires the Secretary of the Resources Agency to establish a nonprofit public benefit corporation, to be known as the "California Climate Action Registry," for the purpose of administering a voluntary GHG emission registry. The State Energy Resources Conservation and Development Commission (commonly called the California Energy Commission [CEC]) was required to develop metrics for use by the Registry and to compile the State's inventory of GHG emissions by January 1, 2002, and to update the inventory every five years thereafter.

Assembly Bill 1493 – Vehicular Emissions of Greenhouse Gases

In a response to the transportation sector accounting for more than half of California's CO_2 emissions, AB 1493 (Pavley) was enacted on July 22, 2002. AB 1493 requires the CARB to set GHG emission standards for passenger vehicles, light duty trucks (and other vehicles determined to be vehicles whose primary use is noncommercial personal transportation) in the state, manufactured in year 2009 and all subsequent model years. In setting these standards, the CARB considered cost effectiveness, technological feasibility, and economic impacts. The CARB adopted the standards in September 2004. When fully phased in, the near-term (years 2009 to 2012) standards would result in a reduction of approximately 22 percent in GHG emissions compared to the emissions from the year 2002 fleet, while the midterm (years 2013 to 2016) standards would result in a reduction of approximately 30 percent. Some currently used technologies that achieve GHG reductions include small engines with superchargers, continuously variable transmissions, and hybrid electric drives. To set its own GHG emissions limits on motor vehicles, California needed to receive a waiver from the USEPA. The USEPA approved the waiver in June 2009.

Executive Order S-7-04

The executive order signed by Governor Schwarzenegger on April 20, 2004, designated California's 21 interstate freeways as the "California Hydrogen Highway Network" and directed the CalEPA and all other relevant state agencies to:

> …plan and build a network of hydrogen fueling stations along these roadways and in urban centers that they connect, so that by 2010, every Californian will have access to hydrogen fuel, with a significant and increasing percentage from clean, renewable sources.

The executive order also directs the CalEPA, in concert with State Legislature, and in consultation with the CEC and other relevant state and local agencies, to develop California Hydrogen Economy Blueprint Plan "for the rapid transition to a hydrogen economy in California" by January 1, 2005. The Plan is to be updated biannually. Recommendations to the Governor and State Legislature include, among others:

> Promoting environmental benefits (including global climate change) and economic development opportunities resulting from increased utilization of hydrogen for stationary and mobile applications; policy strategies to ensure hydrogen generation results in the lowest possible emissions of GHG and other air pollutants.

Executive Order S-3-05

Executive Order S-3-05, signed by Governor Schwarzenegger on June 1, 2005, calls for a reduction in GHG emissions to year 1990 levels by year 2020, and for an 80 percent reduction in GHG emissions by year 2050. Executive Order S-3-05 also calls for the CalEPA to prepare biennial science reports on the potential impact of continued global warming on certain sectors of the California economy. The first of these reports, "Scenarios of Climate Change in California: An Overview," was published in February 2006.

The report uses a range of emissions scenarios developed by the IPCC to project a series of potential warming ranges (i.e., temperature increases) that may occur in California during the 21st century: lower warming range (3.0-5.5°F); medium warming range (5.5-8.0°F); and higher warming range (8.0-10.5°F). The report then presents analysis of future climate in California under each warming range.

As shown above, each emissions scenario would result in substantial temperature increases for California. According to the report, substantial temperature increases would result in a variety of impacts to the people, economy and environment of California associated with a projected increase in extreme conditions; the severity of the impacts would depend upon actual future emissions of GHGs and associated warming. Under the report's emissions scenarios, the impacts of global warming in California are anticipated to include, but are not limited to, public health, biology, rising sea levels, hydrology and water quality, and water supply.

Senate Bill 1505

Largely in response to Executive Order S-7-04, SB 1505 (Lowenthal), passed by the legislature and signed by the governor on September 30, 2006, requires the CARB to adopt regulations by July 1, 2008 that ensure the production and use of hydrogen for transportation purposes contributes to the reduction of greenhouse gas emissions, criteria pollutants, and toxic air contaminants.

Assembly Bill (AB) 32 – Global Warming Solution Act of 2006

In the fall of 2006, Governor Schwarzenegger signed California AB 32, the global warming bill, into law. AB 32 required that by January 1, 2008, the CARB determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. Key AB 32 milestones are as follows:

- June 20, 2007 – Identification of "discrete early action greenhouse gas emission reduction measures."
- January 1, 2008 – Identification of the year 1990 baseline GHG emission levels and approval of a statewide limit equivalent to that level. Adoption of reporting and verification requirements concerning GHG emissions.
- January 1, 2009 – Adoption of a scoping plan for achieving GHG emission reductions.
- January 1, 2010 – Adoption and enforcement of regulations to implement the "discrete" actions.
- January 1, 2011 – Adoption of GHG emission limits and reduction measures by regulations.
- January 1, 2012 – GHG emission limits and reduction measures adopted in 2011 become enforceable.

Since the passage of AB 32, CARB has completed the four out of six milestones identified above. The CARB has established the year 1990 level of GHG emissions at 427 million metric tons (MMT) of CO_2e emissions (CARB 2007a). The CARB estimates that a reduction of 173 MMT net CO_2e emissions below business-as-usual (BAU) would be required by year 2020 to meet the year 1990 levels. This amounts to a 15 percent reduction from today's levels, and a 30 percent reduction from projected BAU levels in year 2020.

Furthermore, CARB published Proposed Early Actions to Mitigate Climate Change in California (CARB 2007b). There are no early action measures specific to new land use development and water facility projects included in the list of 36 measures identified for CARB to pursue during previous calendar years 2007, 2008, 2009, and 2010. Also, this publication indicated that the issue of GHG emissions in the California Environmental Quality Act (CEQA) and General Plans was being deferred for later action, so the publication did not discuss any early action measures generally related to CEQA or to land use decisions. The CARB adopted its Scoping Plan in December 2008, which provided estimates of the year 1990 GHG emissions level, and identified sectors for the reduction of GHG emissions.

According to the CEC, transportation accounts for approximately 41 percent of California's year 2004 GHG emissions (CEC 2006). Growth in California has resulted in VMT by California residents increasing three-fold during the period from 1975 to 2004. To reduce the use of carbon-based fuels, the Governor of California signed Executive Order S-01-07, calling for a 10 percent reduction in carbon intensity in fuels by year 2020. In addition, President Bush signed new fuel efficiency standards (known as CAFE standards) that would increase vehicle mileage to 35 miles per gallon by year 2020. All of these measures are designed to reduce emissions of GHGs.

Senate Bill 1368

In 2006, the California Legislature passed SB 1368, which requires the Public Utilities Commission (PUC) to develop and adopt a "GHGs emission performance standard" by February 1, 2007, for the private electric utilities under its regulation. The PUC adopted an interim standard on January 25, 2007, but has formally requested a delay for the local publicly owned electric utilities under its regulation. These standards apply to all long-term financial commitments entered into by electric utilities (California PUC 2006). The CEC was required to adopt a consistent standard by June 30, 2007. However, this date was missed, and the CEC will address the concerns of the Office of Administrative Law (OAL) and resubmit the rulemaking as soon as possible. The rulemaking then must be approved by the OAL before it can take effect.

In the meantime, the PUC and CEC adopted a preferred loading order to meet goals for satisfying the state's growing demand for electricity while reducing GHG emissions. The preferred loading order places top priority on first increasing energy efficiency and demand response, then providing new generation from renewable and distributed generation resources, and, lastly, providing clean fossil-fueled generation and infrastructure improvements.

Executive Order S-01-07

This executive order signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and direct CARB to determine if a LCFS can be adopted as a discrete early action measure pursuant to AB 32. [The CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in 2010.] EO S-01-07 also instruct the CalEPA to coordinate activities between the University of California, the CEC, and other state agencies to develop and propose a draft compliance schedule to meet the 2020 target.

Senate Bill 97 – CEQA: Greenhouse Gas Emissions

In August 2007, Governor Schwarzenegger signed into law SB 97 – CEQA: Greenhouse Gas Emissions, stating, "This bill advances a coordinated policy for reducing GHG emissions by directing the Office of Planning and Research (OPR) and the Resources Agency to develop CEQA guidelines on how state and local agencies should analyze, and when necessary, mitigate GHG emissions." Specifically, SB 97 requires OPR to prepare, develop, and transmit to the

Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, including but not limited to, effects associated with transportation or energy consumption. The Natural Resources Agency certified and adopted the guidelines on December 31, 2009. The Office of Administrative Law has adopted the guidelines and they became effective on March 18, 2010. The new CEQA guidelines provide the lead agency with broad discretion in determining significance thresholds and the methodology used in assessing the impacts of GHG emissions in the context of a particular project. This guidance is provided because the methodology for assessing GHG emission is expected to evolve over time. The OPR guidance also states that the lead agency can rely on qualitative or other performance based standards for estimating the significance of GHG emissions.

Senate Bill 375

SB 375 was signed and passed into law on September 30, 2008. SB 375 enhances the CARB's ability to reach AB 32 goals. Specifically, SB 375 requires CARB to set regional targets for the purpose of reducing GHG emissions from passenger vehicles for years 2020 and 2035. If regions develop integrated land use, housing and transportation plans that meet the SB 375 targets, new projects in these regions can be relieved of certain review requirements of CEQA. The targets apply to the regions in the state covered by 18 Metropolitan Planning Organizations (MPOs).

Per SB 375, CARB appointed a Regional Targets Advisory Committee (RTAC) on January 23, 2009 to provide recommendations on factors to be considered and methodologies to be used in the CARB target setting process. The RTAC provided its recommendations in a report to the CARB on September 29, 2009. The CARB released its draft targets on June 30, 2010, and adopted its final targets on September 23, 2010. For the San Diego area, the CARB and SANDAG agreed to adopt 7 percent and 13 percent in per capita GHG emission reductions from passenger vehicles by the years 2020 and 2035, respectively. If MPOs do not meet the GHG reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

Executive Order S-13-08

Executive Order S-13-08, signed by Governor Schwarzenegger on November 14, 2008, enhance the state's management of climate impacts from sea level rise, increased temperatures, shifting precipitation and extreme weather events. One key benefit is that the Executive Order S-13-08 has forced state and local agencies to facilitate California's first comprehensive climate adaptation strategy. This strategy will improve coordination within state government and adapt the way agencies work so that better planning can more effectively address climate impacts to human health, the environment, the state's water supply and the economy. Another intended benefit from the Executive Order S-13-08 is providing consistency and clarity to state agencies on how to address sea level rise in current planning efforts, reducing time and resources unnecessarily spent on developing different policies using different scientific information.

Executive Order S-14-08

On November 17, 2008, Governor Schwarzenegger issued Executive Order S-14-08. This Executive Order focuses on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. The governor's order requires that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. Furthermore, the order directs state agencies to take appropriate actions to facilitate reaching this target. The Resources Agency, through collaboration with the CEC and California Department of Fish and Wildlife, is directed to lead this effort. Pursuant to a Memorandum of Understanding between the CEC and California Department of Fish and Wildlife creating the Renewable Energy Action Team, these agencies will create a "one-stop" process for permitting renewable energy power plants.

Executive Order S-21-09

Executive Order S-21-09 was enacted by the Governor on September 15, 2009. This order requires that the CARB, under its AB 32 authority, adopt a regulation by July 31, 2010 that sets a 33 percent renewable energy target as established in Executive Order S-14-08. Under Executive Order S-21-09, the CARB will work with the PUC and CEC to encourage the creation and use of renewable energy sources, and will regulate all California utilities. The CARB will also consult with the Independent System Operator and other load balancing authorities on the impacts on reliability, renewable integration requirements, and interactions with wholesale power markets in carrying out the provisions of the Executive Order. The order requires the CARB to establish the highest priority for those resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health. On September 23, 2010, CARB adopted regulations to implement a "Renewable Electricity Standard," which would achieve the goal of the executive order with the following intermediate and final goals: 20 percent for 2012–2014; 24 percent for 2015–2017; 28 percent for 2018–2019; 33 percent for 2020 and beyond. Under the regulation, wind; solar; geothermal; small hydroelectric; biomass; ocean wave, thermal, and tidal; landfill and digester gas; and biodiesel would be considered sources of renewable energy. The regulation would apply to investor-owned utilities and public (municipal) utilities.

California Greenhouse Gas Programs and Plans

California Energy Commission: New Solar Homes Partnership

The New Solar Homes Partnership (NSHP) is a component of the California Solar Initiative and has a goal to produce 400 megawatts of solar electricity on approximately 160,000 homes by year 2017. To qualify for the program, a new home must achieve energy efficiency levels greater than the requirements of the year 2005 Building Title 24 Standards. The builder can choose to comply with either of two tiers of energy efficiency measures: Tier I, which requires a 15 percent reduction from Title 24 Standards; or Tier II, which requires a 35 percent reduction overall and 40 percent in the building's space cooling (air conditioning) energy compared to Title 24 (CEC 2007). In addition, all appliances must have an Energy Star rating, which indicates that the appliance is consistent with the international standard for energy efficient consumer products.

California Air Resources Board: Interim Significance Thresholds

In October 2008, the CARB released interim guidance on significance thresholds for industrial, commercial, and residential projects (CARB 2008). The draft proposal for residential and commercial projects states that a project would not be significant if it complies with a previously approved plan that addresses GHG emissions, or meets an energy use performance standard defined as CEC's Tier II Energy Efficiency goal (specified as 35 percent above Title 24 requirements) along with "as yet to be defined" performance standards for water, waste and transportation or is below an "as yet to be developed" threshold for GHG emissions tons per year. As such, CARB did not establish a threshold of significance.

California Air Resources Board: Scoping Plan

On December 11, 2008, the CARB adopted the Scoping Plan (CARB 2008) as directed by AB 32. The Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. The measures in the Scoping Plan approved by the Board will be in place by year 2012, with further implementation details and regulations to be developed, followed by the rulemaking process to meet the 2012 deadline. Measures applicable to development and water facility projects include the following:

- Maximum energy efficiency building and appliance standards, including more stringent building codes and appliance efficiency standards, and solar water heating;
- Use of renewable sources for electricity generation, such as photovoltaic solar associated with the Million Solar Roofs program;
- Regional transportation targets, including integration of development patterns and the transportation network to reduce vehicle travel, as identified in SB 375; and
- Green Building strategy, including siting near transit or mixed use areas; zero-net-energy buildings; "beyond-code" building efficiency requirements; and the use of the CEC's Tier II Energy Efficiency goal.

Relative to transportation, the Scoping Plan includes nine measures or recommended actions. One of these is measure T-3, Regional Transportation-Related Greenhouse Gas Targets, which relies on SB 375 implementation to reduce GHG emissions from passenger vehicles through reducing vehicle miles traveled. The other measures are related to vehicle GHG, fuel, and efficiency measures and would be implemented statewide rather than on a project-by-project basis.

California Air Pollution Control Officers Association

The CAPCOA does not regulate emissions of GHGs, but has issued guidance on addressing impacts from GHGs in CEQA documents (CAPCOA 2008). The CAPCOA guidance also provides a listing of measures designed to reduce GHG emissions and, where available, estimates reductions in GHG emissions that would be realized from implementation of those measures (CAPCOA 2010).

Local Policies and Regulations

San Diego Association of Governments

The SANDAG Climate Action Strategy serves as a guide to help policymakers address climate change as they make decisions to meet the needs of our growing population, maintain and enhance our quality of life, and promote economic stability (SANDAG 2010a). The purpose of the strategy is to identify land use, transportation, and other related policy measures that could reduce GHG emissions from passenger cars and light-duty trucks as part of the development of the Sustainable Communities Strategy for the 2050 Regional Transportation Plan in compliance with SB 375. Other policy measures are also identified for buildings and energy use, protecting transportation and energy infrastructures from climate impacts, and to help SANDAG and other local agencies reduce GHG from their operations.

County of San Diego

The County has published guidance for evaluating GHG emissions in its *Guidelines for Determining Significance for Greenhouse Gas Analyses*, dated June 2012. The County's Guidance report references a 2,500-MT guideline as a "bright line" threshold for requiring further GHG analysis and mitigation. This emission level is based on the number of vehicle trips, the typical energy and water use, and other factors associated with projects.

The County also has a voluntary incentive program to promote energy- and resource-efficient building design. Incentives, in the form of fast-track plan checking and fee reductions, are offered to developers who use recycled materials in construction, install irrigation systems using greywater, build projects that exceed California's Title 24 (i.e., the energy efficiency standards), or install photovoltaic electricity generation systems.

City of Imperial Beach

The City has developed a number of strategies and goals under the conservation and open space elements in their General Plan aimed at improving air quality. As part of their environmental review process for new discretionary development projects, the City continues to review all new development plans to ensure that they meet acceptable air quality standards as set forth by the CARB and SDAPCD.

2.5.3 Existing Greenhouse Gas Levels

Global, National, State, and Local Levels

In an effort to evaluate and reduce the potential adverse impact of global climate change, international, State and local organizations have conducted GHG inventories to estimate their levels of GHG emissions and removals. The following summarizes the results of these inventories.

Worldwide

Worldwide anthropogenic emissions of GHG in 2006 were approximately 49,000 MMT of CO_2e, including ongoing emissions from industrial and agricultural sources and emissions from land use changes (i.e., deforestation, biomass decay) (IPCC 2006). CO_2 emissions from fossil fuel use accounts for 57 percent of the total emissions of 49,000 MMT CO_2e (includes land use changes) and all CO_2 emissions are 77 percent of the total. CH_4 emissions account for 14 percent and N_2O emissions for 8 percent of GHG (IPCC 2006).

United States

The USEPA publication, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2006*, provides a comprehensive emissions inventory of the nation's primary anthropogenic sources and sinks of GHG. In 2006, total U.S. GHG emissions were 7,054 teragrams (Tg) or MMT CO_2e. Overall, total U.S. emissions have risen by 15 percent from 1990 to 2006, while the U.S. gross domestic product has increased by 59 percent over the same period. Emissions fell from 2005 to 2006, decreasing by 1 percent (76 MMT CO_2e). The publication indicated that the following factors were primary contributors to this decrease: (1) compared to 2005, 2006 had warmer conditions, which decreased consumption of heating fuels, as well as cooler summer conditions, which reduced demand for electricity; (2) restraint on fuel consumption caused by rising fuel prices, primarily in the transportation sector; and (3) increased use of natural gas and renewables in the electric power sector (USEPA 2008).

California

The State of California is a substantial contributor of GHG as it is the second largest contributor in the U.S. and the 16th largest in the world. According to the CARB, California generated 484 MMT CO_2e in 2004. GHG emissions in California are mainly associated with fossil fuel consumption in the transportation sector (38 percent) with the industrial sector as the second-largest source (20 percent). Electricity production, from both in-state and out-of-state sources, agriculture, forestry, commercial, and residential activities comprise the balance of California's GHG emissions. Emissions of GHG were offset slightly in 2004 by the sequestration (intake) of carbon within forests, reducing the overall emissions by 4.7 MMT CO_2e, resulting in net emissions of about 480 MMT CO_2e. According to the CEC (2006), CO_2 accounts for approximately 84 percent of statewide GHG emissions, with CH_4 accounting for approximately 5.7 percent, and N_2O accounting for 6.8 percent. Other pollutants account for approximately 2.9 percent of greenhouse gas emissions in California.

San Diego County

According to the San Diego County GHG Inventory that was prepared by the University of San Diego School of Law Energy Policy Initiative Center (EPIC) in 2008, San Diego County emitted 34 MMT of CO_2e emissions in 2006. The largest contributor of GHG in San Diego County was the on-road transportation category, which comprised 46 percent (16 MMT CO_2e) of the total amount. The second highest contributor was the electricity category, which contributed 9 MMT CO_2e, or 25 percent of the total. Together, the on-road transportation and electricity categories

comprised 71 percent of the total GHG emissions for the County. The remaining amount was contributed by natural gas consumption, civil aviation, industrial processes, off-road equipment, waste, agriculture, rail, water-borne navigation, and other fuels. By 2020, under the BAU scenario, regional GHG emissions are expected to be 43 MMT of CO_2e.

2.5.4 Sensitive Land Uses

The impact of air emissions on sensitive members of the population is a special concern. Sensitive land uses are defined as locations where pollutant-sensitive members of the population may reside or where the presence of air pollutant emissions could adversely affect use of the land. Sensitive members of the population include those who may be more negatively affected by poor air quality than other members of the population, such as children, the elderly, or the infirmed. CARB has identified the following people as the most likely to be affected by air pollution: children younger than 14, the elderly older than 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder-care facilities, elementary schools, and parks.

Many residential land uses to the east, south, and west, and recreational and educational uses (i.e., Bayside Elementary School, Bayside Park, and West View Elementary School) to the west and northeast, are located nearby the proposed Project site.

3.0 THRESHOLDS OF SIGNIFICANCE

3.1 CRITERIA POLLUTANTS

A potentially significant impact to air quality would occur if the Project would do one or more of the following:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in 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 release emissions which exceed quantitative thresholds for O_3 precursors);
- Expose sensitive receptors (i.e., day care centers, schools, retirement homes, and hospitals or medical patients in residential homes which could be impacted by air pollutants) to substantial pollutant concentrations, including air toxins such as diesel particulates; or
- Create objectionable odors affecting a substantial number of people.

The SDAPCD does not provide quantitative thresholds for determining the significance of construction or mobile source-related projects. In lieu of any set quantitative air quality significance thresholds, this analysis utilizes the City criteria to evaluate project emissions, which are based on the quantitative emission thresholds established by the County of San Diego in its CEQA *Guidelines for Determining Significance for Air Quality* (County 2007). The County sets forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality. It should be noted that the use of these significance thresholds is conservative, as the County's significance thresholds were originally based on the South Coast Air Basin's extreme ozone nonattainment status for the 1-hour NAAQS, whereas the SDAB was designated as an attainment area for the 1-hour NAAQS. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 3, *Air Quality Significance Thresholds*, are exceeded.

For these pollutants, if emissions exceed the thresholds shown in Table 3, the Project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality. In the event that emissions exceed these thresholds, mitigation measures will be required to reduce the Project impacts to less than significant.

Table 3
AIR QUALITY SIGNIFICANCE THRESHOLDS

Pollutant	Construction	Operation
VOC	75 lbs/day	75 lbs/day
NO_X	250 lbs/day	250 lbs/day
CO	550 lbs/day	550 lbs/day
SO_X	250 lbs/day	250 lbs/day
PM_{10}	100 lbs/day	100 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day

Source: County of San Diego 2007.
VOC = volatile organic compounds; NO_X = oxides of nitrogen; CO = carbon monoxide;
SO_X = sulfur oxides; PM_{10} = particulate matter less than 10 microns;
$PM_{2.5}$ = particulate matter less than 2.5 microns

3.2 TOXIC AIR CONTAMINANT EMISSIONS

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as TACs or Hazardous Air Pollutants (HAPs). In San Diego County, APCD Regulation XII establishes acceptable risk levels and emission control requirements for new and modified facilities that may emit additional TACs. Under Rule 1210, emissions of TACs that result in a cancer risk of more than ten in one million, or a health hazard index of more than one are considered to have a significant impact.

With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as schools (preschool through

12th grade), hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project that has the potential to directly impact a sensitive receptor located within 1 mile and results in a health risk greater than ten in one million would cause a potentially significant impact.

The health risk assessment conducted for carcinogens is typically for a period of 70 years; however, due to the short construction duration of the proposed Project, it is not meaningful to estimate quantitative carcinogenic health risks for this project. In addition, no regulatory thresholds for adverse health risk effects due to acute (short-term) exposure to diesel particulate have been established.

3.3 OBJECTIONABLE ODORS

SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of any person. A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

3.4 GREENHOUSE GASES

A potentially significant impact related to GHG would occur if the project would do one or more of the following:

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

Neither the State of California nor the SDAPCD has adopted emission-based thresholds for GHG emissions under CEQA. OPR's Technical Advisory titled *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review* states that "public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact" (OPR 2008, p. 4). Furthermore, the advisory document indicates in the third bullet item on page 6 that "in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a 'significant impact,' individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice."

At this time, the state has established the following goals for reduction of GHG emissions:

- 2000 levels by 2010 (11% below BAU)
- 1990 levels by 2020 (25% below BAU)

The City is utilizing the County's guidance in the 2012 *Guidelines for Determining Significance for Greenhouse Gas Analyses*, dated June 2012, as the GHG threshold to determine whether a GHG analysis will be required. A 2,500 MT screening threshold is used to determine when a detailed GHG analysis is required. The County's Guidance report references the 2,500-MT guideline as a conservative threshold for requiring further GHG analysis and mitigation. This emission level is based on the number of vehicle trips, the typical energy and water use, and other factors associated with projects. The County identifies project types that are estimated to emit approximately 2,500 MT of GHGs annually.

The analysis should include, but is not limited to, the five primary sources of GHG emissions: vehicular traffic, generation of electricity, natural gas consumption/combustion, solid waste generation, and water usage. The CARB has developed a year 2020 "business-as-usual" forecast model which represents the GHG emissions that would be expected to occur without any GHG-reducing project features or mitigation. To reduce potential impacts to below a level of significance, on state-wide average, most proposed projects in California must show a 16 percent to 30 percent reduction from the 2020 business-as-usual model. A general target of 16 percent below business as usual has been established for the purposes of assessing operational GHG emissions of projects in the City of Imperial Beach.

4.0 IMPACTS

This section evaluates potential impacts of the proposed Project related to the generation of criteria pollutants, including CO, SO_2, NO_2, O_3, PM_{10}, $PM_{2.5}$, and Pb; TACs, including DPM; and GHGs, including CO_2, CH_4, and N_2O. The proposed Project could result in both construction and operational air quality impacts. Construction impacts include short-term emissions associated with the construction of the project. Operational impacts include emissions associated with the Project-related vehicle trips as well as area sources such as water and energy consumption at the proposed Project site.

It should be noted that this analysis is based on an older site plan that included 203 DUs. The site plan has since been revised to include only 193 DUs (10 DUs fewer than originally proposed). Therefore, this analysis is considered to be conservative; actual impacts would be less than what is presented below.

4.1 ISSUE 1: CONFLICT WITH APPLICABLE AIR QUALITY PLAN

Based on Appendix G of the State CEQA Guidelines, an impact is considered significant if implementation of the Project would result in a conflict with or obstruct implementation of the applicable air quality plan.

Impact Analysis

The SDAPCD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SDAB is in nonattainment. Strategies to achieve these emissions reductions are

developed in the RAQS and SIP, prepared by the SDAPCD for the region. Both the RAQS and SIP are based on SANDAG population projections, as well as land use designations and population projections included in general plans for those communities located within the County of San Diego, including the City. Population growth is typically associated with the construction of residential units or large employment centers.

A project would be inconsistent with the RAQS/SIP if it results in population and/or employment growth that exceed growth estimates for the area. The proposed Project would increase the intensity of land uses at the Project site by building 193 new residential dwellings. According to the City's amendments to the General Plan/Local Coastal Plan and Zoning Ordinance, the Local Coastal Plan Amendment project would generate 1,842 additional DUs in comparison to the existing General Plan/LCP by allowing residential development within the City's commercial zones (Imperial Beach 2012). While the proposed Project would allow for increased density that would accommodate additional population and would contribute to transportation-generated air pollutants, this would generally be in response to population growth forecasts and the resulting housing demand. Preliminary growth forecasts by SANDAG are an increase to 31,832 residents by year 2035 and to 36,198 residents by year 2050. Regional housing growth is expected to increase by approximately 1,000 new DUs by year 2035 and by 2,319 new DUs by year 2050 (SANDAG 2010b). Providing the opportunity for residential development within the City's commercial zones would divert a portion of the projected regional population growth to the C/MU (General Commercial & Mixed Use) zones from areas within the City and the region that are zoned for single-family and multiple-family development.

Because the Project would not generate population growth beyond the levels assumed for the region, the project would not conflict with any population projections and would therefore be consistent with the City of Imperial Beach General Plan. In addition, the proposed Project would comply with all existing and new rules and regulations as they are implemented by the City, SDAPCD, CARB and/or USEPA related to emissions generated during construction. Therefore, the proposed Project would not conflict with the applicable air quality attainment plan, and no impacts would be anticipated**.**

Mitigation Measures

Because no impacts related to Issue 1 were identified, no mitigation is required.

Significance of Impacts After Mitigation

No impact.

4.2 ISSUE 2: VIOLATE AIR QUALITY STANDARDS

Based on Appendix G of the State CEQA Guidelines, an impact is considered significant if implementation of the project would result in a violation of any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact Analysis

Construction Emissions

Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources. Fugitive PM_{10} and $PM_{2.5}$ emissions estimates take into account compliance with SDAPCD Rule 55 requirements for fugitive dust suppression, which require that no visible dust be present beyond the site boundaries. The following information about the construction projects were used for analysis of construction activity emissions to determine if significance thresholds would be exceeded.

The construction activities associated with the Project would create diesel emissions, and would generate emissions of dust. In general, emissions from diesel-powered equipment contain more NO_X, oxides of sulfur (SO_X), and particulate matter than gasoline-powered engines. However, diesel-powered engines generally produce less CO and less reactive organic gases than do gasoline-powered engines. Standard construction equipment includes dozers, rollers, scrapers, backhoes, loaders, paving equipment, delivery/haul trucks, and so on. Emissions associated with construction of the Project were calculated using the California Emission Estimator Model (CalEEMod) computer program assuming that construction duration period would begin in October 2014 and last until early 2016.

Construction activities are assumed to occur in two separate phases: as the specific tasks to be completed daily during each phase will not be exactly comparable, the worst-case construction day for each phase has been chosen for the purpose of this analysis.

For the purpose of the analysis, the Project was broken down into four construction phases. Under Phase 1, demolition, mass grading and utility installation would be completed and the development of 50 DUs would occur. The development of the next 50 DUs would occur under Phase 2. Under Phase 3 and Phase 4, 50 and 53 DUs would be developed, respectively.

The first stage of the construction activities would involve the demolition of existing site improvements associated with the RV park, mass grading, and utility installation at the Project site. This stage would include the demolition and mass grading of the entire site over a five-month period. Demolition activities would include the removal of the concrete pads, on-site concrete crushing and processing, and re-use of concrete debris for foundations and pavements. At any given time, the maximum acreage disturbed would be up to 2.2 acres per day (i.e., up to 25 percent of the entire 8.83 acre site during Phase 1).
Following the mass grading, backbone infrastructure would be installed. This would consist of all the elements necessary to support developed uses on site, such as construction of roads, off-site connections to a potable water source and sewer lines, and the connection of all utility lines between these residences and the Project boundary.

Once the above construction efforts are completed, vertical construction of buildings could begin. This stage is anticipated to take approximately 1.5 years. The second stage would

involve the vertical construction of all of the structures required for the residential development, as well as interior site roads, installation of Project streetscape, etc. Utilities and storm drains within development sites, as well as the on-site landscaping would be implemented concurrently with build out of the project.

Construction emissions were estimated using the CalEEMod, Version 1.1 (SCAQMD 2011) and construction equipment estimates based on default values in the model. Emission estimates were prepared for the individual construction activities listed above to evaluate the maximum daily emissions. Emission estimates were based on emission factors, equipment ratings, and load factors from the CARB OFFROAD Model.

It is mandatory for all construction projects in the SDAB to comply with SDAPCD Rule 55 for controlling fugitive dust emissions, standard construction best management practice will be required to minimize impacts:

- AQ 1 – The Project Applicant will implement standard construction measures in accordance with SDAPCD rules (Rules 50, 51, 52, 54 and 55) for controlling emissions from fugitive dust and fumes:
    - Water the grading areas a minimum of twice daily to minimize fugitive dust.
    - Provide sufficient erosion control to prevent washout of silty material onto public roads.
    - Cover haul trucks or maintain at least 12 inches of freeboard to reduce blow-off during hauling.
    - Periodically sweep up dirt and debris spilled onto paved surfaces to reduce re-suspension of particulate matter caused by vehicle movement. Clean approach routes to construction sites of construction-related dirt.
- AQ 2 – All construction equipment operating on the project site should meet USEPA-Certified Tier 2 emissions standards, or Tier 3 off-road emissions standards at minimum. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

According to the CalEEMod model, emissions from asphalt off-gassing can be estimated by assuming an emission rate of 2.62 lbs/acre of area to be paved. The amount to be paved was estimated to be one acre per day during the paving construction phase.

Coatings used for the Project would have to conform to the SDAPCD Rule 67, which prohibits the use of architectural coatings (i.e., paints) that would exceed VOC content limits specified for each coating category in the rule. For modeling the Project's emissions in CalEEMod, conformance with these rules was therefore assumed. According to Rule 67, residential interior coatings must have a VOC content less than or equal to 50 grams per liter (g/L), residential exterior coatings must have a content less than or equal to 100 g/L, and non-residential exterior and interior coatings must have a content less than or equal to 250 g/L.

Construction would require heavy equipment during demolition, mass grading, utility installations, building construction, and paving. Construction emissions were estimated using the CalEEMod model and construction equipment estimates are based on Project assumptions provided and default values in the model. Beginning January 1, 2013, CARB requires all off-road equipment greater than 50 horsepower (hp) to comply with the USEPA Tier 2 emission standards and install PM filter devices. As noted above, it was assumed that dust control measures (watering a minimum of three times daily) would be employed to reduce emissions of fugitive dust during site grading. The assumptions used in this analysis are as follows: construction activities associated with site grading and utility line installations would occur in sequential order. None of these activities would occur or overlap on any single peak day during the construction period. The resultant emissions from each activity are compared to the daily emission thresholds to determine significance. The emissions presented in Table 4, *Estimated Construction Criteria Pollutant Emissions,* are the maximum daily emissions for the duration of the construction calendar year.

Table 4
ESTIMATED CONSTRUCTION CRITERIA POLLUTANT EMISSIONS

Maximum Daily Construction	Criteria Pollutant Emissions (pounds/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Year 2014						
Demolition (Yr 2014)	11.38	100.61	57.97	0.13	50.42	4.67
Grading/ Infrastructure (Yr 2014)	6.06	45.75	31.12	0.05	8.80	5.80
Vertical Building (Yr 2014)	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL EMISSIONS (Yr 2014)	**17.44**	**146.36**	**89.09**	**0.18**	**59.22**	**10.47**
Significance Thresholds (pounds/day)	**75**	**250**	**550**	**250**	**100**	**55**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**
Year 2015						
Grading/ Infrastructure (Yr 2015)	14.62	111.84	72.29	0.13	12.10	8.86
Vertical Building (Yr 2015)	28.30	51.05	41.00	0.07	4.47	3.70
TOTAL EMISSIONS (Yr 2015)	**42.92**	**162.89**	**113.29**	**0.20**	**16.57**	**12.56**
Significance Thresholds (pounds/day)	**75**	**250**	**550**	**250**	**100**	**55**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

Table 4 (cont.) ESTIMATED CONSTRUCTION CRITERIA POLLUTANT EMISSIONS						
Maximum Daily Construction	**Criteria Pollutant Emissions (pounds/day)**					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Year 2016						
Grading/ Infrastructure (Yr 2016)	0.00	0.00	0.00	0.00	0.00	0.00
Vertical Building (Yr 2016)	25.34	26.02	23.30	0.04	2.25	1.94
TOTAL EMISSIONS (Yr 2016)	**25.34**	**26.02**	**23.30**	**0.04**	**2.25**	**1.94**
Significance Thresholds (pounds/day)	**75**	**250**	**550**	**250**	**100**	**55**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
1. Emissions were calculated for both summer and winter months, and the highest value is shown here.
2. USEPA Tier 2 off-road equipment and diesel particulate filters were assumed to be utilized.
3. Fugitive dust measures were applied to control PM_{10} and $PM_{2.5}$ dust emissions.

As shown in Table 4, emissions of all criteria pollutants during construction would be below the daily thresholds. As a result, the construction activities would not result in emissions that would violate air quality standards and therefore would be considered a less than significant impact on air quality.

Operational Emissions

The main operational emissions sources associated with the Project are from increased traffic; emissions associated with area sources such as landscaping, maintenance, architectural coatings use at the residences also would be generated.

Project-generated traffic was addressed in the Bernardo Shores Traffic Impact Analysis (Linscott, Law, and Greenspan, Engineers [LLG] 2014). Based on the Traffic Impact Analysis, at full buildout the Project would generate 1,164 average daily trips (ADT). To estimate emissions associated with Project-generated traffic, the CalEEMod model was used. Motor vehicle emission rates are, therefore, based on CARB's EMFAC state-wide emission factors for the San Diego County region. For conservative modeling purposes, emission factors representing the vehicle mix for emission analysis years 2015 were used to estimate emissions. Based on the results of the CalEEMod model for subsequent years, emissions would decrease on an annual basis from 2015 onward due to phase-out of higher polluting vehicles and implementation of more stringent emission standards that are taken into account in the CalEEMod model. Default vehicle speeds, trip rates, trip lengths, trip purpose, and trip type percentages for single family homes were applied in the CalEEMod model.

Residential units were assumed to only have natural gas fireplaces. Area source emissions, including emissions from energy use, fireplaces, landscaping, and maintenance use of architectural coatings, were calculated using the CalEEMod model. Operational emission calculations and CalEEMod model outputs are provided in Attachment A. Tables 5 through 8 present the summary of the operational emissions for each planning phase.

Table 5 ESTIMATED PHASE 1 OPERATIONAL EMISSIONS (lbs/day)						
Category	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	1.32	0.05	4.22	0.00	0.08	0.08
Energy	0.03	0.25	0.11	0.00	0.02	0.02
Mobile	1.83	3.70	16.43	0.03	3.55	0.29
TOTAL	**3.18**	**4.00**	**20.76**	**0.03**	**3.65**	**0.39**
Screening-Level Thresholds	**75**	**250**	**550**	**250**	**100**	**55**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

Note: Emissions were calculated for both summer and winter months, and the highest value is shown here.

Table 6 ESTIMATED PHASES 1 AND 2 OPERATIONAL EMISSIONS (lbs/day)						
Category	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	2.64	0.10	8.44	0.00	0.16	0.16
Energy	0.06	0.50	0.22	0.00	0.04	0.04
Mobile	3.66	7.40	32.86	0.06	7.10	0.58
TOTAL	**6.36**	**8.00**	**41.52**	**0.06**	**7.30**	**0.78**
Screening-Level Thresholds	**75**	**250**	**550**	**250**	**100**	**55**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

Note: Emissions were calculated for both summer and winter months, and the highest value is shown here.

Table 7 ESTIMATED PHASES 1, 2 AND 3 OPERATIONAL EMISSIONS (lbs/day)						
Category	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	3.96	0.15	12.66	0.00	0.24	0.24
Energy	0.09	0.75	0.33	0.00	0.06	0.06
Mobile	5.49	11.10	49.29	0.09	10.65	0.87
TOTAL	**9.54**	**12.00**	**62.28**	**0.09**	**10.95**	**1.17**
Screening-Level Thresholds	**75**	**250**	**550**	**250**	**100**	**55**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

Note: Emissions were calculated for both summer and winter months, and the highest value is shown here.

Table 8 ESTIMATED PHASES 1, 2, 3 AND 4 OPERATIONAL EMISSIONS (lbs/day)						
Category	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	5.35	0.20	17.13	0.00	0.33	0.33
Energy	0.12	1.02	0.44	0.00	0.08	0.08
Mobile	7.43	15.02	66.71	0.12	14.42	1.17
TOTAL	**12.90**	**16.24**	**84.28**	**0.12**	**14.83**	**1.58**
Screening-Level Thresholds	**75**	**250**	**550**	**250**	**100**	**55**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

Note: Emissions were calculated for both summer and winter months, and the highest value is shown here.

As shown in Tables 5, 6, 7, and 8, emissions of all criteria pollutants during operation for each Planning Area would be below the daily thresholds. Therefore, implementation of the Project would not be considered a significant impact on air quality.

Due to the expedited construction period, assumed to occur from 2014 to 2016, operational activities would overlap with construction activities. Therefore, the total Project emissions were estimated during a period when construction and operational activities substantially overlap. For conservative planning purposes, it would be assumed that peak construction for Phase 2 would overlap with operations of Phase 1. Likewise, construction of Phase 3 would overlap with operations of Phases 1 and 2. Also, construction of Phase 4 would overlap with operations of Phases 1, 2, and 3. The combined (construction plus operational) emissions would be compared with the daily emission thresholds. Tables 9 through 11 present the combined total of peak daily construction and operational emissions.

Table 9 COMBINED PHASE 1 OPERATIONAL AND PHASE 2 CONSTRUCTION ESTIMATED EMISSIONS (lbs/day)								
Phase	**Year**	**Category**	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Phase 1	2015	Operational	3.18	4.00	20.76	0.03	3.65	0.39
Phase 2	2015	Construction	42.92	162.89	113.29	0.20	16.57	12.56
P 1 & 2	**2015**	**TOTAL**	**46.10**	**166.89**	**134.05**	**0.23**	**20.22**	**12.95**
Screening-Level Thresholds			**75.00**	**250.00**	**550.00**	**250.00**	**100.00**	**55.00**
Exceedance?			**No**	**No**	**No**	**No**	**No**	**No**

Notes:
1. Peak Daily Emissions were calculated for both summer and winter months, and the highest value is shown here.
2. Total for Peak Daily Operational Emissions includes Area, Energy and Mobile sources.

Table 10 COMBINED PHASES 1 AND 2 OPERATIONAL AND PHASE 3 CONSTRUCTION ESTIMATED EMISSIONS (lbs/day)								
Phase	**Year**	**Category**	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Phases 1 & 2	2015	Operational	6.36	8.00	41.52	0.06	7.30	0.78
Phase 3	2015	Construction	42.92	162.89	113.29	0.20	16.57	12.56
P 1,2 & 3	**2015**	**TOTAL**	**49.28**	**170.89**	**154.81**	**0.26**	**23.87**	**13.34**
Screening-Level Thresholds			**75.00**	**250.00**	**550.00**	**250.00**	**100.00**	**55.00**
Exceedance?			**No**	**No**	**No**	**No**	**No**	**No**

Notes:
1. Peak Daily Emissions were calculated for both summer and winter months, and the highest value is shown here.
2. Total for Peak Daily Operational Emissions includes Area, Energy and Mobile sources.

Table 11 COMBINED PHASES 1-3 OPERATIONAL AND PHASE 4 CONSTRUCTION ESTIMATED EMISSIONS (lbs/day)								
Planning Area	**Year**	**Category**	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Phases 1, 2, & 3	2016	Operational	9.54	12.00	62.28	0.09	10.95	1.17
Phase 4	2016	Construction	25.34	26.02	23.30	0.04	2.25	1.94
Phases 1-4	**2016**	**TOTAL**	**34.88**	**38.02**	**85.58**	**0.13**	**13.20**	**3.11**
Screening-Level Thresholds			**75.00**	**250.00**	**550.00**	**250.00**	**100.00**	**55.00**
Exceedance?			**No**	**No**	**No**	**No**	**No**	**No**

Notes:
1. Peak Daily Emissions were calculated for both summer and winter months, and the highest value is shown here.
2. Total for Peak Daily Operational Emissions includes Area, Energy and Mobile sources.

The combined construction and operational emissions would not exceed the significance thresholds for all pollutants and would, therefore, not be considered significant impacts under CEQA.

For the full build-out of the Project, the results of the emission calculations, in lbs/day, are summarized in Table 12, *Estimated 2030 Buildout Operational Emissions*, along with emissions associated with area sources and a comparison with the County significance criteria. The CalEEMod model outputs are presented in Attachment A. When the four planning areas are combined as shown in Table 12, emissions of criteria pollutants during operation for the entire Project would not exceed the daily thresholds for any of the criteria pollutants. Therefore, no significant air quality impact is anticipated and mitigation measures are not required.

Table 12 ESTIMATED 2030 BUILDOUT OPERATIONAL EMISSIONS (lbs/day)						
Category	**VOC**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area	6.80	0.19	16.91	0.00	0.24	0.24
Energy	0.14	1.18	0.50	0.01	0.10	0.10
Mobile	4.03	7.05	31.99	0.10	12.02	0.65
TOTAL	**10.97**	**8.42**	**49.40**	**0.11**	**12.36**	**0.99**
Screening-Level Thresholds	**75**	**250**	**550**	**250**	**100**	**55**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

Note: Emissions were calculated for both summer and winter months, and the highest value is shown here.

Therefore, emissions as a result of proposed Project operations are considered to be less than significant, and operation of the Project would not result in any impacts related to violation of air quality standards.

Mitigation Measures

Because impacts related to Issue 2 would be less than significant at Project buildout and with implementation of design features AQ 1 and AQ 2 during construction, no mitigation is required for operational emissions or for the combination of construction and operational activities.

Significance of Impacts After Mitigation

Impacts would be less than significant.

4.3 ISSUE 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

Based on Appendix G of the State CEQA Guidelines, an impact is considered significant if implementation of the project would 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.

In analyzing cumulative impacts from a project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SDAB is listed as "non-attainment" for the State and Federal AAQS.

The City does not include specific criteria for determining the significance of cumulative air quality impacts. As an alternative, the City relies on the San Diego County Guidelines for Determining Significance for Air Quality (2007), which provide the following guidance for

construction and operation phases. A project that has a significant impact on air quality with regard to emissions of ozone precursors (NO_X and VOCs) and particulate emissions (PM_{10} and $PM_{2.5}$), as determined by the screening criteria, would have a significant cumulatively considerable net increase. In the event direct impacts from a project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions from the project, in combination with the emissions from other proposed, or reasonably foreseeable future projects are in excess of screening levels identified above.

During the operational phase, a project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of NO_X, VOCs, PM_{10}, and/or $PM_{2.5}$ would also have a significant cumulatively considerable net increase. Projects that cause road intersections to operate at or below an LOS E and create a CO "hot spot" create a cumulatively considerable net increase of CO.

Impact Analysis

With regard to past and present projects, the background ambient air quality, as measured at the monitoring stations maintained and operated by the APCD, measures the concentrations of pollutants from existing sources. Past and present project impacts are therefore included in the background ambient air quality data.

Short-term emissions associated with construction generally result in near-field impacts. As shown in the project construction emissions evaluation, the emissions of NO_X, VOCs, PM_{10}, and/or $PM_{2.5}$ would be below the significance levels. It is unlikely that all construction for the Project and other cumulative projects would be occurring at the same time; therefore, project construction is not anticipated to result in a cumulatively significant impact on air quality.

With regard to cumulative impacts associated with ozone precursors, in general, if a project is consistent with the community and general plans, it has been accounted for in the ozone attainment demonstration contained within the SIP and would not cause a cumulatively significant impact on the ambient air quality for ozone.

The discussion for Section 4.1 concludes that the Project conforms to the RAQS. Section 4.2 concludes that the Project would not result in a direct impact to air quality during operation. As discussed in Section 4.4 below, the Project would not reduce the LOS of any local street intersection during construction or operation. Therefore, operation of the Project would not result in a cumulatively considerable contribution to a significant air quality impact pertaining to ozone precursors, PM_{10}, or $PM_{2.5}$.

Mitigation/Performance Measures

Because impacts related to Issue 3 would be less than significant, no mitigation is required.

Significance of Impacts After Mitigation

Impacts would be less than significant.

4.4 ISSUE 4: EXPOSE SENSITIVE RECEPTORS TO POLLUTANTS

Based on Appendix G of the State CEQA Guidelines, an impact is considered significant if implementation of the project would expose sensitive receptors to substantial pollutant concentrations.

Impact Analysis

Traffic Related CO Concentrations (CO Hot Spot Analysis)

Vehicle exhaust is the primary source of CO. In an urban setting the highest CO concentrations are generally found within close proximity to congested intersections. Under typical meteorological conditions, CO concentrations tend to decrease as distance from the emissions source (i.e., congested intersection) increase. Project-generated traffic has the potential of contributing to localized "hot spots" of CO off site. Because CO is a byproduct of incomplete combustion, exhaust emissions are worse when fossil-fueled vehicles are operated inefficiently, such as in stop-and-go traffic or through heavily congested intersections, where the level of service (LOS) is severely degraded.

The CARB also recommends evaluation of the potential for the formation of locally high concentrations of CO, known as CO hot spots. A CO hot spot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. To verify that the project would not cause or contribute to a violation of the 1-hour and 8-hour CO standards, an evaluation of the potential for CO hot spots at nearby intersections was conducted.

The TIA (LLG 2014) evaluated whether or not there would be a decrease in the LOS at the intersections affected by the proposed Project. The potential for CO hot spots was evaluated based on the results of the TIA. The Transportation Project-Level Carbon Monoxide Protocol (California Department of Transportation [Caltrans] 1998) was followed to determine whether a CO hot spot is likely to form due to project-generated traffic. In accordance with the Protocol, CO hot spots are typically evaluated when: (a) the LOS of an intersection decreases to an LOS E or worse; (b) signalization and/or channelization is added to an intersection; and, (c) sensitive receptors such as residences, schools, hospitals, etc., are located in the vicinity of the affected intersection or roadway segment.

According to the TIA, one intersection would operate at LOS E or F and result in an increase in delay from the Project: SR 75 (Palm Avenue) at Rainbow Drive in the 2040 Future with Project scenario in the AM peak hour (LLG 2014). Therefore, consistent with the CO Protocol, these findings indicate that further screening is required. Although the SDAPCD, County of San Diego and the City of have not, various air quality agencies in California have developed conservative screening methods. The screening methods of the Sacramento Metropolitan Air Quality Management District (SMAQMD) are used for this project because ambient CO concentrations within the SMAQMD jurisdiction are higher than for the project area, as measured by CARB, resulting in a more conservative analysis. The SMAQMD states that a project would not result in a significant impact to local CO concentrations if it meets all of the below criteria:

- The affected intersection carries less than 31,600 vehicles per hour;

- The project does not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, below-grade roadway, or other location where horizontal or vertical mixing of air would be substantially limited; and

- The affected intersection, which includes a mix of vehicle types, is not anticipated to be substantially different from the County average, as identified by EMFAC or CalEEMod models (SMAQMD 2009).

The traffic volume at the intersection of SR 75 (Palm Avenue) at Rainbow Drive during the AM peak hour is forecasted to be 2,944 vehicles (LLG 2014). The intersection is not located in a tunnel, urban canyon, or similar area that would limit the mixing of air. The vehicle mix used for the Project (based on CalEEMod defaults in San Diego County for the proposed land uses) is 84 percent light duty vehicles, 10 percent medium duty vehicles, and 6 percent heavy duty vehicles. The vehicle mix for the Project area based on field observations is 97 percent automobiles, 1.5 percent medium duty trucks, and 0.5 percent heavy duty trucks (HELIX Environmental Planning, Inc. [HELIX] 2014). Because lighter duty vehicles emit lower levels of CO than heavy-duty vehicles, the anticipated vehicle mix at the affected intersection would result in lower CO levels than the County average. There would be no potential for a CO hotspot or exceedance of State or federal CO ambient air quality standard because the maximum traffic volume would be substantially less than the 31,600 vehicles per hour screening level; because the congested intersection is located where mixing of air would not be limited; and because the vehicle mix would not be uncommon. The impact would be less than significant and no mitigation measures are required.

Toxic Air Contaminants

Construction activities are sporadic, transitory, and short-term in nature, and once construction activities have ceased, so too have emissions from construction activities. DPM is not included as a criteria pollutant; however, it recognized by the state of California as containing carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the CAPCOA Air Toxics "Hot Spots" Program Risk Assessment Guidelines (CAPCOA 1993) as 24 hours per day, seven days per week, 365 days per year, for 70 years for residences and 40 years for school children. DPM would be emitted from heavy equipment used in the construction process. It is estimated that construction activities for the Project would occur over approximately 78 weeks. The proposed construction period of less than two years would be much less than the 70-year/40-year period used for health risk determination. Because of the short-term nature of Project construction and the fact that heavy equipment exhaust emissions are relatively minor, exposure to diesel exhaust emissions during construction would not be significant.

Due to the existing operation of diesel RVs in proximity to sensitive receptors, including schools and residences surrounding the site, the proposed Project's removal of the RV park site would decrease the existing DPM emissions in the project area to zero. The DPM of greatest health concern are those in the categories of fine (PM_{10}) and ultra-fine ($PM_{2.5}$). These fine and

ultra-fine particles are respirable, which means that they can avoid many of the human respiratory system defense mechanisms and enter deeply into the lungs. The proposed development of the 193 residential townhomes is not anticipated to generate any new incremental DPM emissions, except for the occasional mail and/or supply delivery trucks whose emissions would be negligible.

Therefore, operation of the proposed Project is not anticipated to result in an elevated health risk to exposed persons given the long-term nature of operational-related DPM exposure. Consequently, the human health impact of diesel risks associated with construction activities is considered to be less than significant.

Mitigation/Performance Measures

Because impacts related to Issue 4 would be less than significant, no mitigation is required.

Significance of Impacts After Mitigation

Impacts would be less than significant.

4.5 ISSUE 5: CREATE OBJECTIONABLE ODORS

Based on Appendix G of the State CEQA Guidelines, an impact is considered significant if implementation of the project would create objectionable odors affecting a substantial number of people.

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and air districts. Any project with the potential to frequently expose the public to objectionable odors would be deemed as one having a significant impact. Odor impacts on residential areas and other sensitive receptors, such as schools, warrant the closest scrutiny; but consideration should also be given to other land uses where people may congregate, such as recreational parks, etc.

Impact Analysis

The only source of odor anticipated from Project construction would be exhaust emissions from the diesel equipment and haul trucks. Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. During construction, diesel equipment operating at various locations on the site may generate some nuisance odors; however, due to the temporary nature of construction, odors associated with Project construction would cease at the completion of construction period. As such, project construction would not cause an odor nuisance, and odor impacts would be less than significant.

Land uses and industrial operations that are associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The proposed Project would be

developed nearby two elementary schools and adjacent to residential land uses, which are not land uses typically associated with odor complaints. On-site trash receptacles would have the potential to create adverse odors. As trash receptacles would be located and maintained in a manner that promotes odor control, such as keeping the receptacles closed and secured, and scheduling the timely garbage collections before the receptacles reaches odiferous conditions, no adverse odor impacts are anticipated from the proposed land uses. Therefore, Project operations would result in a less than significant odor impact.

Mitigation/Performance Measures

Because impacts related to Issue 5 would be less than significant, no mitigation is required.
Significance of Impacts After Mitigation

Impacts would be less than significant.

4.6 ISSUE 6: GENERATE GHG EMISSIONS THAT MAY RESULT IN A SIGNIFICANT EFFECT

Based on Appendix G of the State CEQA Guidelines, an impact is considered significant if implementation of the project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact Analysis

Construction and Operation

The principal source of GHG associated with the proposed Project would be associated with project construction. GHG emissions are anticipated to occur during construction of the proposed project largely from fuel combustion from construction equipment, worker commute travel, and hauling truck trips. Construction-related GHG emissions result from CO_2, CH_4, and N_2O that is released during the combustion of gasoline or diesel fuel in on- and off-road vehicles and equipment. The Project-related construction activities are estimated to generate approximately 3,490.60 MT of CO_2e emissions. For construction emissions, the County guidance recommends that the emissions be amortized over 30 years and added to operational emissions, as appropriate. Amortized over 30 years, construction equipment would contribute 116.35 MT per year of CO_2e emissions to the Project's total. The estimated construction GHG emissions are provided in Table 13, *Estimated Greenhouse Gas Emissions – Operations.*

Operation of the proposed Project would result in GHG emissions from amortized construction, vehicular traffic generated by residents, area sources (natural gas appliances, hearth combustion, and landscape maintenance), electrical generation, solid waste generation, and water supply.

CalEEMod model conservatively assumed an annual total estimate of 3,477,759 miles would be traveled each year by Project residents. Based on the annual VMT estimates, the proposed Project would result in GHG vehicle emissions of 1,240.80 MT CO_2E each year. For the calculations for the Project with GHG-reducing design features, a 15 percent improvement in

building energy efficiency over Title 24, 2008 (i.e., a 15 percent reduction in the BAU energy use projections) was factored into the equation. In addition, the GHG emissions associated with the conveyance and consumption of water were adjusted to account for the recent CalGreen mandate to reduce indoor water consumption by 20 percent. The estimated GHG emissions associated with vehicular traffic, area sources, electrical generation, water supply, and solid waste generation are shown below in Table 13. Additional detail regarding these CalEEMod model calculations can be found in Attachment A. The estimated emissions of operational CO_2e would be 2,265 MT per year without the GHG reduction measures ("business as usual").

Table 13
ESTIMATED GREENHOUSE GAS EMISSIONS – OPERATIONS

Emission Sources	CO_2 metric tons per year	CH_4 metric tons per year	N_2O metric tons per year	CO_2e metric tons per year
Amortized Construction	116.11	0.01	0.00	116.35
Area Sources	266.31	0.01	0.00	267.97
Energy Sources	502.81	0.01	0.01	505.61
Mobile Sources	1,239.84	0.05	0.00	1,240.80
Waste Sources	18.96	1.12	0.00	42.48
Water Sources	81.72	0.33	0.01	91.41
SUBTOTAL	2,225.75	1.53	0.02	2,264.62
Minus the Existing GHG Emissions (RV Park)	(-888.39)	(-0.96)	(-0.04)	(-919.90)
TOTAL	**1,337.36**	**0.57**	**(-0.02)**	**1,344.62**
Significance Thresholds	**--**	**--**	**--**	**2,500**
Exceedance?	**--**	**--**	**--**	**No**

Emissions associated with amortized construction, vehicular traffic, electrical generation, and water supply would be reduced by implementing GHG reduction measures. In addition, the proposed Project would remove the existing RV park that currently generates approximately 920 MT CO_2e per year. With this decrease of 920 MT CO_2e per year, the net incremental GHG increase would be approximately 1,345 MT CO_2e per year. The net CO_2 equivalent emissions of 1,345 MT CO_2e per year would be below the screening criteria of 2,500 MT. A less than significant impact from GHG emissions would occur.

Mitigation/Performance Measures

Because impacts related to Issue 6 would be less than significant, no mitigation is required.

Significance of Impacts After Mitigation

Impacts would be less than significant.

4.7 ISSUE 7: CONFLICT WITH AN ADOPTED PLAN, POLICY OR REGULATION

Based on Appendix G of the State CEQA Guidelines, an impact is considered significant if implementation of the project would result in conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Impact Analysis

Consistency with Applicable GHG Reduction Measures

The regulatory plans and policies discussed in Section 2.3 above aim to reduce federal, state, and local GHG emissions by primarily targeting the largest emitters of GHGs: transportation and energy sectors. Plan goals and regulatory standards are thus largely focused on the automobile industry and public utilities. For the transportation sector, the reduction strategy is generally three pronged: to reduce GHG emissions from vehicles by improving engine design; to reduce the carbon content of transportation fuels through research, funding, and incentives to fuel suppliers; and to reduce the miles these vehicles travel through land use change and infrastructure investments.

For the energy sector, the reduction strategies aim to: reduce energy demand; impose emission caps on energy providers; establish minimum building energy and green building standards; transition to renewable non-fossil fuels; incentivize homeowners and builders; fully recover landfill gas for energy; expand research and development; and so forth.

As discussed above, the Project would result in an increase in traffic on area roadways. Sustainable design that would be incorporated into the Project to reduce overall demand for energy includes installation of energy- and water-efficient systems. By implementing these Project design features and by complying with the sustainability program, the Project would be consistent with many of the General Plan goals and policies, including the following:

CO-6.c. Support the efforts of the Air Pollution Control District to maintain the constant surveillance of all permit holders and installations within the City. The City should establish a formal complaint process for local residents and periodically advise of and encourage its use. Complaints will be recorded and forwarded to the Air Pollution Control Board for formal action. The process should handle both physical, odoriferous, and noise pollution cases. A system of follow-up procedures on any Board actions shall be established. Reports to the initiators on actions taken will be made, as well as reports to the total citizenry through news publications.

CO-6.d. Encourage the development and use of emission reduction equipment for private and commercial vehicles. The City shall encourage operators of vehicular fleets using City streets to use lower weight or horsepower or low emission vehicles whenever feasible. The City shall strive to set the example by purchasing such vehicles for its own use whenever feasible, or converting existing vehicles to meet such standards.

CO-6.g. Continue to review all new developments to ensure that they meet acceptable air quality standards as set forth by the State and local Air Pollution Control District, preferably through the environmental assessment process.

CO-9.e. Reduce pollutants associated with vehicles and increasing traffic resulting from development. Coordinate local traffic management reduction efforts with the San Diego County Congestion Management Plan.

The Project is consistent with the goals and strategies of local and state plans, policies, and regulations aimed at reducing GHG emissions from land use and development. The Project would include the installation of energy- and water-efficient systems. Therefore, no impacts are anticipated as a result of the Project.

Mitigation/Performance Measures

Because no impacts related to Issue 7 were identified, no mitigation is required.

Significance of Impacts After Mitigation

No impacts.

5.0 SUMMARY AND CONCLUSIONS

The air quality impact analysis evaluated the potential for adverse impacts to the ambient air quality due to construction and operational emissions resulting from the proposed Project. Construction of the proposed Project would result in a temporary addition of pollutants to the local airshed caused by demolition, soil disturbance, fugitive dust emissions, and combustion pollutants from on-site construction equipment, as well as from off-site trucks hauling construction materials. The analysis concludes that the daily construction emissions would not exceed the significance thresholds for criteria pollutants. Air quality impacts resulting from construction would, therefore, be less than significant. The proposed Project would not result in any significant long-term (operational) impacts to air quality, as new mobile and stationary sources associated with the proposed Project following the completion of construction activities would remain well below the significance thresholds.

The Project's potential effect on global climate change was evaluated, and emissions of GHGs were estimated based on the use of construction equipment and vehicle trips associated with construction activities, as well as operational emissions once construction phases are complete. Both amortized construction and operational activities would be below the screening criteria of 2,500 MT, therefore, the proposed Project does not require further analysis. Furthermore, the proposed Project would be consistent with the City's Municipal Code by employing energy efficient measures beyond that required by the Energy Code, resulting in a 15 percent reduction in emissions associated with nonresidential energy use. Additionally, the proposed Project would reduce the overall use of indoor potable water by 20 percent, consistent with the City's Municipal Code. The project would therefore have a less than significant impact on global climate change.

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Attachment A

EMISSION CALCULATIONS (PROVIDED ON CD IN BACK OF REPORT)

Bernardo Shores - Grading and Backbone Infrastructure

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	203	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - Townhomes - 203 dwelling units on 8.83 acres

Construction Phase - Prior to site grading, demolition will occur to remove RV concrete pavements and other utility lines. Backbone infrustructure includes installation of utility lines.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Installation of utility lines includes water, sewer, gas, telephone, cable, and electrical conduit pipelines.

Grading - Assume balanced soil cut/fill on 8.83 acres.

Demolition - Area of concrete slab is 8.83 acres x 43,560 sf per acre x 0.5 foot depth = 192,317.40 cubic feet x 140 lbs per cubic feet = 26,924,436 lbs / 2000 = 13,462 tons.

Vehicle Trips - No Operations.

Woodstoves - No operations.

Consumer Products - no operations

Area Coating - no operations

Landscape Equipment - no operations

Energy Use - no operations

Water And Wastewater - no operations

Solid Waste - no operations

Construction Off-road Equipment Mitigation - Implement Tier 2 engines with level 1 diesel particulate filter and watering on-site three times daily

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					
2014	11.38	100.61	57.97	0.13	45.93	4.48	50.42	3.32	4.48	5.80	0.00	13,174.36	0.00	0.90	0.00	13,193.26
2015	14.62	111.84	72.29	0.13	6.56	5.54	12.10	3.33	5.54	8.86	0.00	13,568.08	0.00	1.31	0.00	13,595.61
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2014	28.06	91.14	57.66	0.13	37.04	3.12	40.16	1.30	3.12	3.32	0.00	13,174.36	0.00	0.90	0.00	13,193.26
2015	51.66	101.91	71.71	0.13	2.82	3.38	6.20	1.31	3.38	4.69	0.00	13,568.08	0.00	1.31	0.00	13,595.61
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.88	0.20	17.12	0.00		0.00	0.09		0.00	0.09	0.00	30.52		0.03	0.00	31.17
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**4.88**	**0.20**	**17.12**	**0.00**	**0.00**	**0.00**	**0.09**	**0.00**	**0.00**	**0.09**	**0.00**	**30.52**		**0.03**	**0.00**	**31.17**

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	4.88	0.20	17.12	0.00		0.00	0.09		0.00	0.09	0.00	30.52		0.03	0.00	31.17
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**4.88**	**0.20**	**17.12**	**0.00**	**0.00**	**0.00**	**0.09**	**0.00**	**0.00**	**0.09**	**0.00**	**30.52**		**0.03**	**0.00**	**31.17**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2014

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					14.58	0.00	14.58	0.00	0.00	0.00						0.00
Off-Road	8.39	66.18	41.03	0.07		3.21	3.21		3.21	3.21		7,510.81		0.75		7,526.57
Total	**8.39**	**66.18**	**41.03**	**0.07**	**14.58**	**3.21**	**17.79**	**0.00**	**3.21**	**3.21**		**7,510.81**		**0.75**		**7,526.57**

3.2 Demolition - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.90	34.34	16.01	0.05	31.16	1.26	32.42	0.19	1.26	1.45		5,509.92		0.14		5,512.87
Vendor	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
Worker	0.08	0.09	0.94	0.00	0.20	0.01	0.20	0.01	0.01	0.01		153.63		0.01		153.83
Total	**2.98**	**34.43**	**16.95**	**0.05**	**31.36**	**1.27**	**32.62**	**0.20**	**1.27**	**1.46**		**5,663.55**		**0.15**		**5,666.70**

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					5.69	0.00	5.69	0.00	0.00	0.00						0.00
Off-Road	25.07	56.71	40.71	0.07		1.85	1.85		1.85	1.85	0.00	7,510.81		0.75		7,526.57
Total	**25.07**	**56.71**	**40.71**	**0.07**	**5.69**	**1.85**	**7.54**	**0.00**	**1.85**	**1.85**	**0.00**	**7,510.81**		**0.75**		**7,526.57**

3.2 Demolition - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.90	34.34	16.01	0.05	31.16	1.26	32.42	0.19	1.26	1.45		5,509.92		0.14		5,512.87
Vendor	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
Worker	0.08	0.09	0.94	0.00	0.20	0.01	0.20	0.01	0.01	0.01		153.63		0.01		153.83
Total	**2.98**	**34.43**	**16.95**	**0.05**	**31.36**	**1.27**	**32.62**	**0.20**	**1.27**	**1.46**		**5,663.55**		**0.15**		**5,666.70**

3.3 Grading - 2014

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					6.13	0.00	6.13	3.31	0.00	3.31						0.00
Off-Road	5.98	45.66	30.18	0.05		2.47	2.47		2.47	2.47		5,240.06		0.53		5,251.29
Total	**5.98**	**45.66**	**30.18**	**0.05**	**6.13**	**2.47**	**8.60**	**3.31**	**2.47**	**5.78**		**5,240.06**		**0.53**		**5,251.29**

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.94	0.00	0.20	0.01	0.20	0.01	0.01	0.01		153.63		0.01		153.83
Total	**0.08**	**0.09**	**0.94**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**153.63**		**0.01**		**153.83**

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					2.39	0.00	2.39	1.29	0.00	1.29						0.00
Off-Road	18.49	40.58	30.02	0.05		1.46	1.46		1.46	1.46	0.00	5,240.06		0.53		5,251.29
Total	**18.49**	**40.58**	**30.02**	**0.05**	**2.39**	**1.46**	**3.85**	**1.29**	**1.46**	**2.75**	**0.00**	**5,240.06**		**0.53**		**5,251.29**

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.94	0.00	0.20	0.01	0.20	0.01	0.01	0.01		153.63		0.01		153.83
Total	**0.08**	**0.09**	**0.94**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**153.63**		**0.01**		**153.83**

3.3 Grading - 2015

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					6.13	0.00	6.13	3.31	0.00	3.31						0.00
Off-Road	5.59	41.92	29.44	0.05		2.23	2.23		2.23	2.23		5,240.06		0.50		5,250.58
Total	**5.59**	**41.92**	**29.44**	**0.05**	**6.13**	**2.23**	**8.36**	**3.31**	**2.23**	**5.54**		**5,240.06**		**0.50**		**5,250.58**

3.3 Grading - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.86	0.00	0.20	0.01	0.20	0.01	0.01	0.01		150.15		0.01		150.33
Total	**0.08**	**0.09**	**0.86**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**150.15**		**0.01**		**150.33**

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					2.39	0.00	2.39	1.29	0.00	1.29						0.00
Off-Road	18.49	40.58	30.02	0.05		1.46	1.46		1.46	1.46	0.00	5,240.06		0.50		5,250.58
Total	**18.49**	**40.58**	**30.02**	**0.05**	**2.39**	**1.46**	**3.85**	**1.29**	**1.46**	**2.75**	**0.00**	**5,240.06**		**0.50**		**5,250.58**

3.3 Grading - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.86	0.00	0.20	0.01	0.20	0.01	0.01	0.01		150.15		0.01		150.33
Total	**0.08**	**0.09**	**0.86**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**150.15**		**0.01**		**150.33**

3.4 Backbone Infrastructure - 2015

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	8.85	69.73	40.95	0.07		3.29	3.29		3.29	3.29		7,997.69		0.79		8,014.30
Total	**8.85**	**69.73**	**40.95**	**0.07**		**3.29**	**3.29**		**3.29**	**3.29**		**7,997.69**		**0.79**		**8,014.30**

3.4 Backbone Infrustructure - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.10	1.04	0.00	0.23	0.01	0.24	0.01	0.01	0.02		180.18		0.01		180.40
Total	**0.09**	**0.10**	**1.04**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**180.18**		**0.01**		**180.40**

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	33.00	61.14	39.79	0.07		1.91	1.91		1.91	1.91	0.00	7,997.69		0.79		8,014.30
Total	**33.00**	**61.14**	**39.79**	**0.07**		**1.91**	**1.91**		**1.91**	**1.91**	**0.00**	**7,997.69**		**0.79**		**8,014.30**

3.4 Backbone Infrustructure - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.10	1.04	0.00	0.23	0.01	0.24	0.01	0.01	0.02		180.18		0.01		180.40
Total	**0.09**	**0.10**	**1.04**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**180.18**		**0.01**		**180.40**

4.0 Mobile Detail

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
NaturalGas Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Condo/Townhouse	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Condo/Townhouse	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	4.88	0.20	17.12	0.00		0.00	0.09		0.00	0.09	0.00	30.52		0.03	0.00	31.17
Unmitigated	4.88	0.20	17.12	0.00		0.00	0.09		0.00	0.09	0.00	30.52		0.03	0.00	31.17
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	4.34					0.00	0.00		0.00	0.00						0.00
Hearth	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
Landscaping	0.53	0.20	17.12	0.00		0.00	0.09		0.00	0.09		30.52		0.03		31.17
Total	**4.87**	**0.20**	**17.12**	**0.00**		**0.00**	**0.09**		**0.00**	**0.09**	**0.00**	**30.52**		**0.03**	**0.00**	**31.17**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	4.34					0.00	0.00		0.00	0.00						0.00
Hearth	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
Landscaping	0.53	0.20	17.12	0.00		0.00	0.09		0.00	0.09		30.52		0.03		31.17
Total	**4.87**	**0.20**	**17.12**	**0.00**		**0.00**	**0.09**		**0.00**	**0.09**	**0.00**	**30.52**		**0.03**	**0.00**	**31.17**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Bernardo Shores - Grading and Backbone Infrastructure

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	203	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - Townhomes - 203 dwelling units on 8.83 acres

Construction Phase - Prior to site grading, demolition will occur to remove RV concrete pavements and other utility lines. Backbone infrustructure includes installation of utility lines.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Installation of utility lines includes water, sewer, gas, telephone, cable, and electrical conduit pipelines.

Grading - Assume balanced soil cut/fill on 8.83 acres.

Demolition - Area of concrete slab is 8.83 acres x 43,560 sf per acre x 0.5 foot depth = 192,317.40 cubic feet x 140 lbs per cubic feet = 26,924,436 lbs / 2000 = 13,462 tons.

Vehicle Trips - No Operations.

Woodstoves - No operations.

Consumer Products - no operations

Area Coating - no operations

Landscape Equipment - no operations

Energy Use - no operations

Water And Wastewater - no operations

Solid Waste - no operations

Construction Off-road Equipment Mitigation - Implement Tier 2 engines with level 1 diesel particulate filter and watering on-site three times daily

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					
2014	11.46	101.43	59.38	0.13	45.93	4.50	50.43	3.32	4.50	5.80	0.00	13,133.22	0.00	0.90	0.00	13,152.20
2015	14.63	111.86	72.18	0.13	6.56	5.54	12.10	3.33	5.54	8.86	0.00	13,542.63	0.00	1.31	0.00	13,570.14
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2014	28.14	91.96	59.07	0.13	37.04	3.14	40.18	1.30	3.14	3.33	0.00	13,133.22	0.00	0.90	0.00	13,152.20
2015	51.68	101.93	71.61	0.13	2.82	3.38	6.20	1.31	3.38	4.69	0.00	13,542.63	0.00	1.31	0.00	13,570.14
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.88	0.20	17.12	0.00		0.00	0.09		0.00	0.09	0.00	30.52		0.03	0.00	31.17
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**4.88**	**0.20**	**17.12**	**0.00**	**0.00**	**0.00**	**0.09**	**0.00**	**0.00**	**0.09**	**0.00**	**30.52**		**0.03**	**0.00**	**31.17**

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	4.88	0.20	17.12	0.00		0.00	0.09		0.00	0.09	0.00	30.52		0.03	0.00	31.17
Energy	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Mobile	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
Total	**4.88**	**0.20**	**17.12**	**0.00**	**0.00**	**0.00**	**0.09**	**0.00**	**0.00**	**0.09**	**0.00**	**30.52**		**0.03**	**0.00**	**31.17**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2014

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					14.58	0.00	14.58	0.00	0.00	0.00						0.00
Off-Road	8.39	66.18	41.03	0.07		3.21	3.21		3.21	3.21		7,510.81		0.75		7,526.57
Total	**8.39**	**66.18**	**41.03**	**0.07**	**14.58**	**3.21**	**17.79**	**0.00**	**3.21**	**3.21**		**7,510.81**		**0.75**		**7,526.57**

3.2 Demolition - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.98	35.15	17.47	0.05	31.16	1.28	32.43	0.19	1.28	1.47		5,480.58		0.14		5,483.62
Vendor	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
Worker	0.09	0.10	0.89	0.00	0.20	0.01	0.20	0.01	0.01	0.01		141.82		0.01		142.01
Total	**3.07**	**35.25**	**18.36**	**0.05**	**31.36**	**1.29**	**32.63**	**0.20**	**1.29**	**1.48**		**5,622.40**		**0.15**		**5,625.63**

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					5.69	0.00	5.69	0.00	0.00	0.00						0.00
Off-Road	25.07	56.71	40.71	0.07		1.85	1.85		1.85	1.85	0.00	7,510.81		0.75		7,526.57
Total	**25.07**	**56.71**	**40.71**	**0.07**	**5.69**	**1.85**	**7.54**	**0.00**	**1.85**	**1.85**	**0.00**	**7,510.81**		**0.75**		**7,526.57**

3.2 Demolition - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.98	35.15	17.47	0.05	31.16	1.28	32.43	0.19	1.28	1.47		5,480.58		0.14		5,483.62
Vendor	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
Worker	0.09	0.10	0.89	0.00	0.20	0.01	0.20	0.01	0.01	0.01		141.82		0.01		142.01
Total	**3.07**	**35.25**	**18.36**	**0.05**	**31.36**	**1.29**	**32.63**	**0.20**	**1.29**	**1.48**		**5,622.40**		**0.15**		**5,625.63**

3.3 Grading - 2014

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					6.13	0.00	6.13	3.31	0.00	3.31						0.00
Off-Road	5.98	45.66	30.18	0.05		2.47	2.47		2.47	2.47		5,240.06		0.53		5,251.29
Total	**5.98**	**45.66**	**30.18**	**0.05**	**6.13**	**2.47**	**8.60**	**3.31**	**2.47**	**5.78**		**5,240.06**		**0.53**		**5,251.29**

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.10	0.89	0.00	0.20	0.01	0.20	0.01	0.01	0.01		141.82		0.01		142.01
Total	**0.09**	**0.10**	**0.89**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**141.82**		**0.01**		**142.01**

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					2.39	0.00	2.39	1.29	0.00	1.29						0.00
Off-Road	18.49	40.58	30.02	0.05		1.46	1.46		1.46	1.46	0.00	5,240.06		0.53		5,251.29
Total	**18.49**	**40.58**	**30.02**	**0.05**	**2.39**	**1.46**	**3.85**	**1.29**	**1.46**	**2.75**	**0.00**	**5,240.06**		**0.53**		**5,251.29**

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.09	0.10	0.89	0.00	0.20	0.01	0.20	0.01	0.01	0.01		141.82		0.01		142.01
Total	**0.09**	**0.10**	**0.89**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**141.82**		**0.01**		**142.01**

3.3 Grading - 2015

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					6.13	0.00	6.13	3.31	0.00	3.31						0.00
Off-Road	5.59	41.92	29.44	0.05		2.23	2.23		2.23	2.23		5,240.06		0.50		5,250.58
Total	**5.59**	**41.92**	**29.44**	**0.05**	**6.13**	**2.23**	**8.36**	**3.31**	**2.23**	**5.54**		**5,240.06**		**0.50**		**5,250.58**

3.3 Grading - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.82	0.00	0.20	0.01	0.20	0.01	0.01	0.01		138.58		0.01		138.75
Total	**0.08**	**0.09**	**0.82**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**138.58**		**0.01**		**138.75**

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					2.39	0.00	2.39	1.29	0.00	1.29						0.00
Off-Road	18.49	40.58	30.02	0.05		1.46	1.46		1.46	1.46	0.00	5,240.06		0.50		5,250.58
Total	**18.49**	**40.58**	**30.02**	**0.05**	**2.39**	**1.46**	**3.85**	**1.29**	**1.46**	**2.75**	**0.00**	**5,240.06**		**0.50**		**5,250.58**

3.3 Grading - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.82	0.00	0.20	0.01	0.20	0.01	0.01	0.01		138.58		0.01		138.75
Total	**0.08**	**0.09**	**0.82**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**138.58**		**0.01**		**138.75**

3.4 Backbone Infrustructure - 2015

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	8.85	69.73	40.95	0.07		3.29	3.29		3.29	3.29		7,997.69		0.79		8,014.30
Total	**8.85**	**69.73**	**40.95**	**0.07**		**3.29**	**3.29**		**3.29**	**3.29**		**7,997.69**		**0.79**		**8,014.30**

3.4 Backbone Infrustructure - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.10	0.11	0.98	0.00	0.23	0.01	0.24	0.01	0.01	0.02		166.30		0.01		166.50
Total	**0.10**	**0.11**	**0.98**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**166.30**		**0.01**		**166.50**

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	33.00	61.14	39.79	0.07		1.91	1.91		1.91	1.91	0.00	7,997.69		0.79		8,014.30
Total	**33.00**	**61.14**	**39.79**	**0.07**		**1.91**	**1.91**		**1.91**	**1.91**	**0.00**	**7,997.69**		**0.79**		**8,014.30**

3.4 Backbone Infrustructure - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.10	0.11	0.98	0.00	0.23	0.01	0.24	0.01	0.01	0.02		166.30		0.01		166.50
Total	**0.10**	**0.11**	**0.98**	**0.00**	**0.23**	**0.01**	**0.24**	**0.01**	**0.01**	**0.02**		**166.30**		**0.01**		**166.50**

4.0 Mobile Detail

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

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	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
NaturalGas Unmitigated	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Condo/Townhouse	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	lb/day										lb/day					
Condo/Townhouse	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**	**0.00**	**0.00**

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	4.88	0.20	17.12	0.00		0.00	0.09		0.00	0.09	0.00	30.52		0.03	0.00	31.17
Unmitigated	4.88	0.20	17.12	0.00		0.00	0.09		0.00	0.09	0.00	30.52		0.03	0.00	31.17
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	4.34					0.00	0.00		0.00	0.00						0.00
Hearth	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
Landscaping	0.53	0.20	17.12	0.00		0.00	0.09		0.00	0.09		30.52		0.03		31.17
Total	**4.87**	**0.20**	**17.12**	**0.00**		**0.00**	**0.09**		**0.00**	**0.09**	**0.00**	**30.52**		**0.03**	**0.00**	**31.17**

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	0.00					0.00	0.00		0.00	0.00						0.00
Consumer Products	4.34					0.00	0.00		0.00	0.00						0.00
Hearth	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
Landscaping	0.53	0.20	17.12	0.00		0.00	0.09		0.00	0.09		30.52		0.03		31.17
Total	**4.87**	**0.20**	**17.12**	**0.00**		**0.00**	**0.09**		**0.00**	**0.09**	**0.00**	**30.52**		**0.03**	**0.00**	**31.17**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Bernardo Shores - Grading and Backbone Infrastructure

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	203	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - Townhomes - 203 dwelling units on 8.83 acres

Construction Phase - Prior to site grading, demolition will occur to remove RV concrete pavements and other utility lines. Backbone infrustructure includes installation of utility lines.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Installation of utility lines includes water, sewer, gas, telephone, cable, and electrical conduit pipelines.

Grading - Assume balanced soil cut/fill on 8.83 acres.

Demolition - Area of concrete slab is 8.83 acres x 43,560 sf per acre x 0.5 foot depth = 192,317.40 cubic feet x 140 lbs per cubic feet = 26,924,436 lbs / 2000 = 13,462 tons.

Vehicle Trips - No Operations.

Woodstoves - No operations.

Consumer Products - no operations

Area Coating - no operations

Landscape Equipment - no operations

Energy Use - no operations

Water And Wastewater - no operations

Solid Waste - no operations

Construction Off-road Equipment Mitigation - Implement Tier 2 engines with level 1 diesel particulate filter and watering on-site three times daily

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					
2014	0.24	1.98	1.26	0.00	0.68	0.10	0.78	0.17	0.10	0.26	0.00	224.29	224.29	0.02	0.00	224.69
2015	0.49	3.78	2.38	0.00	0.27	0.18	0.46	0.14	0.18	0.33	0.00	409.87	409.87	0.04	0.00	410.71
Total	**0.73**	**5.76**	**3.64**	**0.00**	**0.95**	**0.28**	**1.24**	**0.31**	**0.28**	**0.59**	**0.00**	**634.16**	**634.16**	**0.06**	**0.00**	**635.40**

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					
2014	0.68	1.77	1.25	0.00	0.43	0.06	0.50	0.07	0.06	0.13	0.00	224.29	224.29	0.02	0.00	224.69
2015	1.76	3.39	2.34	0.00	0.11	0.11	0.22	0.06	0.11	0.17	0.00	409.87	409.87	0.04	0.00	410.71
Total	**2.44**	**5.16**	**3.59**	**0.00**	**0.54**	**0.17**	**0.72**	**0.13**	**0.17**	**0.30**	**0.00**	**634.16**	**634.16**	**0.06**	**0.00**	**635.40**

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	0.79	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
Energy	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
Mobile	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
Waste						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.79**	**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

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	0.79	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
Energy	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
Mobile	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
Waste						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.79**	**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

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

3.2 Demolition - 2014

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					0.15	0.00	0.15	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.08	0.66	0.41	0.00		0.03	0.03		0.03	0.03	0.00	68.12	68.12	0.01	0.00	68.26
Total	**0.08**	**0.66**	**0.41**	**0.00**	**0.15**	**0.03**	**0.18**	**0.02**	**0.03**	**0.05**	**0.00**	**68.12**	**68.12**	**0.01**	**0.00**	**68.26**

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	0.03	0.33	0.17	0.00	0.27	0.01	0.28	0.00	0.01	0.01	0.00	49.87	49.87	0.00	0.00	49.90
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31	1.31	0.00	0.00	1.31
Total	**0.03**	**0.33**	**0.18**	**0.00**	**0.27**	**0.01**	**0.28**	**0.00**	**0.01**	**0.01**	**0.00**	**51.18**	**51.18**	**0.00**	**0.00**	**51.21**

3.2 Demolition - 2014

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					0.06	0.00	0.06	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.25	0.57	0.41	0.00		0.02	0.02		0.02	0.02	0.00	68.12	68.12	0.01	0.00	68.26
Total	**0.25**	**0.57**	**0.41**	**0.00**	**0.06**	**0.02**	**0.08**	**0.01**	**0.02**	**0.03**	**0.00**	**68.12**	**68.12**	**0.01**	**0.00**	**68.26**

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	0.03	0.33	0.17	0.00	0.27	0.01	0.28	0.00	0.01	0.01	0.00	49.87	49.87	0.00	0.00	49.90
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31	1.31	0.00	0.00	1.31
Total	**0.03**	**0.33**	**0.18**	**0.00**	**0.27**	**0.01**	**0.28**	**0.00**	**0.01**	**0.01**	**0.00**	**51.18**	**51.18**	**0.00**	**0.00**	**51.21**

3.3 Grading - 2014

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					0.26	0.00	0.26	0.14	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.13	0.98	0.65	0.00		0.05	0.05		0.05	0.05	0.00	102.18	102.18	0.01	0.00	102.40
Total	**0.13**	**0.98**	**0.65**	**0.00**	**0.26**	**0.05**	**0.31**	**0.14**	**0.05**	**0.19**	**0.00**	**102.18**	**102.18**	**0.01**	**0.00**	**102.40**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.81	2.81	0.00	0.00	2.82
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.81**	**2.81**	**0.00**	**0.00**	**2.82**

3.3 Grading - 2014

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					0.10	0.00	0.10	0.06	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.40	0.87	0.65	0.00		0.03	0.03		0.03	0.03	0.00	102.18	102.18	0.01	0.00	102.40
Total	**0.40**	**0.87**	**0.65**	**0.00**	**0.10**	**0.03**	**0.13**	**0.06**	**0.03**	**0.09**	**0.00**	**102.18**	**102.18**	**0.01**	**0.00**	**102.40**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.81	2.81	0.00	0.00	2.82
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.81**	**2.81**	**0.00**	**0.00**	**2.82**

3.3 Grading - 2015

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					0.26	0.00	0.26	0.14	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.12	0.88	0.62	0.00		0.05	0.05		0.05	0.05	0.00	99.80	99.80	0.01	0.00	100.00
Total	**0.12**	**0.88**	**0.62**	**0.00**	**0.26**	**0.05**	**0.31**	**0.14**	**0.05**	**0.19**	**0.00**	**99.80**	**99.80**	**0.01**	**0.00**	**100.00**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.69	2.69	0.00	0.00	2.69
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.69**	**2.69**	**0.00**	**0.00**	**2.69**

3.3 Grading - 2015

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					0.10	0.00	0.10	0.06	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.39	0.85	0.63	0.00		0.03	0.03		0.03	0.03	0.00	99.80	99.80	0.01	0.00	100.00
Total	**0.39**	**0.85**	**0.63**	**0.00**	**0.10**	**0.03**	**0.13**	**0.06**	**0.03**	**0.09**	**0.00**	**99.80**	**99.80**	**0.01**	**0.00**	**100.00**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.69	2.69	0.00	0.00	2.69
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.69**	**2.69**	**0.00**	**0.00**	**2.69**

3.4 Backbone Infrustructure - 2015

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	0.37	2.89	1.70	0.00		0.14	0.14		0.14	0.14	0.00	301.02	301.02	0.03	0.00	301.64
Total	**0.37**	**2.89**	**1.70**	**0.00**		**0.14**	**0.14**		**0.14**	**0.14**	**0.00**	**301.02**	**301.02**	**0.03**	**0.00**	**301.64**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	6.37	6.37	0.00	0.00	6.38
Total	**0.00**	**0.00**	**0.04**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**6.37**	**6.37**	**0.00**	**0.00**	**6.38**

3.4 Backbone Infrustructure - 2015

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	1.37	2.54	1.65	0.00		0.08	0.08		0.08	0.08	0.00	301.02	301.02	0.03	0.00	301.64
Total	**1.37**	**2.54**	**1.65**	**0.00**		**0.08**	**0.08**		**0.08**	**0.08**	**0.00**	**301.02**	**301.02**	**0.03**	**0.00**	**301.64**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	6.37	6.37	0.00	0.00	6.38
Total	**0.00**	**0.00**	**0.04**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**6.37**	**6.37**	**0.00**	**0.00**	**6.38**

4.0 Mobile Detail

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	0.00	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
Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

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						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NaturalGas Mitigated	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
NaturalGas Unmitigated	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Condo/Townhouse	0	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
Total		**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**

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	tons/yr										MT/yr					
Condo/Townhouse	0	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
Total		**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**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Condo/Townhouse	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Condo/Townhouse	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

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	0.79	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
Unmitigated	0.79	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.79					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	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
Landscaping						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.79**	**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**

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	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.79					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	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
Landscaping						0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.79**	**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**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					0.00	0.00	0.00	0.00
Unmitigated					0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Condo/Townhouse	0 / 0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Condo/Townhouse	0 / 0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					0.00	0.00	0.00	0.00
Unmitigated					0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Condo/Townhouse	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Condo/Townhouse	0					0.00	0.00	0.00	0.00
Total						**0.00**	**0.00**	**0.00**	**0.00**

9.0 Vegetation

Bernardo Shores - Vertical Building Phase 1

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	50	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - 50 units per 2.17 acres

Construction Phase - Estimated construction schedule. architectural coating will begin after dry wall is installed and stucco is dried (4 months).

Construction Off-road Equipment Mitigation - Tier 2 engines with level 1 diesel particulate filter and watering three times daily.

Area Mitigation - Natural gas hearth, Low VOC Cleaning Supplies, and Low VOC paints

Energy Mitigation - Exceed Title 24 with 15% improvements and install energy efficient applicances (Energy Star).

Water Mitigation - Install low flow equipment for indoor water flow.

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					
2015	28.30	51.05	41.00	0.07	0.80	3.67	4.47	0.03	3.67	3.70	0.00	6,625.02	0.00	0.79	0.00	6,641.62
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2015	28.30	51.05	41.00	0.07	0.80	3.67	4.47	0.03	3.67	3.70	0.00	6,625.02	0.00	0.79	0.00	6,641.62
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	28.00	0.52	43.16	0.04		0.00	5.69		0.00	5.69	644.01	589.87		1.29	0.04	1,274.45
Energy	0.03	0.29	0.12	0.00		0.00	0.02		0.00	0.02		371.91		0.01	0.01	374.17
Mobile	1.72	3.54	16.43	0.03	3.38	0.17	3.55	0.12	0.17	0.29		2,821.76		0.12		2,824.20
Total	**29.75**	**4.35**	**59.71**	**0.07**	**3.38**	**0.17**	**9.26**	**0.12**	**0.17**	**6.00**	**644.01**	**3,783.54**		**1.42**	**0.05**	**4,472.82**

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	1.32	0.05	4.22	0.00		0.00	0.08		0.00	0.08	0.00	960.46		0.03	0.02	966.42
Energy	0.03	0.25	0.11	0.00		0.00	0.02		0.00	0.02		324.29		0.01	0.01	326.27
Mobile	1.72	3.54	16.43	0.03	3.38	0.17	3.55	0.12	0.17	0.29		2,821.76		0.12		2,824.20
Total	**3.07**	**3.84**	**20.76**	**0.03**	**3.38**	**0.17**	**3.65**	**0.12**	**0.17**	**0.39**	**0.00**	**4,106.51**		**0.16**	**0.03**	**4,116.89**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.34	24.51	18.80	0.04		1.51	1.51		1.51	1.51		3,233.11		0.39		3,241.30
Total	**4.34**	**24.51**	**18.80**	**0.04**		**1.51**	**1.51**		**1.51**	**1.51**		**3,233.11**		**0.39**		**3,241.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.06	0.73	0.42	0.00	0.05	0.02	0.07	0.00	0.02	0.03		136.72		0.00		136.78
Worker	0.19	0.20	2.07	0.00	0.47	0.02	0.49	0.02	0.02	0.03		360.36		0.02		360.79
Total	**0.25**	**0.93**	**2.49**	**0.00**	**0.52**	**0.04**	**0.56**	**0.02**	**0.04**	**0.06**		**497.08**		**0.02**		**497.57**

3.2 Building Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.34	24.51	18.80	0.04		1.51	1.51		1.51	1.51	0.00	3,233.11		0.39		3,241.30
Total	**4.34**	**24.51**	**18.80**	**0.04**		**1.51**	**1.51**		**1.51**	**1.51**	**0.00**	**3,233.11**		**0.39**		**3,241.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.06	0.73	0.42	0.00	0.05	0.02	0.07	0.00	0.02	0.03		136.72		0.00		136.78
Worker	0.19	0.20	2.07	0.00	0.47	0.02	0.49	0.02	0.02	0.03		360.36		0.02		360.79
Total	**0.25**	**0.93**	**2.49**	**0.00**	**0.52**	**0.04**	**0.56**	**0.02**	**0.04**	**0.06**		**497.08**		**0.02**		**497.57**

3.3 Architectural Coating - 2015

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	19.54					0.00	0.00		0.00	0.00						0.00
Off-Road	0.41	2.57	1.90	0.00		0.22	0.22		0.22	0.22		281.19		0.04		281.96
Total	**19.95**	**2.57**	**1.90**	**0.00**		**0.22**	**0.22**		**0.22**	**0.22**		**281.19**		**0.04**		**281.96**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.04	0.40	0.00	0.09	0.00	0.09	0.00	0.00	0.01		70.07		0.00		70.15
Total	**0.04**	**0.04**	**0.40**	**0.00**	**0.09**	**0.00**	**0.09**	**0.00**	**0.00**	**0.01**		**70.07**		**0.00**		**70.15**

3.3 Architectural Coating - 2015

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	19.54					0.00	0.00		0.00	0.00						0.00
Off-Road	0.41	2.57	1.90	0.00		0.22	0.22		0.22	0.22	0.00	281.19		0.04		281.96
Total	**19.95**	**2.57**	**1.90**	**0.00**		**0.22**	**0.22**		**0.22**	**0.22**	**0.00**	**281.19**		**0.04**		**281.96**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.04	0.40	0.00	0.09	0.00	0.09	0.00	0.00	0.01		70.07		0.00		70.15
Total	**0.04**	**0.04**	**0.40**	**0.00**	**0.09**	**0.00**	**0.09**	**0.00**	**0.00**	**0.01**		**70.07**		**0.00**		**70.15**

3.4 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.65	22.90	16.55	0.03		1.88	1.88		1.88	1.88		2,393.42		0.33		2,400.30
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.65**	**22.90**	**16.55**	**0.03**		**1.88**	**1.88**		**1.88**	**1.88**		**2,393.42**		**0.33**		**2,400.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.86	0.00	0.20	0.01	0.20	0.01	0.01	0.01		150.15		0.01		150.33
Total	**0.08**	**0.09**	**0.86**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**150.15**		**0.01**		**150.33**

3.4 Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.65	22.90	16.55	0.03		1.88	1.88		1.88	1.88	0.00	2,393.42		0.33		2,400.30
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.65**	**22.90**	**16.55**	**0.03**		**1.88**	**1.88**		**1.88**	**1.88**	**0.00**	**2,393.42**		**0.33**		**2,400.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.86	0.00	0.20	0.01	0.20	0.01	0.01	0.01		150.15		0.01		150.33
Total	**0.08**	**0.09**	**0.86**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**150.15**		**0.01**		**150.33**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.72	3.54	16.43	0.03	3.38	0.17	3.55	0.12	0.17	0.29		2,821.76		0.12		2,824.20
Unmitigated	1.72	3.54	16.43	0.03	3.38	0.17	3.55	0.12	0.17	0.29		2,821.76		0.12		2,824.20
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	329.50	358.00	303.50	941,842	941,842
Total	329.50	358.00	303.50	941,842	941,842

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.03	0.25	0.11	0.00		0.00	0.02		0.00	0.02		324.29		0.01	0.01	326.27
NaturalGas Unmitigated	0.03	0.29	0.12	0.00		0.00	0.02		0.00	0.02		371.91		0.01	0.01	374.17
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Condo/Townhouse	3161.21	0.03	0.29	0.12	0.00		0.00	0.02		0.00	0.02		371.91		0.01	0.01	374.17
Total		**0.03**	**0.29**	**0.12**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**		**371.91**		**0.01**	**0.01**	**374.17**

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	lb/day										lb/day					
Condo/Townhouse	2.7565	0.03	0.25	0.11	0.00		0.00	0.02		0.00	0.02		324.29		0.01	0.01	326.27
Total		**0.03**	**0.25**	**0.11**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**		**324.29**		**0.01**	**0.01**	**326.27**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.32	0.05	4.22	0.00		0.00	0.08		0.00	0.08	0.00	960.46		0.03	0.02	966.42
Unmitigated	28.00	0.52	43.16	0.04		0.00	5.69		0.00	5.69	644.01	589.87		1.29	0.04	1,274.45
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.43					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.07					0.00	0.00		0.00	0.00						0.00
Hearth	26.37	0.47	38.95	0.04		0.00	5.67		0.00	5.67	644.01	582.35		1.28	0.04	1,266.77
Landscaping	0.13	0.05	4.22	0.00		0.00	0.02		0.00	0.02		7.52		0.01		7.68
Total	**28.00**	**0.52**	**43.17**	**0.04**		**0.00**	**5.69**		**0.00**	**5.69**	**644.01**	**589.87**		**1.29**	**0.04**	**1,274.45**

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	0.11					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.99					0.00	0.00		0.00	0.00						0.00
Hearth	0.09	0.00	0.00	0.00		0.00	0.06		0.00	0.06	0.00	952.94		0.02	0.02	958.74
Landscaping	0.13	0.05	4.22	0.00		0.00	0.02		0.00	0.02		7.52		0.01		7.68
Total	**1.32**	**0.05**	**4.22**	**0.00**		**0.00**	**0.08**		**0.00**	**0.08**	**0.00**	**960.46**		**0.03**	**0.02**	**966.42**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Bernardo Shores - Vertical Building Phase 1

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	50	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - 50 units per 2.17 acres

Construction Phase - Estimated construction schedule. architectural coating will begin after dry wall is installed and stucco is dried (4 months).

Construction Off-road Equipment Mitigation - Tier 2 engines with level 1 diesel particulate filter and watering three times daily.

Area Mitigation - Natural gas hearth, Low VOC Cleaning Supplies, and Low VOC paints

Energy Mitigation - Exceed Title 24 with 15% improvements and install energy efficient applicances (Energy Star).

Water Mitigation - Install low flow equipment for indoor water flow.

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					
2015	28.33	51.09	40.88	0.07	0.80	3.67	4.47	0.03	3.67	3.70	0.00	6,579.16	0.00	0.79	0.00	6,595.73
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2015	28.33	51.09	40.88	0.07	0.80	3.67	4.47	0.03	3.67	3.70	0.00	6,579.16	0.00	0.79	0.00	6,595.73
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	28.00	0.52	43.16	0.04		0.00	5.69		0.00	5.69	644.01	589.87		1.29	0.04	1,274.45
Energy	0.03	0.29	0.12	0.00		0.00	0.02		0.00	0.02		371.91		0.01	0.01	374.17
Mobile	1.83	3.70	16.18	0.03	3.38	0.17	3.55	0.12	0.17	0.29		2,641.72		0.12		2,644.18
Total	**29.86**	**4.51**	**59.46**	**0.07**	**3.38**	**0.17**	**9.26**	**0.12**	**0.17**	**6.00**	**644.01**	**3,603.50**		**1.42**	**0.05**	**4,292.80**

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	1.32	0.05	4.22	0.00		0.00	0.08		0.00	0.08	0.00	960.46		0.03	0.02	966.42
Energy	0.03	0.25	0.11	0.00		0.00	0.02		0.00	0.02		324.29		0.01	0.01	326.27
Mobile	1.83	3.70	16.18	0.03	3.38	0.17	3.55	0.12	0.17	0.29		2,641.72		0.12		2,644.18
Total	**3.18**	**4.00**	**20.51**	**0.03**	**3.38**	**0.17**	**3.65**	**0.12**	**0.17**	**0.39**	**0.00**	**3,926.47**		**0.16**	**0.03**	**3,936.87**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.34	24.51	18.80	0.04		1.51	1.51		1.51	1.51		3,233.11		0.39		3,241.30
Total	**4.34**	**24.51**	**18.80**	**0.04**		**1.51**	**1.51**		**1.51**	**1.51**		**3,233.11**		**0.39**		**3,241.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.07	0.74	0.48	0.00	0.05	0.02	0.07	0.00	0.02	0.03		135.60		0.00		135.66
Worker	0.20	0.22	1.96	0.00	0.47	0.02	0.49	0.02	0.02	0.03		332.59		0.02		333.01
Total	**0.27**	**0.96**	**2.44**	**0.00**	**0.52**	**0.04**	**0.56**	**0.02**	**0.04**	**0.06**		**468.19**		**0.02**		**468.67**

3.2 Building Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.34	24.51	18.80	0.04		1.51	1.51		1.51	1.51	0.00	3,233.11		0.39		3,241.30
Total	**4.34**	**24.51**	**18.80**	**0.04**		**1.51**	**1.51**		**1.51**	**1.51**	**0.00**	**3,233.11**		**0.39**		**3,241.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.07	0.74	0.48	0.00	0.05	0.02	0.07	0.00	0.02	0.03		135.60		0.00		135.66
Worker	0.20	0.22	1.96	0.00	0.47	0.02	0.49	0.02	0.02	0.03		332.59		0.02		333.01
Total	**0.27**	**0.96**	**2.44**	**0.00**	**0.52**	**0.04**	**0.56**	**0.02**	**0.04**	**0.06**		**468.19**		**0.02**		**468.67**

3.3 Architectural Coating - 2015

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	19.54					0.00	0.00		0.00	0.00						0.00
Off-Road	0.41	2.57	1.90	0.00		0.22	0.22		0.22	0.22		281.19		0.04		281.96
Total	**19.95**	**2.57**	**1.90**	**0.00**		**0.22**	**0.22**		**0.22**	**0.22**		**281.19**		**0.04**		**281.96**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.04	0.38	0.00	0.09	0.00	0.09	0.00	0.00	0.01		64.67		0.00		64.75
Total	**0.04**	**0.04**	**0.38**	**0.00**	**0.09**	**0.00**	**0.09**	**0.00**	**0.00**	**0.01**		**64.67**		**0.00**		**64.75**

3.3 Architectural Coating - 2015

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	19.54					0.00	0.00		0.00	0.00						0.00
Off-Road	0.41	2.57	1.90	0.00		0.22	0.22		0.22	0.22	0.00	281.19		0.04		281.96
Total	**19.95**	**2.57**	**1.90**	**0.00**		**0.22**	**0.22**		**0.22**	**0.22**	**0.00**	**281.19**		**0.04**		**281.96**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.04	0.38	0.00	0.09	0.00	0.09	0.00	0.00	0.01		64.67		0.00		64.75
Total	**0.04**	**0.04**	**0.38**	**0.00**	**0.09**	**0.00**	**0.09**	**0.00**	**0.00**	**0.01**		**64.67**		**0.00**		**64.75**

3.4 Paving - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.65	22.90	16.55	0.03		1.88	1.88		1.88	1.88		2,393.42		0.33		2,400.30
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.65**	**22.90**	**16.55**	**0.03**		**1.88**	**1.88**		**1.88**	**1.88**		**2,393.42**		**0.33**		**2,400.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.82	0.00	0.20	0.01	0.20	0.01	0.01	0.01		138.58		0.01		138.75
Total	**0.08**	**0.09**	**0.82**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**138.58**		**0.01**		**138.75**

3.4 Paving - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.65	22.90	16.55	0.03		1.88	1.88		1.88	1.88	0.00	2,393.42		0.33		2,400.30
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.65**	**22.90**	**16.55**	**0.03**		**1.88**	**1.88**		**1.88**	**1.88**	**0.00**	**2,393.42**		**0.33**		**2,400.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.82	0.00	0.20	0.01	0.20	0.01	0.01	0.01		138.58		0.01		138.75
Total	**0.08**	**0.09**	**0.82**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**138.58**		**0.01**		**138.75**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.83	3.70	16.18	0.03	3.38	0.17	3.55	0.12	0.17	0.29		2,641.72		0.12		2,644.18
Unmitigated	1.83	3.70	16.18	0.03	3.38	0.17	3.55	0.12	0.17	0.29		2,641.72		0.12		2,644.18
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	329.50	358.00	303.50	941,842	941,842
Total	329.50	358.00	303.50	941,842	941,842

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.03	0.25	0.11	0.00		0.00	0.02		0.00	0.02		324.29		0.01	0.01	326.27
NaturalGas Unmitigated	0.03	0.29	0.12	0.00		0.00	0.02		0.00	0.02		371.91		0.01	0.01	374.17
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Condo/Townhouse	3161.21	0.03	0.29	0.12	0.00		0.00	0.02		0.00	0.02		371.91		0.01	0.01	374.17
Total		**0.03**	**0.29**	**0.12**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**		**371.91**		**0.01**	**0.01**	**374.17**

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	lb/day										lb/day					
Condo/Townhouse	2.7565	0.03	0.25	0.11	0.00		0.00	0.02		0.00	0.02		324.29		0.01	0.01	326.27
Total		**0.03**	**0.25**	**0.11**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**		**324.29**		**0.01**	**0.01**	**326.27**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.32	0.05	4.22	0.00		0.00	0.08		0.00	0.08	0.00	960.46		0.03	0.02	966.42
Unmitigated	28.00	0.52	43.16	0.04		0.00	5.69		0.00	5.69	644.01	589.87		1.29	0.04	1,274.45
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.43					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.07					0.00	0.00		0.00	0.00						0.00
Hearth	26.37	0.47	38.95	0.04		0.00	5.67		0.00	5.67	644.01	582.35		1.28	0.04	1,266.77
Landscaping	0.13	0.05	4.22	0.00		0.00	0.02		0.00	0.02		7.52		0.01		7.68
Total	**28.00**	**0.52**	**43.17**	**0.04**		**0.00**	**5.69**		**0.00**	**5.69**	**644.01**	**589.87**		**1.29**	**0.04**	**1,274.45**

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	0.11					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.99					0.00	0.00		0.00	0.00						0.00
Hearth	0.09	0.00	0.00	0.00		0.00	0.06		0.00	0.06	0.00	952.94		0.02	0.02	958.74
Landscaping	0.13	0.05	4.22	0.00		0.00	0.02		0.00	0.02		7.52		0.01		7.68
Total	**1.32**	**0.05**	**4.22**	**0.00**		**0.00**	**0.08**		**0.00**	**0.08**	**0.00**	**960.46**		**0.03**	**0.02**	**966.42**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Bernardo Shores - Vertical Building Phase 1

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	50	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - 50 units per 2.17 acres

Construction Phase - Estimated construction schedule. architectural coating will begin after dry wall is installed and stucco is dried (4 months).

Construction Off-road Equipment Mitigation - Tier 2 engines with level 1 diesel particulate filter and watering three times daily.

Area Mitigation - Natural gas hearth, Low VOC Cleaning Supplies, and Low VOC paints

Energy Mitigation - Exceed Title 24 with 15% improvements and install energy efficient applicances (Energy Star).

Water Mitigation - Install low flow equipment for indoor water flow.

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					
2015	1.32	3.02	2.51	0.00	0.05	0.19	0.24	0.00	0.19	0.19	0.00	394.00	394.00	0.04	0.00	394.93
Total	**1.32**	**3.02**	**2.51**	**0.00**	**0.05**	**0.19**	**0.24**	**0.00**	**0.19**	**0.19**	**0.00**	**394.00**	**394.00**	**0.04**	**0.00**	**394.93**

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					
2015	1.32	3.02	2.51	0.00	0.05	0.19	0.24	0.00	0.19	0.19	0.00	394.00	394.00	0.04	0.00	394.93
Total	**1.32**	**3.02**	**2.51**	**0.00**	**0.05**	**0.19**	**0.24**	**0.00**	**0.19**	**0.19**	**0.00**	**394.00**	**394.00**	**0.04**	**0.00**	**394.93**

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	3.43	0.05	4.24	0.00		0.00	0.55		0.00	0.55	51.65	65.59	117.24	0.05	0.00	119.78
Energy	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	134.81	134.81	0.00	0.00	135.57
Mobile	0.28	0.58	2.73	0.00	0.50	0.03	0.52	0.02	0.03	0.05	0.00	407.73	407.73	0.02	0.00	408.10
Waste						0.00	0.00		0.00	0.00	4.67	0.00	4.67	0.28	0.00	10.46
Water						0.00	0.00		0.00	0.00	0.00	23.14	23.14	0.10	0.00	26.11
Total	**3.72**	**0.68**	**6.99**	**0.00**	**0.50**	**0.03**	**1.07**	**0.02**	**0.03**	**0.60**	**56.32**	**631.27**	**687.59**	**0.45**	**0.00**	**700.02**

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	0.22	0.00	0.38	0.00		0.00	0.01		0.00	0.01	0.00	106.95	106.95	0.00	0.00	107.61
Energy	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	123.85	123.85	0.00	0.00	124.53
Mobile	0.28	0.58	2.73	0.00	0.50	0.03	0.52	0.02	0.03	0.05	0.00	407.73	407.73	0.02	0.00	408.10
Waste						0.00	0.00		0.00	0.00	4.67	0.00	4.67	0.28	0.00	10.46
Water						0.00	0.00		0.00	0.00	0.00	23.14	23.14	0.10	0.00	26.11
Total	**0.51**	**0.63**	**3.13**	**0.00**	**0.50**	**0.03**	**0.53**	**0.02**	**0.03**	**0.06**	**4.67**	**661.67**	**666.34**	**0.40**	**0.00**	**676.81**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2015

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	0.48	2.70	2.07	0.00		0.17	0.17		0.17	0.17	0.00	322.55	322.55	0.04	0.00	323.36
Total	**0.48**	**2.70**	**2.07**	**0.00**		**0.17**	**0.17**		**0.17**	**0.17**	**0.00**	**322.55**	**322.55**	**0.04**	**0.00**	**323.36**

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	0.00	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
Vendor	0.01	0.08	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	13.60	13.60	0.00	0.00	13.60
Worker	0.02	0.02	0.22	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	33.78	33.78	0.00	0.00	33.82
Total	**0.03**	**0.10**	**0.27**	**0.00**	**0.05**	**0.00**	**0.06**	**0.00**	**0.00**	**0.00**	**0.00**	**47.38**	**47.38**	**0.00**	**0.00**	**47.42**

3.2 Building Construction - 2015

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	0.48	2.70	2.07	0.00		0.17	0.17		0.17	0.17	0.00	322.55	322.55	0.04	0.00	323.36
Total	**0.48**	**2.70**	**2.07**	**0.00**		**0.17**	**0.17**		**0.17**	**0.17**	**0.00**	**322.55**	**322.55**	**0.04**	**0.00**	**323.36**

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	0.00	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
Vendor	0.01	0.08	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	13.60	13.60	0.00	0.00	13.60
Worker	0.02	0.02	0.22	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	33.78	33.78	0.00	0.00	33.82
Total	**0.03**	**0.10**	**0.27**	**0.00**	**0.05**	**0.00**	**0.06**	**0.00**	**0.00**	**0.00**	**0.00**	**47.38**	**47.38**	**0.00**	**0.00**	**47.42**

3.3 Architectural Coating - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.78					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.10	0.08	0.00		0.01	0.01		0.01	0.01	0.00	10.20	10.20	0.00	0.00	10.23
Total	**0.80**	**0.10**	**0.08**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**10.20**	**10.20**	**0.00**	**0.00**	**10.23**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.39	2.39	0.00	0.00	2.39
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.39**	**2.39**	**0.00**	**0.00**	**2.39**

3.3 Architectural Coating - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.78					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.10	0.08	0.00		0.01	0.01		0.01	0.01	0.00	10.20	10.20	0.00	0.00	10.23
Total	**0.80**	**0.10**	**0.08**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**10.20**	**10.20**	**0.00**	**0.00**	**10.23**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.39	2.39	0.00	0.00	2.39
Total	**0.00**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.39**	**2.39**	**0.00**	**0.00**	**2.39**

3.4 Paving - 2015

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	0.02	0.11	0.08	0.00		0.01	0.01		0.01	0.01	0.00	10.85	10.85	0.00	0.00	10.88
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.02**	**0.11**	**0.08**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**10.85**	**10.85**	**0.00**	**0.00**	**10.88**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.00	0.00	0.64
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.64**	**0.64**	**0.00**	**0.00**	**0.64**

3.4 Paving - 2015

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	0.02	0.11	0.08	0.00		0.01	0.01		0.01	0.01	0.00	10.85	10.85	0.00	0.00	10.88
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.02**	**0.11**	**0.08**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**10.85**	**10.85**	**0.00**	**0.00**	**10.88**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.00	0.00	0.64
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.64**	**0.64**	**0.00**	**0.00**	**0.64**

4.0 Mobile Detail

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	0.28	0.58	2.73	0.00	0.50	0.03	0.52	0.02	0.03	0.05	0.00	407.73	407.73	0.02	0.00	408.10
Unmitigated	0.28	0.58	2.73	0.00	0.50	0.03	0.52	0.02	0.03	0.05	0.00	407.73	407.73	0.02	0.00	408.10
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	329.50	358.00	303.50	941,842	941,842
Total	329.50	358.00	303.50	941,842	941,842

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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						0.00	0.00		0.00	0.00	0.00	70.16	70.16	0.00	0.00	70.52
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	73.24	73.24	0.00	0.00	73.62
NaturalGas Mitigated	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	53.69	53.69	0.00	0.00	54.02
NaturalGas Unmitigated	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	61.57	61.57	0.00	0.00	61.95
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Condo/Townhouse	1.15384e+006	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	61.57	61.57	0.00	0.00	61.95
Total		**0.01**	**0.05**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**61.57**	**61.57**	**0.00**	**0.00**	**61.95**

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	tons/yr										MT/yr					
Condo/Townhouse	1.00612e+006	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	53.69	53.69	0.00	0.00	54.02
Total		**0.01**	**0.05**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**53.69**	**53.69**	**0.00**	**0.00**	**54.02**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Condo/Townhouse	206799					73.24	0.00	0.00	73.62
Total						**73.24**	**0.00**	**0.00**	**73.62**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Condo/Townhouse	198089					70.16	0.00	0.00	70.52
Total						**70.16**	**0.00**	**0.00**	**70.52**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	0.22	0.00	0.38	0.00		0.00	0.01		0.00	0.01	0.00	106.95	106.95	0.00	0.00	107.61
Unmitigated	3.43	0.05	4.24	0.00		0.00	0.55		0.00	0.55	51.65	65.59	117.24	0.05	0.00	119.78
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.20					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	3.14	0.04	3.87	0.00		0.00	0.55		0.00	0.55	51.65	64.98	116.63	0.05	0.00	119.15
Landscaping	0.01	0.00	0.38	0.00		0.00	0.00		0.00	0.00	0.00	0.61	0.61	0.00	0.00	0.63
Total	**3.43**	**0.04**	**4.25**	**0.00**		**0.00**	**0.55**		**0.00**	**0.55**	**51.65**	**65.59**	**117.24**	**0.05**	**0.00**	**119.78**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.02					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.18					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.01	0.00	0.00	0.00		0.00	0.01		0.00	0.01	0.00	106.33	106.33	0.00	0.00	106.98
Landscaping	0.01	0.00	0.38	0.00		0.00	0.00		0.00	0.00	0.00	0.61	0.61	0.00	0.00	0.63
Total	**0.22**	**0.00**	**0.38**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**106.94**	**106.94**	**0.00**	**0.00**	**107.61**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					23.14	0.10	0.00	26.11
Unmitigated					23.14	0.10	0.00	26.11
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Condo/Townhouse	3.2577 / 2.05377					23.14	0.10	0.00	26.11
Total						**23.14**	**0.10**	**0.00**	**26.11**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Condo/Townhouse	3.2577 / 2.05377					23.14	0.10	0.00	26.11
Total						**23.14**	**0.10**	**0.00**	**26.11**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					4.67	0.28	0.00	10.46
Unmitigated					4.67	0.28	0.00	10.46
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Condo/Townhouse	23					4.67	0.28	0.00	10.46
Total						**4.67**	**0.28**	**0.00**	**10.46**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Condo/Townhouse	23					4.67	0.28	0.00	10.46
Total						**4.67**	**0.28**	**0.00**	**10.46**

9.0 Vegetation

Bernardo Shores - Vertical Building Phase 4

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	53	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - 53 units per 2.3 acres

Construction Phase - Estimated construction schedule. architectural coating will begin after dry wall is installed and stucco is dried (4 months).

Construction Off-road Equipment Mitigation - Tier 2 engines with level 1 diesel particulate filter and watering three times daily.

Area Mitigation - Natural gas hearth, Low VOC Cleaning Supplies, and Low VOC paints

Energy Mitigation - Exceed Title 24 with 15% improvements and install energy efficient applicances (Energy Star).

Water Mitigation - Install low flow equipment for indoor water flow.

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					
2015	25.77	28.23	23.84	0.04	0.66	1.78	2.44	0.03	1.78	1.81	0.00	4,138.82	0.00	0.46	0.00	4,148.41
2016	25.34	26.02	23.30	0.04	0.66	1.93	2.25	0.03	1.93	1.94	0.00	4,128.00	0.00	0.42	0.00	4,136.75
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2015	25.77	28.23	23.84	0.04	0.66	1.78	2.44	0.03	1.78	1.81	0.00	4,138.82	0.00	0.46	0.00	4,148.41
2016	25.34	26.02	23.30	0.04	0.66	1.93	2.25	0.03	1.93	1.94	0.00	4,128.00	0.00	0.42	0.00	4,136.75
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	29.68	0.55	45.75	0.04		0.00	6.03		0.00	6.03	682.66	625.26		1.37	0.05	1,350.91
Energy	0.04	0.31	0.13	0.00		0.00	0.02		0.00	0.02		394.22		0.01	0.01	396.62
Mobile	1.83	3.76	17.42	0.03	3.59	0.18	3.77	0.12	0.18	0.30		2,991.06		0.12		2,993.65
Total	**31.55**	**4.62**	**63.30**	**0.07**	**3.59**	**0.18**	**9.82**	**0.12**	**0.18**	**6.35**	**682.66**	**4,010.54**		**1.50**	**0.06**	**4,741.18**

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	1.39	0.05	4.47	0.00		0.00	0.09		0.00	0.09	0.00	1,018.09		0.03	0.02	1,024.40
Energy	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02		343.75		0.01	0.01	345.84
Mobile	1.83	3.76	17.42	0.03	3.59	0.18	3.77	0.12	0.18	0.30		2,991.06		0.12		2,993.65
Total	**3.25**	**4.08**	**22.00**	**0.03**	**3.59**	**0.18**	**3.88**	**0.12**	**0.18**	**0.41**	**0.00**	**4,352.90**		**0.16**	**0.03**	**4,363.89**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.34	24.51	18.80	0.04		1.51	1.51		1.51	1.51		3,233.11		0.39		3,241.30
Total	**4.34**	**24.51**	**18.80**	**0.04**		**1.51**	**1.51**		**1.51**	**1.51**		**3,233.11**		**0.39**		**3,241.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.07	0.88	0.50	0.00	0.06	0.03	0.08	0.00	0.03	0.03		164.06		0.00		164.14
Worker	0.20	0.22	2.19	0.00	0.50	0.02	0.51	0.02	0.02	0.04		380.38		0.02		380.84
Total	**0.27**	**1.10**	**2.69**	**0.00**	**0.56**	**0.05**	**0.59**	**0.02**	**0.05**	**0.07**		**544.44**		**0.02**		**544.98**

3.2 Building Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.34	24.51	18.80	0.04		1.51	1.51		1.51	1.51	0.00	3,233.11		0.39		3,241.30
Total	**4.34**	**24.51**	**18.80**	**0.04**		**1.51**	**1.51**		**1.51**	**1.51**	**0.00**	**3,233.11**		**0.39**		**3,241.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.07	0.88	0.50	0.00	0.06	0.03	0.08	0.00	0.03	0.03		164.06		0.00		164.14
Worker	0.20	0.22	2.19	0.00	0.50	0.02	0.51	0.02	0.02	0.04		380.38		0.02		380.84
Total	**0.27**	**1.10**	**2.69**	**0.00**	**0.56**	**0.05**	**0.59**	**0.02**	**0.05**	**0.07**		**544.44**		**0.02**		**544.98**

3.2 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.96	22.58	18.51	0.04		1.35	1.35		1.35	1.35		3,233.11		0.36		3,240.57
Total	**3.96**	**22.58**	**18.51**	**0.04**		**1.35**	**1.35**		**1.35**	**1.35**		**3,233.11**		**0.36**		**3,240.57**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.07	0.82	0.46	0.00	0.06	0.03	0.08	0.00	0.03	0.03		164.29		0.00		164.36
Worker	0.18	0.20	2.02	0.00	0.50	0.02	0.51	0.02	0.02	0.04		371.25		0.02		371.68
Total	**0.25**	**1.02**	**2.48**	**0.00**	**0.56**	**0.05**	**0.59**	**0.02**	**0.05**	**0.07**		**535.54**		**0.02**		**536.04**

3.2 Building Construction - 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	3.96	22.58	18.51	0.04		1.35	1.35		1.35	1.35	0.00	3,233.11		0.36		3,240.57
Total	**3.96**	**22.58**	**18.51**	**0.04**		**1.35**	**1.35**		**1.35**	**1.35**	**0.00**	**3,233.11**		**0.36**		**3,240.57**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.07	0.82	0.46	0.00	0.06	0.03	0.08	0.00	0.03	0.03		164.29		0.00		164.36
Worker	0.18	0.20	2.02	0.00	0.50	0.02	0.51	0.02	0.02	0.04		371.25		0.02		371.68
Total	**0.25**	**1.02**	**2.48**	**0.00**	**0.56**	**0.05**	**0.59**	**0.02**	**0.05**	**0.07**		**535.54**		**0.02**		**536.04**

3.3 Architectural Coating - 2015

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	20.71					0.00	0.00		0.00	0.00						0.00
Off-Road	0.41	2.57	1.90	0.00		0.22	0.22		0.22	0.22		281.19		0.04		281.96
Total	**21.12**	**2.57**	**1.90**	**0.00**		**0.22**	**0.22**		**0.22**	**0.22**		**281.19**		**0.04**		**281.96**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.46	0.00	0.10	0.00	0.11	0.00	0.00	0.01		80.08		0.00		80.18
Total	**0.04**	**0.05**	**0.46**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**80.08**		**0.00**		**80.18**

3.3 Architectural Coating - 2015

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	20.71					0.00	0.00		0.00	0.00						0.00
Off-Road	0.41	2.57	1.90	0.00		0.22	0.22		0.22	0.22	0.00	281.19		0.04		281.96
Total	**21.12**	**2.57**	**1.90**	**0.00**		**0.22**	**0.22**		**0.22**	**0.22**	**0.00**	**281.19**		**0.04**		**281.96**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.46	0.00	0.10	0.00	0.11	0.00	0.00	0.01		80.08		0.00		80.18
Total	**0.04**	**0.05**	**0.46**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**80.08**		**0.00**		**80.18**

3.3 Architectural Coating - 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					
Archit. Coating	20.71					0.00	0.00		0.00	0.00						0.00
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20		281.19		0.03		281.89
Total	**21.08**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**		**281.19**		**0.03**		**281.89**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.04	0.43	0.00	0.10	0.00	0.11	0.00	0.00	0.01		78.16		0.00		78.25
Total	**0.04**	**0.04**	**0.43**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**78.16**		**0.00**		**78.25**

3.3 Architectural Coating - 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					
Archit. Coating	20.71					0.00	0.00		0.00	0.00						0.00
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20	0.00	281.19		0.03		281.89
Total	**21.08**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**	**0.00**	**281.19**		**0.03**		**281.89**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.04	0.43	0.00	0.10	0.00	0.11	0.00	0.00	0.01		78.16		0.00		78.25
Total	**0.04**	**0.04**	**0.43**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**78.16**		**0.00**		**78.25**

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	3.40	21.37	16.43	0.03		1.72	1.72		1.72	1.72		2,393.42		0.31		2,399.83
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.40**	**21.37**	**16.43**	**0.03**		**1.72**	**1.72**		**1.72**	**1.72**		**2,393.42**		**0.31**		**2,399.83**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.07	0.08	0.80	0.00	0.20	0.01	0.20	0.01	0.01	0.01		146.55		0.01		146.72
Total	**0.07**	**0.08**	**0.80**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**146.55**		**0.01**		**146.72**

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	3.40	21.37	16.43	0.03		1.72	1.72		1.72	1.72	0.00	2,393.42		0.31		2,399.83
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.40**	**21.37**	**16.43**	**0.03**		**1.72**	**1.72**		**1.72**	**1.72**	**0.00**	**2,393.42**		**0.31**		**2,399.83**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.07	0.08	0.80	0.00	0.20	0.01	0.20	0.01	0.01	0.01		146.55		0.01		146.72
Total	**0.07**	**0.08**	**0.80**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**146.55**		**0.01**		**146.72**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.83	3.76	17.42	0.03	3.59	0.18	3.77	0.12	0.18	0.30		2,991.06		0.12		2,993.65
Unmitigated	1.83	3.76	17.42	0.03	3.59	0.18	3.77	0.12	0.18	0.30		2,991.06		0.12		2,993.65
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	349.27	379.48	321.71	998,353	998,353
Total	349.27	379.48	321.71	998,353	998,353

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02		343.75		0.01	0.01	345.84
NaturalGas Unmitigated	0.04	0.31	0.13	0.00		0.00	0.02		0.00	0.02		394.22		0.01	0.01	396.62
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Condo/Townhouse	3350.89	0.04	0.31	0.13	0.00		0.00	0.02		0.00	0.02		394.22		0.01	0.01	396.62
Total		**0.04**	**0.31**	**0.13**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**		**394.22**		**0.01**	**0.01**	**396.62**

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	lb/day										lb/day					
Condo/Townhouse	2.92189	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02		343.75		0.01	0.01	345.84
Total		**0.03**	**0.27**	**0.11**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**		**343.75**		**0.01**	**0.01**	**345.84**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.39	0.05	4.47	0.00		0.00	0.09		0.00	0.09	0.00	1,018.09		0.03	0.02	1,024.40
Unmitigated	29.68	0.55	45.75	0.04		0.00	6.03		0.00	6.03	682.66	625.26		1.37	0.05	1,350.91
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.45					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.13					0.00	0.00		0.00	0.00						0.00
Hearth	27.95	0.50	41.28	0.04		0.00	6.01		0.00	6.01	682.66	617.29		1.36	0.05	1,342.78
Landscaping	0.14	0.05	4.47	0.00		0.00	0.02		0.00	0.02		7.97		0.01		8.14
Total	**29.67**	**0.55**	**45.75**	**0.04**		**0.00**	**6.03**		**0.00**	**6.03**	**682.66**	**625.26**		**1.37**	**0.05**	**1,350.92**

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	0.11					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.05					0.00	0.00		0.00	0.00						0.00
Hearth	0.09	0.00	0.01	0.00		0.00	0.06		0.00	0.06	0.00	1,010.12		0.02	0.02	1,016.27
Landscaping	0.14	0.05	4.47	0.00		0.00	0.02		0.00	0.02		7.97		0.01		8.14
Total	**1.39**	**0.05**	**4.48**	**0.00**		**0.00**	**0.08**		**0.00**	**0.08**	**0.00**	**1,018.09**		**0.03**	**0.02**	**1,024.41**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Bernardo Shores - Vertical Building Phase 4

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	53	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - 53 units per 2.3 acres

Construction Phase - Estimated construction schedule. architectural coating will begin after dry wall is installed and stucco is dried (4 months).

Construction Off-road Equipment Mitigation - Tier 2 engines with level 1 diesel particulate filter and watering three times daily.

Area Mitigation - Natural gas hearth, Low VOC Cleaning Supplies, and Low VOC paints

Energy Mitigation - Exceed Title 24 with 15% improvements and install energy efficient applicances (Energy Star).

Water Mitigation - Install low flow equipment for indoor water flow.

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					
2015	25.80	28.26	23.77	0.04	0.66	1.78	2.44	0.03	1.78	1.81	0.00	4,101.99	0.00	0.46	0.00	4,111.56
2016	25.36	26.05	23.24	0.04	0.66	1.93	2.25	0.03	1.93	1.94	0.00	4,091.93	0.00	0.42	0.00	4,100.65
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2015	25.80	28.26	23.77	0.04	0.66	1.78	2.44	0.03	1.78	1.81	0.00	4,101.99	0.00	0.46	0.00	4,111.56
2016	25.36	26.05	23.24	0.04	0.66	1.93	2.25	0.03	1.93	1.94	0.00	4,091.93	0.00	0.42	0.00	4,100.65
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	29.68	0.55	45.75	0.04		0.00	6.03		0.00	6.03	682.66	625.26		1.37	0.05	1,350.91
Energy	0.04	0.31	0.13	0.00		0.00	0.02		0.00	0.02		394.22		0.01	0.01	396.62
Mobile	1.94	3.92	17.15	0.03	3.59	0.18	3.77	0.12	0.18	0.30		2,800.23		0.12		2,802.83
Total	**31.66**	**4.78**	**63.03**	**0.07**	**3.59**	**0.18**	**9.82**	**0.12**	**0.18**	**6.35**	**682.66**	**3,819.71**		**1.50**	**0.06**	**4,550.36**

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	1.39	0.05	4.47	0.00		0.00	0.09		0.00	0.09	0.00	1,018.09		0.03	0.02	1,024.40
Energy	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02		343.75		0.01	0.01	345.84
Mobile	1.94	3.92	17.15	0.03	3.59	0.18	3.77	0.12	0.18	0.30		2,800.23		0.12		2,802.83
Total	**3.36**	**4.24**	**21.73**	**0.03**	**3.59**	**0.18**	**3.88**	**0.12**	**0.18**	**0.41**	**0.00**	**4,162.07**		**0.16**	**0.03**	**4,173.07**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.34	24.51	18.80	0.04		1.51	1.51		1.51	1.51		3,233.11		0.39		3,241.30
Total	**4.34**	**24.51**	**18.80**	**0.04**		**1.51**	**1.51**		**1.51**	**1.51**		**3,233.11**		**0.39**		**3,241.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.08	0.89	0.57	0.00	0.06	0.03	0.08	0.00	0.03	0.03		162.71		0.00		162.80
Worker	0.21	0.24	2.07	0.00	0.50	0.02	0.51	0.02	0.02	0.04		351.07		0.02		351.51
Total	**0.29**	**1.13**	**2.64**	**0.00**	**0.56**	**0.05**	**0.59**	**0.02**	**0.05**	**0.07**		**513.78**		**0.02**		**514.31**

3.2 Building Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.34	24.51	18.80	0.04		1.51	1.51		1.51	1.51	0.00	3,233.11		0.39		3,241.30
Total	**4.34**	**24.51**	**18.80**	**0.04**		**1.51**	**1.51**		**1.51**	**1.51**	**0.00**	**3,233.11**		**0.39**		**3,241.30**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.08	0.89	0.57	0.00	0.06	0.03	0.08	0.00	0.03	0.03		162.71		0.00		162.80
Worker	0.21	0.24	2.07	0.00	0.50	0.02	0.51	0.02	0.02	0.04		351.07		0.02		351.51
Total	**0.29**	**1.13**	**2.64**	**0.00**	**0.56**	**0.05**	**0.59**	**0.02**	**0.05**	**0.07**		**513.78**		**0.02**		**514.31**

3.2 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.96	22.58	18.51	0.04		1.35	1.35		1.35	1.35		3,233.11		0.36		3,240.57
Total	**3.96**	**22.58**	**18.51**	**0.04**		**1.35**	**1.35**		**1.35**	**1.35**		**3,233.11**		**0.36**		**3,240.57**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.07	0.83	0.53	0.00	0.06	0.03	0.08	0.00	0.03	0.03		162.91		0.00		162.99
Worker	0.20	0.22	1.91	0.00	0.50	0.02	0.51	0.02	0.02	0.04		342.59		0.02		343.00
Total	**0.27**	**1.05**	**2.44**	**0.00**	**0.56**	**0.05**	**0.59**	**0.02**	**0.05**	**0.07**		**505.50**		**0.02**		**505.99**

3.2 Building Construction - 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	3.96	22.58	18.51	0.04		1.35	1.35		1.35	1.35	0.00	3,233.11		0.36		3,240.57
Total	**3.96**	**22.58**	**18.51**	**0.04**		**1.35**	**1.35**		**1.35**	**1.35**	**0.00**	**3,233.11**		**0.36**		**3,240.57**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.07	0.83	0.53	0.00	0.06	0.03	0.08	0.00	0.03	0.03		162.91		0.00		162.99
Worker	0.20	0.22	1.91	0.00	0.50	0.02	0.51	0.02	0.02	0.04		342.59		0.02		343.00
Total	**0.27**	**1.05**	**2.44**	**0.00**	**0.56**	**0.05**	**0.59**	**0.02**	**0.05**	**0.07**		**505.50**		**0.02**		**505.99**

3.3 Architectural Coating - 2015

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	20.71					0.00	0.00		0.00	0.00						0.00
Off-Road	0.41	2.57	1.90	0.00		0.22	0.22		0.22	0.22		281.19		0.04		281.96
Total	**21.12**	**2.57**	**1.90**	**0.00**		**0.22**	**0.22**		**0.22**	**0.22**		**281.19**		**0.04**		**281.96**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.05	0.05	0.44	0.00	0.10	0.00	0.11	0.00	0.00	0.01		73.91		0.00		74.00
Total	**0.05**	**0.05**	**0.44**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**73.91**		**0.00**		**74.00**

3.3 Architectural Coating - 2015

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	20.71					0.00	0.00		0.00	0.00						0.00
Off-Road	0.41	2.57	1.90	0.00		0.22	0.22		0.22	0.22	0.00	281.19		0.04		281.96
Total	**21.12**	**2.57**	**1.90**	**0.00**		**0.22**	**0.22**		**0.22**	**0.22**	**0.00**	**281.19**		**0.04**		**281.96**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.05	0.05	0.44	0.00	0.10	0.00	0.11	0.00	0.00	0.01		73.91		0.00		74.00
Total	**0.05**	**0.05**	**0.44**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**73.91**		**0.00**		**74.00**

3.3 Architectural Coating - 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					
Archit. Coating	20.71					0.00	0.00		0.00	0.00						0.00
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20		281.19		0.03		281.89
Total	**21.08**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**		**281.19**		**0.03**		**281.89**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.40	0.00	0.10	0.00	0.11	0.00	0.00	0.01		72.12		0.00		72.21
Total	**0.04**	**0.05**	**0.40**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**72.12**		**0.00**		**72.21**

3.3 Architectural Coating - 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					
Archit. Coating	20.71					0.00	0.00		0.00	0.00						0.00
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20	0.00	281.19		0.03		281.89
Total	**21.08**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**	**0.00**	**281.19**		**0.03**		**281.89**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.40	0.00	0.10	0.00	0.11	0.00	0.00	0.01		72.12		0.00		72.21
Total	**0.04**	**0.05**	**0.40**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**72.12**		**0.00**		**72.21**

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	3.40	21.37	16.43	0.03		1.72	1.72		1.72	1.72		2,393.42		0.31		2,399.83
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.40**	**21.37**	**16.43**	**0.03**		**1.72**	**1.72**		**1.72**	**1.72**		**2,393.42**		**0.31**		**2,399.83**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.75	0.00	0.20	0.01	0.20	0.01	0.01	0.01		135.23		0.01		135.39
Total	**0.08**	**0.09**	**0.75**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**135.23**		**0.01**		**135.39**

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	3.40	21.37	16.43	0.03		1.72	1.72		1.72	1.72	0.00	2,393.42		0.31		2,399.83
Paving	0.00					0.00	0.00		0.00	0.00						0.00
Total	**3.40**	**21.37**	**16.43**	**0.03**		**1.72**	**1.72**		**1.72**	**1.72**	**0.00**	**2,393.42**		**0.31**		**2,399.83**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.08	0.09	0.75	0.00	0.20	0.01	0.20	0.01	0.01	0.01		135.23		0.01		135.39
Total	**0.08**	**0.09**	**0.75**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**		**135.23**		**0.01**		**135.39**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.94	3.92	17.15	0.03	3.59	0.18	3.77	0.12	0.18	0.30		2,800.23		0.12		2,802.83
Unmitigated	1.94	3.92	17.15	0.03	3.59	0.18	3.77	0.12	0.18	0.30		2,800.23		0.12		2,802.83
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	349.27	379.48	321.71	998,353	998,353
Total	349.27	379.48	321.71	998,353	998,353

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02		343.75		0.01	0.01	345.84
NaturalGas Unmitigated	0.04	0.31	0.13	0.00		0.00	0.02		0.00	0.02		394.22		0.01	0.01	396.62
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Condo/Townhouse	3350.89	0.04	0.31	0.13	0.00		0.00	0.02		0.00	0.02		394.22		0.01	0.01	396.62
Total		**0.04**	**0.31**	**0.13**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**		**394.22**		**0.01**	**0.01**	**396.62**

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	lb/day										lb/day					
Condo/Townhouse	2.92189	0.03	0.27	0.11	0.00		0.00	0.02		0.00	0.02		343.75		0.01	0.01	345.84
Total		**0.03**	**0.27**	**0.11**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**		**343.75**		**0.01**	**0.01**	**345.84**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.39	0.05	4.47	0.00		0.00	0.09		0.00	0.09	0.00	1,018.09		0.03	0.02	1,024.40
Unmitigated	29.68	0.55	45.75	0.04		0.00	6.03		0.00	6.03	682.66	625.26		1.37	0.05	1,350.91
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.45					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.13					0.00	0.00		0.00	0.00						0.00
Hearth	27.95	0.50	41.28	0.04		0.00	6.01		0.00	6.01	682.66	617.29		1.36	0.05	1,342.78
Landscaping	0.14	0.05	4.47	0.00		0.00	0.02		0.00	0.02		7.97		0.01		8.14
Total	**29.67**	**0.55**	**45.75**	**0.04**		**0.00**	**6.03**		**0.00**	**6.03**	**682.66**	**625.26**		**1.37**	**0.05**	**1,350.92**

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	0.11					0.00	0.00		0.00	0.00						0.00
Consumer Products	1.05					0.00	0.00		0.00	0.00						0.00
Hearth	0.09	0.00	0.01	0.00		0.00	0.06		0.00	0.06	0.00	1,010.12		0.02	0.02	1,016.27
Landscaping	0.14	0.05	4.47	0.00		0.00	0.02		0.00	0.02		7.97		0.01		8.14
Total	**1.39**	**0.05**	**4.48**	**0.00**		**0.00**	**0.08**		**0.00**	**0.08**	**0.00**	**1,018.09**		**0.03**	**0.02**	**1,024.41**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Bernardo Shores - Vertical Building Phase 4

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	53	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - 53 units per 2.3 acres

Construction Phase - Estimated construction schedule. architectural coating will begin after dry wall is installed and stucco is dried (4 months).

Construction Off-road Equipment Mitigation - Tier 2 engines with level 1 diesel particulate filter and watering three times daily.

Area Mitigation - Natural gas hearth, Low VOC Cleaning Supplies, and Low VOC paints

Energy Mitigation - Exceed Title 24 with 15% improvements and install energy efficient applicances (Energy Star).

Water Mitigation - Install low flow equipment for indoor water flow.

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					
2015	0.57	2.25	1.88	0.00	0.04	0.14	0.18	0.00	0.14	0.14	0.00	298.79	298.79	0.03	0.00	299.49
2016	0.79	0.73	0.64	0.00	0.01	0.05	0.06	0.00	0.05	0.05	0.00	99.90	99.90	0.01	0.00	100.12
Total	**1.36**	**2.98**	**2.52**	**0.00**	**0.05**	**0.19**	**0.24**	**0.00**	**0.19**	**0.19**	**0.00**	**398.69**	**398.69**	**0.04**	**0.00**	**399.61**

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					
2015	0.57	2.25	1.88	0.00	0.04	0.14	0.18	0.00	0.14	0.14	0.00	298.79	298.79	0.03	0.00	299.49
2016	0.79	0.73	0.64	0.00	0.01	0.05	0.06	0.00	0.05	0.05	0.00	99.90	99.90	0.01	0.00	100.12
Total	**1.36**	**2.98**	**2.52**	**0.00**	**0.05**	**0.19**	**0.24**	**0.00**	**0.19**	**0.19**	**0.00**	**398.69**	**398.69**	**0.04**	**0.00**	**399.61**

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	3.63	0.05	4.50	0.00		0.00	0.58		0.00	0.58	54.75	69.53	124.28	0.05	0.01	126.97
Energy	0.01	0.06	0.02	0.00		0.00	0.00		0.00	0.00	0.00	142.90	142.90	0.00	0.00	143.70
Mobile	0.30	0.62	2.89	0.01	0.52	0.03	0.56	0.02	0.03	0.05	0.00	432.19	432.19	0.02	0.00	432.59
Waste						0.00	0.00		0.00	0.00	4.95	0.00	4.95	0.29	0.00	11.09
Water						0.00	0.00		0.00	0.00	0.00	24.53	24.53	0.11	0.00	27.68
Total	**3.94**	**0.73**	**7.41**	**0.01**	**0.52**	**0.03**	**1.14**	**0.02**	**0.03**	**0.63**	**59.70**	**669.15**	**728.85**	**0.47**	**0.01**	**742.03**

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	0.24	0.00	0.40	0.00		0.00	0.01		0.00	0.01	0.00	113.36	113.36	0.00	0.00	114.06
Energy	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	131.28	131.28	0.00	0.00	132.01
Mobile	0.30	0.62	2.89	0.01	0.52	0.03	0.56	0.02	0.03	0.05	0.00	432.19	432.19	0.02	0.00	432.59
Waste						0.00	0.00		0.00	0.00	4.95	0.00	4.95	0.29	0.00	11.09
Water						0.00	0.00		0.00	0.00	0.00	24.53	24.53	0.11	0.00	27.68
Total	**0.55**	**0.67**	**3.31**	**0.01**	**0.52**	**0.03**	**0.57**	**0.02**	**0.03**	**0.06**	**4.95**	**701.36**	**706.31**	**0.42**	**0.00**	**717.43**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Building Construction - 2015

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	0.38	2.13	1.63	0.00		0.13	0.13		0.13	0.13	0.00	255.10	255.10	0.03	0.00	255.75
Total	**0.38**	**2.13**	**1.63**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**255.10**	**255.10**	**0.03**	**0.00**	**255.75**

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	0.00	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
Vendor	0.01	0.07	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	12.90	12.90	0.00	0.00	12.91
Worker	0.02	0.02	0.18	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	28.20	28.20	0.00	0.00	28.23
Total	**0.03**	**0.09**	**0.23**	**0.00**	**0.04**	**0.00**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**41.10**	**41.10**	**0.00**	**0.00**	**41.14**

3.2 Building Construction - 2015

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	0.38	2.13	1.63	0.00		0.13	0.13		0.13	0.13	0.00	255.10	255.10	0.03	0.00	255.75
Total	**0.38**	**2.13**	**1.63**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**255.10**	**255.10**	**0.03**	**0.00**	**255.75**

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	0.00	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
Vendor	0.01	0.07	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	12.90	12.90	0.00	0.00	12.91
Worker	0.02	0.02	0.18	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	28.20	28.20	0.00	0.00	28.23
Total	**0.03**	**0.09**	**0.23**	**0.00**	**0.04**	**0.00**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**41.10**	**41.10**	**0.00**	**0.00**	**41.14**

3.2 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.09	0.52	0.43	0.00		0.03	0.03		0.03	0.03	0.00	67.44	67.44	0.01	0.00	67.60
Total	**0.09**	**0.52**	**0.43**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**67.44**	**67.44**	**0.01**	**0.00**	**67.60**

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	0.00	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
Vendor	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.42	3.42	0.00	0.00	3.42
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	7.27	7.27	0.00	0.00	7.28
Total	**0.00**	**0.02**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**10.69**	**10.69**	**0.00**	**0.00**	**10.70**

3.2 Building Construction - 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	tons/yr										MT/yr					
Off-Road	0.09	0.52	0.43	0.00		0.03	0.03		0.03	0.03	0.00	67.44	67.44	0.01	0.00	67.60
Total	**0.09**	**0.52**	**0.43**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**67.44**	**67.44**	**0.01**	**0.00**	**67.60**

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	0.00	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
Vendor	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.42	3.42	0.00	0.00	3.42
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	7.27	7.27	0.00	0.00	7.28
Total	**0.00**	**0.02**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**10.69**	**10.69**	**0.00**	**0.00**	**10.70**

3.3 Architectural Coating - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.17					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	2.04	2.04	0.00	0.00	2.05
Total	**0.17**	**0.02**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**2.04**	**2.04**	**0.00**	**0.00**	**2.05**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.00	0.00	0.55
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.55**	**0.55**	**0.00**	**0.00**	**0.55**

3.3 Architectural Coating - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.17					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.00	0.02	0.02	0.00		0.00	0.00		0.00	0.00	0.00	2.04	2.04	0.00	0.00	2.05
Total	**0.17**	**0.02**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**2.04**	**2.04**	**0.00**	**0.00**	**2.05**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.55	0.55	0.00	0.00	0.55
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.55**	**0.55**	**0.00**	**0.00**	**0.55**

3.3 Architectural Coating - 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					
Archit. Coating	0.66					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.08	0.06	0.00		0.01	0.01		0.01	0.01	0.00	8.16	8.16	0.00	0.00	8.18
Total	**0.67**	**0.08**	**0.06**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**8.16**	**8.16**	**0.00**	**0.00**	**8.18**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13	2.13	0.00	0.00	2.13
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.13**	**2.13**	**0.00**	**0.00**	**2.13**

3.3 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.66					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.08	0.06	0.00		0.01	0.01		0.01	0.01	0.00	8.16	8.16	0.00	0.00	8.18
Total	**0.67**	**0.08**	**0.06**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**8.16**	**8.16**	**0.00**	**0.00**	**8.18**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.13	2.13	0.00	0.00	2.13
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.13**	**2.13**	**0.00**	**0.00**	**2.13**

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	0.02	0.11	0.08	0.00		0.01	0.01		0.01	0.01	0.00	10.85	10.85	0.00	0.00	10.88
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.02**	**0.11**	**0.08**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**10.85**	**10.85**	**0.00**	**0.00**	**10.88**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.62	0.00	0.00	0.62
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.62**	**0.62**	**0.00**	**0.00**	**0.62**

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	tons/yr										MT/yr					
Off-Road	0.02	0.11	0.08	0.00		0.01	0.01		0.01	0.01	0.00	10.85	10.85	0.00	0.00	10.88
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.02**	**0.11**	**0.08**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**10.85**	**10.85**	**0.00**	**0.00**	**10.88**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.62	0.62	0.00	0.00	0.62
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.62**	**0.62**	**0.00**	**0.00**	**0.62**

4.0 Mobile Detail

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	0.30	0.62	2.89	0.01	0.52	0.03	0.56	0.02	0.03	0.05	0.00	432.19	432.19	0.02	0.00	432.59
Unmitigated	0.30	0.62	2.89	0.01	0.52	0.03	0.56	0.02	0.03	0.05	0.00	432.19	432.19	0.02	0.00	432.59
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	349.27	379.48	321.71	998,353	998,353
Total	349.27	379.48	321.71	998,353	998,353

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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						0.00	0.00		0.00	0.00	0.00	74.36	74.36	0.00	0.00	74.75
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	77.63	77.63	0.00	0.00	78.03
NaturalGas Mitigated	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	56.91	56.91	0.00	0.00	57.26
NaturalGas Unmitigated	0.01	0.06	0.02	0.00		0.00	0.00		0.00	0.00	0.00	65.27	65.27	0.00	0.00	65.67
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Condo/Townhouse	1.22307e+006	0.01	0.06	0.02	0.00		0.00	0.00		0.00	0.00	0.00	65.27	65.27	0.00	0.00	65.67
Total		**0.01**	**0.06**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**65.27**	**65.27**	**0.00**	**0.00**	**65.67**

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	tons/yr										MT/yr					
Condo/Townhouse	1.06649e+006	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	56.91	56.91	0.00	0.00	57.26
Total		**0.01**	**0.05**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**56.91**	**56.91**	**0.00**	**0.00**	**57.26**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Condo/Townhouse	219207					77.63	0.00	0.00	78.03
Total						**77.63**	**0.00**	**0.00**	**78.03**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Condo/Townhouse	209975					74.36	0.00	0.00	74.75
Total						**74.36**	**0.00**	**0.00**	**74.75**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	0.24	0.00	0.40	0.00		0.00	0.01		0.00	0.01	0.00	113.36	113.36	0.00	0.00	114.06
Unmitigated	3.63	0.05	4.50	0.00		0.00	0.58		0.00	0.58	54.75	69.53	124.28	0.05	0.01	126.97
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.21					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	3.33	0.05	4.10	0.00		0.00	0.58		0.00	0.58	54.75	68.88	123.63	0.05	0.01	126.30
Landscaping	0.01	0.00	0.40	0.00		0.00	0.00		0.00	0.00	0.00	0.65	0.65	0.00	0.00	0.66
Total	**3.63**	**0.05**	**4.50**	**0.00**		**0.00**	**0.58**		**0.00**	**0.58**	**54.75**	**69.53**	**124.28**	**0.05**	**0.01**	**126.96**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.02					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.19					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.01	0.00	0.00	0.00		0.00	0.01		0.00	0.01	0.00	112.71	112.71	0.00	0.00	113.40
Landscaping	0.01	0.00	0.40	0.00		0.00	0.00		0.00	0.00	0.00	0.65	0.65	0.00	0.00	0.66
Total	**0.23**	**0.00**	**0.40**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**113.36**	**113.36**	**0.00**	**0.00**	**114.06**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					24.53	0.11	0.00	27.68
Unmitigated					24.53	0.11	0.00	27.68
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Condo/Townhouse	3.45316 / 2.17699					24.53	0.11	0.00	27.68
Total						**24.53**	**0.11**	**0.00**	**27.68**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Condo/Townhouse	3.45316 / 2.17699					24.53	0.11	0.00	27.68
Total						**24.53**	**0.11**	**0.00**	**27.68**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					4.95	0.29	0.00	11.09
Unmitigated					4.95	0.29	0.00	11.09
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Condo/Townhouse	24.38					4.95	0.29	0.00	11.09
Total						**4.95**	**0.29**	**0.00**	**11.09**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Condo/Townhouse	24.38					4.95	0.29	0.00	11.09
Total						**4.95**	**0.29**	**0.00**	**11.09**

9.0 Vegetation

Bernardo Shores - Full Buildout 2030

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	203	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - Townhouses will consist of 203 dwelling units on 8.83 acres

Construction Phase - No Construction

Off-road Equipment -

Vehicle Trips - SANDAG's trip generation rate of 6.0 trip per dwelling unit is consistent with the traffic report.

Woodstoves - No woodstoves or wood fireplaces.

Area Mitigation - Natural gas hearth, low VOC Cleaning Supplies, and low VOC paints

Energy Mitigation - Exceed Title 24 with 15% improvements and install energy efficient applicances

Water Mitigation - Apply water conservation with 20% reduction for indoor use.

2.0 Emissions Summary

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	6.80	0.19	16.91	0.00		0.00	0.24		0.00	0.24	0.00	2,394.88		0.07	0.04	2,409.87
Energy	0.14	1.18	0.50	0.01		0.00	0.10		0.00	0.10		1,509.94		0.03	0.03	1,519.13
Mobile	3.78	6.80	31.99	0.10	11.51	0.51	12.02	0.16	0.49	0.65		7,904.06		0.29		7,910.23
Total	**10.72**	**8.17**	**49.40**	**0.11**	**11.51**	**0.51**	**12.36**	**0.16**	**0.49**	**0.99**	**0.00**	**11,808.88**		**0.39**	**0.07**	**11,839.23**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.18	0.19	16.91	0.00		0.00	0.24		0.00	0.24	0.00	2,394.88		0.07	0.04	2,409.87
Energy	0.12	1.03	0.44	0.01		0.00	0.08		0.00	0.08		1,316.64		0.03	0.02	1,324.65
Mobile	3.78	6.80	31.99	0.10	11.51	0.51	12.02	0.16	0.49	0.65		7,904.06		0.29		7,910.23
Total	**9.08**	**8.02**	**49.34**	**0.11**	**11.51**	**0.51**	**12.34**	**0.16**	**0.49**	**0.97**	**0.00**	**11,615.58**		**0.39**	**0.06**	**11,644.75**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

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	3.78	6.80	31.99	0.10	11.51	0.51	12.02	0.16	0.49	0.65		7,904.06		0.29		7,910.23
Unmitigated	3.78	6.80	31.99	0.10	11.51	0.51	12.02	0.16	0.49	0.65		7,904.06		0.29		7,910.23
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	1,218.00	1,218.00	1218.00	3,477,759	3,477,759
Total	1,218.00	1,218.00	1,218.00	3,477,759	3,477,759

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.12	1.03	0.44	0.01		0.00	0.08		0.00	0.08		1,316.64		0.03	0.02	1,324.65
NaturalGas Unmitigated	0.14	1.18	0.50	0.01		0.00	0.10		0.00	0.10		1,509.94		0.03	0.03	1,519.13
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Condo/Townhouse	12834.5	0.14	1.18	0.50	0.01		0.00	0.10		0.00	0.10		1,509.94		0.03	0.03	1,519.13
Total		**0.14**	**1.18**	**0.50**	**0.01**		**0.00**	**0.10**		**0.00**	**0.10**		**1,509.94**		**0.03**	**0.03**	**1,519.13**

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	lb/day										lb/day					
Condo/Townhouse	11.1914	0.12	1.03	0.44	0.01		0.00	0.08		0.00	0.08		1,316.64		0.03	0.02	1,324.65
Total		**0.12**	**1.03**	**0.44**	**0.01**		**0.00**	**0.08**		**0.00**	**0.08**		**1,316.64**		**0.03**	**0.02**	**1,324.65**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.18	0.19	16.91	0.00		0.00	0.24		0.00	0.24	0.00	2,394.88		0.07	0.04	2,409.87
Unmitigated	6.80	0.19	16.91	0.00		0.00	0.24		0.00	0.24	0.00	2,394.88		0.07	0.04	2,409.87
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.74					0.00	0.00		0.00	0.00						0.00
Consumer Products	4.34					0.00	0.00		0.00	0.00						0.00
Hearth	0.22	0.00	0.01	0.00		0.00	0.15		0.00	0.15	0.00	2,364.35		0.05	0.04	2,378.74
Landscaping	0.51	0.19	16.90	0.00		0.00	0.09		0.00	0.09		30.52		0.03		31.13
Total	**6.81**	**0.19**	**16.91**	**0.00**		**0.00**	**0.24**		**0.00**	**0.24**	**0.00**	**2,394.87**		**0.08**	**0.04**	**2,409.87**

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	0.43					0.00	0.00		0.00	0.00						0.00
Consumer Products	4.02					0.00	0.00		0.00	0.00						0.00
Hearth	0.22	0.00	0.01	0.00		0.00	0.15		0.00	0.15	0.00	2,364.35		0.05	0.04	2,378.74
Landscaping	0.51	0.19	16.90	0.00		0.00	0.09		0.00	0.09		30.52		0.03		31.13
Total	**5.18**	**0.19**	**16.91**	**0.00**		**0.00**	**0.24**		**0.00**	**0.24**	**0.00**	**2,394.87**		**0.08**	**0.04**	**2,409.87**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Bernardo Shores - Full Buildout 2030

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	203	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - Townhouses will consist of 203 dwelling units on 8.83 acres

Construction Phase - No Construction

Off-road Equipment -

Vehicle Trips - SANDAG's trip generation rate of 6.0 trip per dwelling unit is consistent with the traffic report.

Woodstoves - No woodstoves or wood fireplaces.

Area Mitigation - Natural gas hearth, low VOC Cleaning Supplies, and low VOC paints

Energy Mitigation - Exceed Title 24 with 15% improvements and install energy efficient applicances

Water Mitigation - Apply water conservation with 20% reduction for indoor use.

2.0 Emissions Summary

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	6.80	0.19	16.91	0.00		0.00	0.24		0.00	0.24	0.00	2,394.88		0.07	0.04	2,409.87
Energy	0.14	1.18	0.50	0.01		0.00	0.10		0.00	0.10		1,509.94		0.03	0.03	1,519.13
Mobile	4.03	7.05	31.34	0.10	11.51	0.51	12.02	0.16	0.49	0.65		7,401.18		0.27		7,406.95
Total	**10.97**	**8.42**	**48.75**	**0.11**	**11.51**	**0.51**	**12.36**	**0.16**	**0.49**	**0.99**	**0.00**	**11,306.00**		**0.37**	**0.07**	**11,335.95**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.18	0.19	16.91	0.00		0.00	0.24		0.00	0.24	0.00	2,394.88		0.07	0.04	2,409.87
Energy	0.12	1.03	0.44	0.01		0.00	0.08		0.00	0.08		1,316.64		0.03	0.02	1,324.65
Mobile	4.03	7.05	31.34	0.10	11.51	0.51	12.02	0.16	0.49	0.65		7,401.18		0.27		7,406.95
Total	**9.33**	**8.27**	**48.69**	**0.11**	**11.51**	**0.51**	**12.34**	**0.16**	**0.49**	**0.97**	**0.00**	**11,112.70**		**0.37**	**0.06**	**11,141.47**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

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	4.03	7.05	31.34	0.10	11.51	0.51	12.02	0.16	0.49	0.65		7,401.18		0.27		7,406.95
Unmitigated	4.03	7.05	31.34	0.10	11.51	0.51	12.02	0.16	0.49	0.65		7,401.18		0.27		7,406.95
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	1,218.00	1,218.00	1218.00	3,477,759	3,477,759
Total	1,218.00	1,218.00	1,218.00	3,477,759	3,477,759

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.12	1.03	0.44	0.01		0.00	0.08		0.00	0.08		1,316.64		0.03	0.02	1,324.65
NaturalGas Unmitigated	0.14	1.18	0.50	0.01		0.00	0.10		0.00	0.10		1,509.94		0.03	0.03	1,519.13
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Condo/Townhouse	12834.5	0.14	1.18	0.50	0.01		0.00	0.10		0.00	0.10		1,509.94		0.03	0.03	1,519.13
Total		**0.14**	**1.18**	**0.50**	**0.01**		**0.00**	**0.10**		**0.00**	**0.10**		**1,509.94**		**0.03**	**0.03**	**1,519.13**

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	lb/day										lb/day					
Condo/Townhouse	11.1914	0.12	1.03	0.44	0.01		0.00	0.08		0.00	0.08		1,316.64		0.03	0.02	1,324.65
Total		**0.12**	**1.03**	**0.44**	**0.01**		**0.00**	**0.08**		**0.00**	**0.08**		**1,316.64**		**0.03**	**0.02**	**1,324.65**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.18	0.19	16.91	0.00		0.00	0.24		0.00	0.24	0.00	2,394.88		0.07	0.04	2,409.87
Unmitigated	6.80	0.19	16.91	0.00		0.00	0.24		0.00	0.24	0.00	2,394.88		0.07	0.04	2,409.87
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.74					0.00	0.00		0.00	0.00						0.00
Consumer Products	4.34					0.00	0.00		0.00	0.00						0.00
Hearth	0.22	0.00	0.01	0.00		0.00	0.15		0.00	0.15	0.00	2,364.35		0.05	0.04	2,378.74
Landscaping	0.51	0.19	16.90	0.00		0.00	0.09		0.00	0.09		30.52		0.03		31.13
Total	**6.81**	**0.19**	**16.91**	**0.00**		**0.00**	**0.24**		**0.00**	**0.24**	**0.00**	**2,394.87**		**0.08**	**0.04**	**2,409.87**

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	0.43					0.00	0.00		0.00	0.00						0.00
Consumer Products	4.02					0.00	0.00		0.00	0.00						0.00
Hearth	0.22	0.00	0.01	0.00		0.00	0.15		0.00	0.15	0.00	2,364.35		0.05	0.04	2,378.74
Landscaping	0.51	0.19	16.90	0.00		0.00	0.09		0.00	0.09		30.52		0.03		31.13
Total	**5.18**	**0.19**	**16.91**	**0.00**		**0.00**	**0.24**		**0.00**	**0.24**	**0.00**	**2,394.87**		**0.08**	**0.04**	**2,409.87**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Bernardo Shores - Full Buildout 2030

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Condo/Townhouse	203	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - Townhouses will consist of 203 dwelling units on 8.83 acres

Construction Phase - No Construction

Off-road Equipment -

Vehicle Trips - SANDAG's trip generation rate of 6.0 trip per dwelling unit is consistent with the traffic report.

Woodstoves - No woodstoves or wood fireplaces.

Area Mitigation - Natural gas hearth, low VOC Cleaning Supplies, and low VOC paints

Energy Mitigation - Exceed Title 24 with 15% improvements and install energy efficient applicances

Water Mitigation - Apply water conservation with 20% reduction for indoor use.

2.0 Emissions Summary

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	1.18	0.02	1.52	0.00		0.00	0.03		0.00	0.03	0.00	266.31	266.31	0.01	0.00	267.97
Energy	0.03	0.22	0.09	0.00		0.00	0.02		0.00	0.02	0.00	547.34	547.34	0.02	0.01	550.39
Mobile	0.67	1.21	5.73	0.02	1.83	0.09	1.92	0.03	0.09	0.12	0.00	1,239.84	1,239.84	0.05	0.00	1,240.80
Waste						0.00	0.00		0.00	0.00	18.96	0.00	18.96	1.12	0.00	42.48
Water						0.00	0.00		0.00	0.00	0.00	93.95	93.95	0.41	0.01	106.02
Total	**1.88**	**1.45**	**7.34**	**0.02**	**1.83**	**0.09**	**1.97**	**0.03**	**0.09**	**0.17**	**18.96**	**2,147.44**	**2,166.40**	**1.61**	**0.02**	**2,207.66**

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	0.88	0.02	1.52	0.00		0.00	0.03		0.00	0.03	0.00	266.31	266.31	0.01	0.00	267.97
Energy	0.02	0.19	0.08	0.00		0.00	0.02		0.00	0.02	0.00	502.81	502.81	0.01	0.01	505.61
Mobile	0.67	1.21	5.73	0.02	1.83	0.09	1.92	0.03	0.09	0.12	0.00	1,239.84	1,239.84	0.05	0.00	1,240.80
Waste						0.00	0.00		0.00	0.00	18.96	0.00	18.96	1.12	0.00	42.48
Water						0.00	0.00		0.00	0.00	0.00	81.72	81.72	0.33	0.01	91.41
Total	**1.57**	**1.42**	**7.33**	**0.02**	**1.83**	**0.09**	**1.97**	**0.03**	**0.09**	**0.17**	**18.96**	**2,090.68**	**2,109.64**	**1.52**	**0.02**	**2,148.27**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

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	0.67	1.21	5.73	0.02	1.83	0.09	1.92	0.03	0.09	0.12	0.00	1,239.84	1,239.84	0.05	0.00	1,240.80
Unmitigated	0.67	1.21	5.73	0.02	1.83	0.09	1.92	0.03	0.09	0.12	0.00	1,239.84	1,239.84	0.05	0.00	1,240.80
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	1,218.00	1,218.00	1218.00	3,477,759	3,477,759
Total	1,218.00	1,218.00	1,218.00	3,477,759	3,477,759

4.3 Trip Type Information

	Miles			Trip %		
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
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive 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						0.00	0.00		0.00	0.00	0.00	284.83	284.83	0.01	0.00	286.30
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	297.35	297.35	0.01	0.00	298.89
NaturalGas Mitigated	0.02	0.19	0.08	0.00		0.00	0.02		0.00	0.02	0.00	217.98	217.98	0.00	0.00	219.31
NaturalGas Unmitigated	0.03	0.22	0.09	0.00		0.00	0.02		0.00	0.02	0.00	249.99	249.99	0.00	0.00	251.51
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Condo/Townhouse	4.6846e+006	0.03	0.22	0.09	0.00		0.00	0.02		0.00	0.02	0.00	249.99	249.99	0.00	0.00	251.51
Total		**0.03**	**0.22**	**0.09**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**249.99**	**249.99**	**0.00**	**0.00**	**251.51**

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	tons/yr										MT/yr					
Condo/Townhouse	4.08486e+006	0.02	0.19	0.08	0.00		0.00	0.02		0.00	0.02	0.00	217.98	217.98	0.00	0.00	219.31
Total		**0.02**	**0.19**	**0.08**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**217.98**	**217.98**	**0.00**	**0.00**	**219.31**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Condo/Townhouse	839604					297.35	0.01	0.00	298.89
Total						**297.35**	**0.01**	**0.00**	**298.89**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Condo/Townhouse	804243					284.83	0.01	0.00	286.30
Total						**284.83**	**0.01**	**0.00**	**286.30**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	0.88	0.02	1.52	0.00		0.00	0.03		0.00	0.03	0.00	266.31	266.31	0.01	0.00	267.97
Unmitigated	1.18	0.02	1.52	0.00		0.00	0.03		0.00	0.03	0.00	266.31	266.31	0.01	0.00	267.97
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.32					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.79					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.03	0.00	0.00	0.00		0.00	0.02		0.00	0.02	0.00	263.82	263.82	0.01	0.00	265.43
Landscaping	0.05	0.02	1.52	0.00		0.00	0.01		0.00	0.01	0.00	2.49	2.49	0.00	0.00	2.54
Total	**1.19**	**0.02**	**1.52**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**266.31**	**266.31**	**0.01**	**0.00**	**267.97**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.08					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.73					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.03	0.00	0.00	0.00		0.00	0.02		0.00	0.02	0.00	263.82	263.82	0.01	0.00	265.43
Landscaping	0.05	0.02	1.52	0.00		0.00	0.01		0.00	0.01	0.00	2.49	2.49	0.00	0.00	2.54
Total	**0.89**	**0.02**	**1.52**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**266.31**	**266.31**	**0.01**	**0.00**	**267.97**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					81.72	0.33	0.01	91.41
Unmitigated					93.95	0.41	0.01	106.02
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Condo/Townhouse	13.2263 / 8.3383					93.95	0.41	0.01	106.02
Total						**93.95**	**0.41**	**0.01**	**106.02**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Condo/Townhouse	10.581 / 8.3383					81.72	0.33	0.01	91.41
Total						**81.72**	**0.33**	**0.01**	**91.41**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					18.96	1.12	0.00	42.48
Unmitigated					18.96	1.12	0.00	42.48
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Condo/Townhouse	93.38					18.96	1.12	0.00	42.48
Total						**18.96**	**1.12**	**0.00**	**42.48**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Condo/Townhouse	93.38					18.96	1.12	0.00	42.48
Total						**18.96**	**1.12**	**0.00**	**42.48**

9.0 Vegetation

Bernardo Shores - Existing Setting

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Mobile Home Park	124	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - RV Park with 124 spaces on 8.83 acres.

Construction Phase - No Construction

Off-road Equipment -

Vehicle Trips - trip generation rate is less than 2 trips per day (0.806).

Area Mitigation -

Woodstoves - No woodstoves and fireplaces at the RV Park. Propane stoves and heaters are utilized.

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.06	3.30	12.51	0.00		0.00	0.23		0.00	0.23	0.00	3,067.82		0.07	0.22	3,137.34
Energy	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
Mobile	0.59	1.30	6.13	0.01	0.94	0.05	1.00	0.03	0.05	0.08		879.51		0.05		880.53
Total	**5.72**	**5.19**	**18.89**	**0.01**	**0.94**	**0.05**	**1.28**	**0.03**	**0.05**	**0.36**	**0.00**	**4,700.09**		**0.13**	**0.23**	**4,775.22**

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	4.81	0.13	10.68	0.00		0.00	0.06		0.00	0.06	0.00	18.64		0.02	0.00	19.07
Energy	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
Mobile	0.59	1.30	6.13	0.01	0.94	0.05	1.00	0.03	0.05	0.08		879.51		0.05		880.53
Total	**5.47**	**2.02**	**17.06**	**0.01**	**0.94**	**0.05**	**1.11**	**0.03**	**0.05**	**0.19**	**0.00**	**1,650.91**		**0.08**	**0.01**	**1,656.95**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

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	0.59	1.30	6.13	0.01	0.94	0.05	1.00	0.03	0.05	0.08		879.51		0.05		880.53
Unmitigated	0.59	1.30	6.13	0.01	0.94	0.05	1.00	0.03	0.05	0.08		879.51		0.05		880.53
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Mobile Home Park	99.94	99.94	99.94	285,370	285,370
Total	99.94	99.94	99.94	285,370	285,370

4.3 Trip Type Information

	Miles			Trip %		
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
Mobile Home Park	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

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	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
NaturalGas Unmitigated	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Mobile Home Park	6398.5	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
Total		**0.07**	**0.59**	**0.25**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**752.76**		**0.01**	**0.01**	**757.35**

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	lb/day										lb/day					
Mobile Home Park	6.3985	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
Total		**0.07**	**0.59**	**0.25**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**752.76**		**0.01**	**0.01**	**757.35**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.81	0.13	10.68	0.00		0.00	0.06		0.00	0.06	0.00	18.64		0.02	0.00	19.07
Unmitigated	5.06	3.30	12.51	0.00		0.00	0.23		0.00	0.23	0.00	3,067.82		0.07	0.22	3,137.34
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.27					0.00	0.00		0.00	0.00						0.00
Consumer Products	3.18					0.00	0.00		0.00	0.00						0.00
Hearth	0.24	3.17	1.83	0.00		0.00	0.17		0.00	0.17	0.00	3,049.18		0.05	0.22	3,118.26
Landscaping	0.36	0.13	10.68	0.00		0.00	0.06		0.00	0.06		18.64		0.02		19.07
Total	**5.05**	**3.30**	**12.51**	**0.00**		**0.00**	**0.23**		**0.00**	**0.23**	**0.00**	**3,067.82**		**0.07**	**0.22**	**3,137.33**

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	1.27					0.00	0.00		0.00	0.00						0.00
Consumer Products	3.18					0.00	0.00		0.00	0.00						0.00
Hearth	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
Landscaping	0.36	0.13	10.68	0.00		0.00	0.06		0.00	0.06		18.64		0.02		19.07
Total	**4.81**	**0.13**	**10.68**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**18.64**		**0.02**	**0.00**	**19.07**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Bernardo Shores - Existing Setting

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Mobile Home Park	124	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - RV Park with 124 spaces on 8.83 acres.

Construction Phase - No Construction

Off-road Equipment -

Vehicle Trips - trip generation rate is less than 2 trips per day (0.806).

Area Mitigation -

Woodstoves - No woodstoves and fireplaces at the RV Park. Propane stoves and heaters are utilized.

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.06	3.30	12.51	0.00		0.00	0.23		0.00	0.23	0.00	3,067.82		0.07	0.22	3,137.34
Energy	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
Mobile	0.64	1.36	6.03	0.01	0.94	0.05	1.00	0.03	0.05	0.09		822.95		0.05		823.92
Total	**5.77**	**5.25**	**18.79**	**0.01**	**0.94**	**0.05**	**1.28**	**0.03**	**0.05**	**0.37**	**0.00**	**4,643.53**		**0.13**	**0.23**	**4,718.61**

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	4.81	0.13	10.68	0.00		0.00	0.06		0.00	0.06	0.00	18.64		0.02	0.00	19.07
Energy	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
Mobile	0.64	1.36	6.03	0.01	0.94	0.05	1.00	0.03	0.05	0.09		822.95		0.05		823.92
Total	**5.52**	**2.08**	**16.96**	**0.01**	**0.94**	**0.05**	**1.11**	**0.03**	**0.05**	**0.20**	**0.00**	**1,594.35**		**0.08**	**0.01**	**1,600.34**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

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	0.64	1.36	6.03	0.01	0.94	0.05	1.00	0.03	0.05	0.09		822.95		0.05		823.92
Unmitigated	0.64	1.36	6.03	0.01	0.94	0.05	1.00	0.03	0.05	0.09		822.95		0.05		823.92
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Mobile Home Park	99.94	99.94	99.94	285,370	285,370
Total	99.94	99.94	99.94	285,370	285,370

4.3 Trip Type Information

	Miles			Trip %		
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
Mobile Home Park	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

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	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
NaturalGas Unmitigated	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Mobile Home Park	6398.5	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
Total		**0.07**	**0.59**	**0.25**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**752.76**		**0.01**	**0.01**	**757.35**

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	lb/day										lb/day					
Mobile Home Park	6.3985	0.07	0.59	0.25	0.00		0.00	0.05		0.00	0.05		752.76		0.01	0.01	757.35
Total		**0.07**	**0.59**	**0.25**	**0.00**		**0.00**	**0.05**		**0.00**	**0.05**		**752.76**		**0.01**	**0.01**	**757.35**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	4.81	0.13	10.68	0.00		0.00	0.06		0.00	0.06	0.00	18.64		0.02	0.00	19.07
Unmitigated	5.06	3.30	12.51	0.00		0.00	0.23		0.00	0.23	0.00	3,067.82		0.07	0.22	3,137.34
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.27					0.00	0.00		0.00	0.00						0.00
Consumer Products	3.18					0.00	0.00		0.00	0.00						0.00
Hearth	0.24	3.17	1.83	0.00		0.00	0.17		0.00	0.17	0.00	3,049.18		0.05	0.22	3,118.26
Landscaping	0.36	0.13	10.68	0.00		0.00	0.06		0.00	0.06		18.64		0.02		19.07
Total	**5.05**	**3.30**	**12.51**	**0.00**		**0.00**	**0.23**		**0.00**	**0.23**	**0.00**	**3,067.82**		**0.07**	**0.22**	**3,137.33**

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	1.27					0.00	0.00		0.00	0.00						0.00
Consumer Products	3.18					0.00	0.00		0.00	0.00						0.00
Hearth	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
Landscaping	0.36	0.13	10.68	0.00		0.00	0.06		0.00	0.06		18.64		0.02		19.07
Total	**4.81**	**0.13**	**10.68**	**0.00**		**0.00**	**0.06**		**0.00**	**0.06**	**0.00**	**18.64**		**0.02**	**0.00**	**19.07**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Bernardo Shores - Existing Setting

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Mobile Home Park	124	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Utility Company**	San Diego Gas & Electric
Climate Zone	13	**Precipitation Freq (Days)**	40		

1.3 User Entered Comments

Project Characteristics -

Land Use - RV Park with 124 spaces on 8.83 acres.

Construction Phase - No Construction

Off-road Equipment -

Vehicle Trips - trip generation rate is less than 2 trips per day (0.806).

Area Mitigation -

Woodstoves - No woodstoves and fireplaces at the RV Park. Propane stoves and heaters are utilized.

2.0 Emissions Summary

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	0.88	0.40	1.18	0.00		0.00	0.03		0.00	0.03	0.00	341.76	341.76	0.01	0.02	349.50
Energy	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	339.80	339.80	0.01	0.01	341.67
Mobile	0.11	0.23	1.11	0.00	0.15	0.01	0.16	0.01	0.01	0.02	0.00	137.86	137.86	0.01	0.00	138.02
Waste						0.00	0.00		0.00	0.00	11.58	0.00	11.58	0.68	0.00	25.95
Water						0.00	0.00		0.00	0.00	0.00	57.39	57.39	0.25	0.01	64.76
Total	**1.00**	**0.74**	**2.34**	**0.00**	**0.15**	**0.01**	**0.20**	**0.01**	**0.01**	**0.06**	**11.58**	**876.81**	**888.39**	**0.96**	**0.04**	**919.90**

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	0.85	0.01	0.96	0.00		0.00	0.01		0.00	0.01	0.00	1.52	1.52	0.00	0.00	1.56
Energy	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	339.80	339.80	0.01	0.01	341.67
Mobile	0.11	0.23	1.11	0.00	0.15	0.01	0.16	0.01	0.01	0.02	0.00	137.86	137.86	0.01	0.00	138.02
Waste						0.00	0.00		0.00	0.00	11.58	0.00	11.58	0.68	0.00	25.95
Water						0.00	0.00		0.00	0.00	0.00	57.39	57.39	0.25	0.01	64.76
Total	**0.97**	**0.35**	**2.12**	**0.00**	**0.15**	**0.01**	**0.18**	**0.01**	**0.01**	**0.04**	**11.58**	**536.57**	**548.15**	**0.95**	**0.02**	**571.96**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

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	0.11	0.23	1.11	0.00	0.15	0.01	0.16	0.01	0.01	0.02	0.00	137.86	137.86	0.01	0.00	138.02
Unmitigated	0.11	0.23	1.11	0.00	0.15	0.01	0.16	0.01	0.01	0.02	0.00	137.86	137.86	0.01	0.00	138.02
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Mobile Home Park	99.94	99.94	99.94	285,370	285,370
Total	99.94	99.94	99.94	285,370	285,370

4.3 Trip Type Information

	Miles			Trip %		
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
Mobile Home Park	10.80	7.30	7.50	41.60	18.80	39.60

5.0 Energy Detail

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						0.00	0.00		0.00	0.00	0.00	215.18	215.18	0.01	0.00	216.28
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	215.18	215.18	0.01	0.00	216.28
NaturalGas Mitigated	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	124.63	124.63	0.00	0.00	125.39
NaturalGas Unmitigated	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	124.63	124.63	0.00	0.00	125.39
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Mobile Home Park	2.33545e+006	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	124.63	124.63	0.00	0.00	125.39
Total		**0.01**	**0.11**	**0.05**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**124.63**	**124.63**	**0.00**	**0.00**	**125.39**

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	tons/yr										MT/yr					
Mobile Home Park	2.33545e+006	0.01	0.11	0.05	0.00		0.00	0.01		0.00	0.01	0.00	124.63	124.63	0.00	0.00	125.39
Total		**0.01**	**0.11**	**0.05**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**124.63**	**124.63**	**0.00**	**0.00**	**125.39**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Mobile Home Park	607564					215.18	0.01	0.00	216.28
Total						**215.18**	**0.01**	**0.00**	**216.28**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Mobile Home Park	607564					215.18	0.01	0.00	216.28
Total						**215.18**	**0.01**	**0.00**	**216.28**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive 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	0.85	0.01	0.96	0.00		0.00	0.01		0.00	0.01	0.00	1.52	1.52	0.00	0.00	1.56
Unmitigated	0.88	0.40	1.18	0.00		0.00	0.03		0.00	0.03	0.00	341.76	341.76	0.01	0.02	349.50
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.23					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.03	0.39	0.23	0.00		0.00	0.02		0.00	0.02	0.00	340.24	340.24	0.01	0.02	347.95
Landscaping	0.03	0.01	0.96	0.00		0.00	0.01		0.00	0.01	0.00	1.52	1.52	0.00	0.00	1.56
Total	**0.87**	**0.40**	**1.19**	**0.00**		**0.00**	**0.03**		**0.00**	**0.03**	**0.00**	**341.76**	**341.76**	**0.01**	**0.02**	**349.51**

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	0.23					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	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
Landscaping	0.03	0.01	0.96	0.00		0.00	0.01		0.00	0.01	0.00	1.52	1.52	0.00	0.00	1.56
Total	**0.84**	**0.01**	**0.96**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**1.52**	**1.52**	**0.00**	**0.00**	**1.56**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					57.39	0.25	0.01	64.76
Unmitigated					57.39	0.25	0.01	64.76
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Mobile Home Park	8.0791 / 5.09335					57.39	0.25	0.01	64.76
Total						**57.39**	**0.25**	**0.01**	**64.76**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Mobile Home Park	8.0791 / 5.09335					57.39	0.25	0.01	64.76
Total						**57.39**	**0.25**	**0.01**	**64.76**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					11.58	0.68	0.00	25.95
Unmitigated					11.58	0.68	0.00	25.95
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Mobile Home Park	57.04					11.58	0.68	0.00	25.95
Total						**11.58**	**0.68**	**0.00**	**25.95**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Mobile Home Park	57.04					11.58	0.68	0.00	25.95
Total						**11.58**	**0.68**	**0.00**	**25.95**

9.0 Vegetation