

AIR QUALITY ASSESSMENT

**Summit Estates, PDS2019-TM-5635
Residential Development
County of San Diego CA**

Lead Agency:

**County of San Diego
Planning & Development Services
5510 Overland Avenue, Suite 110
San Diego, CA 92123**

Prepared By:

**Jeremy Loudon
Ldn Consulting, Inc.
42428 Chisolm Trail
Murrieta, CA 92562**

Prepared For:

**2510 Summit, LLC
19782 Macarthur Blvd, Suite 300
Irvine, CA 92612**

June 15, 2020

TABLE OF CONTENTS

TABLE OF CONTENTS	II
LIST OF FIGURES	III
LIST OF TABLES	III
APPENDIX	III
LIST OF COMMON ACRONYMS	IV
EXECUTIVE SUMMARY	V
1.0 INTRODUCTION	1
1.1 PURPOSE OF THIS STUDY	1
1.2 PROJECT LOCATION	1
1.3 PROJECT DESCRIPTION	1
2.0 EXISTING ENVIRONMENTAL SETTING	4
2.1 EXISTING SETTING	4
2.2 CLIMATE AND METEOROLOGY	4
2.3 REGULATORY STANDARDS.....	4
2.3.1 FEDERAL STANDARDS AND DEFINITIONS	4
2.3.2 STATE STANDARDS AND DEFINITIONS.....	6
2.3.3 REGIONAL STANDARDS.....	8
2.4 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) SIGNIFICANCE THRESHOLDS.....	9
2.5 SDAPCD RULE 20.2 – AIR QUALITY IMPACT ASSESSMENT SCREENING THRESHOLDS	10
2.6 LOCAL AIR QUALITY.....	11
3.0 METHODOLOGY	12
3.1 CONSTRUCTION EMISSIONS CALCULATIONS.....	12
3.2 CONSTRUCTION ASSUMPTIONS.....	14
3.3 ODOR IMPACTS (CONSTRUCTION)	15
4.0 FINDINGS	16
4.1 CONSTRUCTION FINDINGS	16
4.2 HEALTH RISK.....	16
4.3 CUMULATIVE IMPACT FINDINGS.....	17
4.4 CONCLUSION OF FINDINGS.....	18
5.0 REFERENCES	19
6.0 CERTIFICATIONS	20

List of Figures

FIGURE 1-A: PROJECT VICINITY MAP	2
FIGURE 1-B: PROPOSED PROJECT SITE LAYOUT	3
FIGURE 3-A: CONSTRUCTION HEALTH RISK RECEPTOR LOCATIONS.....	14

List of Tables

TABLE 2.1: AMBIENT AIR QUALITY STANDARDS	7
TABLE 2.2: SAN DIEGO COUNTY AIR BASIN ATTAINMENT STATUS BY POLLUTANT	9
TABLE 2.3: CONSTRUCTION SCREENING LEVEL THRESHOLDS FOR CRITERIA POLLUTANTS	10
TABLE 2.4: THREE-YEAR AMBIENT AIR QUALITY SUMMARY NEAR THE PROJECT SITE	11
TABLE 3.1: EXPECTED CONSTRUCTION EQUIPMENT	15
TABLE 4.1: EXPECTED CONSTRUCTION EMISSIONS SUMMARY – POUNDS PER DAY (LB/DAY)	16
TABLE 4.2: MITIGATED CONSTRUCTION EMISSIONS (LB/DAY) - TIER 4.....	17

Appendix

CALEEMOD	21
AERMOD FOR DPM PM ₁₀	113
HEALTH RISK CALCULATIONS	128

LIST OF COMMON ACRONYMS

Air Quality Impact Assessments (AQIA)
California Air Resource Board (CARB)
California Ambient Air Quality Standards (CAAQS)
California Environmental Quality Act (CEQA)
Carbon Dioxide (CO₂)
Diesel Particulate Matter (DPM)
Environmental Protection Agency (EPA)
EPA Office of Air Quality Planning and Standards (OAQPS)
Hazardous Air Pollutants (HAPs)
Hydrogen Sulfide (H₂S)
Level of Service (LOS)
Methane (CH₄)
National ambient air quality standards (NAAQS)
Nitrous Oxide (N₂O)
Project Design Features (PDF)
Reactive Organic Gas (ROG)
Regional Air Quality Strategy (RAQS)
San Diego Air Basin (SDAB)
San Diego Air Pollution Control District (SDAPCD)
San Diego Association of Governments (SANDAG)
South Coast Air Quality Management District (SCAQMD)
Square Foot (SF)
State Implementation Plan (SIP)
Toxic Air Contaminants (TACs)
Vehicle Miles Traveled (VMT)
Volatile Organic Compounds (VOC)

EXECUTIVE SUMMARY

This air quality impact study has been completed to address requirements identified in the County's scoping letter specific to the proposed project. As reflected in the scoping letter, the project is required to identify construction related air quality impacts associated with the grading and construction activities necessary for project development. Operational impacts for this project are not required since the project would not be expected to result in operational emissions that would exceed daily thresholds of significance, as determined by the County's Study Trigger Criteria. The Project known as "Summit Estates" envisions providing a total of 20 single family residential units on approximately 22 acres. The project site is located on 2510 Summit Drive in the San Pasqual area within the County of San Diego.

A worst-case construction intensity plan was assumed for this analysis using a construction schedule which could begin as early as 2021 and be completed roughly later in 2022. The first full year of operations is expected in 2023. Based upon the analysis of construction activities for the proposed Project, a less than significant construction impact would be expected. A review of nearby cumulative Projects showed that there are zero nearby cumulative construction projects within a ½ mile radius. Given this, a less than significant cumulative construction impact is expected.

The only source of odors during construction would be from construction equipment or paving activities. Since odors generated during construction would-be short-term events, a less than significant odor impact is expected during construction.

Finally, a health risk assessment was conducted and cancer risks for the project were found to exceed the one per one million exposed without Best Available Control Technology for Toxics (T-BACT) threshold. It was found that these impacts can be reduced to less than significant through the utilization of T-BACT equipment (Tier 4) equipment. The following mitigation measure is therefore required for the construction of this project.

AQ-1 - Project-related construction equipment shall use Tier 4 construction equipment, as defined by United States Environmental Protection Agency (EPA) / California Air Resources Board (CARB) standards.

1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this Air Quality study is to determine potential air quality impacts (if any) that may be created by construction from the proposed Project as was requested by the County of San Diego in the projects County Scoping Letter. Based on the scoping letter, the project is required to identify construction related air quality impacts associated with the grading and construction activities necessary for project development. Operational impacts for this project were not required since the project is would not be expected to result in operational emissions that would exceed daily thresholds of significance, as determined by the County's Study Trigger Criteria.. 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

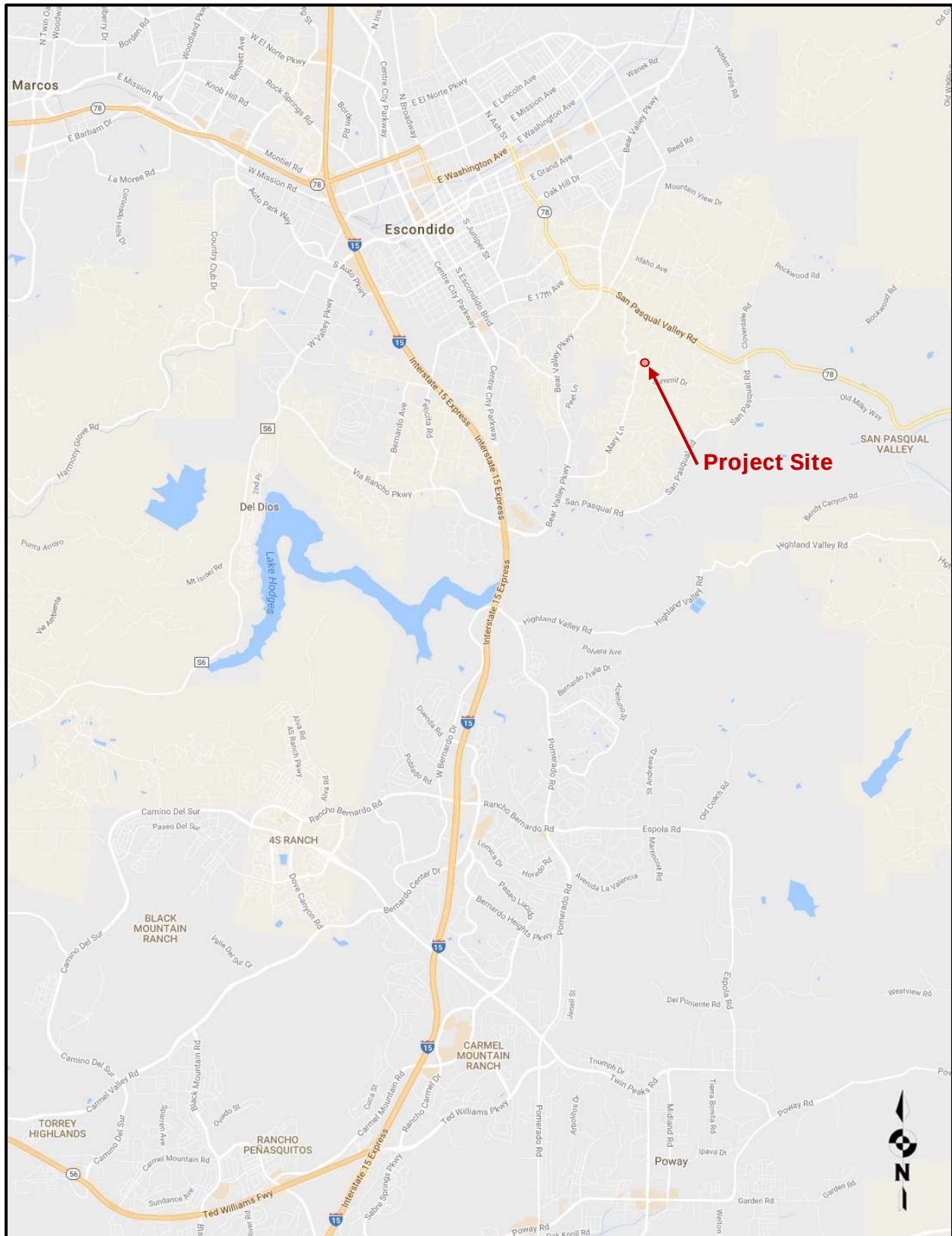
The project is located at 2510 Summit Drive, approximately 2,000-feet south of San Pasqual Valley Road (SR-78) in the unincorporated area of the North County Metro Community Planning Area in San Diego County. The general location of the project is shown on the Vicinity Map, Figure 1-A.

1.3 Project Description

The proposed project is approximately 22 acres. The County of San Diego General Plan Land Use designation for this site is SR-1 (Semi-Rural Residential: 1.0 DU/acre). The project proposes to build 20 single-family residential dwelling units. The site plan for the proposed project used for this analysis is shown on Figure 1-B.

A worst-case construction intensity plan was assumed for this analysis using a construction schedule which could begin as early as 2021 and be completed later in 2022. The first year of full operations would be expected in 2023. The project would demolish a single family home with accessory buildings having a combined size of roughly 4,000 Square Feet (SF).

Figure 1-A: Project Vicinity Map



Source: (Google, 2020)

NOTES

1. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
2. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
3. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
4. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
5. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
6. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
7. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
8. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
9. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
10. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
11. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
12. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
13. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
14. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
15. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
16. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
17. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
18. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
19. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.
20. THE INFORMATION ON THIS PLAN WAS OBTAINED FROM THE RECORDS OF THE COUNTY OF SAN DIEGO, CALIFORNIA.

LEGEND

- 1. LOT
- 2. PARCEL
- 3. STREET
- 4. DRIVE
- 5. ALLEY
- 6. EASEMENT
- 7. FENCE
- 8. UTILITY
- 9. TREE
- 10. SHrub
- 11. GRASS
- 12. SAND
- 13. WATER
- 14. ROCK
- 15. CLIFF
- 16. DITCH
- 17. FILL
- 18. EXCAVATION
- 19. CONCRETE
- 20. ASPHALT
- 21. GRAVEL
- 22. SOIL
- 23. PLANT
- 24. ANIMAL
- 25. HUMAN
- 26. VEHICLE
- 27. AIRCRAFT
- 28. BOAT
- 29. FISH
- 30. BIRD
- 31. INSECT
- 32. MAMMAL
- 33. REPTILE
- 34. AMPHIBIAN
- 35. MOLLUSK
- 36. CRUSTACEAN
- 37. ECHINODERM
- 38. CORDATE
- 39. CILIATE
- 40. PROTOZOAN
- 41. VIRUS
- 42. BACTERIA
- 43. FUNGUS
- 44. PLANT
- 45. ANIMAL
- 46. HUMAN
- 47. VEHICLE
- 48. AIRCRAFT
- 49. BOAT
- 50. FISH
- 51. BIRD
- 52. INSECT
- 53. MAMMAL
- 54. REPTILE
- 55. AMPHIBIAN
- 56. MOLLUSK
- 57. CRUSTACEAN
- 58. ECHINODERM
- 59. CORDATE
- 60. CILIATE
- 61. PROTOZOAN
- 62. VIRUS
- 63. BACTERIA
- 64. FUNGUS
- 65. PLANT
- 66. ANIMAL
- 67. HUMAN
- 68. VEHICLE
- 69. AIRCRAFT
- 70. BOAT
- 71. FISH
- 72. BIRD
- 73. INSECT
- 74. MAMMAL
- 75. REPTILE
- 76. AMPHIBIAN
- 77. MOLLUSK
- 78. CRUSTACEAN
- 79. ECHINODERM
- 80. CORDATE
- 81. CILIATE
- 82. PROTOZOAN
- 83. VIRUS
- 84. BACTERIA
- 85. FUNGUS
- 86. PLANT
- 87. ANIMAL
- 88. HUMAN
- 89. VEHICLE
- 90. AIRCRAFT
- 91. BOAT
- 92. FISH
- 93. BIRD
- 94. INSECT
- 95. MAMMAL
- 96. REPTILE
- 97. AMPHIBIAN
- 98. MOLLUSK
- 99. CRUSTACEAN
- 100. ECHINODERM
- 101. CORDATE
- 102. CILIATE
- 103. PROTOZOAN
- 104. VIRUS
- 105. BACTERIA
- 106. FUNGUS
- 107. PLANT
- 108. ANIMAL
- 109. HUMAN
- 110. VEHICLE
- 111. AIRCRAFT
- 112. BOAT
- 113. FISH
- 114. BIRD
- 115. INSECT
- 116. MAMMAL
- 117. REPTILE
- 118. AMPHIBIAN
- 119. MOLLUSK
- 120. CRUSTACEAN
- 121. ECHINODERM
- 122. CORDATE
- 123. CILIATE
- 124. PROTOZOAN
- 125. VIRUS
- 126. BACTERIA
- 127. FUNGUS
- 128. PLANT
- 129. ANIMAL
- 130. HUMAN
- 131. VEHICLE
- 132. AIRCRAFT
- 133. BOAT
- 134. FISH
- 135. BIRD
- 136. INSECT
- 137. MAMMAL
- 138. REPTILE
- 139. AMPHIBIAN
- 140. MOLLUSK
- 141. CRUSTACEAN
- 142. ECHINODERM
- 143. CORDATE
- 144. CILIATE
- 145. PROTOZOAN
- 146. VIRUS
- 147. BACTERIA
- 148. FUNGUS
- 149. PLANT
- 150. ANIMAL
- 151. HUMAN
- 152. VEHICLE
- 153. AIRCRAFT
- 154. BOAT
- 155. FISH
- 156. BIRD
- 157. INSECT
- 158. MAMMAL
- 159. REPTILE
- 160. AMPHIBIAN
- 161. MOLLUSK
- 162. CRUSTACEAN
- 163. ECHINODERM
- 164. CORDATE
- 165. CILIATE
- 166. PROTOZOAN
- 167. VIRUS
- 168. BACTERIA
- 169. FUNGUS
- 170. PLANT
- 171. ANIMAL
- 172. HUMAN
- 173. VEHICLE
- 174. AIRCRAFT
- 175. BOAT
- 176. FISH
- 177. BIRD
- 178. INSECT
- 179. MAMMAL
- 180. REPTILE
- 181. AMPHIBIAN
- 182. MOLLUSK
- 183. CRUSTACEAN
- 184. ECHINODERM
- 185. CORDATE
- 186. CILIATE
- 187. PROTOZOAN
- 188. VIRUS
- 189. BACTERIA
- 190. FUNGUS
- 191. PLANT
- 192. ANIMAL
- 193. HUMAN
- 194. VEHICLE
- 195. AIRCRAFT
- 196. BOAT
- 197. FISH
- 198. BIRD
- 199. INSECT
- 200. MAMMAL
- 201. REPTILE
- 202. AMPHIBIAN
- 203. MOLLUSK
- 204. CRUSTACEAN
- 205. ECHINODERM
- 206. CORDATE
- 207. CILIATE
- 208. PROTOZOAN
- 209. VIRUS
- 210. BACTERIA
- 211. FUNGUS
- 212. PLANT
- 213. ANIMAL
- 214. HUMAN
- 215. VEHICLE
- 216. AIRCRAFT
- 217. BOAT
- 218. FISH
- 219. BIRD
- 220. INSECT
- 221. MAMMAL
- 222. REPTILE
- 223. AMPHIBIAN
- 224. MOLLUSK
- 225. CRUSTACEAN
- 226. ECHINODERM
- 227. CORDATE
- 228. CILIATE
- 229. PROTOZOAN
- 230. VIRUS
- 231. BACTERIA
- 232. FUNGUS
- 233. PLANT
- 234. ANIMAL
- 235. HUMAN
- 236. VEHICLE
- 237. AIRCRAFT
- 238. BOAT
- 239. FISH
- 240. BIRD
- 241. INSECT
- 242. MAMMAL
- 243. REPTILE
- 244. AMPHIBIAN
- 245. MOLLUSK
- 246. CRUSTACEAN
- 247. ECHINODERM
- 248. CORDATE
- 249. CILIATE
- 250. PROTOZOAN
- 251. VIRUS
- 252. BACTERIA
- 253. FUNGUS
- 254. PLANT
- 255. ANIMAL
- 256. HUMAN
- 257. VEHICLE
- 258. AIRCRAFT
- 259. BOAT
- 260. FISH
- 261. BIRD
- 262. INSECT
- 263. MAMMAL
- 264. REPTILE
- 265. AMPHIBIAN
- 266. MOLLUSK
- 267. CRUSTACEAN

1948-06 Summit Estates AQ

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The site currently has a land use designator as Semi-Rural Residential. Land uses surrounding the Project mostly include single family residential of similar type which are adjacent to the proposed project site. Elevations at the northern area of the project are around 855 feet above mean sea level (MSL) and at the southern elevations are closer to 795 feet above MSL.

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heat up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego 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. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning.

Meteorological trends within the area generally show daytime highs ranging between 70 degrees Fahrenheit (°F) in the winter to approximately 92°F in the summer with August usually being the hottest month. Daytime Low temperatures range from approximately 40°F in the winter to approximately 60°F in the summer. Precipitation is generally about 13.80 inches per year (WRCC, 2020). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant pattern though throughout the year is usually from the west or westerly (WRCC, 2018).

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 (NO₂):** *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, NO₂ is usually visible as a reddish-brown air layer over urban areas. NO₂ 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 NO₂ above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO₂ exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. **Particulate Matter (PM₁₀ 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. PM₁₀ 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 (O₃):** *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 (SO₂):** *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. SO₂ is also emitted from several industrial processes, such as petroleum*

refining and metal processing. Effects from SO₂ 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 SO₂ results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.

2.3.2 State Standards and Definitions

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 (H₂S):** *is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H₂S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H₂S 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 Fluorescence; Spectrophotometry (Pararosaniline 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	-	Same as Primary Standard	-
	Calendar Quarter	-		1.5 µg/m3		
	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 PM₁₀ 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 O₃ and state PM₁₀ and PM_{2.5}. An attainment plan is available for O₃. 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 on the following page (SDAPCD, 2019).

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG) as well as growth projections based on land use designations within the County of San Diego’s General Plan. 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 County 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 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act has provided a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

- A:* Conflict with or obstruct implementation of the San Diego RAQS or applicable portions of the SIP?
- B:* Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- C:* Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard (PM₁₀, PM_{2.5} or exceed quantitative thresholds for O₃ precursors, NO_x and VOCs)?
- D:* Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, residential uses or day-care centers) to substantial pollutant concentrations?
- E:* Create objectionable odors affecting a substantial number of people?

2.5 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources. The County's Guidelines for Determining Significance and Report Format and Content Requirements incorporate screening level thresholds from Rule 20.2 for use in all County related Air Quality Impact Assessments (AQIA) and for determining CEQA air quality impacts (County of San Diego, 2007). These screening criteria can be used to demonstrate that a Project's total emissions would not result in a significant impact as defined by CEQA. Also, since SDAPCD does not have air quality impact threshold for VOCs, it is acceptable to use the Coachella Valley VOC threshold from South Coast Air Quality Management District. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the Project's total air quality impacts are below state and federal ambient air quality standards. These screening thresholds for construction are shown in Table 2.3 and are based on requirements identified by the County (County of San Diego, 2007).

Table 2.3: Construction Screening Level Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	100 and 55
Nitrogen Oxide (NO _x)	250
Sulfur Oxide (SO _x)	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75

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 to 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 a project increase the incremental cancer risk to over 10 in one million or a health hazard index (chronic and acute) greater than one. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology.

The U.S. EPA uses the term VOC and the CARB's Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term however for purposes of this study we

will assume they are essentially the same due to the fact SCAQMD interchanges these words and because Air Quality models directly calculates ROG in place of VOC.

2.6 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 monitoring sites, which collect data on criteria pollutants. The closest monitoring location to the Project site is the Escondido monitoring location roughly 2.8 miles to the south-southeast. The next closest monitoring station is Camp Pendleton rough 22 miles to the northwest. Table 2.4 identifies the criteria pollutants monitored at the aforementioned station (SDAPCD, 2018).

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

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2015	2016	2017	Days Exceeded over 3 years
O ₃ (ppm)	Camp Pendleton or Escondido Monitoring Station (Escondido Location Identified with an *)	1 Hour	0.09 ppm	No Standard	0.09	0.08	0.09	0
		8 Hour	0.070 ppm	0.070 ppm	0.08	0.07	0.08	10
* PM ₁₀ (µg/m ³)		24 Hour	50 µg/m ³	150 µg/m ³	30	-	-	N/A
		Annual Arithmetic Mean	20 µg/m ³	No Standard	19.4	-	-	N/A
* PM _{2.5} (µg/m ³)		24 Hour	No standard -	35 µg/m ³	29.4	-	-	N/A
		Annual Arithmetic Mean	12 µg/m ³	15 µg/m ³	8.6	-	-	N/A
NO ₂ (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.006	0.006	0.006	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.060	0.072	0.063	N/A
* CO (ppm)		1 Hour	20 ppm	35 ppm	3.1	-	-	N/A
		8 Hour	9 ppm	9 ppm	2.0	-	-	N/A

Notes:

1. - Yearly maximums marked with "-" indicated data was not available for either monitoring station.
2. Days exceeded marked with "N/A" indicate no data available
3. * Data was selected from the Escondido Monitoring Station. All other data presented was collected at the Camp Pendleton Monitoring Station.
4. SO₂ is only monitored at the El Cajon Monitoring Station. Within the entire County of San Diego, SO₂ 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 SO₂) is 0.25 ppm.

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction were calculated using the latest CalEEMod 2016.3.2 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 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.

The AERMOD dispersion model will be used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model will predict the maximum exposure distance and concentrations. The notable toxic air contaminant from construction is diesel exhaust, since exposure to diesel exhaust is known to cause cancer and acute and chronic health effects. Diesel exhaust emissions can be estimated using the annual PM₁₀ exhaust emissions, referred to as diesel particulate matter (DPM), from onsite construction operations obtained from the annual CalEEMod model output by summing each onsite source for the construction duration. The AERMOD input/output file for the proposed Project is provided in **Attachment B** and includes sensitive residential receptors.

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, February 2015):

Equation 1

$$Dose_{air} = C_{air} * (BR/BW) * A * EF * (1 \times 10^{-6})$$

Dose _{air}	=	Dose through inhalation (mg/kg/d)
C _{air}	=	Concentration in air (µg/m ³) Annual average DPM concentration in µg/m ³ - SCREEN3 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 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 attached to this report. The worst case cancer risk calculation is defined in Equation 2 below (OEHHA, 2015):

Equation 2
$$RISK_{inh-res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

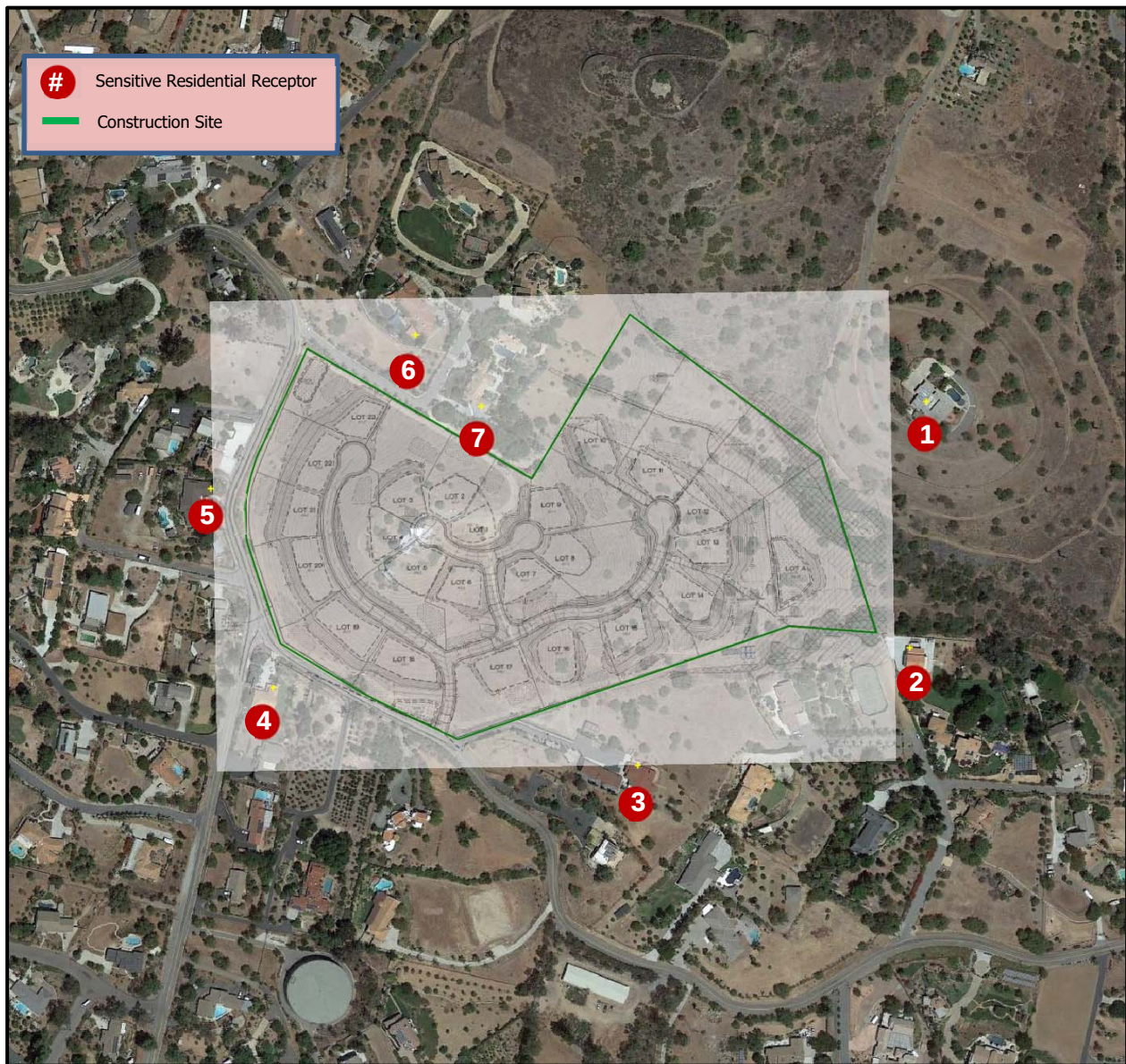
$RISK_{inh-res}$	=	Residential inhalation cancer risk
$DOSE_{air}$	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor (mg/kg-day ⁻¹)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time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

The California 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. Health risk calculations are shown in **Attachment C** to this report.

Non-Cancer risks or risks defined as chronic or acute are also known with respect to 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, 2015). Diesel Exhaust has a REL of 5 µg/m³ and targets the respiratory system.

A graphical representation of the modeling locations is shown on a site aerial below in Figure 3-A. The red points (1-5) represent the sensitive receptor locations where air quality emissions are calculated by AERMOD. The green polygon represents the grading area. For purposes of analysis an unmitigated and mitigated model was created.

Figure 3-A: Construction Health Risk Receptor Locations



Source: (Google Earth Pro, 2020)

3.2 Construction Assumptions

CalEEMod Version 2016.3.2 was utilized for all construction emissions calculations and has been manually updated to reflect SDAPCD Rule 67 VOC paint standards. The Project construction dates assumed default settings within the software and are shown in Table 3.1 below. Additionally, the project would demolish a single family home with accessory buildings having a combined size of roughly of 4,000 SF.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Demolition	01/01/2021	01/28/2021	
Concrete/Industrial Saws			1
Excavators			3
Rubber Tired Dozers			2
Site Preparation	01/29/2021	02/11/2021	
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
Grading	02/12/2021	04/01/2021	
Excavators			2
Graders			1
Rubber Tired Dozers			1
Scrapers			2
Tractors/Loaders/Backhoes			2
Building Construction	04/02/2021	09/01/2022	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Paving	09/02/2022	9/29/2022	
Pavers			2
Paving Equipment			2
Rollers			2
Architectural Coating	09/30/2022	10/27/2022	
Air Compressors			1
This equipment and durations were selected based on CalEEMod defaults			

3.3 Odor Impacts (Construction)

Potential onsite odor generators would include short-term construction odors from activities such as paving and painting as well as exhaust odors. Odors created during construction activities would most likely be from the bitumen and solvents from the placement of hot asphalt, architectural coating and exhaust odors. These activities are short term and would therefore generate less than significant impacts.

4.0 FINDINGS

4.1 Construction Findings

Emissions from construction activities and equipment use, identified in Section 3.2, are presented in pounds per day and are shown in Table 4.1 below. Based on these numbers, the Project would not exceed SDAPCD Rule 20.2 standards and would not require mitigation to comply.

Table 4.1: Expected Construction Emissions Summary – Pounds per Day (lb/day)

Year	ROG	NO _x	CO	SO ₂	PM ₁₀ (Dust)	PM ₁₀ (Exhaust)	PM ₁₀ (Total)	PM _{2.5} (Dust)	PM _{2.5} (Exhaust)	PM _{2.5} (Total)
2021	4.26	46.44	31.41	0.06	18.21	2.05	20.26	9.97	1.88	11.85
2022	26.12	15.82	16.61	0.03	0.12	0.81	0.89	0.03	0.76	0.78
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
SDAPCD Impact?	No	No	No	No	-	-	No	-	-	No

4.2 Health Risk

The nearest sensitive receptors to the Project site adjacent to the project site as shown in Figure 3-A above. Based upon the annual air quality modeling outputs, worst-case PM₁₀ generated from onsite construction exhaust would cumulatively produce 0.2312 tons over the construction duration (664-calendar days) or an average of 0.0037 grams/second. The average emission rate over the grading area is 4.10×10^{-8} g/m²/s, which was calculated as follows:

$$\frac{0.0037 \frac{\text{grams}}{\text{second}}}{22 \text{ acres} * 4,046 \frac{\text{meters}^2}{\text{acre}}} = 4.10 * 10^{-8} \frac{\text{grams}}{\text{meters}^2 \text{ second}}$$

Utilizing the AERMOD dispersion model, we find that the peak maximum annual concentration is 0.83 µg/m³ during the worst-case construction period. Utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk for the worst-case residential receptor is greater than one per one million exposed which would be a potentially significant impact and would require the application of T-BACT.

It was found that these impacts can be reduced to less than significant through the utilization of T-BACT equipment (Tier 4) equipment. This equipment would cumulatively produce a total of 0.0107 tons of PM₁₀ over the two year construction duration above which equates to 0.00016 grams/second. Based on this the mitigated average emission rate over the grading area is 1.89×10^{-9} g/m²/s. Utilizing the AERMOD dispersion model, we find that the annual concentration is 0.0387 µg/m³ during construction. Given this, the inhalation cancer risk for the closest residential receptor was found to be 8.57 per one million exposed which would be considered a less than significant impact under CEQA with T-BACT applied. Additionally, as noted earlier in this report, detailed calculations for both the unmitigated and mitigated scenarios are shown in **Attachment B** of this report.

Finally, there are known 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 annual concentration of 0.0387 µg/m³ divided by the REL of 5 µg/m³ yields a Health Hazard Index of 0.007, which is less than one. Therefore, no chronic health risks are expected and all health risks are considered less than significant.

It should be noted that the mitigation measure to utilize Tier 4 equipment would further reduce Air Quality emissions identified in Section 4.1 above. Since unmitigated emissions do not exceed Rule 20.2, mitigated emissions would also be considered less than significant. Mitigated construction emissions are shown in Table 4.2 below:

Table 4.2: Mitigated Construction Emissions (lb/day) - Tier 4

Year	ROG	NO _x	CO	SO ₂	PM ₁₀ (Dust)	PM ₁₀ (Exhaust)	PM ₁₀ (Total)	PM _{2.5} (Dust)	PM _{2.5} (Exhaust)	PM _{2.5} (Total)
2021	0.83	3.35	33.53	0.06	18.21	0.10	18.28	9.97	0.10	10.03
2022	25.94	2.44	17.71	0.03	0.12	0.04	0.16	0.03	0.04	0.07
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
SDAPCD Impact?	No	No	No	No	-	-	No	-	-	No

4.3 Cumulative Impact Findings

Cumulative impacts would exist when either there are direct air quality impacts or when multiple construction projects occur within the same area simultaneously. To illustrate this, if a Project was to produce air quality emissions simultaneous to a nearby construction project

the addition of both project emissions to the environment could exceed significance thresholds. If a nearby Project was to be under construction at the same time, that Project would need to produce an additive amount of emissions close to the Project site such that emissions would exceed thresholds.

The Project applicant contacted the County to determine whether or not nearby cumulative construction projects are expected around the project. The two nearest projects are San Pasqual TM 5620 located roughly ½ mile from the project site and Idaho Estates located over one mile from the project site. Given that these projects are so far from the Summit Estates project a less than significant cumulative construction impact would be expected. The County has verified that this is accurate around the Project area.

Finally, it should be noted that since the proposed project would generate less than significant construction impacts and since the project intensity as related to land use conforms with the County's General Plan, the project would not conflict with the RAQS. Given this a less than significant impact to the RAQS is expected.

4.4 Conclusion of Findings

Based upon the analysis of construction activities for the proposed Project would generate less than significant and direct construction impacts related to fugitive dust.

It was found that significant cancer health risks could be tied to construction and therefore would require mitigation to comply. Using Tier 4 construction equipment would reduce cancer risks to less than significant at all receptors surrounding the Project site.

Finally, the project would generate short-term construction odors, but these impacts would not be considered significant. The project would not generate long term odor impacts. Based on this, no significant odor impacts are expected.

Based on this analysis, the project would be required to implement one mitigation measure identified below:

AQ-1 - Project-related construction equipment shall use Tier 4 construction equipment, as defined by United States Environmental Protection Agency (EPA) / California Air Resources Board (CARB) standards.

5.0 REFERENCES

- California Air Resources Board. (5/4/2016). *www.arb.ca.gov*. Retrieved from Ambient Air Quality Standards: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>
- County of San Diego. (2007, March 19). *AQ-Guidelines*. Retrieved from <https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf>
- Google. (2020). Retrieved 2020, from maps.google.com
- Google Earth Pro. (2020).
- Latitude 33. (2019). *Project Site Plan*.
- OEHHA. (February 2015). *Air Toxics Hot Spots Program - Risk Assessment Guidelines - Guidance Manual for Preparation of Health Risk Assessments*. OEHHA.
- SDAPCD. (2018). *5 Year Summary 2012 - 2016*. Retrieved 2015, from https://www.sdapcd.org/content/dam/sdc/apcd/monitoring/5-Year_Air_Quality.pdf
- SDAPCD. (2019). Retrieved 2018, from <https://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning/attainment-status.html>
- US EPA. (1992). *Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised*. US EPA. Retrieved from http://www.epa.gov/scram001/guidance/guide/EPA-454R-92-019_OCR.pdf
- WRCC. (2018). Retrieved from https://wrcc.dri.edu/Climate/comp_table_show.php?stype=wind_dir_avg
- WRCC. (2020). *SAN PASQUAL ANIMAL PK, CALIFORNIA (047874)*. Retrieved from <https://wrcc.dri.edu/summary/Climsmsca.html>: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7874>

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. This report was prepared by Jeremy Loudon; a County approved CEQA Consultant for Air Quality.



Jeremy Loudon, Principal
Ldn Consulting, Inc.
(760) 473-1253
jloudon@ldnconsulting.net

Date June 15, 2020

ATTACHMENT A

CalEEMod

Summit Estates - San Diego County, Summer

Summit Estates
San Diego County, Summer**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	23.00	Dwelling Unit	22.00	41,400.00	66

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Summit Estates - San Diego County, Summer

Project Characteristics -

Land Use - 22 acre site

Demolition - Demolition to remove 4,000 SF of facilities

Architectural Coating - Rule 67 Paint

Area Coating - Rule 67 Paint

Construction Off-road Equipment Mitigation - Tier 4

Construction Phase -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

Summit Estates - San Diego County, Summer

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.60	0.60
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	5.4350e-003	5.4790e-003
tblFleetMix	MCY	5.9380e-003	6.0160e-003
tblFleetMix	MDV	0.10	0.11

Summit Estates - San Diego County, Summer

tblFleetMix	MH	1.0560e-003	1.1220e-003
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	1.9340e-003	1.9260e-003
tblFleetMix	SBUS	7.5700e-004	7.5300e-004
tblFleetMix	UBUS	1.8880e-003	1.9320e-003
tblLandUse	LotAcreage	7.47	22.00

2.0 Emissions Summary

Summit Estates - San Diego County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2604	46.4448	31.4089	0.0637	18.2141	2.0455	20.2596	9.9699	1.8819	11.8517	0.0000	6,169.9316	6,169.9316	1.9475	0.0000	6,218.6178
2022	26.1161	15.8245	16.6099	0.0281	0.1232	0.8098	0.8891	0.0327	0.7619	0.7833	0.0000	2,674.8211	2,674.8211	0.7172	0.0000	2,690.2633
Maximum	26.1161	46.4448	31.4089	0.0637	18.2141	2.0455	20.2596	9.9699	1.8819	11.8517	0.0000	6,169.9316	6,169.9316	1.9475	0.0000	6,218.6178

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					
2021	0.8307	3.3450	33.5296	0.0637	18.2141	0.1027	18.2772	9.9699	0.1026	10.0329	0.0000	6,169.9316	6,169.9316	1.9475	0.0000	6,218.6178
2022	25.9413	2.4436	17.7067	0.0281	0.1232	0.0416	0.1615	0.0327	0.0416	0.0709	0.0000	2,674.8211	2,674.8211	0.7172	0.0000	2,690.2633
Maximum	25.9413	3.3450	33.5296	0.0637	18.2141	0.1027	18.2772	9.9699	0.1026	10.0329	0.0000	6,169.9316	6,169.9316	1.9475	0.0000	6,218.6178

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	11.87	90.70	-6.70	0.00	0.00	94.95	12.81	0.00	94.55	20.03	0.00	0.00	0.00	0.00	0.00	0.00

Summit Estates - San Diego County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398
Energy	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063
Mobile	0.3514	1.2786	4.1791	0.0153	1.3799	0.0114	1.3913	0.3688	0.0106	0.3794		1,558.3252	1,558.3252	0.0756		1,560.2149
Total	36.6515	2.1237	49.5843	0.0950	1.3799	6.1249	7.5048	0.3688	6.1241	6.4929	638.7498	2,003.0003	2,641.7501	0.6717	0.0534	2,674.4610

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	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398
Energy	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063
Mobile	0.3514	1.2786	4.1791	0.0153	1.3799	0.0114	1.3913	0.3688	0.0106	0.3794		1,558.3252	1,558.3252	0.0756		1,560.2149
Total	36.6515	2.1237	49.5843	0.0950	1.3799	6.1249	7.5048	0.3688	6.1241	6.4929	638.7498	2,003.0003	2,641.7501	0.6717	0.0534	2,674.4610

Summit Estates - San Diego County, Summer

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/28/2021	5	20	
2	Site Preparation	Site Preparation	1/29/2021	2/11/2021	5	10	
3	Grading	Grading	2/12/2021	4/1/2021	5	35	
4	Building Construction	Building Construction	4/2/2021	9/1/2022	5	370	
5	Paving	Paving	9/2/2022	9/29/2022	5	20	
6	Architectural Coating	Architectural Coating	9/30/2022	10/27/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 83,835; Residential Outdoor: 27,945; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0
(Architectural Coating – sqft)

OffRoad Equipment

Summit Estates - San Diego County, Summer

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

Trips and VMT

Summit Estates - San Diego County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	18.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	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

3.2 Demolition - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1993	0.0000	0.1993	0.0302	0.0000	0.0302			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	3.1651	31.4407	21.5650	0.0388	0.1993	1.5513	1.7507	0.0302	1.4411	1.4713		3,747.9449	3,747.9449	1.0549		3,774.3174

Summit Estates - San Diego County, Summer

3.2 Demolition - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.6800e-003	0.2307	0.0564	6.9000e-004	0.0157	7.0000e-004	0.0164	4.3100e-003	6.7000e-004	4.9800e-003		76.1112	76.1112	6.7200e-003		76.2793
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	0.0586	0.2644	0.4543	1.9200e-003	0.1390	1.5500e-003	0.1405	0.0370	1.4500e-003	0.0385		198.2774	198.2774	0.0102		198.5326

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1993	0.0000	0.1993	0.0302	0.0000	0.0302			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	0.4623	2.0032	23.2798	0.0388	0.1993	0.0616	0.2610	0.0302	0.0616	0.0918	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174

Summit Estates - San Diego County, Summer

3.2 Demolition - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.6800e-003	0.2307	0.0564	6.9000e-004	0.0157	7.0000e-004	0.0164	4.3100e-003	6.7000e-004	4.9800e-003		76.1112	76.1112	6.7200e-003		76.2793
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	0.0586	0.2644	0.4543	1.9200e-003	0.1390	1.5500e-003	0.1405	0.0370	1.4500e-003	0.0385		198.2774	198.2774	0.0102		198.5326

3.3 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.6569	3,685.6569	1.1920		3,715.4573

Summit Estates - San Diego County, Summer

3.3 Site Preparation - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040
Total	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	0.4656	2.0175	20.8690	0.0380	18.0663	0.0621	18.1283	9.9307	0.0621	9.9928	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573

Summit Estates - San Diego County, Summer

3.3 Site Preparation - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040
Total	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040

3.4 Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	8.6733	1.9853	10.6587	3.5965	1.8265	5.4230		6,007.0434	6,007.0434	1.9428		6,055.6134

Summit Estates - San Diego County, Summer

3.4 Grading - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0692	0.0449	0.5305	1.6300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		162.8882	162.8882	4.6500e-003		163.0044
Total	0.0692	0.0449	0.5305	1.6300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		162.8882	162.8882	4.6500e-003		163.0044

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	0.7616	3.3000	32.9991	0.0620	8.6733	0.1015	8.7749	3.5965	0.1015	3.6980	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134

Summit Estates - San Diego County, Summer

3.4 Grading - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0692	0.0449	0.5305	1.6300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		162.8882	162.8882	4.6500e-003		163.0044
Total	0.0692	0.0449	0.5305	1.6300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		162.8882	162.8882	4.6500e-003		163.0044

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

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

Summit Estates - San Diego County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.0500e-003	0.2037	0.0519	5.4000e-004	0.0135	4.3000e-004	0.0140	3.9000e-003	4.1000e-004	4.3100e-003		58.2704	58.2704	4.1600e-003		58.3745
Worker	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	0.0337	0.2216	0.2641	1.1900e-003	0.0793	8.8000e-004	0.0801	0.0213	8.3000e-004	0.0222		123.4257	123.4257	6.0200e-003		123.5762

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	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

Summit Estates - San Diego County, Summer

3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.0500e-003	0.2037	0.0519	5.4000e-004	0.0135	4.3000e-004	0.0140	3.9000e-003	4.1000e-004	4.3100e-003		58.2704	58.2704	4.1600e-003		58.3745
Worker	0.0277	0.0180	0.2122	6.5000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		65.1553	65.1553	1.8600e-003		65.2018
Total	0.0337	0.2216	0.2641	1.1900e-003	0.0793	8.8000e-004	0.0801	0.0213	8.3000e-004	0.0222		123.4257	123.4257	6.0200e-003		123.5762

3.5 Building Construction - 2022**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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

Summit Estates - San Diego County, Summer

3.5 Building Construction - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.6200e-003	0.1925	0.0492	5.4000e-004	0.0135	3.7000e-004	0.0139	3.9000e-003	3.5000e-004	4.2500e-003		57.7228	57.7228	4.0400e-003		57.8237
Worker	0.0262	0.0164	0.1973	6.3000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.1000e-004	0.0178		62.7648	62.7648	1.7000e-003		62.8074
Total	0.0318	0.2089	0.2465	1.1700e-003	0.0793	8.1000e-004	0.0801	0.0213	7.6000e-004	0.0221		120.4875	120.4875	5.7400e-003		120.6311

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	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Summit Estates - San Diego County, Summer

3.5 Building Construction - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.6200e-003	0.1925	0.0492	5.4000e-004	0.0135	3.7000e-004	0.0139	3.9000e-003	3.5000e-004	4.2500e-003		57.7228	57.7228	4.0400e-003		57.8237
Worker	0.0262	0.0164	0.1973	6.3000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.1000e-004	0.0178		62.7648	62.7648	1.7000e-003		62.8074
Total	0.0318	0.2089	0.2465	1.1700e-003	0.0793	8.1000e-004	0.0801	0.0213	7.6000e-004	0.0221		120.4875	120.4875	5.7400e-003		120.6311

3.6 Paving - 2022**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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104

Summit Estates - San Diego County, Summer

3.6 Paving - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0491	0.0307	0.3700	1.1800e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		117.6840	117.6840	3.2000e-003		117.7639
Total	0.0491	0.0307	0.3700	1.1800e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		117.6840	117.6840	3.2000e-003		117.7639

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		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104

Summit Estates - San Diego County, Summer

3.6 Paving - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0491	0.0307	0.3700	1.1800e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		117.6840	117.6840	3.2000e-003		117.7639
Total	0.0491	0.0307	0.3700	1.1800e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		117.6840	117.6840	3.2000e-003		117.7639

3.7 Architectural Coating - 2022**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	25.9050					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	26.1096	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Summit Estates - San Diego County, Summer

3.7 Architectural Coating - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.5400e-003	4.1000e-003	0.0493	1.6000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		15.6912	15.6912	4.3000e-004		15.7019
Total	6.5400e-003	4.1000e-003	0.0493	1.6000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		15.6912	15.6912	4.3000e-004		15.7019

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	25.9050					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062
Total	25.9347	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062

Summit Estates - San Diego County, Summer

3.7 Architectural Coating - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.5400e-003	4.1000e-003	0.0493	1.6000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		15.6912	15.6912	4.3000e-004		15.7019
Total	6.5400e-003	4.1000e-003	0.0493	1.6000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		15.6912	15.6912	4.3000e-004		15.7019

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

Summit Estates - San Diego County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3514	1.2786	4.1791	0.0153	1.3799	0.0114	1.3913	0.3688	0.0106	0.3794		1,558.325 2	1,558.325 2	0.0756		1,560.214 9
Unmitigated	0.3514	1.2786	4.1791	0.0153	1.3799	0.0114	1.3913	0.3688	0.0106	0.3794		1,558.325 2	1,558.325 2	0.0756		1,560.214 9

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	218.96	227.93	198.26	620,413	620,413
Total	218.96	227.93	198.26	620,413	620,413

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
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

 Historical Energy Use: N

Summit Estates - San Diego County, Summer

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063
NaturalGas Unmitigated	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063

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					
Single Family Housing	1473.7	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063
Total		0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063

Summit Estates - San Diego County, Summer

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1.4737	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063
Total		0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398
Unmitigated	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398

Summit Estates - San Diego County, Summer

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1420					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	35.1991	0.6874	43.4495	0.0787		6.0920	6.0920		6.0920	6.0920	638.7498	267.8824	906.6322	0.5895	0.0502	936.3409
Landscaping	0.0572	0.0219	1.8980	1.0000e-004		0.0105	0.0105		0.0105	0.0105		3.4167	3.4167	3.2900e-003		3.4988
Total	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398

Summit Estates - San Diego County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1420					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	35.1991	0.6874	43.4495	0.0787		6.0920	6.0920		6.0920	6.0920	638.7498	267.8824	906.6322	0.5895	0.0502	936.3409
Landscaping	0.0572	0.0219	1.8980	1.0000e-004		0.0105	0.0105		0.0105	0.0105		3.4167	3.4167	3.2900e-003		3.4988
Total	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398

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

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

10.0 Stationary Equipment

Summit Estates - San Diego County, Summer

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

Summit Estates - San Diego County, Winter

Summit Estates
San Diego County, Winter**1.0 Project Characteristics**

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	23.00	Dwelling Unit	22.00	41,400.00	66

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Summit Estates - San Diego County, Winter

Project Characteristics -

Land Use - 22 acre site

Demolition - Demolition to remove 4,000 SF of facilities

Architectural Coating - Rule 67 Paint

Area Coating - Rule 67 Paint

Construction Off-road Equipment Mitigation - Tier 4

Construction Phase -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

Summit Estates - San Diego County, Winter

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
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
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.60	0.60
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	5.4350e-003	5.4790e-003
tblFleetMix	MCY	5.9380e-003	6.0160e-003
tblFleetMix	MDV	0.10	0.11

Summit Estates - San Diego County, Winter

tblFleetMix	MH	1.0560e-003	1.1220e-003
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	1.9340e-003	1.9260e-003
tblFleetMix	SBUS	7.5700e-004	7.5300e-004
tblFleetMix	UBUS	1.8880e-003	1.9320e-003
tblLandUse	LotAcreage	7.47	22.00

2.0 Emissions Summary

Summit Estates - San Diego County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	4.2696	46.4503	31.3771	0.0636	18.2141	2.0455	20.2596	9.9699	1.8819	11.8517	0.0000	6,159.953 0	6,159.953 0	1.9472	0.0000	6,208.632 8
2022	26.1170	15.8259	16.6032	0.0280	0.1232	0.8098	0.8891	0.0327	0.7619	0.7833	0.0000	2,669.476 2	2,669.476 2	0.7170	0.0000	2,684.922 0
Maximum	26.1170	46.4503	31.3771	0.0636	18.2141	2.0455	20.2596	9.9699	1.8819	11.8517	0.0000	6,159.953 0	6,159.953 0	1.9472	0.0000	6,208.632 8

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					
2021	0.8400	3.3505	33.4978	0.0636	18.2141	0.1027	18.2772	9.9699	0.1026	10.0329	0.0000	6,159.952 9	6,159.952 9	1.9472	0.0000	6,208.632 8
2022	25.9422	2.4449	17.7001	0.0280	0.1232	0.0416	0.1615	0.0327	0.0416	0.0709	0.0000	2,669.476 2	2,669.476 2	0.7170	0.0000	2,684.922 0
Maximum	25.9422	3.3505	33.4978	0.0636	18.2141	0.1027	18.2772	9.9699	0.1026	10.0329	0.0000	6,159.952 9	6,159.952 9	1.9472	0.0000	6,208.632 8

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	11.86	90.69	-6.71	0.00	0.00	94.95	12.81	0.00	94.55	20.03	0.00	0.00	0.00	0.00	0.00	0.00

Summit Estates - San Diego County, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398
Energy	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063
Mobile	0.3401	1.3174	4.0845	0.0145	1.3799	0.0114	1.3913	0.3688	0.0107	0.3794		1,478.7194	1,478.7194	0.0757		1,480.6121
Total	36.6402	2.1625	49.4897	0.0942	1.3799	6.1250	7.5048	0.3688	6.1242	6.4930	638.7498	1,923.3945	2,562.1443	0.6718	0.0534	2,594.8582

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	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398
Energy	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063
Mobile	0.3401	1.3174	4.0845	0.0145	1.3799	0.0114	1.3913	0.3688	0.0107	0.3794		1,478.7194	1,478.7194	0.0757		1,480.6121
Total	36.6402	2.1625	49.4897	0.0942	1.3799	6.1250	7.5048	0.3688	6.1242	6.4930	638.7498	1,923.3945	2,562.1443	0.6718	0.0534	2,594.8582

Summit Estates - San Diego County, Winter

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/28/2021	5	20	
2	Site Preparation	Site Preparation	1/29/2021	2/11/2021	5	10	
3	Grading	Grading	2/12/2021	4/1/2021	5	35	
4	Building Construction	Building Construction	4/2/2021	9/1/2022	5	370	
5	Paving	Paving	9/2/2022	9/29/2022	5	20	
6	Architectural Coating	Architectural Coating	9/30/2022	10/27/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 83,835; Residential Outdoor: 27,945; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0
(Architectural Coating – sqft)

OffRoad Equipment

Summit Estates - San Diego County, Winter

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

Trips and VMT

Summit Estates - San Diego County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	18.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	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

3.2 Demolition - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1993	0.0000	0.1993	0.0302	0.0000	0.0302			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	3.1651	31.4407	21.5650	0.0388	0.1993	1.5513	1.7507	0.0302	1.4411	1.4713		3,747.9449	3,747.9449	1.0549		3,774.3174

Summit Estates - San Diego County, Winter

3.2 Demolition - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.8700e-003	0.2327	0.0600	6.8000e-004	0.0157	7.2000e-004	0.0165	4.3100e-003	6.9000e-004	5.0000e-003		74.7962	74.7962	6.9400e-003		74.9698
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0588	0.0378	0.3740	1.1500e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		114.6821	114.6821	3.2900e-003		114.7645
Total	0.0657	0.2705	0.4340	1.8300e-003	0.1390	1.5700e-003	0.1405	0.0370	1.4700e-003	0.0385		189.4784	189.4784	0.0102		189.7343

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1993	0.0000	0.1993	0.0302	0.0000	0.0302			0.0000			0.0000
Off-Road	0.4623	2.0032	23.2798	0.0388		0.0616	0.0616		0.0616	0.0616	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	0.4623	2.0032	23.2798	0.0388	0.1993	0.0616	0.2610	0.0302	0.0616	0.0918	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174

Summit Estates - San Diego County, Winter

3.2 Demolition - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.8700e-003	0.2327	0.0600	6.8000e-004	0.0157	7.2000e-004	0.0165	4.3100e-003	6.9000e-004	5.0000e-003		74.7962	74.7962	6.9400e-003		74.9698
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0588	0.0378	0.3740	1.1500e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		114.6821	114.6821	3.2900e-003		114.7645
Total	0.0657	0.2705	0.4340	1.8300e-003	0.1390	1.5700e-003	0.1405	0.0370	1.4700e-003	0.0385		189.4784	189.4784	0.0102		189.7343

3.3 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	3.8882	40.4971	21.1543	0.0380	18.0663	2.0445	20.1107	9.9307	1.8809	11.8116		3,685.6569	3,685.6569	1.1920		3,715.4573

Summit Estates - San Diego County, Winter

3.3 Site Preparation - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174
Total	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		0.0621	0.0621		0.0621	0.0621	0.0000	3,685.6569	3,685.6569	1.1920		3,715,4573
Total	0.4656	2.0175	20.8690	0.0380	18.0663	0.0621	18.1283	9.9307	0.0621	9.9928	0.0000	3,685.6569	3,685.6569	1.1920		3,715,4573

Summit Estates - San Diego County, Winter

3.3 Site Preparation - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174
Total	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174

3.4 Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	4.1912	46.3998	30.8785	0.0620	8.6733	1.9853	10.6587	3.5965	1.8265	5.4230		6,007.0434	6,007.0434	1.9428		6,055.6134

Summit Estates - San Diego County, Winter

3.4 Grading - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0505	0.4987	1.5300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		152.9095	152.9095	4.3900e-003		153.0193
Total	0.0785	0.0505	0.4987	1.5300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		152.9095	152.9095	4.3900e-003		153.0193

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	0.7616	3.3000	32.9991	0.0620	8.6733	0.1015	8.7749	3.5965	0.1015	3.6980	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134

Summit Estates - San Diego County, Winter

3.4 Grading - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0785	0.0505	0.4987	1.5300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		152.9095	152.9095	4.3900e-003		153.0193
Total	0.0785	0.0505	0.4987	1.5300e-003	0.1643	1.1300e-003	0.1654	0.0436	1.0500e-003	0.0446		152.9095	152.9095	4.3900e-003		153.0193

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

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

Summit Estates - San Diego County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3700e-003	0.2031	0.0578	5.3000e-004	0.0135	4.5000e-004	0.0140	3.9000e-003	4.3000e-004	4.3200e-003		56.7639	56.7639	4.4200e-003		56.8744
Worker	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	0.0378	0.2233	0.2573	1.1400e-003	0.0793	9.0000e-004	0.0802	0.0213	8.5000e-004	0.0222		117.9277	117.9277	6.1800e-003		118.0822

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	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

Summit Estates - San Diego County, Winter

3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3700e-003	0.2031	0.0578	5.3000e-004	0.0135	4.5000e-004	0.0140	3.9000e-003	4.3000e-004	4.3200e-003		56.7639	56.7639	4.4200e-003		56.8744
Worker	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	0.0378	0.2233	0.2573	1.1400e-003	0.0793	9.0000e-004	0.0802	0.0213	8.5000e-004	0.0222		117.9277	117.9277	6.1800e-003		118.0822

3.5 Building Construction - 2022**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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322

Summit Estates - San Diego County, Winter

3.5 Building Construction - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9300e-003	0.1918	0.0547	5.2000e-004	0.0135	3.8000e-004	0.0139	3.9000e-003	3.7000e-004	4.2600e-003		56.2205	56.2205	4.2800e-003		56.3276
Worker	0.0297	0.0184	0.1851	5.9000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.1000e-004	0.0178		58.9221	58.9221	1.6100e-003		58.9623
Total	0.0357	0.2102	0.2398	1.1100e-003	0.0793	8.2000e-004	0.0801	0.0213	7.8000e-004	0.0221		115.1426	115.1426	5.8900e-003		115.2898

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	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322

Summit Estates - San Diego County, Winter

3.5 Building Construction - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9300e-003	0.1918	0.0547	5.2000e-004	0.0135	3.8000e-004	0.0139	3.9000e-003	3.7000e-004	4.2600e-003		56.2205	56.2205	4.2800e-003		56.3276
Worker	0.0297	0.0184	0.1851	5.9000e-004	0.0657	4.4000e-004	0.0662	0.0174	4.1000e-004	0.0178		58.9221	58.9221	1.6100e-003		58.9623
Total	0.0357	0.2102	0.2398	1.1100e-003	0.0793	8.2000e-004	0.0801	0.0213	7.8000e-004	0.0221		115.1426	115.1426	5.8900e-003		115.2898

3.6 Paving - 2022**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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104

Summit Estates - San Diego County, Winter

3.6 Paving - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0558	0.0345	0.3470	1.1100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		110.4788	110.4788	3.0200e-003		110.5543
Total	0.0558	0.0345	0.3470	1.1100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		110.4788	110.4788	3.0200e-003		110.5543

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		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104

Summit Estates - San Diego County, Winter

3.6 Paving - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0558	0.0345	0.3470	1.1100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		110.4788	110.4788	3.0200e-003		110.5543
Total	0.0558	0.0345	0.3470	1.1100e-003	0.1232	8.3000e-004	0.1241	0.0327	7.7000e-004	0.0335		110.4788	110.4788	3.0200e-003		110.5543

3.7 Architectural Coating - 2022**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	25.9050					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	26.1096	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062

Summit Estates - San Diego County, Winter

3.7 Architectural Coating - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.4300e-003	4.6000e-003	0.0463	1.5000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		14.7305	14.7305	4.0000e-004		14.7406
Total	7.4300e-003	4.6000e-003	0.0463	1.5000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		14.7305	14.7305	4.0000e-004		14.7406

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	25.9050					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062
Total	25.9347	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062

Summit Estates - San Diego County, Winter

3.7 Architectural Coating - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.4300e-003	4.6000e-003	0.0463	1.5000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		14.7305	14.7305	4.0000e-004		14.7406
Total	7.4300e-003	4.6000e-003	0.0463	1.5000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		14.7305	14.7305	4.0000e-004		14.7406

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

Summit Estates - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3401	1.3174	4.0845	0.0145	1.3799	0.0114	1.3913	0.3688	0.0107	0.3794		1,478.719 4	1,478.719 4	0.0757		1,480.612 1
Unmitigated	0.3401	1.3174	4.0845	0.0145	1.3799	0.0114	1.3913	0.3688	0.0107	0.3794		1,478.719 4	1,478.719 4	0.0757		1,480.612 1

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	218.96	227.93	198.26	620,413	620,413
Total	218.96	227.93	198.26	620,413	620,413

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

 Historical Energy Use: N

Summit Estates - San Diego County, Winter

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063
NaturalGas Unmitigated	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063

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					
Single Family Housing	1473.7	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063
Total		0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063

Summit Estates - San Diego County, Winter

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	1.4737	0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063
Total		0.0159	0.1358	0.0578	8.7000e-004		0.0110	0.0110		0.0110	0.0110		173.3760	173.3760	3.3200e-003	3.1800e-003	174.4063

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398
Unmitigated	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398

Summit Estates - San Diego County, Winter

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1420					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	35.1991	0.6874	43.4495	0.0787		6.0920	6.0920		6.0920	6.0920	638.7498	267.8824	906.6322	0.5895	0.0502	936.3409
Landscaping	0.0572	0.0219	1.8980	1.0000e-004		0.0105	0.0105		0.0105	0.0105		3.4167	3.4167	3.2900e-003		3.4988
Total	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398

Summit Estates - San Diego County, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1420					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8860					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	35.1991	0.6874	43.4495	0.0787		6.0920	6.0920		6.0920	6.0920	638.7498	267.8824	906.6322	0.5895	0.0502	936.3409
Landscaping	0.0572	0.0219	1.8980	1.0000e-004		0.0105	0.0105		0.0105	0.0105		3.4167	3.4167	3.2900e-003		3.4988
Total	36.2842	0.7093	45.3474	0.0788		6.1025	6.1025		6.1025	6.1025	638.7498	271.2991	910.0489	0.5928	0.0502	939.8398

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

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

10.0 Stationary Equipment

Summit Estates - San Diego County, Winter

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

Summit Estates - San Diego County, Annual

Summit Estates

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	23.00	Dwelling Unit	22.00	41,400.00	66

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 22 acre site

Demolition - Demolition to remove 4,000 SF of facilities

Architectural Coating - Rule 67 Paint

Area Coating - Rule 67 Paint

Construction Off-road Equipment Mitigation - Tier 4

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00

Summit Estates - San Diego County, Annual

[illegible]

Summit Estates - San Diego County, Annual

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
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.60	0.60
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.18	0.18
tblFleetMix	LHD1	0.01	0.02
tblFleetMix	LHD2	5.4350e-003	5.4790e-003
tblFleetMix	MCY	5.9380e-003	6.0160e-003
tblFleetMix	MDV	0.10	0.11
tblFleetMix	MH	1.0560e-003	1.1220e-003
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	1.9340e-003	1.9260e-003
tblFleetMix	SBUS	7.5700e-004	7.5300e-004
tblFleetMix	UBUS	1.8880e-003	1.9320e-003
tblLandUse	LotAcreage	7.47	22.00

2.0 Emissions Summary

Summit Estates - San Diego County, Annual

2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.3162	3.0631	2.5264	4.4700e-003	0.2566	0.1546	0.4111	0.1162	0.1442	0.2605	0.0000	388.5243	388.5243	0.1013	0.0000	391.0569
2022	0.4239	1.5027	1.6122	2.7100e-003	8.1000e-003	0.0770	0.0851	2.1800e-003	0.0723	0.0745	0.0000	234.5319	234.5319	0.0554	0.0000	235.9176
Maximum	0.4239	3.0631	2.5264	4.4700e-003	0.2566	0.1546	0.4111	0.1162	0.1442	0.2605	0.0000	388.5243	388.5243	0.1013	0.0000	391.0569

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					
2021	0.0579	0.3328	2.6660	4.4700e-003	0.2566	6.8300e-003	0.2634	0.1162	6.8200e-003	0.1231	0.0000	388.5238	388.5238	0.1013	0.0000	391.0564
2022	0.2940	0.2267	1.7349	2.7100e-003	8.1000e-003	4.0400e-003	0.0121	2.1800e-003	4.0400e-003	6.2200e-003	0.0000	234.5316	234.5316	0.0554	0.0000	235.9173
Maximum	0.2940	0.3328	2.6660	4.4700e-003	0.2566	6.8300e-003	0.2634	0.1162	6.8200e-003	0.1231	0.0000	388.5238	388.5238	0.1013	0.0000	391.0564

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	52.46	87.75	-6.34	0.00	0.00	95.30	44.47	0.00	94.99	61.41	0.00	0.00	0.00	0.00	0.00	0.00

Summit Estates - San Diego County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2021	3-31-2021	1.4414	0.1128
2	4-1-2021	6-30-2021	0.6477	0.0921
3	7-1-2021	9-30-2021	0.6436	0.0926
4	10-1-2021	12-31-2021	0.6438	0.0928
5	1-1-2022	3-31-2022	0.5647	0.0903
6	4-1-2022	6-30-2022	0.5708	0.0911
7	7-1-2022	9-30-2022	0.5281	0.0881
		Highest	1.4414	0.1128

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6359	0.0302	1.9522	3.2400e-003		0.2507	0.2507		0.2507	0.2507	23.7580	10.2427	34.0008	0.0222	1.8700e-003	35.1125
Energy	2.9000e-003	0.0248	0.0106	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	89.5579	89.5579	3.0000e-003	1.0300e-003	89.9407
Mobile	0.0576	0.2290	0.7021	2.5400e-003	0.2338	1.9800e-003	0.2358	0.0626	1.8400e-003	0.0645	0.0000	234.9162	234.9162	0.0118	0.0000	235.2114
Waste						0.0000	0.0000		0.0000	0.0000	5.4929	0.0000	5.4929	0.3246	0.0000	13.6085
Water						0.0000	0.0000		0.0000	0.0000	0.4754	9.8070	10.2825	0.0492	1.2300e-003	11.8810
Total	1.6964	0.2839	2.6649	5.9400e-003	0.2338	0.2547	0.4885	0.0626	0.2546	0.3172	29.7264	344.5239	374.2503	0.4108	4.1300e-003	385.7541

Summit Estates - San Diego County, Annual

2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6359	0.0302	1.9522	3.2400e-003		0.2507	0.2507		0.2507	0.2507	23.7580	10.2427	34.0008	0.0222	1.8700e-003	35.1125
Energy	2.9000e-003	0.0248	0.0106	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	89.5579	89.5579	3.0000e-003	1.0300e-003	89.9407
Mobile	0.0576	0.2290	0.7021	2.5400e-003	0.2338	1.9800e-003	0.2358	0.0626	1.8400e-003	0.0645	0.0000	234.9162	234.9162	0.0118	0.0000	235.2114
Waste						0.0000	0.0000		0.0000	0.0000	5.4929	0.0000	5.4929	0.3246	0.0000	13.6085
Water						0.0000	0.0000		0.0000	0.0000	0.4754	9.8070	10.2825	0.0492	1.2300e-003	11.8810
Total	1.6964	0.2839	2.6649	5.9400e-003	0.2338	0.2547	0.4885	0.0626	0.2546	0.3172	29.7264	344.5239	374.2503	0.4108	4.1300e-003	385.7541

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

3.0 Construction Detail**Construction Phase**

Summit Estates - San Diego County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2021	1/28/2021	5	20	
2	Site Preparation	Site Preparation	1/29/2021	2/11/2021	5	10	
3	Grading	Grading	2/12/2021	4/1/2021	5	35	
4	Building Construction	Building Construction	4/2/2021	9/1/2022	5	370	
5	Paving	Paving	9/2/2022	9/29/2022	5	20	
6	Architectural Coating	Architectural Coating	9/30/2022	10/27/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 83,835; Residential Outdoor: 27,945; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0
(Architectural Coating – sqft)

OffRoad Equipment

Summit Estates - San Diego County, Annual

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

Trips and VMT

Summit Estates - San Diego County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	18.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	8.00	2.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	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

3.2 Demolition - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9900e-003	0.0000	1.9900e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0317	0.3144	0.2157	3.9000e-004		0.0155	0.0155		0.0144	0.0144	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400
Total	0.0317	0.3144	0.2157	3.9000e-004	1.9900e-003	0.0155	0.0175	3.0000e-004	0.0144	0.0147	0.0000	34.0008	34.0008	9.5700e-003	0.0000	34.2400

Summit Estates - San Diego County, Annual

3.2 Demolition - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-005	2.3500e-003	5.8000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6855	0.6855	6.0000e-005	0.0000	0.6870
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	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	5.9000e-004	2.7200e-003	4.3300e-003	2.0000e-005	1.3500e-003	2.0000e-005	1.3700e-003	3.6000e-004	2.0000e-005	3.8000e-004	0.0000	1.7362	1.7362	9.0000e-005	0.0000	1.7386

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					1.9900e-003	0.0000	1.9900e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0200	0.2328	3.9000e-004		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400
Total	4.6200e-003	0.0200	0.2328	3.9000e-004	1.9900e-003	6.2000e-004	2.6100e-003	3.0000e-004	6.2000e-004	9.2000e-004	0.0000	34.0007	34.0007	9.5700e-003	0.0000	34.2400

Summit Estates - San Diego County, Annual

3.2 Demolition - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-005	2.3500e-003	5.8000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6855	0.6855	6.0000e-005	0.0000	0.6870
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	5.2000e-004	3.7000e-004	3.7500e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0508	1.0508	3.0000e-005	0.0000	1.0515
Total	5.9000e-004	2.7200e-003	4.3300e-003	2.0000e-005	1.3500e-003	2.0000e-005	1.3700e-003	3.6000e-004	2.0000e-005	3.8000e-004	0.0000	1.7362	1.7362	9.0000e-005	0.0000	1.7386

3.3 Site Preparation - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0194	0.2025	0.1058	1.9000e-004		0.0102	0.0102		9.4000e-003	9.4000e-003	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530
Total	0.0194	0.2025	0.1058	1.9000e-004	0.0903	0.0102	0.1006	0.0497	9.4000e-003	0.0591	0.0000	16.7179	16.7179	5.4100e-003	0.0000	16.8530

Summit Estates - San Diego County, Annual

3.3 Site Preparation - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.2500e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6305	0.6305	2.0000e-005	0.0000	0.6309
Total	3.1000e-004	2.2000e-004	2.2500e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6305	0.6305	2.0000e-005	0.0000	0.6309

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					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		3.1000e-004	3.1000e-004		3.1000e-004	3.1000e-004	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530
Total	2.3300e-003	0.0101	0.1043	1.9000e-004	0.0903	3.1000e-004	0.0906	0.0497	3.1000e-004	0.0500	0.0000	16.7178	16.7178	5.4100e-003	0.0000	16.8530

Summit Estates - San Diego County, Annual

3.3 Site Preparation - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.2500e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6305	0.6305	2.0000e-005	0.0000	0.6309
Total	3.1000e-004	2.2000e-004	2.2500e-003	1.0000e-005	7.2000e-004	1.0000e-005	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.6305	0.6305	2.0000e-005	0.0000	0.6309

3.4 Grading - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0734	0.8120	0.5404	1.0900e-003		0.0347	0.0347		0.0320	0.0320	0.0000	95.3662	95.3662	0.0308	0.0000	96.1373
Total	0.0734	0.8120	0.5404	1.0900e-003	0.1518	0.0347	0.1865	0.0629	0.0320	0.0949	0.0000	95.3662	95.3662	0.0308	0.0000	96.1373

Summit Estates - San Diego County, Annual

3.4 Grading - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	8.7000e-004	8.7400e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8300e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.4518	2.4518	7.0000e-005	0.0000	2.4536
Total	1.2200e-003	8.7000e-004	8.7400e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8300e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.4518	2.4518	7.0000e-005	0.0000	2.4536

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					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.0578	0.5775	1.0900e-003		1.7800e-003	1.7800e-003		1.7800e-003	1.7800e-003	0.0000	95.3661	95.3661	0.0308	0.0000	96.1372
Total	0.0133	0.0578	0.5775	1.0900e-003	0.1518	1.7800e-003	0.1536	0.0629	1.7800e-003	0.0647	0.0000	95.3661	95.3661	0.0308	0.0000	96.1372

Summit Estates - San Diego County, Annual

3.4 Grading - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	8.7000e-004	8.7400e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8300e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.4518	2.4518	7.0000e-005	0.0000	2.4536
Total	1.2200e-003	8.7000e-004	8.7400e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8300e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.4518	2.4518	7.0000e-005	0.0000	2.4536

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1863	1.7084	1.6244	2.6400e-003		0.0939	0.0939		0.0883	0.0883	0.0000	227.0045	227.0045	0.0548	0.0000	228.3737
Total	0.1863	1.7084	1.6244	2.6400e-003		0.0939	0.0939		0.0883	0.0883	0.0000	227.0045	227.0045	0.0548	0.0000	228.3737

Summit Estates - San Diego County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1000e-004	0.0201	5.3700e-003	5.0000e-005	1.3000e-003	4.0000e-005	1.3400e-003	3.8000e-004	4.0000e-005	4.2000e-004	0.0000	5.1242	5.1242	3.8000e-004	0.0000	5.1337
Worker	2.7300e-003	1.9400e-003	0.0196	6.0000e-005	6.2900e-003	4.0000e-005	6.3300e-003	1.6700e-003	4.0000e-005	1.7100e-003	0.0000	5.4921	5.4921	1.6000e-004	0.0000	5.4960
Total	3.3400e-003	0.0221	0.0250	1.1000e-004	7.5900e-003	8.0000e-005	7.6700e-003	2.0500e-003	8.0000e-005	2.1300e-003	0.0000	10.6163	10.6163	5.4000e-004	0.0000	10.6298

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	0.0321	0.2190	1.7111	2.6400e-003		4.0000e-003	4.0000e-003		4.0000e-003	4.0000e-003	0.0000	227.0043	227.0043	0.0548	0.0000	228.3734
Total	0.0321	0.2190	1.7111	2.6400e-003		4.0000e-003	4.0000e-003		4.0000e-003	4.0000e-003	0.0000	227.0043	227.0043	0.0548	0.0000	228.3734

Summit Estates - San Diego County, Annual

3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.1000e-004	0.0201	5.3700e-003	5.0000e-005	1.3000e-003	4.0000e-005	1.3400e-003	3.8000e-004	4.0000e-005	4.2000e-004	0.0000	5.1242	5.1242	3.8000e-004	0.0000	5.1337
Worker	2.7300e-003	1.9400e-003	0.0196	6.0000e-005	6.2900e-003	4.0000e-005	6.3300e-003	1.6700e-003	4.0000e-005	1.7100e-003	0.0000	5.4921	5.4921	1.6000e-004	0.0000	5.4960
Total	3.3400e-003	0.0221	0.0250	1.1000e-004	7.5900e-003	8.0000e-005	7.6700e-003	2.0500e-003	8.0000e-005	2.1300e-003	0.0000	10.6163	10.6163	5.4000e-004	0.0000	10.6298

3.5 Building Construction - 2022**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	0.1484	1.3586	1.4236	2.3400e-003		0.0704	0.0704		0.0662	0.0662	0.0000	201.6010	201.6010	0.0483	0.0000	202.8084
Total	0.1484	1.3586	1.4236	2.3400e-003		0.0704	0.0704		0.0662	0.0662	0.0000	201.6010	201.6010	0.0483	0.0000	202.8084

Summit Estates - San Diego County, Annual

3.5 Building Construction - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-004	0.0169	4.5100e-003	5.0000e-005	1.1500e-003	3.0000e-005	1.1900e-003	3.3000e-004	3.0000e-005	3.6000e-004	0.0000	4.5060	4.5060	3.3000e-004	0.0000	4.5142
Worker	2.2900e-003	1.5700e-003	0.0161	5.0000e-005	5.5800e-003	4.0000e-005	5.6200e-003	1.4800e-003	4.0000e-005	1.5200e-003	0.0000	4.6969	4.6969	1.3000e-004	0.0000	4.7001
Total	2.7900e-003	0.0185	0.0207	1.0000e-004	6.7300e-003	7.0000e-005	6.8100e-003	1.8100e-003	7.0000e-005	1.8800e-003	0.0000	9.2029	9.2029	4.6000e-004	0.0000	9.2143

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	0.0285	0.1944	1.5190	2.3400e-003		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	201.6007	201.6007	0.0483	0.0000	202.8082
Total	0.0285	0.1944	1.5190	2.3400e-003		3.5500e-003	3.5500e-003		3.5500e-003	3.5500e-003	0.0000	201.6007	201.6007	0.0483	0.0000	202.8082

Summit Estates - San Diego County, Annual

3.5 Building Construction - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-004	0.0169	4.5100e-003	5.0000e-005	1.1500e-003	3.0000e-005	1.1900e-003	3.3000e-004	3.0000e-005	3.6000e-004	0.0000	4.5060	4.5060	3.3000e-004	0.0000	4.5142
Worker	2.2900e-003	1.5700e-003	0.0161	5.0000e-005	5.5800e-003	4.0000e-005	5.6200e-003	1.4800e-003	4.0000e-005	1.5200e-003	0.0000	4.6969	4.6969	1.3000e-004	0.0000	4.7001
Total	2.7900e-003	0.0185	0.0207	1.0000e-004	6.7300e-003	7.0000e-005	6.8100e-003	1.8100e-003	7.0000e-005	1.8800e-003	0.0000	9.2029	9.2029	4.6000e-004	0.0000	9.2143

3.6 Paving - 2022**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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895

Summit Estates - San Diego County, Annual

3.6 Paving - 2022**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.4000e-004	3.4800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0123	1.0123	3.0000e-005	0.0000	1.0130
Total	4.9000e-004	3.4000e-004	3.4800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0123	1.0123	3.0000e-005	0.0000	1.0130

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		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.8000e-003	0.0122	0.1730	2.3000e-004		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895

Summit Estates - San Diego County, Annual

3.6 Paving - 2022**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.4000e-004	3.4800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0123	1.0123	3.0000e-005	0.0000	1.0130
Total	4.9000e-004	3.4000e-004	3.4800e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	1.0123	1.0123	3.0000e-005	0.0000	1.0130

3.7 Architectural Coating - 2022**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	0.2591					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.2611	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

Summit Estates - San Diego County, Annual

3.7 Architectural Coating - 2022**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	7.0000e-005	5.0000e-005	4.6000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1350	0.1350	0.0000	0.0000	0.1351
Total	7.0000e-005	5.0000e-005	4.6000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1350	0.1350	0.0000	0.0000	0.1351

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	0.2591					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0000e-004	1.2900e-003	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	0.2594	1.2900e-003	0.0183	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574

Summit Estates - San Diego County, Annual

3.7 Architectural Coating - 2022**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	7.0000e-005	5.0000e-005	4.6000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1350	0.1350	0.0000	0.0000	0.1351
Total	7.0000e-005	5.0000e-005	4.6000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1350	0.1350	0.0000	0.0000	0.1351

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

Summit Estates - San Diego County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0576	0.2290	0.7021	2.5400e-003	0.2338	1.9800e-003	0.2358	0.0626	1.8400e-003	0.0645	0.0000	234.9162	234.9162	0.0118	0.0000	235.2114
Unmitigated	0.0576	0.2290	0.7021	2.5400e-003	0.2338	1.9800e-003	0.2358	0.0626	1.8400e-003	0.0645	0.0000	234.9162	234.9162	0.0118	0.0000	235.2114

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	218.96	227.93	198.26	620,413	620,413
Total	218.96	227.93	198.26	620,413	620,413

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Single Family Housing	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

Summit Estates - San Diego County, Annual

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	60.8535	60.8535	2.4500e-003	5.1000e-004	61.0658
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	60.8535	60.8535	2.4500e-003	5.1000e-004	61.0658
NaturalGas Mitigated	2.9000e-003	0.0248	0.0106	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	28.7044	28.7044	5.5000e-004	5.3000e-004	28.8749
NaturalGas Unmitigated	2.9000e-003	0.0248	0.0106	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	28.7044	28.7044	5.5000e-004	5.3000e-004	28.8749

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					
Single Family Housing	537899	2.9000e-003	0.0248	0.0106	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	28.7044	28.7044	5.5000e-004	5.3000e-004	28.8749
Total		2.9000e-003	0.0248	0.0106	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	28.7044	28.7044	5.5000e-004	5.3000e-004	28.8749

Summit Estates - San Diego County, Annual

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	537899	2.9000e-003	0.0248	0.0106	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	28.7044	28.7044	5.5000e-004	5.3000e-004	28.8749
Total		2.9000e-003	0.0248	0.0106	1.6000e-004		2.0000e-003	2.0000e-003		2.0000e-003	2.0000e-003	0.0000	28.7044	28.7044	5.5000e-004	5.3000e-004	28.8749

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	186205	60.8535	2.4500e-003	5.1000e-004	61.0658
Total		60.8535	2.4500e-003	5.1000e-004	61.0658

Summit Estates - San Diego County, Annual

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	186205	60.8535	2.4500e-003	5.1000e-004	61.0658
Total		60.8535	2.4500e-003	5.1000e-004	61.0658

6.0 Area Detail**6.1 Mitigation Measures Area**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6359	0.0302	1.9522	3.2400e-003		0.2507	0.2507		0.2507	0.2507	23.7580	10.2427	34.0008	0.0222	1.8700e-003	35.1125
Unmitigated	1.6359	0.0302	1.9522	3.2400e-003		0.2507	0.2507		0.2507	0.2507	23.7580	10.2427	34.0008	0.0222	1.8700e-003	35.1125

Summit Estates - San Diego County, Annual

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0259					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4432	0.0282	1.7814	3.2300e-003		0.2498	0.2498		0.2498	0.2498	23.7580	9.9638	33.7218	0.0219	1.8700e-003	34.8268
Landscaping	5.1500e-003	1.9700e-003	0.1708	1.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	0.2790	0.2790	2.7000e-004	0.0000	0.2857
Total	1.6359	0.0302	1.9523	3.2400e-003		0.2507	0.2507		0.2507	0.2507	23.7580	10.2427	34.0008	0.0222	1.8700e-003	35.1125

Summit Estates - San Diego County, Annual

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	0.0259					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1617					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4432	0.0282	1.7814	3.2300e-003		0.2498	0.2498		0.2498	0.2498	23.7580	9.9638	33.7218	0.0219	1.8700e-003	34.8268
Landscaping	5.1500e-003	1.9700e-003	0.1708	1.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	0.2790	0.2790	2.7000e-004	0.0000	0.2857
Total	1.6359	0.0302	1.9523	3.2400e-003		0.2507	0.2507		0.2507	0.2507	23.7580	10.2427	34.0008	0.0222	1.8700e-003	35.1125

7.0 Water Detail**7.1 Mitigation Measures Water**

Summit Estates - San Diego County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.2825	0.0492	1.2300e-003	11.8810
Unmitigated	10.2825	0.0492	1.2300e-003	11.8810

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.49854 / 0.944733	10.2825	0.0492	1.2300e-003	11.8810
Total		10.2825	0.0492	1.2300e-003	11.8810

Summit Estates - San Diego County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	1.49854 / 0.944733	10.2825	0.0492	1.2300e-003	11.8810
Total		10.2825	0.0492	1.2300e-003	11.8810

8.0 Waste Detail

8.1 Mitigation Measures Waste**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.4929	0.3246	0.0000	13.6085
Unmitigated	5.4929	0.3246	0.0000	13.6085

Summit Estates - San Diego County, Annual

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	27.06	5.4929	0.3246	0.0000	13.6085
Total		5.4929	0.3246	0.0000	13.6085

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	27.06	5.4929	0.3246	0.0000	13.6085
Total		5.4929	0.3246	0.0000	13.6085

9.0 Operational Offroad

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

Summit Estates - San Diego County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

ATTACHMENT B

AERMOD for DPM PM₁₀

1 AERMOD PRIME - (DATED 19191)
AERMODPrMSPx VERSION
(C) COPYRIGHT 1998-2017, Trinity Consultants

Run Began on 4/15/2020 at 11:33:26

** BREEZE AERMOD
** Trinity Consultants
** VERSION 9.0

CO STARTING
CO TITLEONE PM10 Exhaust Unmitigated
CO MODELOPT DEFAULT CONC NODRYDPLT NOWETDPLT
CO RUNORNOT RUN
CO AVERTIME ANNUAL
CO POLLUTID PM10
CO FINISHED

SO STARTING
SO ELEVUNIT METERS
SO LOCATION N2Q97000 AREAPOLY 496051 3662142.8 0
** SRCDESCR Area Source
SO SRCPARAM N2Q97000 4.1E-08 3 14 1
SO AREAVERT N2Q97000 496051 3662142.8 496013.9 3662062.4 496009.2 3662047.9 496004.5 3662026.3
SO AREAVERT N2Q97000 496006.1 3662000.2 496031.5 3661924.2 496094.4 3661886.1 496161.9 3661853.5
SO AREAVERT N2Q97000 496407 3661937 496471.7 3661932.3 496430.8 3662062.4 496289.8 3662167.9
SO AREAVERT N2Q97000 496216.9 3662046.7 496051 3662142.8
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE ELEVUNIT METERS
RE DISCCART 496509.1 3662103 0 0
** SENSITIV
** RCPDESCR R1
RE DISCCART 496496.7 3661921 0 0
** SENSITIV
** RCPDESCR R2
RE DISCCART 496295.4 3661833.8 0 0
** SENSITIV
** RCPDESCR R3
RE DISCCART 496026.6 3661891 0 0
** SENSITIV
** RCPDESCR R4
RE DISCCART 495980 3662038.9 0 0
** SENSITIV
** RCPDESCR R5
RE DISCCART 496131.3 3662152.6 0 0
** SENSITIV
** RCPDESCR R6
RE DISCCART 496180 3662100 0 0
** SENSITIV
** RCPDESCR R7
RE FINISHED

ME STARTING
ME SURFFILE "C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.SFC"
** SURFFILE "C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.SFC"
ME PROFFILE "C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.PFL"
** PROFFILE "C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.PFL"
ME SURFDATA 53120 2012
ME UAIRDATA 3190 2012
ME SITEDATA 00001002 2012
ME PROFBASE 0 METERS
ME FINISHED

OU STARTING
OU FILEFORM FIX

OU PLOTFILE ANNUAL ALL ALL`ANNUAL.plt 10000
OU FINISHED

** It is recommended that the user not edit any data below this line

** AMPTYPE
** AMPDATUM -1
** AMPZONE -1
** AMPHEMISPHERE

** PROJECTIONWKT
PROJCS["UTM_6326_Zone11",GEOGCS["WGS_84",DATUM["World_Geodetic_System_1984",SPHEROID["WGS_1984",6378137,298.2572235
63],TOWGS84[0,0,0,0,0,0,0]],PRIMEM["Greenwich",0],UNIT["Degree",0.0174532925199433]],PROJECTION["Universal_Transver
se_Mercator"],PARAMETER["Zone",11],UNIT["Meter",1,AUTHORITY["EPSG","9001"]]]]
** PROJECTION UTM
** DATUM WGE
** UNITS METER
** ZONE 11
** HEMISPHERE N
** ORIGINLON 0
** ORIGINLAT 0
** PARALLEL1 0
** PARALLEL2 0
** AZIMUTH 0
** SCALEFACT 0
** FALSEEAST 0
** FALSENORTH 0

** POSTFMT UNFORM
** TEMPLATE USERDEFINED
** AERMODEXE AERMOD_BREEZE_19191_64.EXE
** AERMAPEXE AERMAP_EPA_18081_64.EXE

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 2 Warning Message(s)
A Total of 0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
ME W186 66 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.40
MX W403 66 PFLCNV: Turbulence data is being used w/o ADJ_U* option SigA Data

*** SETUP Finishes Successfully ***

▲ *** AERMOD - VERSION 19191 *** *** PM10 Exhaust Unmitigated ***
04/15/20
*** AERMET - VERSION 15181 *** ***
11:33:26

PAGE 1
*** MODELOPTs: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** MODEL SETUP OPTIONS SUMMARY ***

- - - - -

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --

**NO GAS DEPOSITION Data Provided.

**NO PARTICLE DEPOSITION Data Provided.

**Model Uses NO DRY DEPLETION. DRYDPLT = F

**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:

1. Stack-tip Downwash.
2. Model Accounts for ELEVated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.

**Other Options Specified:

CCVR_Sub - Meteorological data includes CCVR substitutions

TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM10

**Model Calculates ANNUAL Averages Only

**This Run Includes: 1 Source(s); 1 Source Group(s); and 7 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 1 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 15181

**Output Options Selected:

Model Outputs Tables of ANNUAL Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 0.00 ; Decay Coef. = 0.000 ; Rot. Angle
= 0.0

Emission Units = GRAMS/SEC ; Emission Rate Unit Factor =
0.10000E+07

Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.5 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

▲ *** AERMOD - VERSION 19191 *** *** PM10 Exhaust Unmitigated
04/15/20

*** AERMET - VERSION 15181 *** ***

11:33:26

PAGE 2

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
N2Q97000	0	0.41000E-07	496051.0	3662142.8	0.0	3.00	14	1.00	NO	
*** AERMOD - VERSION 19191 *** PM10 Exhaust Unmitigated ***										
04/15/20										
*** AERMET - VERSION 15181 *** ***										

11:33:26

PAGE 3

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	N2Q97000
*** AERMOD - VERSION 19191 *** PM10 Exhaust Unmitigated ***	
04/15/20	
*** AERMET - VERSION 15181 *** ***	

11:33:26

PAGE 4

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,	
*** AERMOD - VERSION 19191 *** PM10 Exhaust Unmitigated ***	
04/15/20	

*** AERMET - VERSION 15181 ***
11:33:26

PAGE 5

*** MODELOPTs: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.SFC Met Version:
15181

Profile file: C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.PFL

Surface format: FREE

Profile format: FREE

Surface station no.: 53120

Name: UNKNOWN

Year: 2012

Upper air station no.: 3190

Name: UNKNOWN

Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA
12	01	01	1	01	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	51.	10.0	282.5	10.0		
12	01	01	1	02	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	64.	10.0	281.9	10.0		
12	01	01	1	03	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	31.	10.0	280.9	10.0		
12	01	01	1	04	-2.9	0.056	-9.000	-9.000	-999.	32.	5.5	0.15	1.10	1.00	1.18	130.	10.0	280.4	10.0		
12	01	01	1	05	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	47.	10.0	280.4	10.0		
12	01	01	1	06	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	39.	10.0	279.8	10.0		
12	01	01	1	07	-0.7	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	60.	10.0	279.2	10.0		
12	01	01	1	08	-0.5	0.029	-9.000	-9.000	-999.	12.	4.0	0.47	1.10	0.50	0.44	42.	10.0	280.4	10.0		
12	01	01	1	09	33.3	0.106	0.323	0.014	36.	83.	-3.2	0.47	1.10	0.30	0.44	44.	10.0	285.4	10.0		
12	01	01	1	10	85.9	0.121	0.634	0.011	106.	101.	-1.8	0.48	1.10	0.23	0.44	232.	10.0	291.4	10.0		
12	01	01	1	11	123.6	0.252	0.982	0.005	273.	303.	-11.5	0.48	1.10	0.21	1.34	242.	10.0	297.5	10.0		
12	01	01	1	12	141.2	0.255	1.253	0.005	496.	309.	-10.4	0.48	1.10	0.20	1.34	249.	10.0	299.8	10.0		
12	01	01	1	13	139.0	0.308	1.399	0.005	700.	410.	-18.6	0.48	1.10	0.20	1.78	244.	10.0	300.4	10.0		
12	01	01	1	14	118.4	0.303	1.510	0.005	1033.	401.	-20.9	0.48	1.10	0.21	1.78	241.	10.0	301.4	10.0		
12	01	01	1	15	79.3	0.291	1.390	0.005	1204.	377.	-27.6	0.48	1.10	0.24	1.78	260.	10.0	301.4	10.0		
12	01	01	1	16	24.5	0.162	0.951	0.005	1244.	167.	-15.4	0.51	1.10	0.34	0.89	292.	10.0	299.8	10.0		
12	01	01	1	17	-2.5	0.060	-9.000	-9.000	-999.	45.	7.5	0.51	1.10	0.61	0.89	282.	10.0	296.9	10.0		
12	01	01	1	18	-0.6	0.029	-9.000	-9.000	-999.	12.	3.4	0.47	1.10	1.00	0.44	10.	10.0	293.1	10.0		
12	01	01	1	19	-4.0	0.066	-9.000	-9.000	-999.	40.	6.3	0.11	1.10	1.00	1.48	329.	10.0	290.4	10.0		
12	01	01	1	20	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	65.	10.0	288.1	10.0		
12	01	01	1	21	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	61.	10.0	286.4	10.0		
12	01	01	1	22	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	33.	10.0	285.4	10.0		
12	01	01	1	23	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	50.	10.0	284.2	10.0		

10.0
12 01 01 1 24 -0.6 0.029 -9.000 -9.000 -999. 12. 3.3 0.47 1.10 1.00 0.44 42. 10.0 283.1
10.0

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
12 01 01 01 10.0 1 51. 0.44 282.6 30.0 -99.00 0.20

F indicates top of profile (=1) or below (=0)

▲ *** AERMOD - VERSION 19191 *** *** PM10 Exhaust Unmitigated ***
04/15/20
*** AERMET - VERSION 15181 *** ***
11:33:26

PAGE 6

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): N2Q97000 ,

*** SENSITIVE DISCRETE RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
496509.10	3662103.00	0.26333	496496.70	3661921.00	0.45417
496295.40	3661833.80	0.50000	496026.60	3661891.00	0.83902
495980.00	3662038.90	0.79867	496131.30	3662152.60	0.34488
496180.00	3662100.00	0.68286			

▲ *** AERMOD - VERSION 19191 *** *** PM10 Exhaust Unmitigated ***
04/15/20
*** AERMET - VERSION 15181 *** ***
11:33:26

PAGE 7

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

NETWORK GROUP ID GRID-ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE
ALL	1ST HIGHEST VALUE IS	0.83902 AT (496026.60, 3661891.00, 0.00, 0.00, 0.00)	SR
	2ND HIGHEST VALUE IS	0.79867 AT (495980.00, 3662038.90, 0.00, 0.00, 0.00)	SR
	3RD HIGHEST VALUE IS	0.68286 AT (496180.00, 3662100.00, 0.00, 0.00, 0.00)	SR
	4TH HIGHEST VALUE IS	0.50000 AT (496295.40, 3661833.80, 0.00, 0.00, 0.00)	SR
	5TH HIGHEST VALUE IS	0.45417 AT (496496.70, 3661921.00, 0.00, 0.00, 0.00)	SR
	6TH HIGHEST VALUE IS	0.34488 AT (496131.30, 3662152.60, 0.00, 0.00, 0.00)	SR

7TH HIGHEST VALUE IS 0.26333 AT (496509.10, 3662103.00, 0.00, 0.00, 0.00) SR
8TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
9TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
10TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

▲ *** AERMOD - VERSION 19191 *** *** PM10 Exhaust Unmitigated
04/15/20

*** AERMET - VERSION 15181 *** ***
11:33:26

PAGE 8

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 2 Warning Message(s)
A Total of 378 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 250 Calm Hours Identified

A Total of 128 Missing Hours Identified (1.46 Percent)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****

ME W186 66 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.40
MX W403 66 PFLCNV: Turbulence data is being used w/o ADJ_U* option SigA Data

*** AERMOD Finishes Successfully ***

1 AERMOD PRIME - (DATED 19191)
AERMODPrMSPx VERSION
(C) COPYRIGHT 1998-2017, Trinity Consultants

Run Began on 4/14/2020 at 15:19:53

** BREEZE AERMOD
** Trinity Consultants
** VERSION 9.0

CO STARTING
CO TITLEONE PM10 Exhaust mitigated
CO MODELOPT DEFAULT CONC NODRYDPLT NOWETDPLT
CO RUNORNOT RUN
CO AVERTIME ANNUAL
CO POLLUTID PM10
CO FINISHED

SO STARTING
SO ELEVUNIT METERS
SO LOCATION N2Q97000 AREAPOLY 496051 3662142.8 0
** SRCDESCR Area Source
SO SRCPARAM N2Q97000 1.89E-09 3 14 1
SO AREAVERT N2Q97000 496051 3662142.8 496013.9 3662062.4 496009.2 3662047.9 496004.5 3662026.3
SO AREAVERT N2Q97000 496006.1 3662000.2 496031.5 3661924.2 496094.4 3661886.1 496161.9 3661853.5
SO AREAVERT N2Q97000 496407 3661937 496471.7 3661932.3 496430.8 3662062.4 496289.8 3662167.9
SO AREAVERT N2Q97000 496216.9 3662046.7 496051 3662142.8
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE ELEVUNIT METERS
RE DISCCART 496509.1 3662103 0 0
** SENSITIV
** RCPDESCR R1
RE DISCCART 496496.7 3661921 0 0
** SENSITIV
** RCPDESCR R2
RE DISCCART 496295.4 3661833.8 0 0
** SENSITIV
** RCPDESCR R3
RE DISCCART 496026.6 3661891 0 0
** SENSITIV
** RCPDESCR R4
RE DISCCART 495980 3662038.9 0 0
** SENSITIV
** RCPDESCR R5
RE DISCCART 496131.3 3662152.6 0 0
** SENSITIV
** RCPDESCR R6
RE DISCCART 496180 3662100 0 0
** SENSITIV
** RCPDESCR R7
RE FINISHED

ME STARTING
ME SURFFILE "C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.SFC"
** SURFFILE "C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.SFC"
ME PROFFILE "C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.PFL"
** PROFFILE "C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.PFL"
ME SURFDATA 53120 2012
ME UAIRDATA 3190 2012
ME SITEDATA 00001002 2012
ME PROFBASE 0 METERS
ME FINISHED

OU STARTING
OU FILEFORM FIX

OU PLOTFILE ANNUAL ALL ALL`ANNUAL.plt 10000
OU FINISHED

** It is recommended that the user not edit any data below this line

** AMPTYPE
** AMPDATUM -1
** AMPZONE -1
** AMPHEMISPHERE

** PROJECTIONWKT
PROJCS["UTM_6326_Zone11",GEOGCS["WGS_84",DATUM["World_Geodetic_System_1984",SPHEROID["WGS_1984",6378137,298.2572235
63],TOWGS84[0,0,0,0,0,0,0]],PRIMEM["Greenwich",0],UNIT["Degree",0.0174532925199433]],PROJECTION["Universal_Transver
se_Mercator"],PARAMETER["Zone",11],UNIT["Meter",1,AUTHORITY["EPSG","9001"]]]]
** PROJECTION UTM
** DATUM WGE
** UNITS METER
** ZONE 11
** HEMISPHERE N
** ORIGINLON 0
** ORIGINLAT 0
** PARALLEL1 0
** PARALLEL2 0
** AZIMUTH 0
** SCALEFACT 0
** FALSEEAST 0
** FALSENORTH 0

** POSTFMT UNIFORM
** TEMPLATE UserDefined
** AERMODEXE AERMOD_BREEZE_19191_64.EXE
** AERMAPEXE AERMAP_EPA_18081_64.EXE

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 2 Warning Message(s)
A Total of 0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
ME W186 66 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.40
MX W403 66 PFLCNV: Turbulence data is being used w/o ADJ_U* option SigA Data

*** SETUP Finishes Successfully ***

▲ *** AERMOD - VERSION 19191 *** *** PM10 Exhaust mitigated ***
04/14/20
*** AERMET - VERSION 15181 *** ***
15:19:53

PAGE 1
*** MODELOPTs: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** MODEL SETUP OPTIONS SUMMARY ***

- - - - -

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --

**NO GAS DEPOSITION Data Provided.

**NO PARTICLE DEPOSITION Data Provided.

**Model Uses NO DRY DEPLETION. DRYDPLT = F

**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:

1. Stack-tip Downwash.
2. Model Accounts for ELEVated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.

**Other Options Specified:

CCVR_Sub - Meteorological data includes CCVR substitutions

TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM10

**Model Calculates ANNUAL Averages Only

**This Run Includes: 1 Source(s); 1 Source Group(s); and 7 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 1 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 15181

**Output Options Selected:

Model Outputs Tables of ANNUAL Averages by Receptor

Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 0.00 ; Decay Coef. = 0.000 ; Rot. Angle
= 0.0

Emission Units = GRAMS/SEC ; Emission Rate Unit Factor =
0.10000E+07

Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.5 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

▲ *** AERMOD - VERSION 19191 *** *** PM10 Exhaust mitigated
04/14/20

*** AERMET - VERSION 15181 *** ***

15:19:53

PAGE 2

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
N2Q97000	0	0.18900E-08	496051.0	3662142.8	0.0	3.00	14	1.00	NO	
*** AERMOD - VERSION 19191 *** PM10 Exhaust mitigated ***										
04/14/20										
*** AERMET - VERSION 15181 ***										
15:19:53										

PAGE 3

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID

SOURCE IDs

ALL N2Q97000 ,
*** AERMOD - VERSION 19191 *** PM10 Exhaust mitigated ***
04/14/20
*** AERMET - VERSION 15181 ***
15:19:53

PAGE 4

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,
*** AERMOD - VERSION 19191 *** PM10 Exhaust mitigated ***
04/14/20

*** AERMET - VERSION 15181 ***
15:19:53

PAGE 5

*** MODELOPTs: RegDEFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.SFC Met Version:
15181
Profile file: C:\Users\ryan\OneDrive\LDNONE~1\20-23V~1\AERMOD\ESCONDIDO-2012-V15181.PFL
Surface format: FREE

Profile format: FREE

Surface station no.: 53120 Upper air station no.: 3190
Name: UNKNOWN Name: UNKNOWN
Year: 2012 Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA
12	01	01	1	01	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	51.	10.0	282.5	10.0		
12	01	01	1	02	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	64.	10.0	281.9	10.0		
12	01	01	1	03	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	31.	10.0	280.9	10.0		
12	01	01	1	04	-2.9	0.056	-9.000	-9.000	-999.	32.	5.5	0.15	1.10	1.00	1.18	130.	10.0	280.4	10.0		
12	01	01	1	05	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	47.	10.0	280.4	10.0		
12	01	01	1	06	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	39.	10.0	279.8	10.0		
12	01	01	1	07	-0.7	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	60.	10.0	279.2	10.0		
12	01	01	1	08	-0.5	0.029	-9.000	-9.000	-999.	12.	4.0	0.47	1.10	0.50	0.44	42.	10.0	280.4	10.0		
12	01	01	1	09	33.3	0.106	0.323	0.014	36.	83.	-3.2	0.47	1.10	0.30	0.44	44.	10.0	285.4	10.0		
12	01	01	1	10	85.9	0.121	0.634	0.011	106.	101.	-1.8	0.48	1.10	0.23	0.44	232.	10.0	291.4	10.0		
12	01	01	1	11	123.6	0.252	0.982	0.005	273.	303.	-11.5	0.48	1.10	0.21	1.34	242.	10.0	297.5	10.0		
12	01	01	1	12	141.2	0.255	1.253	0.005	496.	309.	-10.4	0.48	1.10	0.20	1.34	249.	10.0	299.8	10.0		
12	01	01	1	13	139.0	0.308	1.399	0.005	700.	410.	-18.6	0.48	1.10	0.20	1.78	244.	10.0	300.4	10.0		
12	01	01	1	14	118.4	0.303	1.510	0.005	1033.	401.	-20.9	0.48	1.10	0.21	1.78	241.	10.0	301.4	10.0		
12	01	01	1	15	79.3	0.291	1.390	0.005	1204.	377.	-27.6	0.48	1.10	0.24	1.78	260.	10.0	301.4	10.0		
12	01	01	1	16	24.5	0.162	0.951	0.005	1244.	167.	-15.4	0.51	1.10	0.34	0.89	292.	10.0	299.8	10.0		
12	01	01	1	17	-2.5	0.060	-9.000	-9.000	-999.	45.	7.5	0.51	1.10	0.61	0.89	282.	10.0	296.9	10.0		
12	01	01	1	18	-0.6	0.029	-9.000	-9.000	-999.	12.	3.4	0.47	1.10	1.00	0.44	10.	10.0	293.1	10.0		
12	01	01	1	19	-4.0	0.066	-9.000	-9.000	-999.	40.	6.3	0.11	1.10	1.00	1.48	329.	10.0	290.4	10.0		
12	01	01	1	20	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	65.	10.0	288.1	10.0		
12	01	01	1	21	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	61.	10.0	286.4	10.0		
12	01	01	1	22	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	33.	10.0	285.4	10.0		
12	01	01	1	23	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	50.	10.0	284.2	10.0		

10.0
12 01 01 1 24 -0.6 0.029 -9.000 -9.000 -999. 12. 3.3 0.47 1.10 1.00 0.44 42. 10.0 283.1
10.0

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
12 01 01 01 10.0 1 51. 0.44 282.6 30.0 -99.00 0.20

F indicates top of profile (=1) or below (=0)

▲ *** AERMOD - VERSION 19191 *** *** PM10 Exhaust mitigated ***
04/14/20
*** AERMET - VERSION 15181 *** ***
15:19:53

PAGE 6

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): N2Q97000 ,

*** SENSITIVE DISCRETE RECEPTOR POINTS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
496509.10	3662103.00	0.01214	496496.70	3661921.00	0.02094
496295.40	3661833.80	0.02305	496026.60	3661891.00	0.03868
495980.00	3662038.90	0.03682	496131.30	3662152.60	0.01590
496180.00	3662100.00	0.03148			

▲ *** AERMOD - VERSION 19191 *** *** PM10 Exhaust mitigated ***
04/14/20
*** AERMET - VERSION 15181 *** ***
15:19:53

PAGE 7

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

NETWORK
GROUP ID
GRID-ID
AVERAGE CONC
RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE

ALL	1ST HIGHEST VALUE IS	0.03868 AT (	496026.60,	3661891.00,	0.00,	0.00,	0.00)	SR
	2ND HIGHEST VALUE IS	0.03682 AT (	495980.00,	3662038.90,	0.00,	0.00,	0.00)	SR
	3RD HIGHEST VALUE IS	0.03148 AT (	496180.00,	3662100.00,	0.00,	0.00,	0.00)	SR
	4TH HIGHEST VALUE IS	0.02305 AT (	496295.40,	3661833.80,	0.00,	0.00,	0.00)	SR
	5TH HIGHEST VALUE IS	0.02094 AT (	496496.70,	3661921.00,	0.00,	0.00,	0.00)	SR
	6TH HIGHEST VALUE IS	0.01590 AT (	496131.30,	3662152.60,	0.00,	0.00,	0.00)	SR

7TH HIGHEST VALUE IS 0.01214 AT (496509.10, 3662103.00, 0.00, 0.00, 0.00) SR
8TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
9TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)
10TH HIGHEST VALUE IS 0.00000 AT (0.00, 0.00, 0.00, 0.00, 0.00)

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** AERMOD - VERSION 19191 *** PM10 Exhaust mitigated
04/14/20

*** AERMET - VERSION 15181 ***
15:19:53

PAGE 8

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL SigA Data

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 2 Warning Message(s)
A Total of 378 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 250 Calm Hours Identified

A Total of 128 Missing Hours Identified (1.46 Percent)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****

ME W186 66 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.40
MX W403 66 PFLCNV: Turbulence data is being used w/o ADJ_U* option SigA Data

*** AERMOD Finishes Successfully ***

ATTACHMENT C

Health Risk Calculations

Air Quality Health Risk Calculations (Worst-Case) Summit Estates Unmitigated						
From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.2312				
	Construction Start	1/1/2021				
	Construction Complete	10/27/2022				
	Days	664				
	Construction Emission per day (lb/day)	0.696385542				
	Annual Duration (Days)	365				
	Annualized Emission Rate (Grams/Second)	0.003651188				
	Project Site Size (Acres)	22				
	Project Site Size (meters^2)	89030.84129				
	Length of Smalles Side (meters)	298.3803635				
Used as an input to AERMOD	Emission Rate over Grading Area(g/s-m^2)	4.10E-08				
Output from AERMOD	Concentration Annual (Ug/M^3)	0.83				
Duration	Days	664	Days to years			
			1.819178082			
Age (Years)	3rd Trimester (0.25)		0-2	2-9	2-16	16-30
						16-70
Cair (annual) - From F15	0.83		0.83	0.83	0.83	0.83
Breathing Rate per agegroup BR/BW (Page 5-25)	361		1090	861	745	335
A (Default is 1)	1		1	1	1	1
Exposure Frequency = EF (days/365days)	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
Dose-inh	0.00028764		0.00086851	0.00068604	0.00059362	0.00026693
						0.00023107
Construction Days	664		1.819178082			
potency factor for Diesel	1.1		1.1	1.1	1.1	1.1
Age Sensitivity Factor	10		10	3	3	1
						1
ED	0.25		1.819178082	1.819178082	1.819178082	1.819178082
AT	70		70	70	70	70
FAH	0.85		0.85	0.72	0.72	0.73
Risk for Each Age Group	9.60528E-06		0.00021104	4.2362E-05	3.66547E-05	5.57041E-06
Risk per million Exposed	9.605281714		211.0399178	42.36196412	36.65466118	5.570406034
						4.822142537
Cancer Risk Per Million 9-years	263.01					
Cancer Risk Per Million 30-years	262.87					
Cancer Risk Per Million 70-years	262.12					

**Air Quality Health Risk Calculations (Worst-Case)
Summit Estates with Tier 4**

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.01067				
	Construction Start	1/1/2021				
	Construction Complete	10/27/2022				
	Days	664				
	Construction Emission per day (lb/day)	0.032138554				
	Annual Duration (Days)	365				
	Annualized Emission Rate (Grams/Second)	0.000168504				
	Project Site Size (Acres)	22				
	Project Site Size (meters^2)	89030.84129				
	Length of Smalles Side (meters)	298.3803635				
Used as an input to AERMOD	Emission Rate over Grading Area(g/s-m^2)	1.89E-09				
Output from AERMOD	Concentration Annual (Ug/M^3)	0.0387				
Duration	Days	458	Days to years			
			1.254794521			
Age (Years)	3rd Trimester (0.25)		0-2	2-9	2-16	16-30
						16-70
Cair (annual) - From F15	0.0387		0.0387	0.0387	0.0387	0.0387
Breathing Rate per agegroup BR/BW (Page 5-25)	361		1090	861	745	335
A (Default is 1)	1		1	1	1	1
Exposure Frequency = EF (days/365days)	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
Dose-inh	0.00001341		0.00004050	0.00003199	0.00002768	0.00001245
						0.00001077
Construction Days	458		1.254794521			
potency factor for Diesel	1.1		1.1	1.1	1.1	1.1
Age Sensitivity Factor	10		10	3	3	1
ED	0.25		1.254794521	1.254794521	1.254794521	1.254794521
AT	70		70	70	70	70
FAH	0.85		0.85	0.72	0.72	0.73
Risk for Each Age Group	4.47861E-07		6.78727E-06	1.36241E-06	1.17885E-06	1.7915E-07
Risk per million Exposed	0.447860726		6.787266163	1.36240541	1.178852532	0.179150128
						0.155085186
Cancer Risk Per Million 9-years	8.60					
Cancer Risk Per Million 30-years	8.59					
Cancer Risk Per Million 70-years	8.57					