APPENDIX C-1.
AIR QUALITY ASSESSMENT

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AIR QUALITY ASSESSMENT

Piraeus Point
City of Encinitas, CA

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1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this Air Quality Assessment is to determine potential air quality impacts (if any) that may be created by either construction or operational emissions (short term or long term) from the proposed Project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to reduce impacts to the extent feasible.

1.2 Project Location

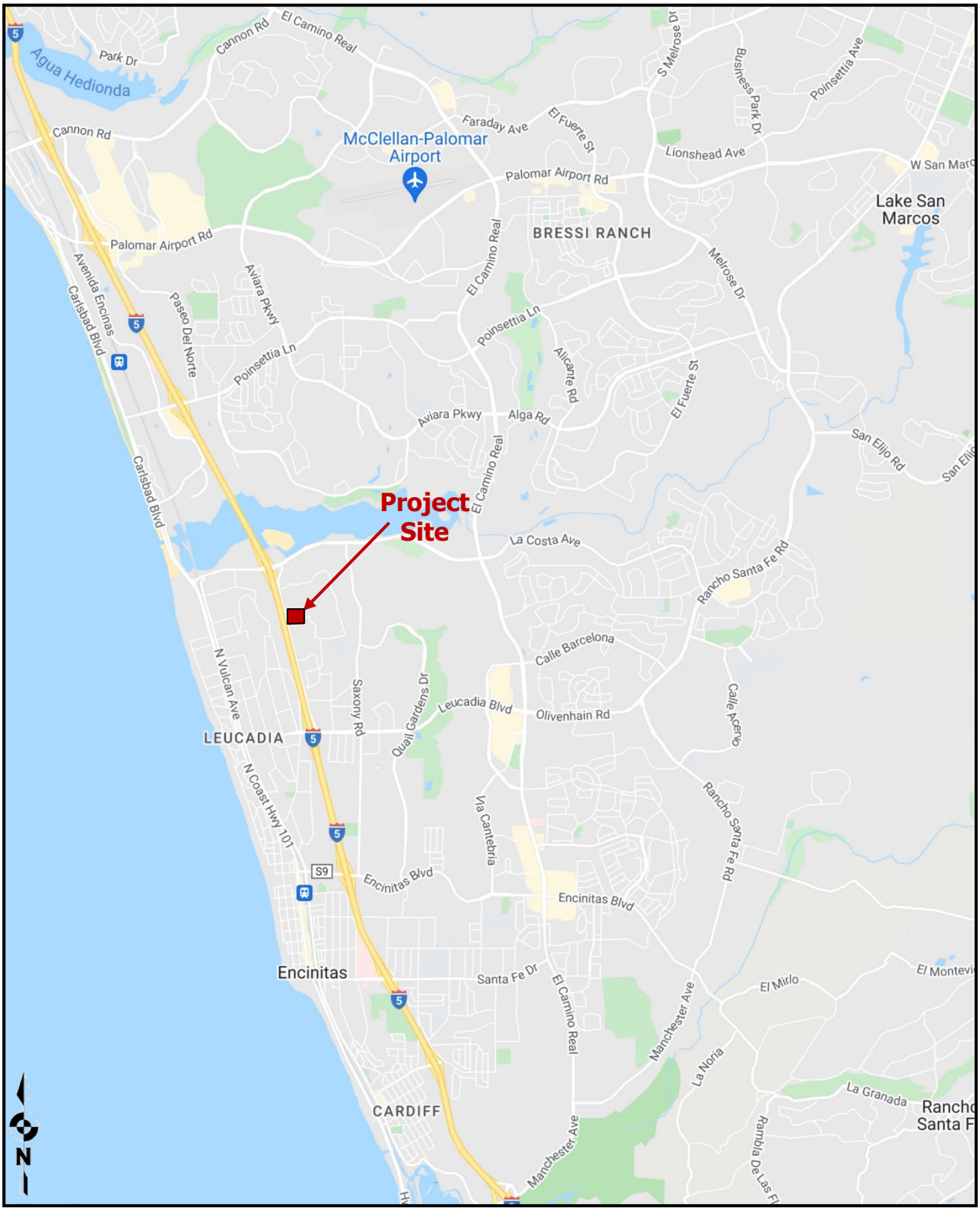
The proposed Piraeus Point project is located on a 6.88-acre project site on the northeast corner of Piraeus Street and Plato Place in the Leucadia community of the City of Encinitas, California. The project is located east of Interstate 5 (I-5) between La Costa Avenue and Leucadia Boulevard. The project site is bordered by Piraeus Street to the west, Plato Place to the south, and existing single-family homes to the east and undeveloped land to the north. A general project vicinity map is shown in Figure 1-A.

1.3 Project Description

The community would be situated on a 6.88-acre site and would consist of 149 residential homes including 134 market-rate homes and 15 would be "very low" income affordable residential homes. The Project would provide 246 garage spaces and 26 open outdoor guest spaces. The proposed project site configuration is shown in Figure 1-B. During the grading phase of the project, the plan calls for approximately 83,000 cubic yards (CY) of cut and 25,400 CY of fill and expects a net export of 57,600 (CY). The Project will include a number of Project Design Features (PDFs) to include:

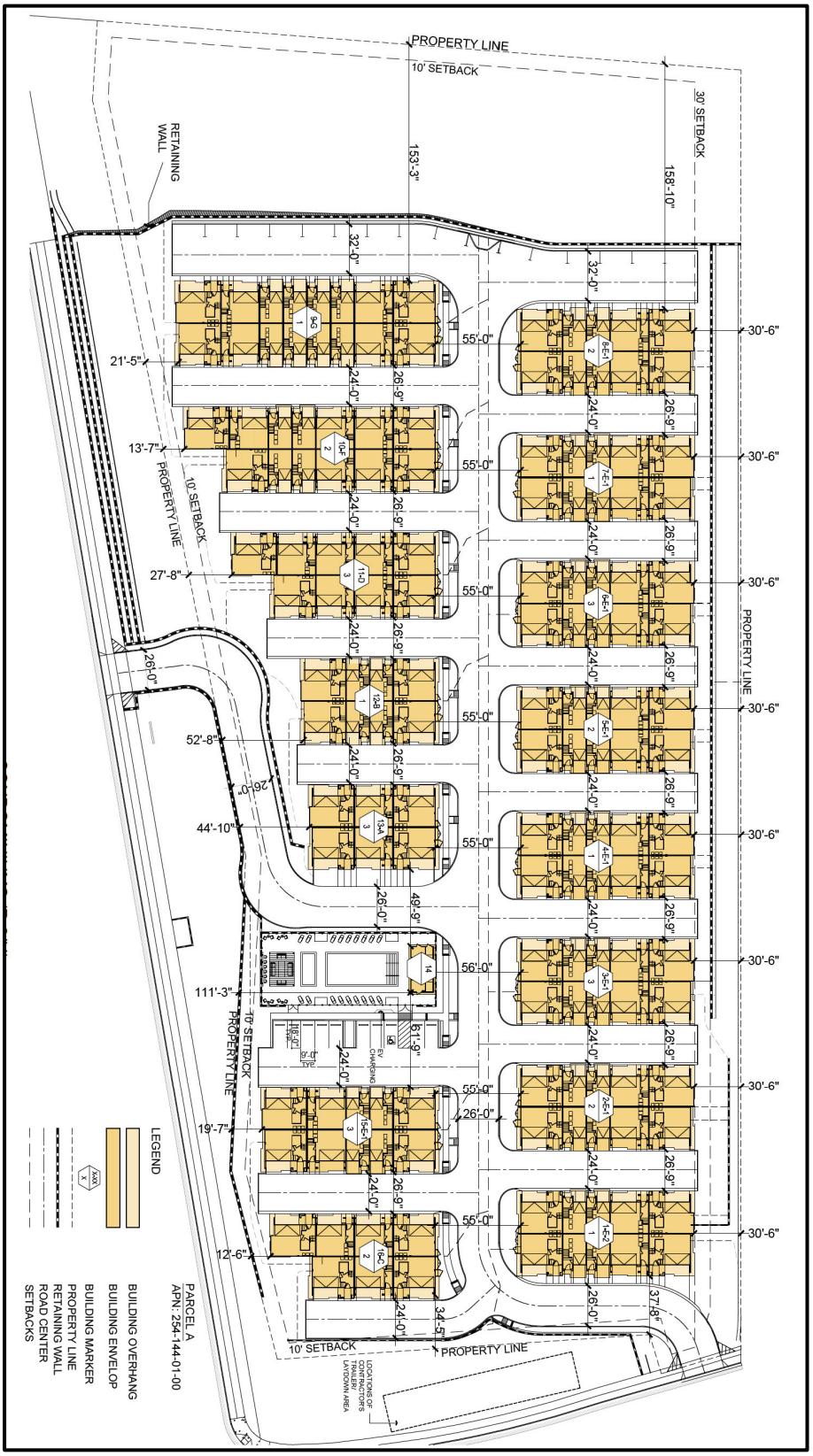
1. *The project would install Low Flow water fixtures in all the units.*
2. *All lights will be designed use LED technology and would be for both indoor and outdoor areas.*
3. *The Project would provide separate waste containers to allow for simpler material separations or the Project would pay for a waste collection service that recycles the materials in accordance with AB 341 to achieve a 75% waste diversion. All green waste will be diverted from landfills and recycled as mulch.*
4. *The project would not install hearth options.*
5. *The Project will be 100 percent electric.*
6. *The project would be required to utilize Tier 4 construction Equipment with Diesel Particulate Filters (DPF).*
7. *The Project would install 149 kilowatt (KW) of solar*
8. *The Project would install 4 Electric Vehicle (EV) Charging Stations*
9. *The Project would include construction BMPs which would include wetting soil during construction and installing a dust barrier between existing residences.*

Figure 1-A: Project Vicinity Map



Source: (Google, 2022)

Figure 1-B: Proposed Project Site Plan



Source: (Schmidt Design Group, 2022)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The Project site lies in the western portion of San Diego County, in the City of Encinitas. The project site is bordered by Piraeus Street to the west, Plato Place to the south, and existing single-family homes to the east and undeveloped land to the north. The site is zoned RR-1 and RR-2 with a R-30 overlay covering a portion of the project site as part of the City's Housing Element and allows for the construction of up to 149 homes (City of Encinitas, 2019). Site topography onsite generally slopes with elevations ranging from approximately 110 to 175 feet above mean sea level (AMSL).

2.2 Climate (Encinitas)

Climate within the San Diego Air Basin (SDAB) area varies dramatically over short geographical distances due to size and topography. Most of southern California is dominated by high-pressure systems for much of the year, which keeps the high desert mostly sunny and warm. Typically, during the winter months, the high pressure system drops to the south and brings cooler, moister weather from the north. Prevailing winds are generally westerly flowing towards the east for most of the year; however, during the autumn and winter, it is common for strong warm dry winds originating in the desert having a more easterly flow characteristic.

Meteorological trends within the City of Encinitas are typically cooler given the close vicinity to the ocean. Median temperatures range from approximately 55ºF in the winter to approximately 72ºF in the summer (City-Data, 2020).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. ***Primary Standards*** set limits for the intention of protecting public health, which includes sensitive populations such as asthmatics, children and elderly.

Secondary Standards set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. ***Carbon Monoxide (CO):*** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.*
2. ***Lead (Pb):*** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. ***Nitrogen Dioxide (NO_2):*** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO_2 is usually visible as a reddish-brown air layer over urban areas. NO_2 along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. ***Particulate Matter (PM_{10} or $PM_{2.5}$):*** *is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM_{10} particles are 10 microns (µm) or less and $PM_{2.5}$ particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*
5. ***Ozone (O_3)****: is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*
6. ***Sulfur Dioxide (SO_2)****: is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO_2 exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease*

(such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.

2.3.2 State Standards and Definitions

The California Air Resources Board (CARB) sets the laws and regulations for air quality on the state level. The California Ambient Air Quality Standards (CAAQS) is similar to the NAAQS and also restricts four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. ***Visibility Reducing Particles**: Particles in the Air that obstruct the visibility.*
2. ***Sulfates**: are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. ***Hydrogen Sulfide (H_2S)**: is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H_2S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H_2S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 Parts per Million (ppm)) can cause a loss of consciousness and possibly death.**
4. ***Vinyl Chloride**: also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	**Average Time**	**California Standards[1]**		**Federal Standards[2]**		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m3)		0.070 ppm (137 µg/m3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m3	Gravimetric or Beta Attenuation	150 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m3		-		
Fine Particulate Matter (PM2.5)[9]	24 Hour	No Separate State Standard		35 µg/m3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m3	Gravimetric or Beta Attenuation	12.0 µg/m3	15 µg/m3	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m3)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m3)		35 ppm (40 mg/m3)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m3)		-	-	-
Nitrogen Dioxide (NO_2)[10]	Annual Arithmetic Mean	0.030 ppm (57 µg/m3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m3)[8]	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m3)		0.100 ppm[8] (188/ µg/m3)	-	
Sulfur Dioxide (SO_2)[11]	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm[10] (for Certain Areas)	-	Ultraviolet Flourescence; Spectrophotometry (Pararoosaniline Method)[9]
	24 Hour	0.04 ppm (105 µg/m3)		0.14 ppm[10] (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m3)	
	1 Hour	0.25 ppm (655 µg/m3)		75 ppb (196 µg/m3)	-	
Lead[12,13]	30 Day Average	1.5 µg/m3	Atomic Absorption	-		-
	Calendar Quarter	-		1.5 µg/m3	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m3		
Visibility Reducing Particles	8 Hour	See footnote 14				
Sulfates	24 Hour	25 µg/m3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m3)	Gas Chromatography			

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent 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 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 EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3. The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: (California Air Resources Board, 5/4/2016)

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment areas" for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the $PM_{2.5}$ standard and many areas are in non-attainment for PM_{10} as well. California therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed to attain ambient air quality standards.

The San Diego Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within the County. Therefore, the SDAPCD developed a Regional Air Quality Strategy (RAQS) to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on Volatile Organic Compounds (VOCs) and oxides of nitrogen (NO_X). Currently, San Diego is in "non-attainment" status for federal and state O_3 and state PM_{10} and $PM_{2.5.}$ An attainment plan is available for O_3. The RAQS was adopted in 1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

The 2016 update mostly summarizes how the 2009 update has lowered NO_X and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing for discussion three new VOC and four new NO_X reduction measures. NO_X and VOCs are precursors to the formation of ozone in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status for criteria pollutants with respect to both federal and state nonattainment status by pollutants for County is shown in Table 2.2 (SDAPCD, 2019).

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the project produces unmitigable air quality emissions or if the project produces cumulative impacts.

Table 2.2: San Diego Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment *	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable **	Nonattainment
PM2.5	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

** The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans.*
*** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.*
(SDAPCD, 2019)

2.4 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established threshold in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA). These screening criteria can be used to demonstrate that a Project's total emissions would not result in a significant impact. Since SDAPCD does not have AQIA threshold for emissions of Volatile Organic Compounds (VOCs), the use of the threshold for VOCs is from the South Coast Air Quality Management District for the Coachella Valley. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the Project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3 (SDAPCD, 2020).

Non Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that propose to increase cancer risk between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the project increase the cancer risk to over 10 in one million. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology. This report assumes that Volatile Organic Compounds (VOC)

and Reactive Organic Gases (ROG) are essentially the same due to the fact that emissions generated from the Project represent non-methane organic compounds.

Table 2.3: Screening Threshold for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)	Total Emissions (Tons per Year)
Construction Emissions		
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55	15
Nitrogen Oxide (NO_x)	250	40
Sulfur Oxide (SO_x)	250	40
Carbon Monoxide (CO)	550	100
Volatile Organic Compounds (VOCs)	75	40
Reactive Organic Gases (ROG) SCAQMD	75	40
Operational Emissions		
Respirable Particulate Matter (PM_{10} and $PM_{2.5}$)	100 and 55	15
Nitrogen Oxide (NO_x)	250	40
Sulfur Oxide (SO_x)	250	40
Carbon Monoxide (CO)	550	100
Lead and Lead Compounds	3.2	0.6
Volatile Organic Compounds (VOCs)	75	40
Reactive Organic Gases (ROG) SCAQMD	75	40
Source: (SDAPCD, 2020)		

2.5 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 10 monitoring sites, which collect data on criteria pollutants. The proposed development project is closest to the Camp Pendleton and Carmel Mountain Ranch monitoring stations which are located roughly 11 and 13 miles from the Project site respectively. Table 2.4 identifies the criteria pollutants monitored at the aforementioned station. SDAPCD published the five-year air quality summary for all of the monitoring stations (SDAPCD, 2021).

Table 2.4: Two-Year Ambient Air Quality Summary near the Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2019	2020	Days Exceeded over 2 years
O_3 (ppm)	Camp Pendleton or Carmel Mountain Ranch	1 Hour	0.09 ppm	No Standard	0.08	0.09	0
		8 Hour	0.070 ppm	0.070 ppm	0.06	0.07	3
PM_{10} (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	PM10 Data Not Available for Monitoring Sites near Project Site		
		Annual Arithmetic Mean	20 µg/m3	No Standard			
* $PM_{2.5}$ (µg/m^3)		24 Hour	No standard -	35 µg/m3	18.9	40.2	N/A
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	8.2	9.3	N/A
NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.014	0.013	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.086	0.056	N/A
* CO (ppm)		1 Hour	20 ppm	35 ppm	4.1	3.3	N/A
		8 Hour	9 ppm	9 ppm	2.5	1.7	N/A

Notes:
1. - Yearly maximums marked with "-" indicated data was not available for either monitoring station.
2. * Data was selected from the Carmel Mountain Ranch station which began in 2019. All other data presented was collected at the Camp Pendleton Monitoring Station.
3. SO_2 is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO_2 emissions within the County are essentially Zero for all metrics including the Average, Maximum 24 hour and 1- hour standards. The Highest 1-hr measurement identified is 0.004 ppm and the most restrictive standard (CAAQS for SO_2) is 0.25 ppm.

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Criteria Air Pollutants

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod 2020.4.0 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2017. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the proposed Project and uses methodologies presented in the US EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in ***Attachment A*** to this report.

Onsite Generate Construction Health Risk

The AERSCREEN dispersion model was used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model predicts the maximum exposure distance and concentrations. The AERSCREEN input/output file for the proposed project is shown in ***Attachment B*** at the end of this report. The worst-case exhaust emissions generated from the proposed Project from construction equipment was utilized and calculated within the CalEEMod model. Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst-case cancer risk dose calculation is defined in Equation 1 below (OEHHA, 2015).

Equation 1 $Dose_{air} = C_{air} * (BR/BW) * A * EF * (1x10^{-6})$

$Dose_{air}$	=	Dose through inhalation (mg/kg/d)
C_{air}	=	Concentration in air (µg/m^3) Annual average Diesel Particulate Matter (DPM) concentration in µg/m^3 -AERSCREEN predicts a 1-hr concentration and is corrected to an annual average by multiplying the 1-hr average by 0.08 (US EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
$1x10^{-6}$	=	Milligrams to micrograms conversion (10^{-3} mg/ µg), cubic meters to liters conversion (10^{-3} m^3/l)

Cancer Risk

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. Specific factors as modeled are shown within the project models which is provided as ***Attachment C*** to this report. The worst-case cancer risk calculation is defined in Equation 2 below (OEHHA, 2015).

Equation 2

$$RISK_{inh\text{-}res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

$RISK_{inh\text{-}res}$	=	Residential inhalation cancer risk
$DOSE_{air}$	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time spent at home (unitless)

Office of Environmental Health Hazard Assessment OEHHA recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the Maximally Exposed Individual Resident (MEIR). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans.

Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9-and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years.

Non-Cancer Risk

Non-Cancer risks or risks defined as chronic or acute are also known with respect to Diesel Particulate Matter (DPM) and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its chronic Reference Exposure Levels (REL). Where the total equals or exceeds one, a health hazard is presumed to exist. RELs are published by the Office of Environmental Health Hazard Assessment (OEHHA, February 2015). Diesel Exhaust has a REL of 5 $\mu g/m^3$ and targets the respiratory system.

Offsite Sourced Cancer Risks

Cancer Risks from DPM originating from Interstate-5 (I-5) would be expected and are analyzed separately for the project. Based on findings from that analysis, the project building facades would be exposed to sources which would exceed 10 per one million exposed. Based on the findings of that report, mechanical ventilation systems would need a Minimum Efficiency Reporting Value (MERV) filtration rating of 16 (LDN Consulting, 2022).

3.2 Construction Assumptions

The Project construction dates were estimated based on a construction start date in 2023 and an expected completion date in 2025. CalEEMod was utilized for all construction calculations and has been manually updated to reflect SDAPCD Rule 67 VOC paint standards and to include Tier 4 construction equipment with DPF per the Project description. Table 3.1 shows the modeled worst-case timeframes for the construction of all Project infrastructure, facilities, and improvements at the site, as well as the expected number of pieces of equipment which have been verified by the applicant's Project Engineer. Also, it should be noted that the below would be conservative in the event construction began/ended at a later date.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Site Preparation	11/01/2023	11/14/2023	
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
Grading	11/15/2023	06/30/2024	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			3
Building Construction	07/01/2024	05/16/2025	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coating	4/5/2025	5/16/2025	
Air Compressors			1
Paving	05/17/2025	06/13/2025	
Pavers			2
Paving Equipment			2
Rollers			2
This equipment list is based upon equipment inventory within CalEEMod. The quantity and types are based upon assumptions provided by the project applicant.			

It should be noted that building construction assumes all homes are built in progression within a 230 workday progression though intensity may decrease pending market conditions pushing individual home construction through 2027. The shorter duration would yield higher daily emissions and is therefore worst case.

3.3 Operational Emissions

Once construction is completed, the proposed project would generate emissions from daily operations which would include sources such as Area, Energy, Mobile, Waste and Water uses, which are also calculated within CalEEMod. Area Sources include consumer products, landscaping, and architectural coatings as part of regular maintenance. Energy sources would be from electrical only as the project will not install Natural Gas. Air quality emission would not be expected from energy usage. Finally, mobile or transportation related emissions would be expected and are also calculated in CalEEMod. The Operational model is also shown in ***Attachment A*** at the end of this report.

The Traffic inputs for CalEEMod were adjusted to be consistent with the proposed project traffic study. Based on that study, the proposed project would generate 894 net average daily trips (IM Intersecting Metrics, 2022). These traffic numbers were utilized within the CalEEMod analysis. The model also estimates emission predictions for ROG, NOx, CO, SO_2, PM_{10} and $PM_{2.5}$ for area source assumptions. Additionally, it was assumed that an average of 10% of the structural surface area will be re-painted each year. Finally, since the project would not be installing hearth options, CalEEMod default hearth settings were modified to represent no hearth options.

Consumer product emissions are generated by a wide range of product categories, including air fresheners, automotive products, household cleaners, and personal care products. Emissions associated with these products primarily depend on the increased population associated with residential development. Default emission factors were utilized within the CalEEMod.

3.4 Micro Scale Operational Emissions

Air pollutant emissions related to project traffic have the potential to create new, or worsen existing localized air quality with respect to carbon monoxide (CO). These increased carbon monoxide "Hot Spots" are determined through the utilization of the Institute of Transportation Studies (ITS) Transportation Project-Level Carbon Monoxide Protocol (California Department of Transportation, 1997) as well as the County.

In the event the proposed project traffic adds vehicular trips to either an intersection that operates at LOS E or F or any intersection where the project trips re-classifies the intersection level of service to LOS E or F and when peak-hour trips exceed 3,000, the Project must quantify CO levels (County of San Diego, 2007). The ITS Transportation Project-Level Carbon Monoxide Protocol recommends running the EMFAC model to determine emission rates for the Project year as well as conduct dispersion modeling utilizing CALINE to determine worst-case emission concentrations.

The Project traffic study reported that the proposed project would not generate any traffic impacts and would not be required to implement mitigation measures. Given this, the project would generate less than significant CO Hot Spot impacts.

3.5 Odor Impacts (Onsite)

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Since the activities are "short-term" construction odors are not typically considered a significant impact. Long-term odor impacts would not be expected because uses proposed under the proposed project would not generate offensive odors.

4.0 FINDINGS

4.1 Consistency with RAQS and SIP

As mentioned in Section 2.3.3 of this analysis, the RAQS is based on population predictions from SANDAG. Projects that produce growth in accordance with SANDAG's projections would generally conform to the RAQS. Since the proposed project is compatible with the general plan land use designation, the construction emissions would not conflict with the RAQS.

The RAQS is updated regularly with the last update being completed in 2016. The City has recently updated the Housing Element to the General Plan and has updated SANDAG with new employment and residential growth projections which have been adopted by the City. Given this, the project has been designed to conform to the updated Housing Element and re with the RAQS. As such, the project would create a less than significant impact to the RAQS.

4.2 Construction Findings

Construction emissions in pounds per day from the construction activities and equipment identified in Section 3.2 above is shown in Table 4.1 below. Based on these numbers, the proposed Project would not exceed City standards, and would not require mitigation. It should be noted that, as a design feature, the proposed Project construction team will utilize Tier 4 diesel construction equipment with DPF, and architectural coatings would conform to SDAPCD Rule 67 as indicated by the applicant.

Table 4.1: Expected Construction Emissions Summary (lb/day)

Year	ROG	NO_x	CO	SO_2	PM_{10} (Total)	$PM_{2.5}$ (Total)
2023	0.51	7.38	21.30	0.06	19.82	10.15
2024	0.64	7.32	20.25	0.06	8.09	3.73
2025	62.95	3.31	22.39	0.04	1.24	0.34
Significance Threshold (lb/day)	**75**	**250**	**550**	**250**	**100**	**55**
SDAPCD Impact?	**No**	**No**	**No**	**No**	**No**	**No**

Given these findings, project emissions would not exceed SDAPCD air quality standards during construction. No mitigation measures will be necessary. Given the proposed project has no direct impacts and the proposed project is compatible with the general plan land use designation, there would not be any impacts to any RAQS.

4.3 Health Risk

Based upon the air quality modeling and assuming Tier 4 equipment with DPF as a design feature to the proposed project, worst-case onsite PM_{10} from onsite construction exhaust would cumulatively produce 0.00141 tons over the construction duration (423-working days) or an average of 0.000105 grams/second.

Utilizing the AERSCREEN dispersion model, we find that the peak maximum 1-hr concentration is 0.123 $\mu g/m^3$ during the worst-case construction period. Converting the peak 1-hr concentration to an annual concentration by multiplying it by 0.08 (US EPA, 1992) yields an annual concentration of 0.00986 $\mu g/m^3$. Therefore, utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk is 2.02 per million exposed at the point of maximum exposure 100 meters away. It should be again noted that a project design feature would be to utilize Tier 4 diesel equipment with DPF and would be a condition to the proposed project and is considered T-BACT. Given this, the construction scenario analyzed would be considered less than significant and would be in compliance with the City's thresholds.

It should be noted that an elementary school is proposed to the northeast of the project site. The site is within the 100 meter point of maximum exposure and would also be exposed to a cancer risk of 2.02 per million exposed. This would be a less than significant impact

There are known acute and chronic health risks associated with diesel exhaust which are considered non-cancer risks. These risks are calculated based on methods identified in Section 3.1 of this report. From this we find that the hourly concentration of 0.123 $\mu g/m^3$ divided by the REL of 5 $\mu g/m^3$ yields a Health Hazard Index of 0.025, which is less than one. Therefore, no non-cancer risks are expected and all health risks are considered less than significant.

Furthermore, based on discussions with the project applicant, large cumulative projects closest to the project site are in excess of 500 meters away. Since the project health risk screening model predicted that diesel exhaust during construction would produce the highest concentrations roughly 100 meters from the project centroid and would generate a cancer risk of 2.02 per one million exposed, cumulative contributions from these cumulative projects would not be large enough or have a construction intensity to cause this risk to exceed 10 per one million exposed. Also, since construction emissions identified in Table 4.1 above are low relative to standards, simultaneous construction of all three projects would cause a less than significant cumulative air quality impact.

4.4 Operational Findings

The proposed project will generate 894 new daily trips once the proposed project is fully operational in the year 2025 (IM Intersecting Metrics, 2022). This assumption has been incorporated into the CalEEMod file. Also, as noted above, design features would be included and have been assumed within this analysis. Therefore, because the following analysis relies upon implementation of those design features, they would be a requirement of the proposed project.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles within the City and the expected emissions inventory. The daily pollutant emissions as calculated within CalEEMod are shown in Table 4.2 below. Based on this analysis, the proposed project would generate a less than significant direct operational impact. Since the Project would not exceed significance thresholds and because the proposed project has been designed to conform with the City's Housing Element to the General Plan, a less than significant cumulative operational impact would also be expected and the proposed project would not conflict with SDAPCDs RAQS.

Table 4.2: Expected Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Summer Scenario						
Area	4.07	0.14	12.28	0.00	0.07	0.07
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	2.48	2.47	22.23	0.05	5.41	1.47
Total (Lb/Day)	**6.55**	**2.61**	**34.51**	**0.05**	**5.48**	**1.53**
SCAQMD Thresholds	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**
Winter Scenario						
Area	4.07	0.14	12.28	0.00	0.07	0.07
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	2.42	2.67	22.81	0.05	5.41	1.47
Total (Lb/Day)	**6.49**	**2.81**	**35.09**	**0.05**	**5.48**	**1.53**
SCAQMD Thresholds	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

4.5 Conclusion of Findings

The air quality analysis has been prepared to include certain PDFs as identified in Section 1.3 of this report. Since all modeling assumes these PDFs have been included at a minimum, the PDFs identified would be required as Conditions of Approval by the City of Encinitas. Based upon the analysis of project construction and operation activities, neither direct construction nor direct operational impacts would be expected.

During construction of the proposed project, fugitive dust emissions will be expected during grading operations from heavy equipment usage and from construction workers commuting to and from the site. During short-term construction activities, the proposed project will generate less than significant impacts based on thresholds established by the San Diego Air Pollution Control District (SDAPCD) and will NOT require mitigation. Also, based on the project size, emissions and relative location to nearby cumulative projects, the proposed project would generate less than significant cumulative construction impacts.

Emissions from the operation of the proposed project to include project generated traffic would not exceed significance thresholds established by the SDAPCD, and therefore will generate less than significant air quality impacts. Furthermore, since the proposed project has been designed to conform to the City's General Plan, no significant cumulative operational impacts would be expected

Furthermore, a screening-level health risk assessment was conducted from onsite generated DPM from construction activities to determine the potential for the proposed project to result in a significant impact on nearby sensitive receptors during short-term construction activities. The result of the health risk assessment from these sources indicates that the proposed project would increase diesel particulates to a level which would not exceed the 10 in one million cancer risk threshold. Given this, no impacts would be expected. It should also be noted that offsite cancer risks sources which may affect the project were analyzed in a separate study by LDN Consulting (LDN Consulting, 2022).

The proposed project has been designed to conform to the City's updated Housing Element to the City's General Plan. The City has updated SANDAG with growth projections approved by the City within the Housing Element. Since the project has been designed in accordance with growth projections identified within the Housing Element, and since direct construction and operational impacts are not expected, the project would be consistent with San Diego's RAQS and would also conform to the SIP.

5.0 REFERENCES

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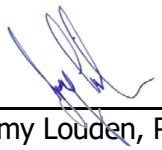
6.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the air quality environment and impacts within and surrounding the proposed development. This report was prepared utilizing the latest emission rates and reduction methodologies.



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Date November 15, 2022

ATTACHMENT A

CalEEMod 2020.4.0 Summer, Winter, Annual

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Piraeus Point 149 Unit MF

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	26.00	Space	0.23	10,400.00	0
Condo/Townhouse	149.00	Dwelling Unit	6.65	149,000.00	426

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	431.18	**CH4 Intensity (lb/MWhr)**	0.026	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2025 46.5%

Land Use - Area is 6.88 acres

Construction Phase - schedule provided by applicant

Trips and VMT -

Grading -

Architectural Coating - Rule 67 Paint

Vehicle Trips - Updated based on Project Traffic Trip Generation

Woodstoves - No hearth

Area Coating - Rule 67 Paint

Energy Use - Project will be 100% electric

Water And Wastewater -

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Solid Waste -

Construction Off-road Equipment Mitigation - T4

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	163.00
tblConstructionPhase	NumDays	20.00	30.00
tblEnergyUse	NT24NG	4,180.00	0.00
tblEnergyUse	T24NG	9,243.79	0.00
tblFireplaces	NumberGas	81.95	0.00
tblFireplaces	NumberNoFireplace	14.90	149.00
tblFireplaces	NumberWood	52.15	0.00
tblGrading	MaterialExported	0.00	57,600.00
tblLandUse	LotAcreage	9.31	6.65
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.026
tblProjectCharacteristics	CO2IntensityFactor	539.98	431.18
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.003

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	8.14	6.00
tblVehicleTrips	SU_TR	6.28	6.00
tblVehicleTrips	WD_TR	7.32	6.00
tblWoodstoves	NumberCatalytic	7.45	0.00
tblWoodstoves	NumberNoncatalytic	7.45	0.00

2.0 Emissions Summary

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	2.7087	27.5547	18.6775	0.0572	19.8049	1.2668	21.0717	10.1417	1.1655	11.3071	0.0000	5,905.0987	5,905.0987	1.1961	0.4673	6,071.3224
2024	1.7991	22.7819	18.9570	0.0566	8.0281	0.7744	8.8024	3.6767	0.7142	4.3910	0.0000	5,851.2366	5,851.2366	1.0836	0.4592	6,015.1801
2025	64.1344	14.5594	20.9876	0.0426	1.2227	0.5892	1.8119	0.3271	0.5572	0.8843	0.0000	4,167.9938	4,167.9938	0.7162	0.0770	4,207.2141
Maximum	**64.1344**	**27.5547**	**20.9876**	**0.0572**	**19.8049**	**1.2668**	**21.0717**	**10.1417**	**1.1655**	**11.3071**	**0.0000**	**5,905.0987**	**5,905.0987**	**1.1961**	**0.4673**	**6,071.3224**

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					
2023	0.5148	7.3775	21.3021	0.0572	19.8049	0.0570	19.8150	10.1417	0.0548	10.1517	0.0000	5,905.0987	5,905.0987	1.1961	0.4673	6,071.3224
2024	0.6362	7.3246	20.2504	0.0566	8.0281	0.0572	8.0853	3.6767	0.0550	3.7318	0.0000	5,851.2366	5,851.2366	1.0836	0.4592	6,015.1801
2025	62.9537	3.3077	22.3865	0.0426	1.2227	0.0168	1.2395	0.3271	0.0162	0.3433	0.0000	4,167.9938	4,167.9938	0.7162	0.0770	4,207.2141
Maximum	**62.9537**	**7.3775**	**22.3865**	**0.0572**	**19.8049**	**0.0572**	**19.8150**	**10.1417**	**0.0550**	**10.1517**	**0.0000**	**5,905.0987**	**5,905.0987**	**1.1961**	**0.4673**	**6,071.3224**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	6.61	72.25	-9.07	0.00	0.00	95.02	8.04	0.00	94.83	14.21	0.00	0.00	0.00	0.00	0.00	0.00

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	4.0729	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682	0.0000	22.1400	22.1400	0.0212	0.0000	22.6703
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.4789	2.4676	22.2255	0.0494	5.3734	0.0370	5.4105	1.4314	0.0345	1.4659		5,157.6444	5,157.6444	0.3336	0.2108	5,228.7891
Total	**6.5518**	**2.6091**	**34.5092**	**0.0500**	**5.3734**	**0.1052**	**5.4786**	**1.4314**	**0.1027**	**1.5340**	**0.0000**	**5,179.7844**	**5,179.7844**	**0.3548**	**0.2108**	**5,251.4593**

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	4.0729	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682	0.0000	22.1400	22.1400	0.0212	0.0000	22.6703
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.4789	2.4676	22.2255	0.0494	5.3734	0.0370	5.4105	1.4314	0.0345	1.4659		5,157.6444	5,157.6444	0.3336	0.2108	5,228.7891
Total	**6.5518**	**2.6091**	**34.5092**	**0.0500**	**5.3734**	**0.1052**	**5.4786**	**1.4314**	**0.1027**	**1.5340**	**0.0000**	**5,179.7844**	**5,179.7844**	**0.3548**	**0.2108**	**5,251.4593**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/1/2023	11/14/2023	5	10	
2	Grading	Grading	11/15/2023	6/30/2024	5	163	
3	Building Construction	Building Construction	7/1/2024	5/16/2025	5	230	
4	Architectural Coating	Architectural Coating	4/5/2025	5/16/2025	5	30	
5	Paving	Paving	5/17/2025	6/13/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 163

Acres of Paving: 0.23

Residential Indoor: 301,725; Residential Outdoor: 100,575; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 624 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	7,200.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	112.00	18.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0492	0.0306	0.4332	1.3100e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		133.7136	133.7136	3.5800e-003	3.2900e-003	134.7841
Total	**0.0492**	**0.0306**	**0.4332**	**1.3100e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.3000e-004**	**0.0400**		**133.7136**	**133.7136**	**3.5800e-003**	**3.2900e-003**	**134.7841**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		9.3100e-003	9.3100e-003		9.3100e-003	9.3100e-003	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**19.6570**	**9.3100e-003**	**19.6663**	**10.1025**	**9.3100e-003**	**10.1118**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0492	0.0306	0.4332	1.3100e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		133.7136	133.7136	3.5800e-003	3.2900e-003	134.7841
Total	**0.0492**	**0.0306**	**0.4332**	**1.3100e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.3000e-004**	**0.0400**		**133.7136**	**133.7136**	**3.5800e-003**	**3.2900e-003**	**134.7841**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

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					7.1322	0.0000	7.1322	3.4323	0.0000	3.4323			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.1322**	**0.7749**	**7.9072**	**3.4323**	**0.7129**	**4.1452**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.1000	5.7783	1.5873	0.0264	0.7726	0.0490	0.8216	0.2118	0.0469	0.2587		2,920.9797	2,920.9797	0.1472	0.4645	3,063.0841
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0410	0.0255	0.3610	1.0900e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		111.4280	111.4280	2.9800e-003	2.7400e-003	112.3201
Total	**0.1411**	**5.8038**	**1.9483**	**0.0275**	**0.8958**	**0.0497**	**0.9455**	**0.2444**	**0.0475**	**0.2920**		**3,032.4077**	**3,032.4077**	**0.1502**	**0.4673**	**3,175.4042**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1322	0.0000	7.1322	3.4323	0.0000	3.4323			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		7.2600e-003	7.2600e-003		7.2600e-003	7.2600e-003	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**7.1322**	**7.2600e-003**	**7.1395**	**3.4323**	**7.2600e-003**	**3.4395**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.1000	5.7783	1.5873	0.0264	0.7726	0.0490	0.8216	0.2118	0.0469	0.2587		2,920.9797	2,920.9797	0.1472	0.4645	3,063.0841
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0410	0.0255	0.3610	1.0900e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		111.4280	111.4280	2.9800e-003	2.7400e-003	112.3201
Total	**0.1411**	**5.8038**	**1.9483**	**0.0275**	**0.8958**	**0.0497**	**0.9455**	**0.2444**	**0.0475**	**0.2920**		**3,032.4077**	**3,032.4077**	**0.1502**	**0.4673**	**3,175.4042**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2024

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					7.1322	0.0000	7.1322	3.4323	0.0000	3.4323			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665		2,873.0541	2,873.0541	0.9292		2,896.2842
Total	**1.6617**	**17.0310**	**14.7594**	**0.0297**	**7.1322**	**0.7244**	**7.8567**	**3.4323**	**0.6665**	**4.0987**		**2,873.0541**	**2,873.0541**	**0.9292**		**2,896.2842**

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	0.0989	5.7280	1.6093	0.0259	0.7726	0.0493	0.8219	0.2118	0.0472	0.2590		2,869.5589	2,869.5589	0.1517	0.4567	3,009.4405
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0385	0.0229	0.3373	1.0500e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		108.6237	108.6237	2.7100e-003	2.5600e-003	109.4555
Total	**0.1374**	**5.7509**	**1.9466**	**0.0270**	**0.8958**	**0.0500**	**0.9458**	**0.2445**	**0.0478**	**0.2922**		**2,978.1825**	**2,978.1825**	**0.1544**	**0.4592**	**3,118.8960**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1322	0.0000	7.1322	3.4323	0.0000	3.4323			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		7.2600e-003	7.2600e-003		7.2600e-003	7.2600e-003	0.0000	2,873.0541	2,873.0541	0.9292		2,896.2842
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**7.1322**	**7.2600e-003**	**7.1395**	**3.4323**	**7.2600e-003**	**3.4395**	**0.0000**	**2,873.0541**	**2,873.0541**	**0.9292**		**2,896.2842**

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	0.0989	5.7280	1.6093	0.0259	0.7726	0.0493	0.8219	0.2118	0.0472	0.2590		2,869.5589	2,869.5589	0.1517	0.4567	3,009.4405
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0385	0.0229	0.3373	1.0500e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		108.6237	108.6237	2.7100e-003	2.5600e-003	109.4555
Total	**0.1374**	**5.7509**	**1.9466**	**0.0270**	**0.8958**	**0.0500**	**0.9458**	**0.2445**	**0.0478**	**0.2922**		**2,978.1825**	**2,978.1825**	**0.1544**	**0.4592**	**3,118.8960**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0207	0.7664	0.2716	3.6200e-003	0.1219	4.7200e-003	0.1266	0.0351	4.5200e-003	0.0396		390.9475	390.9475	0.0123	0.0566	408.1236
Worker	0.2877	0.1711	2.5186	7.8600e-003	0.9201	4.7200e-003	0.9248	0.2440	4.3400e-003	0.2484		811.0567	811.0567	0.0203	0.0191	817.2679
Total	**0.3084**	**0.9375**	**2.7902**	**0.0115**	**1.0420**	**9.4400e-003**	**1.0514**	**0.2791**	**8.8600e-003**	**0.2880**		**1,202.0042**	**1,202.0042**	**0.0326**	**0.0757**	**1,225.3915**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**6.1200e-003**	**6.1200e-003**		**6.1200e-003**	**6.1200e-003**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0207	0.7664	0.2716	3.6200e-003	0.1219	4.7200e-003	0.1266	0.0351	4.5200e-003	0.0396		390.9475	390.9475	0.0123	0.0566	408.1236
Worker	0.2877	0.1711	2.5186	7.8600e-003	0.9201	4.7200e-003	0.9248	0.2440	4.3400e-003	0.2484		811.0567	811.0567	0.0203	0.0191	817.2679
Total	**0.3084**	**0.9375**	**2.7902**	**0.0115**	**1.0420**	**9.4400e-003**	**1.0514**	**0.2791**	**8.8600e-003**	**0.2880**		**1,202.0042**	**1,202.0042**	**0.0326**	**0.0757**	**1,225.3915**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0201	0.7588	0.2670	3.5400e-003	0.1219	4.7100e-003	0.1266	0.0351	4.5100e-003	0.0396		383.4897	383.4897	0.0127	0.0555	400.3434
Worker	0.2711	0.1550	2.3627	7.5900e-003	0.9201	4.5200e-003	0.9246	0.2440	4.1600e-003	0.2482		791.1728	791.1728	0.0185	0.0180	796.9893
Total	**0.2911**	**0.9138**	**2.6297**	**0.0111**	**1.0420**	**9.2300e-003**	**1.0512**	**0.2791**	**8.6700e-003**	**0.2878**		**1,174.6625**	**1,174.6625**	**0.0311**	**0.0735**	**1,197.3327**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**6.1200e-003**	**6.1200e-003**		**6.1200e-003**	**6.1200e-003**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0201	0.7588	0.2670	3.5400e-003	0.1219	4.7100e-003	0.1266	0.0351	4.5100e-003	0.0396		383.4897	383.4897	0.0127	0.0555	400.3434
Worker	0.2711	0.1550	2.3627	7.5900e-003	0.9201	4.5200e-003	0.9246	0.2440	4.1600e-003	0.2482		791.1728	791.1728	0.0185	0.0180	796.9893
Total	**0.2911**	**0.9138**	**2.6297**	**0.0111**	**1.0420**	**9.2300e-003**	**1.0512**	**0.2791**	**8.6700e-003**	**0.2878**		**1,174.6625**	**1,174.6625**	**0.0311**	**0.0735**	**1,197.3327**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Architectural Coating - 2025

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	62.2518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**62.4226**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0533	0.0304	0.4641	1.4900e-003	0.1807	8.9000e-004	0.1816	0.0479	8.2000e-004	0.0488		155.4089	155.4089	3.6300e-003	3.5300e-003	156.5515
Total	**0.0533**	**0.0304**	**0.4641**	**1.4900e-003**	**0.1807**	**8.9000e-004**	**0.1816**	**0.0479**	**8.2000e-004**	**0.0488**		**155.4089**	**155.4089**	**3.6300e-003**	**3.5300e-003**	**156.5515**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Architectural Coating - 2025

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	62.2518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**62.2815**	**0.1288**	**1.8324**	**2.9700e-003**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0533	0.0304	0.4641	1.4900e-003	0.1807	8.9000e-004	0.1816	0.0479	8.2000e-004	0.0488		155.4089	155.4089	3.6300e-003	3.5300e-003	156.5515
Total	**0.0533**	**0.0304**	**0.4641**	**1.4900e-003**	**0.1807**	**8.9000e-004**	**0.1816**	**0.0479**	**8.2000e-004**	**0.0488**		**155.4089**	**155.4089**	**3.6300e-003**	**3.5300e-003**	**156.5515**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0301					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9453**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0363	0.0208	0.3164	1.0200e-003	0.1232	6.0000e-004	0.1238	0.0327	5.6000e-004	0.0332		105.9606	105.9606	2.4700e-003	2.4100e-003	106.7396
Total	**0.0363**	**0.0208**	**0.3164**	**1.0200e-003**	**0.1232**	**6.0000e-004**	**0.1238**	**0.0327**	**5.6000e-004**	**0.0332**		**105.9606**	**105.9606**	**2.4700e-003**	**2.4100e-003**	**106.7396**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0301					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3106**	**1.2154**	**17.2957**	**0.0228**		**5.6100e-003**	**5.6100e-003**		**5.6100e-003**	**5.6100e-003**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0363	0.0208	0.3164	1.0200e-003	0.1232	6.0000e-004	0.1238	0.0327	5.6000e-004	0.0332		105.9606	105.9606	2.4700e-003	2.4100e-003	106.7396
Total	**0.0363**	**0.0208**	**0.3164**	**1.0200e-003**	**0.1232**	**6.0000e-004**	**0.1238**	**0.0327**	**5.6000e-004**	**0.0332**		**105.9606**	**105.9606**	**2.4700e-003**	**2.4100e-003**	**106.7396**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4789	2.4676	22.2255	0.0494	5.3734	0.0370	5.4105	1.4314	0.0345	1.4659		5,157.6444	5,157.6444	0.3336	0.2108	5,228.7891
Unmitigated	2.4789	2.4676	22.2255	0.0494	5.3734	0.0370	5.4105	1.4314	0.0345	1.4659		5,157.6444	5,157.6444	0.3336	0.2108	5,228.7891

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	894.00	894.00	894.00	2,552,641	2,552,641
Parking Lot	0.00	0.00	0.00		
Total	894.00	894.00	894.00	2,552,641	2,552,641

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

6.0 Area Detail

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	4.0729	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682	0.0000	22.1400	22.1400	0.0212	0.0000	22.6703
Unmitigated	4.0729	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682	0.0000	22.1400	22.1400	0.0212	0.0000	22.6703

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5117					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1923					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3690	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682		22.1400	22.1400	0.0212		22.6703
Total	**4.0729**	**0.1415**	**12.2837**	**6.5000e-004**		**0.0682**	**0.0682**		**0.0682**	**0.0682**	**0.0000**	**22.1400**	**22.1400**	**0.0212**	**0.0000**	**22.6703**

Piraeus Point 149 Unit MF - San Diego County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5117					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1923					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3690	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682		22.1400	22.1400	0.0212		22.6703
Total	**4.0729**	**0.1415**	**12.2837**	**6.5000e-004**		**0.0682**	**0.0682**		**0.0682**	**0.0682**	**0.0000**	**22.1400**	**22.1400**	**0.0212**	**0.0000**	**22.6703**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Piraeus Point 149 Unit MF

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	26.00	Space	0.23	10,400.00	0
Condo/Townhouse	149.00	Dwelling Unit	6.65	149,000.00	426

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	431.18	**CH4 Intensity (lb/MWhr)**	0.026	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2025 46.5%

Land Use - Area is 6.88 acres

Construction Phase - schedule provided by applicant

Trips and VMT -

Grading -

Architectural Coating - Rule 67 Paint

Vehicle Trips - Updated based on Project Traffic Trip Generation

Woodstoves - No hearth

Area Coating - Rule 67 Paint

Energy Use - Project will be 100% electric

Water And Wastewater -

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Solid Waste -

Construction Off-road Equipment Mitigation - T4

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	163.00
tblConstructionPhase	NumDays	20.00	30.00
tblEnergyUse	NT24NG	4,180.00	0.00
tblEnergyUse	T24NG	9,243.79	0.00
tblFireplaces	NumberGas	81.95	0.00
tblFireplaces	NumberNoFireplace	14.90	149.00
tblFireplaces	NumberWood	52.15	0.00
tblGrading	MaterialExported	0.00	57,600.00
tblLandUse	LotAcreage	9.31	6.65
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.026
tblProjectCharacteristics	CO2IntensityFactor	539.98	431.18
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.003

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	8.14	6.00
tblVehicleTrips	SU_TR	6.28	6.00
tblVehicleTrips	WD_TR	7.32	6.00
tblWoodstoves	NumberCatalytic	7.45	0.00
tblWoodstoves	NumberNoncatalytic	7.45	0.00

2.0 Emissions Summary

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	2.7128	27.5586	18.6559	0.0572	19.8049	1.2668	21.0717	10.1417	1.1655	11.3071	0.0000	5,901.8121	5,901.8121	1.1964	0.4680	6,068.2386
2024	1.8044	23.0163	18.8447	0.0566	8.0281	0.7745	8.8025	3.6767	0.7143	4.3911	0.0000	5,848.1177	5,848.1177	1.0834	0.4599	6,012.2589
2025	64.1628	14.6146	20.8646	0.0421	1.2227	0.5892	1.8119	0.3271	0.5573	0.8843	0.0000	4,116.7513	4,116.7513	0.7164	0.0789	4,156.5661
Maximum	**64.1628**	**27.5586**	**20.8646**	**0.0572**	**19.8049**	**1.2668**	**21.0717**	**10.1417**	**1.1655**	**11.3071**	**0.0000**	**5,901.8121**	**5,901.8121**	**1.1964**	**0.4680**	**6,068.2386**

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					
2023	0.5189	7.6137	21.2806	0.0572	19.8049	0.0571	19.8150	10.1417	0.0549	10.1517	0.0000	5,901.8121	5,901.8121	1.1964	0.4680	6,068.2386
2024	0.6606	7.5590	20.1381	0.0566	8.0281	0.0573	8.0854	3.6767	0.0551	3.7318	0.0000	5,848.1177	5,848.1177	1.0834	0.4599	6,012.2589
2025	62.9820	3.3629	22.2635	0.0421	1.2227	0.0169	1.2395	0.3271	0.0162	0.3433	0.0000	4,116.7513	4,116.7513	0.7164	0.0789	4,156.5661
Maximum	**62.9820**	**7.6137**	**22.2635**	**0.0572**	**19.8049**	**0.0573**	**19.8150**	**10.1417**	**0.0551**	**10.1517**	**0.0000**	**5,901.8121**	**5,901.8121**	**1.1964**	**0.4680**	**6,068.2386**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	6.58	71.57	-9.11	0.00	0.00	95.01	8.04	0.00	94.82	14.21	0.00	0.00	0.00	0.00	0.00	0.00

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	4.0729	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682	0.0000	22.1400	22.1400	0.0212	0.0000	22.6703
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.4203	2.6731	22.8051	0.0472	5.3734	0.0370	5.4105	1.4314	0.0346	1.4659		4,933.5205	4,933.5205	0.3522	0.2219	5,008.4409
Total	**6.4933**	**2.8146**	**35.0888**	**0.0479**	**5.3734**	**0.1052**	**5.4786**	**1.4314**	**0.1027**	**1.5341**	**0.0000**	**4,955.6605**	**4,955.6605**	**0.3734**	**0.2219**	**5,031.1111**

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	4.0729	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682	0.0000	22.1400	22.1400	0.0212	0.0000	22.6703
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.4203	2.6731	22.8051	0.0472	5.3734	0.0370	5.4105	1.4314	0.0346	1.4659		4,933.5205	4,933.5205	0.3522	0.2219	5,008.4409
Total	**6.4933**	**2.8146**	**35.0888**	**0.0479**	**5.3734**	**0.1052**	**5.4786**	**1.4314**	**0.1027**	**1.5341**	**0.0000**	**4,955.6605**	**4,955.6605**	**0.3734**	**0.2219**	**5,031.1111**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/1/2023	11/14/2023	5	10	
2	Grading	Grading	11/15/2023	6/30/2024	5	163	
3	Building Construction	Building Construction	7/1/2024	5/16/2025	5	230	
4	Architectural Coating	Architectural Coating	4/5/2025	5/16/2025	5	30	
5	Paving	Paving	5/17/2025	6/13/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 163

Acres of Paving: 0.23

Residential Indoor: 301,725; Residential Outdoor: 100,575; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 624 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	7,200.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	112.00	18.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0534	0.0344	0.4116	1.2300e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		126.3637	126.3637	3.8100e-003	3.5600e-003	127.5200
Total	**0.0534**	**0.0344**	**0.4116**	**1.2300e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.3000e-004**	**0.0400**		**126.3637**	**126.3637**	**3.8100e-003**	**3.5600e-003**	**127.5200**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0381		9.3100e-003	9.3100e-003		9.3100e-003	9.3100e-003	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**0.4656**	**2.0175**	**20.8690**	**0.0381**	**19.6570**	**9.3100e-003**	**19.6663**	**10.1025**	**9.3100e-003**	**10.1118**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0534	0.0344	0.4116	1.2300e-003	0.1479	8.0000e-004	0.1487	0.0392	7.3000e-004	0.0400		126.3637	126.3637	3.8100e-003	3.5600e-003	127.5200
Total	**0.0534**	**0.0344**	**0.4116**	**1.2300e-003**	**0.1479**	**8.0000e-004**	**0.1487**	**0.0392**	**7.3000e-004**	**0.0400**		**126.3637**	**126.3637**	**3.8100e-003**	**3.5600e-003**	**127.5200**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

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					7.1322	0.0000	7.1322	3.4323	0.0000	3.4323			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.1322**	**0.7749**	**7.9072**	**3.4323**	**0.7129**	**4.1452**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.0940	6.0114	1.6071	0.0265	0.7726	0.0491	0.8217	0.2118	0.0470	0.2588		2,923.8181	2,923.8181	0.1469	0.4650	3,066.0538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0445	0.0287	0.3430	1.0300e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		105.3031	105.3031	3.1800e-003	2.9700e-003	106.2666
Total	**0.1385**	**6.0400**	**1.9501**	**0.0275**	**0.8958**	**0.0498**	**0.9456**	**0.2444**	**0.0476**	**0.2921**		**3,029.1211**	**3,029.1211**	**0.1500**	**0.4680**	**3,172.3205**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1322	0.0000	7.1322	3.4323	0.0000	3.4323			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		7.2600e-003	7.2600e-003		7.2600e-003	7.2600e-003	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**7.1322**	**7.2600e-003**	**7.1395**	**3.4323**	**7.2600e-003**	**3.4395**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.0940	6.0114	1.6071	0.0265	0.7726	0.0491	0.8217	0.2118	0.0470	0.2588		2,923.8181	2,923.8181	0.1469	0.4650	3,066.0538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0445	0.0287	0.3430	1.0300e-003	0.1232	6.6000e-004	0.1239	0.0327	6.1000e-004	0.0333		105.3031	105.3031	3.1800e-003	2.9700e-003	106.2666
Total	**0.1385**	**6.0400**	**1.9501**	**0.0275**	**0.8958**	**0.0498**	**0.9456**	**0.2444**	**0.0476**	**0.2921**		**3,029.1211**	**3,029.1211**	**0.1500**	**0.4680**	**3,172.3205**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2024

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					7.1322	0.0000	7.1322	3.4323	0.0000	3.4323			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665		2,873.0541	2,873.0541	0.9292		2,896.2842
Total	**1.6617**	**17.0310**	**14.7594**	**0.0297**	**7.1322**	**0.7244**	**7.8567**	**3.4323**	**0.6665**	**4.0987**		**2,873.0541**	**2,873.0541**	**0.9292**		**2,896.2842**

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	0.0929	5.9595	1.6291	0.0259	0.7726	0.0494	0.8220	0.2118	0.0473	0.2591		2,872.3975	2,872.3975	0.1513	0.4571	3,012.4101
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0419	0.0258	0.3212	1.0000e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		102.6661	102.6661	2.9000e-003	2.7700e-003	103.5647
Total	**0.1348**	**5.9853**	**1.9503**	**0.0269**	**0.8958**	**0.0501**	**0.9459**	**0.2445**	**0.0479**	**0.2923**		**2,975.0636**	**2,975.0636**	**0.1542**	**0.4599**	**3,115.9748**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.1322	0.0000	7.1322	3.4323	0.0000	3.4323			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		7.2600e-003	7.2600e-003		7.2600e-003	7.2600e-003	0.0000	2,873.0541	2,873.0541	0.9292		2,896.2842
Total	**0.3632**	**1.5737**	**17.7527**	**0.0297**	**7.1322**	**7.2600e-003**	**7.1395**	**3.4323**	**7.2600e-003**	**3.4395**	**0.0000**	**2,873.0541**	**2,873.0541**	**0.9292**		**2,896.2842**

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	0.0929	5.9595	1.6291	0.0259	0.7726	0.0494	0.8220	0.2118	0.0473	0.2591		2,872.3975	2,872.3975	0.1513	0.4571	3,012.4101
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0419	0.0258	0.3212	1.0000e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		102.6661	102.6661	2.9000e-003	2.7700e-003	103.5647
Total	**0.1348**	**5.9853**	**1.9503**	**0.0269**	**0.8958**	**0.0501**	**0.9459**	**0.2445**	**0.0479**	**0.2923**		**2,975.0636**	**2,975.0636**	**0.1542**	**0.4599**	**3,115.9748**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0201	0.7987	0.2799	3.6200e-003	0.1219	4.7500e-003	0.1267	0.0351	4.5400e-003	0.0396		391.5192	391.5192	0.0123	0.0567	408.7329
Worker	0.3127	0.1924	2.3979	7.4300e-003	0.9201	4.7200e-003	0.9248	0.2440	4.3400e-003	0.2484		766.5737	766.5737	0.0216	0.0207	773.2828
Total	**0.3328**	**0.9911**	**2.6779**	**0.0111**	**1.0420**	**9.4700e-003**	**1.0514**	**0.2791**	**8.8800e-003**	**0.2880**		**1,158.0929**	**1,158.0929**	**0.0339**	**0.0774**	**1,182.0157**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**6.1200e-003**	**6.1200e-003**		**6.1200e-003**	**6.1200e-003**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0201	0.7987	0.2799	3.6200e-003	0.1219	4.7500e-003	0.1267	0.0351	4.5400e-003	0.0396		391.5192	391.5192	0.0123	0.0567	408.7329
Worker	0.3127	0.1924	2.3979	7.4300e-003	0.9201	4.7200e-003	0.9248	0.2440	4.3400e-003	0.2484		766.5737	766.5737	0.0216	0.0207	773.2828
Total	**0.3328**	**0.9911**	**2.6779**	**0.0111**	**1.0420**	**9.4700e-003**	**1.0514**	**0.2791**	**8.8800e-003**	**0.2880**		**1,158.0929**	**1,158.0929**	**0.0339**	**0.0774**	**1,182.0157**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0194	0.7909	0.2753	3.5500e-003	0.1219	4.7300e-003	0.1266	0.0351	4.5200e-003	0.0396		384.0639	384.0639	0.0126	0.0556	400.9543
Worker	0.2953	0.1743	2.2530	7.1800e-003	0.9201	4.5200e-003	0.9246	0.2440	4.1600e-003	0.2482		747.8633	747.8633	0.0197	0.0194	754.1461
Total	**0.3147**	**0.9652**	**2.5283**	**0.0107**	**1.0420**	**9.2500e-003**	**1.0512**	**0.2791**	**8.6800e-003**	**0.2878**		**1,131.9272**	**1,131.9272**	**0.0323**	**0.0751**	**1,155.1004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0270		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**0.3278**	**2.2347**	**17.4603**	**0.0270**		**6.1200e-003**	**6.1200e-003**		**6.1200e-003**	**6.1200e-003**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0194	0.7909	0.2753	3.5500e-003	0.1219	4.7300e-003	0.1266	0.0351	4.5200e-003	0.0396		384.0639	384.0639	0.0126	0.0556	400.9543
Worker	0.2953	0.1743	2.2530	7.1800e-003	0.9201	4.5200e-003	0.9246	0.2440	4.1600e-003	0.2482		747.8633	747.8633	0.0197	0.0194	754.1461
Total	**0.3147**	**0.9652**	**2.5283**	**0.0107**	**1.0420**	**9.2500e-003**	**1.0512**	**0.2791**	**8.6800e-003**	**0.2878**		**1,131.9272**	**1,131.9272**	**0.0323**	**0.0751**	**1,155.1004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Architectural Coating - 2025

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	62.2518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**62.4226**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0580	0.0342	0.4426	1.4100e-003	0.1807	8.9000e-004	0.1816	0.0479	8.2000e-004	0.0488		146.9017	146.9017	3.8800e-003	3.8200e-003	148.1358
Total	**0.0580**	**0.0342**	**0.4426**	**1.4100e-003**	**0.1807**	**8.9000e-004**	**0.1816**	**0.0479**	**8.2000e-004**	**0.0488**		**146.9017**	**146.9017**	**3.8800e-003**	**3.8200e-003**	**148.1358**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Architectural Coating - 2025

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	62.2518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**62.2815**	**0.1288**	**1.8324**	**2.9700e-003**		**5.9000e-004**	**5.9000e-004**		**5.9000e-004**	**5.9000e-004**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0580	0.0342	0.4426	1.4100e-003	0.1807	8.9000e-004	0.1816	0.0479	8.2000e-004	0.0488		146.9017	146.9017	3.8800e-003	3.8200e-003	148.1358
Total	**0.0580**	**0.0342**	**0.4426**	**1.4100e-003**	**0.1807**	**8.9000e-004**	**0.1816**	**0.0479**	**8.2000e-004**	**0.0488**		**146.9017**	**146.9017**	**3.8800e-003**	**3.8200e-003**	**148.1358**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0301					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9453**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0396	0.0233	0.3017	9.6000e-004	0.1232	6.0000e-004	0.1238	0.0327	5.6000e-004	0.0332		100.1603	100.1603	2.6400e-003	2.6000e-003	101.0017
Total	**0.0396**	**0.0233**	**0.3017**	**9.6000e-004**	**0.1232**	**6.0000e-004**	**0.1238**	**0.0327**	**5.6000e-004**	**0.0332**		**100.1603**	**100.1603**	**2.6400e-003**	**2.6000e-003**	**101.0017**

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0301					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3106**	**1.2154**	**17.2957**	**0.0228**		**5.6100e-003**	**5.6100e-003**		**5.6100e-003**	**5.6100e-003**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0396	0.0233	0.3017	9.6000e-004	0.1232	6.0000e-004	0.1238	0.0327	5.6000e-004	0.0332		100.1603	100.1603	2.6400e-003	2.6000e-003	101.0017
Total	**0.0396**	**0.0233**	**0.3017**	**9.6000e-004**	**0.1232**	**6.0000e-004**	**0.1238**	**0.0327**	**5.6000e-004**	**0.0332**		**100.1603**	**100.1603**	**2.6400e-003**	**2.6000e-003**	**101.0017**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4203	2.6731	22.8051	0.0472	5.3734	0.0370	5.4105	1.4314	0.0346	1.4659		4,933.5205	4,933.5205	0.3522	0.2219	5,008.4409
Unmitigated	2.4203	2.6731	22.8051	0.0472	5.3734	0.0370	5.4105	1.4314	0.0346	1.4659		4,933.5205	4,933.5205	0.3522	0.2219	5,008.4409

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	894.00	894.00	894.00	2,552,641	2,552,641
Parking Lot	0.00	0.00	0.00		
Total	894.00	894.00	894.00	2,552,641	2,552,641

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

6.0 Area Detail

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	4.0729	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682	0.0000	22.1400	22.1400	0.0212	0.0000	22.6703
Unmitigated	4.0729	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682	0.0000	22.1400	22.1400	0.0212	0.0000	22.6703

Piraeus Point 149 Unit MF - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5117					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1923					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3690	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682		22.1400	22.1400	0.0212		22.6703
Total	**4.0729**	**0.1415**	**12.2837**	**6.5000e-004**		**0.0682**	**0.0682**		**0.0682**	**0.0682**	**0.0000**	**22.1400**	**22.1400**	**0.0212**	**0.0000**	**22.6703**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.5117					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.1923					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.3690	0.1415	12.2837	6.5000e-004		0.0682	0.0682		0.0682	0.0682		22.1400	22.1400	0.0212		22.6703
Total	**4.0729**	**0.1415**	**12.2837**	**6.5000e-004**		**0.0682**	**0.0682**		**0.0682**	**0.0682**	**0.0000**	**22.1400**	**22.1400**	**0.0212**	**0.0000**	**22.6703**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Piraeus Point 149 Unit MF

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	26.00	Space	0.23	10,400.00	0
Condo/Townhouse	149.00	Dwelling Unit	6.65	149,000.00	426

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	431.18	**CH4 Intensity (lb/MWhr)**	0.026	**N2O Intensity (lb/MWhr)**	0.003

1.3 User Entered Comments & Non-Default Data

Project Characteristics - RPS 2025 46.5%

Land Use - Area is 6.88 acres

Construction Phase - schedule provided by applicant

Trips and VMT -

Grading -

Architectural Coating - Rule 67 Paint

Vehicle Trips - Updated based on Project Traffic Trip Generation

Woodstoves - No hearth

Area Coating - Rule 67 Paint

Energy Use - Project will be 100% electric

Water And Wastewater -

Piraeus Point 149 Unit MF - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Solid Waste -

Construction Off-road Equipment Mitigation - T4

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	163.00
tblConstructionPhase	NumDays	20.00	30.00
tblEnergyUse	NT24NG	4,180.00	0.00
tblEnergyUse	T24NG	9,243.79	0.00
tblFireplaces	NumberGas	81.95	0.00
tblFireplaces	NumberNoFireplace	14.90	149.00
tblFireplaces	NumberWood	52.15	0.00
tblGrading	MaterialExported	0.00	57,600.00
tblLandUse	LotAcreage	9.31	6.65
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.026
tblProjectCharacteristics	CO2IntensityFactor	539.98	431.18
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.003

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	ST_TR	8.14	6.00
tblVehicleTrips	SU_TR	6.28	6.00
tblVehicleTrips	WD_TR	7.32	6.00
tblWoodstoves	NumberCatalytic	7.45	0.00
tblWoodstoves	NumberNoncatalytic	7.45	0.00

2.0 Emissions Summary

Piraeus Point 149 Unit MF - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2023	0.0441	0.5331	0.3686	1.1400e-003	0.3033	0.0199	0.3233	0.1192	0.0184	0.1376	0.0000	105.6345	105.6345	0.0216	7.0200e-003	108.2647
2024	0.2340	2.4471	2.3286	6.1900e-003	0.6061	0.0914	0.6975	0.2587	0.0851	0.3438	0.0000	567.5486	567.5486	0.1021	0.0317	579.5528
2025	1.0281	0.7616	1.0942	2.1500e-003	0.0537	0.0313	0.0850	0.0144	0.0294	0.0438	0.0000	191.0180	191.0180	0.0349	3.4000e-003	192.9024
Maximum	**1.0281**	**2.4471**	**2.3286**	**6.1900e-003**	**0.6061**	**0.0914**	**0.6975**	**0.2587**	**0.0851**	**0.3438**	**0.0000**	**567.5486**	**567.5486**	**0.1021**	**0.0317**	**579.5528**

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					
2023	0.0108	0.1356	0.4313	1.1400e-003	0.3033	9.9000e-004	0.3043	0.1192	9.5000e-004	0.1202	0.0000	105.6344	105.6344	0.0216	7.0200e-003	108.2647
2024	0.0741	0.7025	2.6085	6.1900e-003	0.6061	4.7500e-003	0.6108	0.2587	4.5700e-003	0.2633	0.0000	567.5482	567.5482	0.1021	0.0317	579.5524
2025	0.9687	0.1712	1.1891	2.1500e-003	0.0537	8.4000e-004	0.0546	0.0144	8.1000e-004	0.0152	0.0000	191.0178	191.0178	0.0349	3.4000e-003	192.9023
Maximum	**0.9687**	**0.7025**	**2.6085**	**6.1900e-003**	**0.6061**	**4.7500e-003**	**0.6108**	**0.2587**	**4.5700e-003**	**0.2633**	**0.0000**	**567.5482**	**567.5482**	**0.1021**	**0.0317**	**579.5524**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**19.33**	**73.03**	**-11.54**	**0.00**	**0.00**	**95.39**	**12.31**	**0.00**	**95.24**	**24.09**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**11-1-2023**	**1-31-2024**	0.8596	0.2383
2	**2-1-2024**	**4-30-2024**	0.7951	0.2565
3	**5-1-2024**	**7-31-2024**	0.7144	0.2126
4	**8-1-2024**	**10-31-2024**	0.5319	0.1260
5	**11-1-2024**	**1-31-2025**	0.5211	0.1272
6	**2-1-2025**	**4-30-2025**	1.0708	0.7016
7	**5-1-2025**	**7-31-2025**	0.5455	0.3945
		Highest	1.0708	0.7016

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.7092	0.0127	1.1055	6.0000e-005		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003	0.0000	1.8077	1.8077	1.7300e-003	0.0000	1.8510
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	141.8680	141.8680	8.5500e-003	9.9000e-004	142.3760
Mobile	0.4325	0.4811	4.0676	8.6400e-003	0.9549	6.7300e-003	0.9616	0.2548	6.2800e-003	0.2611	0.0000	819.1321	819.1321	0.0571	0.0363	831.3664
Waste						0.0000	0.0000		0.0000	0.0000	13.9130	0.0000	13.9130	0.8222	0.0000	34.4689
Water						0.0000	0.0000		0.0000	0.0000	3.0799	38.0213	41.1012	0.3186	7.7300e-003	51.3716
Total	**1.1417**	**0.4938**	**5.1732**	**8.7000e-003**	**0.9549**	**0.0129**	**0.9677**	**0.2548**	**0.0124**	**0.2672**	**16.9929**	**1,000.8291**	**1,017.8220**	**1.2082**	**0.0450**	**1,061.4337**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.7092	0.0127	1.1055	6.0000e-005		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003	0.0000	1.8077	1.8077	1.7300e-003	0.0000	1.8510
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	141.8680	141.8680	8.5500e-003	9.9000e-004	142.3760
Mobile	0.4325	0.4811	4.0676	8.6400e-003	0.9549	6.7300e-003	0.9616	0.2548	6.2800e-003	0.2611	0.0000	819.1321	819.1321	0.0571	0.0363	831.3664
Waste						0.0000	0.0000		0.0000	0.0000	13.9130	0.0000	13.9130	0.8222	0.0000	34.4689
Water						0.0000	0.0000		0.0000	0.0000	3.0799	38.0213	41.1012	0.3186	7.7300e-003	51.3716
Total	**1.1417**	**0.4938**	**5.1732**	**8.7000e-003**	**0.9549**	**0.0129**	**0.9677**	**0.2548**	**0.0124**	**0.2672**	**16.9929**	**1,000.8291**	**1,017.8220**	**1.2082**	**0.0450**	**1,061.4337**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	11/1/2023	11/14/2023	5	10	
2	Grading	Grading	11/15/2023	6/30/2024	5	163	
3	Building Construction	Building Construction	7/1/2024	5/16/2025	5	230	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Architectural Coating	Architectural Coating	4/5/2025	5/16/2025	5	30	
5	Paving	Paving	5/17/2025	6/13/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 163

Acres of Paving: 0.23

Residential Indoor: 301,725; Residential Outdoor: 100,575; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 624 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	7,200.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	112.00	18.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2023

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0983**	**6.3300e-003**	**0.1046**	**0.0505**	**5.8200e-003**	**0.0563**	**0.0000**	**16.7254**	**16.7254**	**5.4100e-003**	**0.0000**	**16.8606**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.7000e-004	2.0600e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5783	0.5783	2.0000e-005	2.0000e-005	0.5834
Total	**2.4000e-004**	**1.7000e-004**	**2.0600e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5783**	**0.5783**	**2.0000e-005**	**2.0000e-005**	**0.5834**

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	**2.3300e-003**	**0.0101**	**0.1043**	**1.9000e-004**	**0.0983**	**5.0000e-005**	**0.0983**	**0.0505**	**5.0000e-005**	**0.0506**	**0.0000**	**16.7253**	**16.7253**	**5.4100e-003**	**0.0000**	**16.8606**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	1.7000e-004	2.0600e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5783	0.5783	2.0000e-005	2.0000e-005	0.5834
Total	**2.4000e-004**	**1.7000e-004**	**2.0600e-003**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**7.3000e-004**	**1.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.5783**	**0.5783**	**2.0000e-005**	**2.0000e-005**	**0.5834**

3.3 Grading - 2023

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					0.1898	0.0000	0.1898	0.0646	0.0000	0.0646	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0282	0.2959	0.2434	4.9000e-004		0.0128	0.0128		0.0118	0.0118	0.0000	43.0000	43.0000	0.0139	0.0000	43.3477
Total	**0.0282**	**0.2959**	**0.2434**	**4.9000e-004**	**0.1898**	**0.0128**	**0.2026**	**0.0646**	**0.0118**	**0.0763**	**0.0000**	**43.0000**	**43.0000**	**0.0139**	**0.0000**	**43.3477**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6100e-003	0.0989	0.0263	4.4000e-004	0.0125	8.1000e-004	0.0133	3.4300e-003	7.7000e-004	4.2000e-003	0.0000	43.7407	43.7407	2.2000e-003	6.9600e-003	45.8686
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	4.6000e-004	5.6600e-003	2.0000e-005	1.9800e-003	1.0000e-005	2.0000e-003	5.3000e-004	1.0000e-005	5.4000e-004	0.0000	1.5902	1.5902	5.0000e-005	4.0000e-005	1.6044
Total	**2.2800e-003**	**0.0994**	**0.0320**	**4.6000e-004**	**0.0145**	**8.2000e-004**	**0.0153**	**3.9600e-003**	**7.8000e-004**	**4.7400e-003**	**0.0000**	**45.3309**	**45.3309**	**2.2500e-003**	**7.0000e-003**	**47.4730**

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					0.1898	0.0000	0.1898	0.0646	0.0000	0.0646	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9900e-003	0.0260	0.2929	4.9000e-004		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	43.0000	43.0000	0.0139	0.0000	43.3476
Total	**5.9900e-003**	**0.0260**	**0.2929**	**4.9000e-004**	**0.1898**	**1.2000e-004**	**0.1900**	**0.0646**	**1.2000e-004**	**0.0647**	**0.0000**	**43.0000**	**43.0000**	**0.0139**	**0.0000**	**43.3476**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.6100e-003	0.0989	0.0263	4.4000e-004	0.0125	8.1000e-004	0.0133	3.4300e-003	7.7000e-004	4.2000e-003	0.0000	43.7407	43.7407	2.2000e-003	6.9600e-003	45.8686
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	4.6000e-004	5.6600e-003	2.0000e-005	1.9800e-003	1.0000e-005	2.0000e-003	5.3000e-004	1.0000e-005	5.4000e-004	0.0000	1.5902	1.5902	5.0000e-005	4.0000e-005	1.6044
Total	**2.2800e-003**	**0.0994**	**0.0320**	**4.6000e-004**	**0.0145**	**8.2000e-004**	**0.0153**	**3.9600e-003**	**7.8000e-004**	**4.7400e-003**	**0.0000**	**45.3309**	**45.3309**	**2.2500e-003**	**7.0000e-003**	**47.4730**

3.3 Grading - 2024

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					0.4819	0.0000	0.4819	0.2251	0.0000	0.2251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1080	1.1070	0.9594	1.9300e-003		0.0471	0.0471		0.0433	0.0433	0.0000	169.4154	169.4154	0.0548	0.0000	170.7852
Total	**0.1080**	**1.1070**	**0.9594**	**1.9300e-003**	**0.4819**	**0.0471**	**0.5290**	**0.2251**	**0.0433**	**0.2684**	**0.0000**	**169.4154**	**169.4154**	**0.0548**	**0.0000**	**170.7852**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2024

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	6.2600e-003	0.3863	0.1051	1.6800e-003	0.0492	3.2100e-003	0.0524	0.0135	3.0700e-003	0.0166	0.0000	169.2795	169.2795	8.9400e-003	0.0269	177.5314
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4800e-003	1.6400e-003	0.0209	7.0000e-005	7.8200e-003	4.0000e-005	7.8600e-003	2.0800e-003	4.0000e-005	2.1200e-003	0.0000	6.1074	6.1074	1.7000e-004	1.6000e-004	6.1597
Total	**8.7400e-003**	**0.3879**	**0.1260**	**1.7500e-003**	**0.0570**	**3.2500e-003**	**0.0603**	**0.0156**	**3.1100e-003**	**0.0187**	**0.0000**	**175.3870**	**175.3870**	**9.1100e-003**	**0.0271**	**183.6910**

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					0.4819	0.0000	0.4819	0.2251	0.0000	0.2251	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0236	0.1023	1.1539	1.9300e-003		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	169.4152	169.4152	0.0548	0.0000	170.7850
Total	**0.0236**	**0.1023**	**1.1539**	**1.9300e-003**	**0.4819**	**4.7000e-004**	**0.4824**	**0.2251**	**4.7000e-004**	**0.2256**	**0.0000**	**169.4152**	**169.4152**	**0.0548**	**0.0000**	**170.7850**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2024

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	6.2600e-003	0.3863	0.1051	1.6800e-003	0.0492	3.2100e-003	0.0524	0.0135	3.0700e-003	0.0166	0.0000	169.2795	169.2795	8.9400e-003	0.0269	177.5314
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4800e-003	1.6400e-003	0.0209	7.0000e-005	7.8200e-003	4.0000e-005	7.8600e-003	2.0800e-003	4.0000e-005	2.1200e-003	0.0000	6.1074	6.1074	1.7000e-004	1.6000e-004	6.1597
Total	**8.7400e-003**	**0.3879**	**0.1260**	**1.7500e-003**	**0.0570**	**3.2500e-003**	**0.0603**	**0.0156**	**3.1100e-003**	**0.0187**	**0.0000**	**175.3870**	**175.3870**	**9.1100e-003**	**0.0271**	**183.6910**

3.4 Building Construction - 2024

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	0.0971	0.8873	1.0670	1.7800e-003		0.0405	0.0405		0.0381	0.0381	0.0000	153.0204	153.0204	0.0362	0.0000	153.9250
Total	**0.0971**	**0.8873**	**1.0670**	**1.7800e-003**		**0.0405**	**0.0405**		**0.0381**	**0.0381**	**0.0000**	**153.0204**	**153.0204**	**0.0362**	**0.0000**	**153.9250**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3400e-003	0.0524	0.0182	2.4000e-004	7.8900e-003	3.1000e-004	8.2000e-003	2.2800e-003	3.0000e-004	2.5800e-003	0.0000	23.4221	23.4221	7.4000e-004	3.3900e-003	24.4517
Worker	0.0188	0.0125	0.1581	4.9000e-004	0.0593	3.1000e-004	0.0596	0.0158	2.9000e-004	0.0160	0.0000	46.3037	46.3037	1.2700e-003	1.2200e-003	46.6998
Total	**0.0201**	**0.0648**	**0.1763**	**7.3000e-004**	**0.0672**	**6.2000e-004**	**0.0678**	**0.0180**	**5.9000e-004**	**0.0186**	**0.0000**	**69.7258**	**69.7258**	**2.0100e-003**	**4.6100e-003**	**71.1515**

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	0.0216	0.1475	1.1524	1.7800e-003		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	153.0202	153.0202	0.0362	0.0000	153.9249
Total	**0.0216**	**0.1475**	**1.1524**	**1.7800e-003**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**153.0202**	**153.0202**	**0.0362**	**0.0000**	**153.9249**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3400e-003	0.0524	0.0182	2.4000e-004	7.8900e-003	3.1000e-004	8.2000e-003	2.2800e-003	3.0000e-004	2.5800e-003	0.0000	23.4221	23.4221	7.4000e-004	3.3900e-003	24.4517
Worker	0.0188	0.0125	0.1581	4.9000e-004	0.0593	3.1000e-004	0.0596	0.0158	2.9000e-004	0.0160	0.0000	46.3037	46.3037	1.2700e-003	1.2200e-003	46.6998
Total	**0.0201**	**0.0648**	**0.1763**	**7.3000e-004**	**0.0672**	**6.2000e-004**	**0.0678**	**0.0180**	**5.9000e-004**	**0.0186**	**0.0000**	**69.7258**	**69.7258**	**2.0100e-003**	**4.6100e-003**	**71.1515**

3.4 Building Construction - 2025

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	0.0670	0.6110	0.7882	1.3200e-003		0.0259	0.0259		0.0243	0.0243	0.0000	113.6405	113.6405	0.0267	0.0000	114.3084
Total	**0.0670**	**0.6110**	**0.7882**	**1.3200e-003**		**0.0259**	**0.0259**		**0.0243**	**0.0243**	**0.0000**	**113.6405**	**113.6405**	**0.0267**	**0.0000**	**114.3084**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6000e-004	0.0385	0.0133	1.7000e-004	5.8600e-003	2.3000e-004	6.0900e-003	1.6900e-003	2.2000e-004	1.9100e-003	0.0000	17.0577	17.0577	5.6000e-004	2.4700e-003	17.8077
Worker	0.0132	8.3700e-003	0.1102	3.5000e-004	0.0440	2.2000e-004	0.0442	0.0117	2.0000e-004	0.0119	0.0000	33.5374	33.5374	8.6000e-004	8.5000e-004	33.8127
Total	**0.0141**	**0.0469**	**0.1235**	**5.2000e-004**	**0.0499**	**4.5000e-004**	**0.0503**	**0.0134**	**4.2000e-004**	**0.0138**	**0.0000**	**50.5950**	**50.5950**	**1.4200e-003**	**3.3200e-003**	**51.6205**

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	0.0161	0.1095	0.8556	1.3200e-003		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	113.6404	113.6404	0.0267	0.0000	114.3082
Total	**0.0161**	**0.1095**	**0.8556**	**1.3200e-003**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**113.6404**	**113.6404**	**0.0267**	**0.0000**	**114.3082**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.6000e-004	0.0385	0.0133	1.7000e-004	5.8600e-003	2.3000e-004	6.0900e-003	1.6900e-003	2.2000e-004	1.9100e-003	0.0000	17.0577	17.0577	5.6000e-004	2.4700e-003	17.8077
Worker	0.0132	8.3700e-003	0.1102	3.5000e-004	0.0440	2.2000e-004	0.0442	0.0117	2.0000e-004	0.0119	0.0000	33.5374	33.5374	8.6000e-004	8.5000e-004	33.8127
Total	**0.0141**	**0.0469**	**0.1235**	**5.2000e-004**	**0.0499**	**4.5000e-004**	**0.0503**	**0.0134**	**4.2000e-004**	**0.0138**	**0.0000**	**50.5950**	**50.5950**	**1.4200e-003**	**3.3200e-003**	**51.6205**

3.5 Architectural Coating - 2025

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	0.9338					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5600e-003	0.0172	0.0271	4.0000e-005		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004	0.0000	3.8299	3.8299	2.1000e-004	0.0000	3.8351
Total	**0.9363**	**0.0172**	**0.0271**	**4.0000e-005**		**7.7000e-004**	**7.7000e-004**		**7.7000e-004**	**7.7000e-004**	**0.0000**	**3.8299**	**3.8299**	**2.1000e-004**	**0.0000**	**3.8351**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Architectural Coating - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	5.0000e-004	6.6300e-003	2.0000e-005	2.6500e-003	1.0000e-005	2.6600e-003	7.0000e-004	1.0000e-005	7.2000e-004	0.0000	2.0166	2.0166	5.0000e-005	5.0000e-005	2.0332
Total	**7.9000e-004**	**5.0000e-004**	**6.6300e-003**	**2.0000e-005**	**2.6500e-003**	**1.0000e-005**	**2.6600e-003**	**7.0000e-004**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**2.0166**	**2.0166**	**5.0000e-005**	**5.0000e-005**	**2.0332**

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	0.9338					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-004	1.9300e-003	0.0275	4.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.8299	3.8299	2.1000e-004	0.0000	3.8351
Total	**0.9342**	**1.9300e-003**	**0.0275**	**4.0000e-005**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.8299**	**3.8299**	**2.1000e-004**	**0.0000**	**3.8351**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Architectural Coating - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.9000e-004	5.0000e-004	6.6300e-003	2.0000e-005	2.6500e-003	1.0000e-005	2.6600e-003	7.0000e-004	1.0000e-005	7.2000e-004	0.0000	2.0166	2.0166	5.0000e-005	5.0000e-005	2.0332
Total	**7.9000e-004**	**5.0000e-004**	**6.6300e-003**	**2.0000e-005**	**2.6500e-003**	**1.0000e-005**	**2.6600e-003**	**7.0000e-004**	**1.0000e-005**	**7.2000e-004**	**0.0000**	**2.0166**	**2.0166**	**5.0000e-005**	**5.0000e-005**	**2.0332**

3.6 Paving - 2025

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	3.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.4500e-003**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.3000e-004	3.0100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9167	0.9167	2.0000e-005	2.0000e-005	0.9242
Total	**3.6000e-004**	**2.3000e-004**	**3.0100e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9167**	**0.9167**	**2.0000e-005**	**2.0000e-005**	**0.9242**

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	2.8000e-003	0.0122	0.1730	2.3000e-004		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	3.0000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**3.1000e-003**	**0.0122**	**0.1730**	**2.3000e-004**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.3000e-004	3.0100e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9167	0.9167	2.0000e-005	2.0000e-005	0.9242
Total	**3.6000e-004**	**2.3000e-004**	**3.0100e-003**	**1.0000e-005**	**1.2000e-003**	**1.0000e-005**	**1.2100e-003**	**3.2000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**0.9167**	**0.9167**	**2.0000e-005**	**2.0000e-005**	**0.9242**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.4325	0.4811	4.0676	8.6400e-003	0.9549	6.7300e-003	0.9616	0.2548	6.2800e-003	0.2611	0.0000	819.1321	819.1321	0.0571	0.0363	831.3664
Unmitigated	0.4325	0.4811	4.0676	8.6400e-003	0.9549	6.7300e-003	0.9616	0.2548	6.2800e-003	0.2611	0.0000	819.1321	819.1321	0.0571	0.0363	831.3664

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	894.00	894.00	894.00	2,552,641	2,552,641
Parking Lot	0.00	0.00	0.00		
Total	894.00	894.00	894.00	2,552,641	2,552,641

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.8680	141.8680	8.5500e-003	9.9000e-004	142.3760
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	141.8680	141.8680	8.5500e-003	9.9000e-004	142.3760
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	721731	141.1561	8.5100e-003	9.8000e-004	141.6615
Parking Lot	3640	0.7119	4.0000e-005	0.0000	0.7145
Total		**141.8680**	**8.5500e-003**	**9.8000e-004**	**142.3760**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	721731	141.1561	8.5100e-003	9.8000e-004	141.6615
Parking Lot	3640	0.7119	4.0000e-005	0.0000	0.7145
Total		**141.8680**	**8.5500e-003**	**9.8000e-004**	**142.3760**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.7092	0.0127	1.1055	6.0000e-005		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003	0.0000	1.8077	1.8077	1.7300e-003	0.0000	1.8510
Unmitigated	0.7092	0.0127	1.1055	6.0000e-005		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003	0.0000	1.8077	1.8077	1.7300e-003	0.0000	1.8510

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0934					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5826					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0332	0.0127	1.1055	6.0000e-005		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003	0.0000	1.8077	1.8077	1.7300e-003	0.0000	1.8510
Total	**0.7092**	**0.0127**	**1.1055**	**6.0000e-005**		**6.1300e-003**	**6.1300e-003**		**6.1300e-003**	**6.1300e-003**	**0.0000**	**1.8077**	**1.8077**	**1.7300e-003**	**0.0000**	**1.8510**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0934					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5826					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0332	0.0127	1.1055	6.0000e-005		6.1300e-003	6.1300e-003		6.1300e-003	6.1300e-003	0.0000	1.8077	1.8077	1.7300e-003	0.0000	1.8510
Total	**0.7092**	**0.0127**	**1.1055**	**6.0000e-005**		**6.1300e-003**	**6.1300e-003**		**6.1300e-003**	**6.1300e-003**	**0.0000**	**1.8077**	**1.8077**	**1.7300e-003**	**0.0000**	**1.8510**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	41.1012	0.3186	7.7300e-003	51.3716
Unmitigated	41.1012	0.3186	7.7300e-003	51.3716

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	9.70795 / 6.12023	41.1012	0.3186	7.7300e-003	51.3716
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**41.1012**	**0.3186**	**7.7300e-003**	**51.3716**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	9.70795 / 6.12023	41.1012	0.3186	7.7300e-003	51.3716
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**41.1012**	**0.3186**	**7.7300e-003**	**51.3716**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	13.9130	0.8222	0.0000	34.4689
Unmitigated	13.9130	0.8222	0.0000	34.4689

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	68.54	13.9130	0.8222	0.0000	34.4689
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**13.9130**	**0.8222**	**0.0000**	**34.4689**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	68.54	13.9130	0.8222	0.0000	34.4689
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**13.9130**	**0.8222**	**0.0000**	**34.4689**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT B

AERSCREEN Dispersion Modeling Results

TITLE: PIRAEUS MF

********** AREA PARAMETERS **********

SOURCE EMISSION RATE: 0.104E-03 g/s 0.825E-03 lb/hr

AREA EMISSION RATE: 0.372E-08 g/(s-m2) 0.296E-07 lb/(hr-m2)
AREA HEIGHT: 3.00 meters 9.84 feet
AREA SOURCE LONG SIDE: 167.10 meters 548.23 feet
AREA SOURCE SHORT SIDE: 167.10 meters 548.23 feet
INITIAL VERTICAL DIMENSION: 1.00 meters 3.28 feet
RURAL OR URBAN: URBAN
POPULATION: 79000

FLAGPOLE RECEPTOR HEIGHT: 1.50 meters 4.92 feet

INITIAL PROBE DISTANCE = 5000. meters 16404. feet

********** BUILDING DOWNWASH PARAMETERS **********

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

********** FLOW SECTOR ANALYSIS **********
25 meter receptor spacing: 1. meters - 5000. meters

MAXIMUM IMPACT RECEPTOR

Zo SECTOR	SURFACE ROUGHNESS	1-HR CONC (ug/m3)	RADIAL (deg)	DIST (m)	TEMPORAL PERIOD
1*	1.000	0.1232	45	100.0	WIN

* = worst case diagonal

********** MAKEMET METEOROLOGY PARAMETERS **********

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban
DOMINANT CLIMATE TYPE: Average Moisture
DOMINANT SEASON: Winter

ALBEDO: 0.35
BOWEN RATIO: 1.50
ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR	MO	DY	JDY	HR
10	01	28	28	01

H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS
-0.92	0.043	-9.000	0.020	-999.	21.	8.5	1.000	1.50	0.35	0.50

HT	REF TA	HT
10.0	310.0	2.0

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

YR	MO	DY	JDY	HR

```
 -- -- -- --- --
 10 01 28  28 01

    H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 -0.92  0.043 -9.000  0.020 -999.   21.      8.5 1.000   1.50   0.35    0.50

    HT  REF TA     HT
- - - - - - - - - - -
  10.0   310.0    2.0
```

********** AERSCREEN AUTOMATED DISTANCES **********

OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

DIST (m)	MAXIMUM 1-HR CONC (ug/m3)	DIST (m)	MAXIMUM 1-HR CONC (ug/m3)
1.00	0.8978E-01	2525.00	0.3056E-02
25.00	0.9924E-01	2550.00	0.3027E-02
50.01	0.1081	2575.00	0.2999E-02
75.00	0.1160	2600.00	0.2972E-02
100.00	0.1232	2625.00	0.2945E-02
125.00	0.1143	2650.00	0.2919E-02
150.01	0.8834E-01	2675.00	0.2894E-02
174.99	0.7147E-01	2700.00	0.2870E-02
200.00	0.6024E-01	2725.00	0.2846E-02
225.00	0.5229E-01	2750.00	0.2823E-02
250.00	0.4632E-01	2775.00	0.2801E-02
274.99	0.4161E-01	2800.00	0.2779E-02
300.00	0.3779E-01	2825.00	0.2758E-02
325.00	0.3459E-01	2850.00	0.2797E-02
350.00	0.3188E-01	2875.00	0.2775E-02
375.01	0.2952E-01	2900.00	0.2754E-02
400.00	0.2747E-01	2925.00	0.2734E-02
425.00	0.2567E-01	2950.00	0.2713E-02
450.00	0.2406E-01	2975.00	0.2694E-02
475.01	0.2262E-01	3000.00	0.2674E-02
500.00	0.2133E-01	3025.00	0.2656E-02
525.00	0.2017E-01	3050.00	0.2637E-02
550.00	0.1910E-01	3075.00	0.2619E-02
575.01	0.1813E-01	3100.00	0.2601E-02
599.99	0.1724E-01	3125.00	0.2584E-02
625.00	0.1643E-01	3150.00	0.2567E-02
650.00	0.1568E-01	3175.00	0.2551E-02
675.00	0.1498E-01	3200.00	0.2534E-02
699.99	0.1434E-01	3225.00	0.2518E-02
725.00	0.1374E-01	3250.00	0.2503E-02
750.00	0.1319E-01	3275.00	0.2487E-02
775.00	0.1267E-01	3300.00	0.2472E-02
800.01	0.1218E-01	3325.00	0.2457E-02
825.00	0.1173E-01	3350.00	0.2443E-02
850.00	0.1130E-01	3375.00	0.2428E-02
875.00	0.1090E-01	3400.00	0.2414E-02
900.01	0.1053E-01	3425.00	0.2400E-02
924.99	0.1018E-01	3450.00	0.2387E-02
950.00	0.9842E-02	3475.00	0.2373E-02
975.00	0.9525E-02	3500.00	0.2360E-02
1000.00	0.9225E-02	3525.00	0.2347E-02
1024.99	0.8943E-02	3550.00	0.2335E-02
1050.00	0.8677E-02	3575.00	0.2322E-02
1075.00	0.8423E-02	3600.00	0.2310E-02
1100.00	0.8182E-02	3625.00	0.2298E-02
1125.01	0.7951E-02	3650.00	0.2286E-02
1150.00	0.7730E-02	3675.00	0.2274E-02
1175.00	0.7521E-02	3700.00	0.2262E-02
1200.00	0.7322E-02	3725.00	0.2251E-02
1225.01	0.7132E-02	3750.00	0.2240E-02
1250.00	0.6952E-02	3775.00	0.2229E-02
1275.00	0.6780E-02	3800.00	0.2218E-02
1300.00	0.6615E-02	3825.00	0.2207E-02
1325.01	0.6456E-02	3849.99	0.2196E-02
1349.99	0.6304E-02	3875.00	0.2186E-02
1375.00	0.6157E-02	3900.00	0.2176E-02
1400.00	0.6018E-02	3925.00	0.2165E-02
1425.00	0.5884E-02	3950.00	0.2155E-02
1450.00	0.5756E-02	3975.00	0.2145E-02
1475.00	0.5632E-02	4000.00	0.2135E-02
1500.00	0.5514E-02	4025.00	0.2126E-02
1525.00	0.5401E-02	4050.00	0.2116E-02
1550.00	0.5293E-02	4075.00	0.2107E-02
1575.00	0.5189E-02	4100.00	0.2097E-02
1600.00	0.5089E-02	4125.00	0.2088E-02
1625.00	0.4993E-02	4150.00	0.2079E-02
1650.01	0.4899E-02	4175.00	0.2070E-02
1675.00	0.4810E-02	4200.00	0.2061E-02
1700.00	0.4723E-02	4225.00	0.2052E-02

1725.00	0.4640E-02	4250.00	0.2044E-02
1750.00	0.4559E-02	4275.00	0.2035E-02
1775.00	0.4482E-02	4300.00	0.2026E-02
1800.00	0.4407E-02	4325.00	0.2018E-02
1825.00	0.4335E-02	4350.00	0.2010E-02
1850.00	0.4266E-02	4375.00	0.2001E-02
1875.00	0.4199E-02	4400.00	0.1993E-02
1900.00	0.4134E-02	4425.00	0.1985E-02
1925.00	0.4072E-02	4450.00	0.1977E-02
1950.01	0.4012E-02	4475.00	0.1969E-02
1975.00	0.3954E-02	4500.00	0.1962E-02
2000.01	0.3898E-02	4525.00	0.1954E-02
2025.00	0.3844E-02	4550.00	0.1946E-02
2050.00	0.3792E-02	4575.00	0.1939E-02
2075.00	0.3741E-02	4600.00	0.1931E-02
2099.99	0.3692E-02	4625.00	0.1924E-02
2125.00	0.3644E-02	4650.00	0.1916E-02
2150.00	0.3598E-02	4675.00	0.1909E-02
2175.00	0.3554E-02	4700.00	0.1902E-02
2200.00	0.3511E-02	4725.00	0.1895E-02
2225.00	0.3469E-02	4750.00	0.1888E-02
2250.00	0.3429E-02	4774.99	0.1881E-02
2275.00	0.3389E-02	4800.00	0.1874E-02
2300.00	0.3351E-02	4825.00	0.1867E-02
2325.00	0.3314E-02	4850.00	0.1860E-02
2350.00	0.3278E-02	4875.00	0.1853E-02
2375.00	0.3243E-02	4900.00	0.1847E-02
2400.00	0.3210E-02	4925.00	0.1840E-02
2425.00	0.3177E-02	4950.00	0.1833E-02
2450.00	0.3146E-02	4975.00	0.1827E-02
2475.00	0.3115E-02	5000.00	0.1821E-02
2500.00	0.3085E-02		

********** AERSCREEN MAXIMUM IMPACT SUMMARY **********

3-hour, 8-hour, and 24-hour scaled
concentrations are equal to the 1-hour concentration as referenced in
SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY
IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4)
Report number EPA-454/R-92-019
http://www.epa.gov/scram001/guidance_permit.htm
under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.1276	0.1276	0.1276	0.1276	N/A
DISTANCE FROM SOURCE	117.00 meters				
IMPACT AT THE AMBIENT BOUNDARY	0.8978E-01	0.8978E-01	0.8978E-01	0.8978E-01	N/A
DISTANCE FROM SOURCE	1.00 meters				

ATTACHMENT C

Cancer Risk Calculations (Tier 4 Equipment)

Air Quality Health Risk Calculations
Piraeus Point (Tier 4 w/ DPF)

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	**0.00141**
	Number of Workdays	**423**
	Emission per day (lb/day)	**0.006666667**
	Construction day (Hours)	**8**
	Emission Rate (Grams/Second)	**0.000104861**
	Project Site Size (Acres)	**6.9**
	Project Site Size (meters	**27923.30931**
	Length of Smalles Side (meters)	**167.1026909**
Used as an input to AERSCREEN	Emission Rate over Grading Area	**3.75533E-09**

	Concentration Annual	**0.009856**

	Construction Days	Construction Days converted to years				
Duration	423	1.15890411				
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.009856	0.009856	0.009856	0.009856	0.009856	0.009856
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000342	0.00001031	0.00000815	0.00000705	0.00000317	0.00000274

Calculating Residential and Offsite Worker
Inhalation Cancer Risk

Construction Days	423	1.15890411				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	1.15890411	1.15890411	1.15890411	1.15890411	1.15890411
AT	70	70	70	70	70	70
FAH (USE 1 if School for 3rd and 2-9)	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	1.1406E-07	1.59647E-06	3.20458E-07	2.77284E-07	4.21388E-08	3.64783E-08
	0.114059827	1.59646536	0.320457897	0.277283546	0.042138759	0.036478329

Cancer Risk Per Million 9-years	2.03
Cancer Risk Per Million 30-years	2.03
Cancer Risk Per Million 70-years	2.02