

AIR QUALITY ASSESSMENT

**ACE Self Storage Development
PDS2016-MUP-16-010 AND PDS2016-ER-16-18-002
Bonita, CA**

Lead Agency:

**County of San Diego
Department of Planning and Land Use
Contact: Ben Mills
5510 Overland Avenue, Suite 110
San Diego, CA 92123
858-495-5234**

Prepared By:

**Jeremy Loudon
Ldn Consulting, Inc.
42428 Chisolm Trail
Murrieta, CA 92562
760-473-1253**

Prepared For:

**BSB Co.
10035 Prospect Ave. Suite 201
Santee, CA 92071**

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LIST OF ACRONYMS

Air Quality Impact Assessments (AQIA)
Assembly Bill 32 (AB32)
California Air Resource Board (CARB)
California Ambient Air Quality Standards (CAAQS)
California Environmental Quality Act (CEQA)
Carbon Dioxide (CO₂)
Cubic Yards (CY)
Diesel Particulate Matter (DPM)
Environmental Protection Agency (EPA)
EPA Office of Air Quality Planning and Standards (OAQPS)
Hazardous Air Pollutants (HAPs)
Hydrogen Sulfide (H₂S)
International Residential Code (IRC)
Level of Service (LOS)
Low Carbon Fuel Standard (LCFS)
Methane (CH₄)
National ambient air quality standards (NAAQS)
Nitrous Oxide (N₂O)
North County Transit District (NCTD)
Reactive Organic Gas (ROG)
Regional Air Quality Strategy (RAQS)
San Diego Air Basin (SDAB)
San Diego Air Pollution Control District (SDAPCD)
South Coast Air Quality Management District (SCAQMD)
Specific Plan Area (SPA)
State Implementation Plan (SIP)
Toxic Air Contaminants (TACs)
Vehicle Miles Traveled (VMT)

EXECUTIVE SUMMARY

This air quality impact study has been completed to determine the air quality impacts associated with the development of the proposed ACE Self Storage Development. The project is located along Bonita Road between Otay Lakes Road and Central Avenue in the unincorporated area known as Bonita within the County of San Diego, CA.

The project would construct multiple storage buildings and an operations office on a 4.18 acre project site with a total building area of 140,129 square-feet (SF). The project site is bordered Bonita Road to the northwest and residential to the East and South of the project. The Bonita Sunnyside Fire Protection District office is located to the west of the site and the Kinderland Montessori School is located to the north of the project.

The proposed project site is designated VR-2 in the General Plan. The site is currently be developed with a consistent use which is consistent with region growth projections by SANDAG. Given this, growth assumptions were included and therefore assumed by SANDAG so the project would be compatible with both the RAQS and County's SIP.

During construction of the proposed Project, fugitive dust emissions will be expected during grading and construction but the project would not generate significant air quality impacts. No mitigation will be required. As part of the County's Grading Plan, the project would be required to implement BMP practices to limit fugitive dust. It was found that the following mitigation measures and BMPs will reduce construction impacts to less than significant.

Onsite diesel particulate matter was found to generate significant health impacts and would require mitigation to comply. It was found that if all Diesel Equipment was Tier IV with inline diesel particulate filters installed would adequately reduce these risks to less than significant. It should be noted however, health risk impacts from older diesel equipment using OEHHA's latest risk guidelines almost always increases the risks to greater than 10 in one million and using Tier IV equipment is mostly standard for all projects.

- *Construction Mitigation Measure 1: Ensure that all heavy diesel construction equipment is classified as Tier IV at a minimum and includes diesel particulate filters. This will also satisfy health risk impacts related to diesel particulates under T-BACT guidelines.*
- *Best Management Practice 1: Comply with the County's Grading Ordinance and SDAPCDs fugitive dust rules outlined in section 87.426: (County of San Diego, 2012)*

Air Quality emissions will be generated from both area and operational sources which are the result of Project generated traffic, landscaping maintenance equipment, consumer products, and annual maintenance and painting to name a few. These emissions were analyzed and no impacts would be expected.

Micro scale CO emissions impacts are not expected since the proposed project the project was calculated to generate an average of 123 daily trips and only 11 peak hour trips. Given this, no significant CO hot spot impacts would be expected from the project. No additional mitigation measures are necessary per CEQA guidelines.

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.

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, area or operational emissions (short term or long term) from the proposed Project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to bring those impacts to a level that would be considered less than significant.

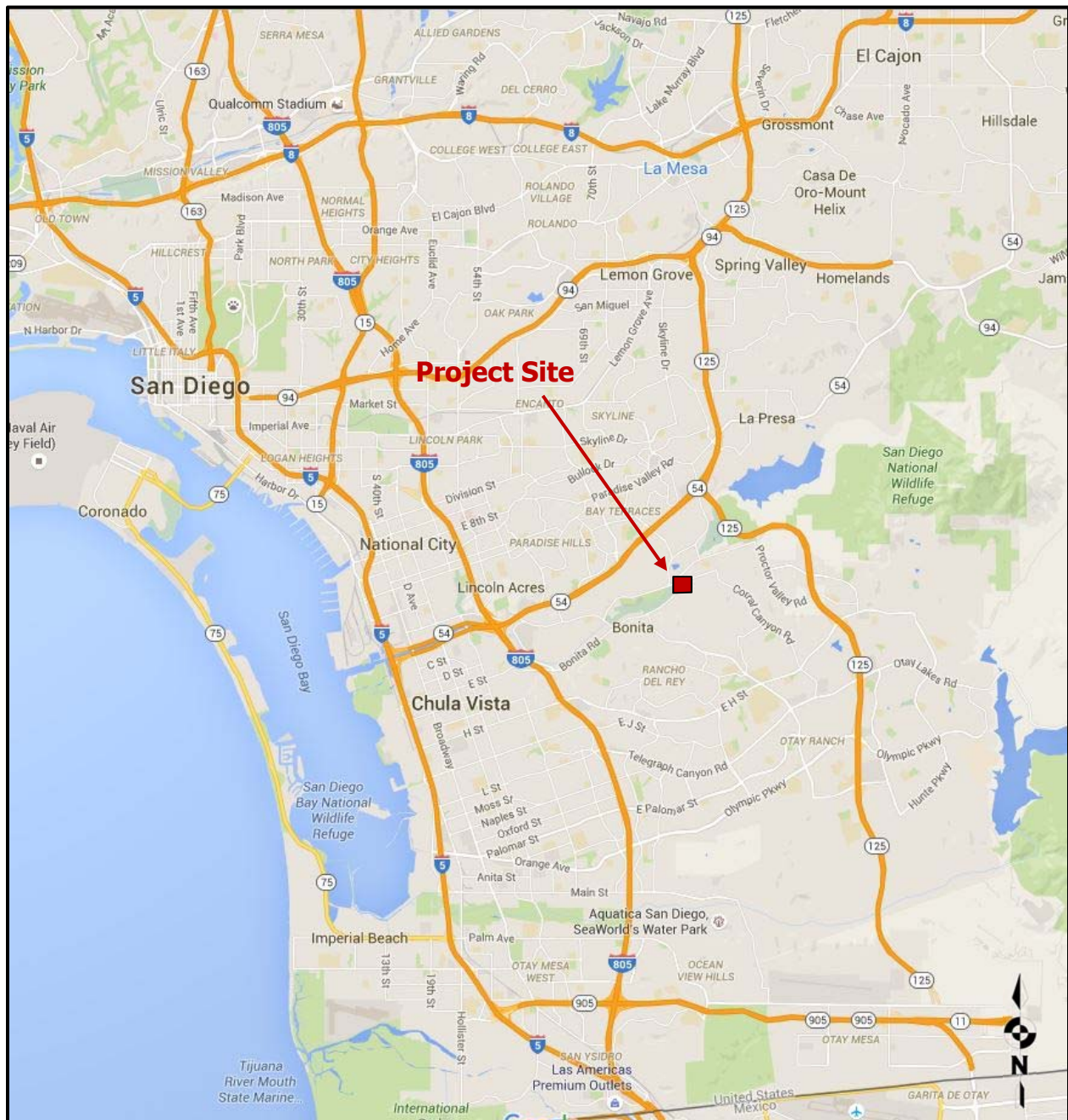
1.2 Project Location

The proposed development is located at 32° 39' 59" N and 117° 01' 21" W, southeast of Bonita Road in the unincorporated community of Bonita in eastern San Diego County, CA. A general project vicinity map is shown in Figure 1–A on the following page.

1.3 Project Description

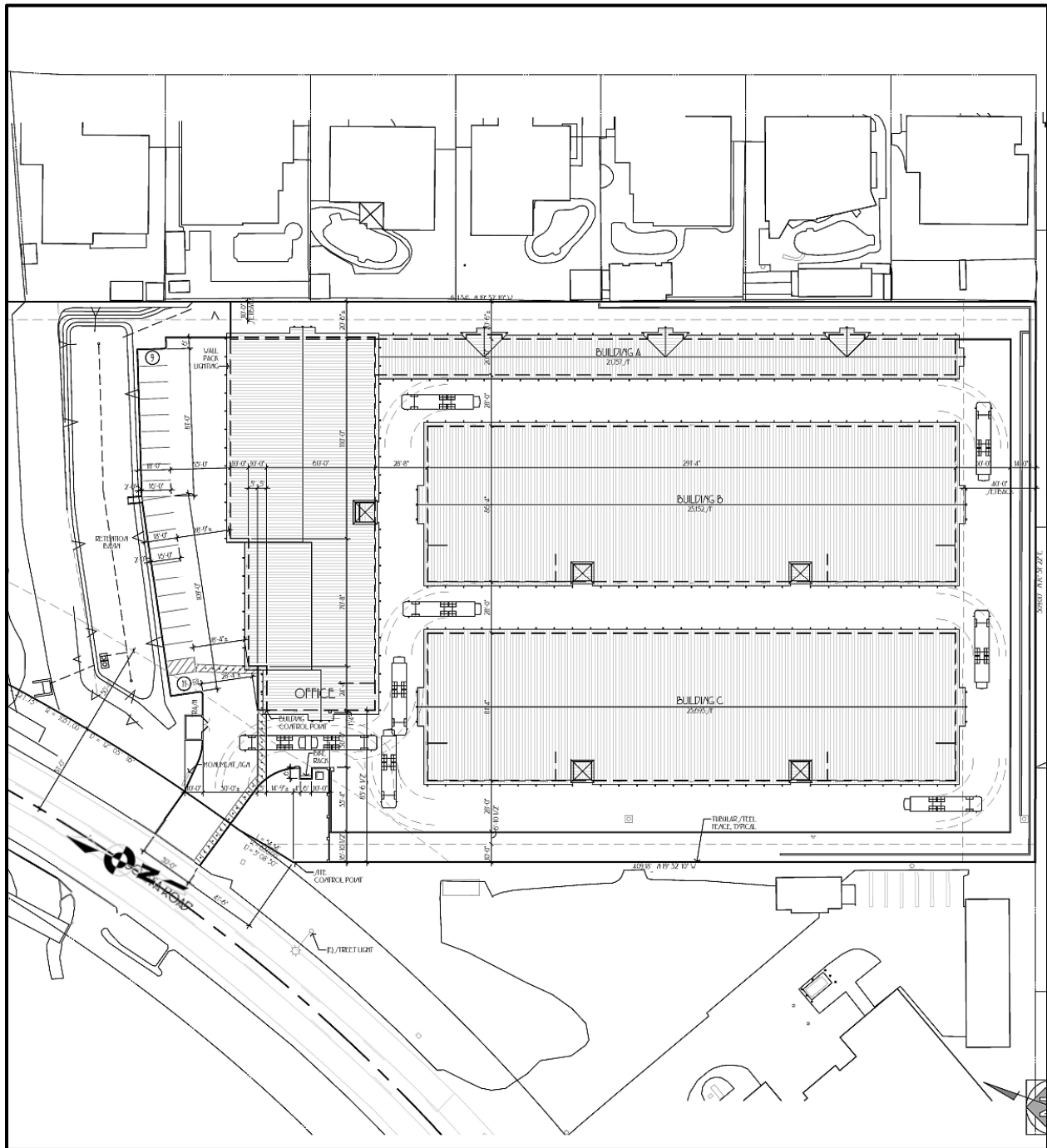
The project development plan calls for the construction of three separate buildings with a total floor area of 140,129 SF and will be used for storage and office space for the onsite operations. The project would likely be operated by no more than 4 employees onsite at any given time. Construction of the project is proposed in early 2017 with full buildout expected late 2017 and full buildout operations in 2018. The project site plan is shown on in Figure 1-B on Page 3 of this report.

Figure 1-A: Project Vicinity Map



Source: (Google, 2016)

Figure 1-B: Proposed Project Site Plan



Source: (ARE Associates, 2016)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The project site is surrounded by mostly residential to the east on south and the Bonita Sunnyside Fire Protection District is located to the west. To the north exists the Kinderland Montessori School. The general location of the project is shown on the Vicinity Map.

The subject property is generally flat vacant lot and appears to have been disturbed in the past. The project site has no observed existing structures onsite. Currently the site is generally devoid of significant vegetation with the exception of parse grass and shrubs and palm trees on the frontage to Bonita Road. Elevations onsite average about 85 feet above mean sea level (AMSL).

2.2 Climate and Meteorology

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

Meteorological trends within the Bonita area produce daytime highs that range between 68°F in the winter to approximately 80°F in the summer with August usually being the hottest month. Median temperatures range from approximately 56°F in the winter to approximately 72°F in the summer. The average humidity is approximately 64% in the winter and about 75% in the summer (City-Data, 2016). Bonita usually receives approximately 9.8 inches of rain per year with February usually being the wettest month (weather.com, 2016).

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 National Ambient Air Quality Standards 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 (O_3):** is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.
6. **Sulfur Dioxide (SO_2):** is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO_2 is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO_2 exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.

2.3.2 State Standards and Definitions

The State of California Air Resources Board (ARB) sets the laws and regulations for air quality on the state level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive than the NAAQS and also restrict four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. **Visibility Reducing Particles:** Particles in the Air that obstruct the visibility.
2. **Sulfates:** are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.
3. **Hydrogen Sulfide (H_2S):** is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H_2S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H_2S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 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/m ³)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		-		
Fine Particulate Matter (PM _{2.5}) ⁹	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	8 hour	9.0 ppm (10mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		-		
Nitrogen Dioxide (NO ₂) ¹⁰	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³) ⁸	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m ³)		0.100 ppm ⁸ (188/ µg/m ³)	-	
Sulfur Dioxide (SO ₂) ¹¹	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm ¹⁰ (for Certain Areas)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararoosaniline Method) ⁹
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm ¹⁰ (for Certain Areas) (See Footnote 9)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m ³)	
	1 Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)	-	
	30 Day Average	1.5 µg/m ³		-	-	
Lead ^{12,13}	Calendar Quarter	-	Atomic Absorption	1.5 µg/m ³	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Rolling 3-Month Average	-		0.15 µg/m ³		
	Visibility Reducing Particles	8 Hour		See footnote 13		
Sulfates	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹²	24 Hour	0.01 ppm (26 µg/m ³)	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, 10/1/15)						

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. The state therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed for California Air basins 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 San Diego County. Therefore, the SDAPCD developed a Regional Air Quality Strategy (RAQS) to provide control measures to try to achieve attainment status. Currently, San Diego is in “non-attainment” status for federal O₃ and the State PM₁₀ and PM_{2.5} however, an attainment plan is only available for O₃. The RAQS was adopted in 1992 and has been updated as recently as 2009 which was the latest update incorporating minor changes to the prior 2004 update.

The 2009 update mostly clarifies and enhances emission reductions by implementing new VOC and NOX reduction measures. 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 with respect to both federal and state nonattainment status by pollutants for San Diego County is shown in Table 2.2 on the following page.

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce less growth than predicted by SANDAG would generally conform to the RAQS and projects that create more growth than projected by SANDAG may create a significant impact assuming the project either produces unmitigable emission generation in excess of the regional standards. Also the project would be considered a significant impact if the project produces cumulative impacts.

Table 2.2: San Diego County Air Basin Attainment Status by Pollutant

San Diego County Air Basin Attainment Status by Pollutant			
Pollutant	Average Time	California Standards	Federal Standards
Ozone (O ₃)	1 Hour	Non-attainment	No Federal Standard
	8 Hour		Basic Non-attainment
Respirable Particulate Matter (PM ₁₀)	24 Hour	Non-attainment	Unclassified ¹
	Annual Arithmetic Mean	No State Standard	Unclassified ²
Fine Particulate Matter PM _{2.5}	24 Hour	No State Standard	Attainment
	Annual Arithmetic Mean	Non-attainment	Attainment
Carbon Monoxide (CO)	8 hour	Attainment	Maintenance Area ³
	1 hour		
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	No State Standard	Attainment
	1 Hour	Attainment	No Federal Standard
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	No State Standard	Attainment
	24 Hour	Attainment	Attainment
	1 Hour	Attainment	No Federal Standard
Lead	30 Day Average	Attainment	No Federal Standard
	Calendar Quarter	No State Standard	Attainment
Visibility Reducing Particles	8 Hour (10AM to 6PM, PST)	Unclassified	No Federal Standard
Sulfates	24 Hour	Attainment	No Federal Standard
Hydrogen Sulfide	1 Hour	Unclassified	No Federal Standard
1. Data reflects status as of March 19, 2009. 2. Unclassified; indicates data are not sufficient for determining attainment or nonattainment. 3. Maintenance Area (defined by U.S. Department of Transportation) is any geographic region of the United States previously designated nonattainment pursuant to the CAA Amendments of 1990 and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under section 175A of the CAA, as amended.			

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 Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (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, oxides of nitrogen [NO_x] and Volatile Organic Compounds [VOCs])?
- D:* Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, 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. 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 AQI threshold for Volatile Organic Compounds (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 the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3 below.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
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
Reactive Organic Gases (ROG) SDAPCD	75
Operational Emissions	
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
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SDAPCD	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 the project increase the cancer risk to over 10 in one million. At no time shall the project increase the 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. Environmental Protection Agency (U.S. EPA) uses the term Volatile Organic Compounds (VOC) and the California Air Resources Board's (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 CalEEMod directly calculates ROG in place of VOC.

In addition to EPA emission standards, the project equipment will be required to adhere to the In-Use Off-Road Diesel-Fueled Fleets regulation as defined by the California Air Resource Board (CARB) codified as Title 13 CCR §2449. The general purpose of these requirements is to establish emission thresholds which meet the most current federal or state thresholds and then provide permits to equipment meeting such thresholds.

2.6 Title 24 Standards

The California Energy Code, or Title 24, Part 6 of the California Code of Regulations, also titled The Energy Efficiency Standards for Residential and Nonresidential Buildings, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods (California Energy Code, 2015)

The latest standards are Title 24 2013 and are effective as of July 1, 2014. Looking at the entire construction outlook for low-rise single-family detached homes, electricity use is reduced by 36.4 percent and 23.3 percent for multi-family uses and natural gas consumption is reduced by 6.5 percent for single family developments and 3.8% for multi-

family structures (Architectural Energy Corporation (AEC), 2013). Nonresidential Newly Constructed Buildings would have a reduction from the 2008 Standards of 21.8 percent for electricity and 16.8 percent for natural gas.

2.7 Local Air Quality

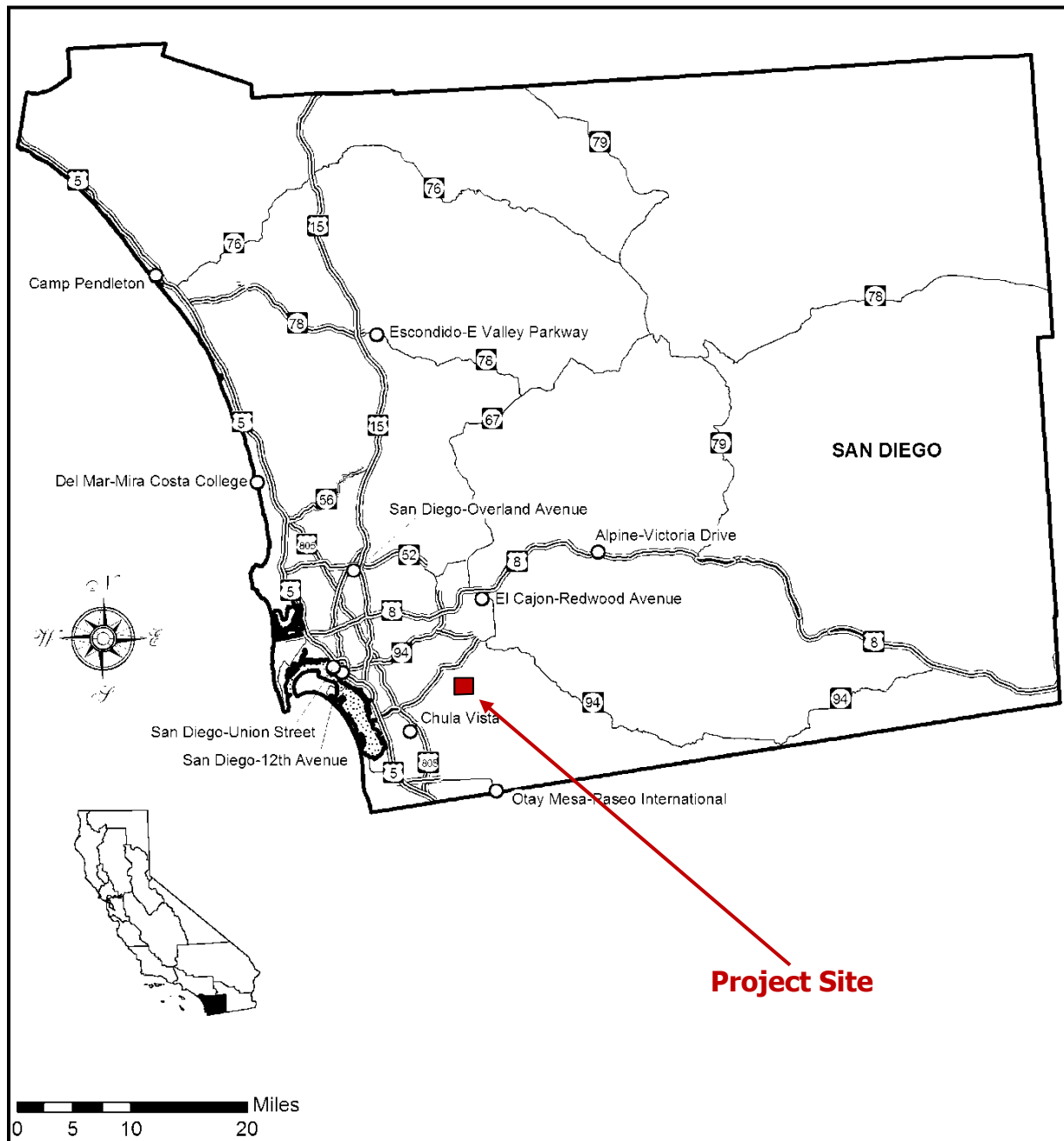
Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 10 monitoring sites, which collect data on criteria pollutants. The proposed development project is closest to the Chula Vista Monitoring station which is located approximately 3.25 miles from the project site. Table 2.5 on the following page identifies the criteria pollutants monitored at the aforementioned station.

Four additional sites collect meteorological data which is used by the District to assist with pollutant forecasting, data analysis and characterization of pollutant transport. Figure 2-A on the following page shows the relative locations of the monitoring sites. SDAPCD published the five-year air quality summary for all of the monitoring stations within the following link (SDAPCD, 2015).

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

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2013	2014	2015
O3 (ppm)	Chula Vista Monitoring Station	1 Hour	0.09 ppm	-	0.07	0.09	0.09
		8 Hour	0.070 ppm	0.075 ppm	0.06	0.06	0.07
PM10 (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	38	37	46
		Annual Arithmetic Mean	20 µg/m3	-	22.0	22.5	19.7
PM2.5 (µg/m3)		24 Hour	-	35 µg/m3	21.9	26.5	33.5
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	9.4	9.2	8.3
NO2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.010	0.010	0.010
		1 Hour	0.18 ppm	-	0.057	0.055	0.049
CO (ppm)		8 Hour	9 ppm	9 ppm	-	-	-

Figure 2-A: Ambient Air Quality Monitoring Stations within SDAB – CARB



3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod air quality model, which was developed by ENVIRON International Corporation for South Coast Air Quality Management District (SCAQMD) in 2013. 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 SCREEN3 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 SCREEN3 input/output file for the proposed project is shown in **Attachment B** at the end of this report. The worst case exhaust emissions generated from the Project from construction equipment was utilized and calculated within the CalEEMod model.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst case cancer risk dose calculation is defined in Equation 1 below (OEHHA, February 2015):

Equation 1

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

Dose _{air}	=	Dose through inhalation (mg/kg/d) Concentration in air (µg/m ³) Annual average DPM concentration in µg/m ³ -SCREEN3
C _{air}	=	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)

Once the dose is determined then you must calculate the cancer risk. The average daily inhalation dose (mg/kg-day) multiplied by the cancer potency factor (mg/kg-day)⁻¹ will give

the inhalation cancer risk (unitless), which is an expression of the chemical's cancer risk during a 70-year lifespan of exposure. For example, an inhalation cancer risk of 5×10^{-6} is the same as stating that an individual has an estimated probability of developing cancer from their exposure of 5 chances per million people exposed.

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, February 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)

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

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

Non-Cancer 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 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, 2014). Diesel Exhaust has a REL of 5 µg/m³ and targets the respiratory system.

3.2 Construction Assumptions

The Project construction dates were estimated based a hypothetical construction kickoff in starting in 2017 with grading expected to last about one month. Once all the earthwork is complete, the project would pave the site and start building construction. Construction of the project would be expected in late 2017 as a worst case assumption. Table 3.1 shows the expected timeframes for the construction processes for all the project infrastructure, facilities, improvements and commercial structures at the proposed project location as well as the expected number of pieces of equipment.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Site Preparation	1/1/2017	1/7/2017	
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			2
Grading	1/8/2017	1/30/2017	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			2
Paving	1/31/2017	2/15/2017	
Cement and Mortar Mixers			2
Pavers			1
Paving Equipment			2
Rollers			2
Tractors/Loaders/Backhoes			1
Building Construction	2/16/2017	12/31/2017	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coating	6/1/2017	12/31/2017	
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coating			
This equipment list is based upon equipment inventory within CalEEMod. The quantity and types are based upon assumptions from Projects of similar size and scope in the County of San Diego.			

3.3 Operational Emissions

Once construction is completed the proposed project would generate emissions from daily operations which would include sources such as Area, Energy, Mobile, Waste and Water

uses, which are also calculated within CalEEMod. Area Sources include consumer products, landscaping and architectural coatings as part of regular maintenance. Energy sources would be from uses such as onsite natural gas use. Finally, mobile or transportation related emissions are calculated in CalEEMod through the use of EMFAC2011. The Operational model is also shown in Attachment A at the end of this report.

The Traffic inputs for CalEEMod were not modified as the default rates are based on the project trip generation study (LOS Engineering, 2016). The analysis determined that the project would generate 123 daily trips and 11 peak hour trips. These traffic numbers were utilized within the CalEEMod analysis. The model also estimates emissions for ROG, NO_x, CO, SO₂, PM₁₀ and PM_{2.5} for area source assumptions. Additionally, it was assumed that an average of 10% of the structural surface area will be re-painted each year. Consumer product emissions are generated by a wide range of product categories, including air fresheners, automotive products, household cleaners, and personal care products. Emissions associated with these products primarily depend on the increased population associated with residential development. Default emission factors were utilized within CalEEMod.

3.4 Micro Scale Operational Emissions

Air pollutant emissions related to project traffic have the potential to create new, or worsen existing localized air quality with respect to carbon monoxide (CO). These increased carbon monoxide "Hot Spots" are determined through the utilization of the ITS Transportation Project-Level Carbon Monoxide Protocol (Caltrans 1998) as well as the County.

In the event the proposed project traffic adds vehicular trips to either an intersection that operates at LOS E or F or any intersection where the project trips re-classifies the intersection level of service to LOS E or F and when peak-hour trips exceed 3,000 the Project must quantify CO levels (Source: County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements – March, 2007). The ITS Transportation Project-Level Carbon Monoxide Protocol recommends running the EMFAC model to determine emission rates for the Project year as well as conduct dispersion modeling utilizing CALINE to determine worst-case emission concentrations. Based on the size of this project, intersection and roadway segment CO impacts would not be expected and are not further analyzed.

3.5 Odor Impacts (Onsite)

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Given this, short-term construction odors would not be considered an impact. Long-term odor impacts would not be expected.

4.0 FINDINGS

4.1 Construction Findings

The Project construction dates were estimated based a hypothetical construction kickoff in starting in 2017 with grading expected to last about one month. Once all the earthwork is complete, the project would pave the site and start building construction. Construction of the project would be expected in late 2017 as a worst case assumption. Based on these results, no significant construction impacts are expected. Table 4.1 below shows the calculated emissions from construction.

A summary of the construction emissions is shown in Table 4.1 below. Given these findings, the Project construction would not exceed SDAPCD air quality standards and would not be required to incorporate mitigation measures to comply. It should be noted however, the Project would be required to comply with the County's Grading Ordinance and SDAPCDs fugitive dust rules outlined in section 87.426: (County of San Diego, 2012)

Table 4.1: Expected Construction Emissions Summary (Unmitigated)

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)
2017	15.13	26.27	18.96	0.03	6.97	1.47	8.05	3.42	1.35	4.41
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
SDAPCD Impact?	No	No	No	No	-	-	No	-	-	No

4.2 Health Risk

Based upon the air quality modeling, worst-case onsite PM₁₀ from onsite construction exhaust would cumulatively produce 0.1299 tons over the construction duration (260-working days) or an average of 0.0157 grams/second. The average emission rate over the grading area is 9.29×10^{-7} g/m²/s, which was calculated as follows:

$$\frac{0.0157 \frac{\text{grams}}{\text{second}}}{4.18 \text{ acres} * 4,046 \frac{\text{meters}^2}{\text{acre}}} = 9.29 * 10^{-7} \frac{\text{grams}}{\text{meters}^2 \text{ second}}$$

Utilizing the SCREEN3 dispersion model, we find that the peak maximum 1-hr concentration is $16.91 \mu\text{g}/\text{m}^3$ during the worst-case construction period. Converting the peak 1-hr concentration to an annual concentration reduces the concentration to $1.353 \mu\text{g}/\text{m}^3$. Therefore, utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk is 287 at the point of maximum exposure 101 meters away. Based on this, there would be a significant health risk impact per the latest OEHHA guidelines and would the project would need to incorporate mitigation measures to comply.

It was found that utilizing Tier IV or better diesel equipment with diesel particulate filters attached inline to the exhaust system would reduce worst-case PM_{10} from exhaust to .00047 tons over the construction duration (260-working days) or an average of 5.68×10^{-5} grams/second. Given this reduced emission, dispersion modeling predicts that worst case 1-hr concentrations would be $0.061 \mu\text{g}/\text{m}^3$ at the point of maximum exposure. Therefore, the Inhalation Cancer risk would be reduced to 1.04 in one million at the point of maximum exposure. Since the risk is less than 10 in one million, health risk impacts would not be expected at the Kinderland Montessori School or any of the nearby residents. The calculations for both mitigated and unmitigated scenarios are provided in **Attachment C**.

There are known acute and chronic health risks associated with diesel exhaust which are considered non-cancer risks. These risks are calculated based on methods identified in Section 3.1 of this report. From this we find that the unmitigated concentration of $1.353 \mu\text{g}/\text{m}^3$ divided by the REL of $5 \mu\text{g}/\text{m}^3$ yields a Health Hazard Index of 0.27, which is less than one. Therefore, no non-cancer risks are expected and all health risks are considered less than significant even with the unmitigated emission projections.

Furthermore, based on discussions with the project applicant, no cumulative projects are known to be within a 1,000 meters radius from the project site. Given the fact that the projects point of maximum exposure is only 101 meters away and given that no impacts exist; cumulative construction impacts would also not be expected. Also, as a generalized estimated at 10 times the distance from the point of maximum exposure, cumulative air emissions from construction would not be expected in any significant quantities.

4.3 Operational Findings

The proposed project will generate 123 trips per day once the Project is fully operational sometime in the year 2018. This assumption was used within CalEEMod inputs and was run for a 2018 scenario. The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by EMFAC2011; CalEEMod performs this calculation. The daily pollutants calculated are shown in Table 4.2 below. Based on this analysis, no impacts would be expected.

Table 4.2: Expected Daily Pollutant Generation (Unmitigated)

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Summer Scenario (Lb/Day)						
Area	3.80	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.07	0.06	0.00	0.01	0.01
Mobile	0.41	0.93	4.33	0.01	0.77	0.22
Total (Unmitigated)	4.22	1.00	4.40	0.01	0.78	0.22
SDAPCD Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Winter Scenario (Lb/Day)						
Area	3.80	0.00	0.01	0.00	0.00	0.00
Energy	0.01	0.07	0.06	0.00	0.01	0.01
Mobile	0.44	0.99	4.52	0.01	0.78	0.22
Total (Unmitigated)	4.25	1.06	4.59	0.01	0.78	0.22
SDAPCD Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod						

4.4 Odor Impacts (Onsite)

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Given this, short-term construction odors would not be considered an impact. Long-term odor impacts would not be expected.

4.5 Cumulative Impacts

The proposed project would expect up to 123 ADT per day. Based on the VR-2 zoning designation, the project would be able to support 8 residential units which could generate as much as (8*12=96 ADT). The project would generate roughly 27 more ADT than would generally be accepted by VR-2 zoning however based on research of both Series 12 (SANDAG, 2011) and 13 data, (SANDAG, 2013). Series 12 data for 2020 estimated population for Bonita to be 18,063 while 2013 forecasts were revised down to 17,873. Since population forecasts were reduced from 2011 to 2013 as seen in SANDAGs estimates, it's reasonable to conclude the RAQS, which was prepared in 2009, would have adequately supported higher traffic volumes than are currently being forecasts for 2020. Given this, the project would not be expected to conflict with the RAQS. Furthermore, the project would not create any direct operational or construction impacts.

4.6 Conclusion of Findings

The proposed project site being developed with a consistent use which is consistent with region growth projections by SANDAG. Given this, growth assumptions were included and therefore assumed by SANDAG so the project would be compatible with both the RAQS and County's SIP.

During construction of the proposed Project, fugitive dust emissions will be expected during grading and construction but the project would not generate significant air quality impacts. No mitigation will be required. As part of the County's Grading Plan, the project would be required to implement BMP practices to limit fugitive dust. It was found that the following mitigation measures and BMPs will reduce construction impacts to less than significant.

Onsite diesel particulate matter was found to generate significant health impacts and would require mitigation to comply. It was found that if all Diesel Equipment was Tier IV with inline diesel particulate filters installed would adequately reduce these risks to less than significant. It should be noted however, health risk impacts from older diesel equipment using OEHHA's latest risk guidelines almost always increases the risks to greater than 10 in one million and using Tier IV equipment is mostly standard for all projects.

- *Construction Mitigation Measure 1: Ensure that all heavy diesel construction equipment is classified as Tier IV at a minimum and includes diesel particulate filters. This will also satisfy health risk impacts related to diesel particulates under T-BACT guidelines.*
- *Best Management Practice 1: Comply with the County's Grading Ordinance and SDAPCDs fugitive dust rules outlined in section 87.426: (County of San Diego, 2012)*

Air Quality emissions will be generated from both area and operational sources which are the result of Project generated traffic, landscaping maintenance equipment, consumer products, and annual maintenance and painting to name a few. These emissions were analyzed and no impacts would be expected. Additionally, micro scale CO emissions impacts are not expected since the proposed project the project was calculated to generate an average of 123 daily trips and only 11 peak hour trips. Given this, no significant CO hot spot impacts would be expected from the project. No additional mitigation measures are necessary per CEQA guidelines.

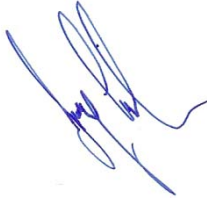
Finally, the project would generate short-term construction odors but these impacts would not be considered significant. The project would not generate long term odor impacts. Based on this, no significant odor impacts are expected.

5.0 REFERENCES

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6.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the air quality environment and impacts within and surrounding the proposed Project 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 July 24, 2018

ATTACHMENT A

CalEEMod

Bonita Road Self Storage (2018 Operations)
San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	140.13	1000sqft	4.18	140,129.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
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 - 4.18 acre self storage site. Most similar would be unrefrigerated warehouse area. Traffic to be modified per proejct trip generation study

Construction Phase - Proposed Construction

Off-road Equipment -

Off-road Equipment - CS

Off-road Equipment - CE

Off-road Equipment -

Off-road Equipment - Proposed Equipment

Grading - 4.18 acres

Architectural Coating - 150 g/l VOC Paint Max

Vehicle Trips - Traffic Study indicates that the project will generate .877 trips per 1000 SF

Area Coating - 150 g/l VOC Paint Max

Construction Off-road Equipment Mitigation - Tier 3 Mitigation

[illegible]

[illegible]

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstructionPhase	NumDays	230.00	227.00
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	18.00	12.00
tblConstructionPhase	PhaseEndDate	7/31/2018	12/31/2017
tblConstructionPhase	PhaseEndDate	12/29/2017	12/31/2017
tblConstructionPhase	PhaseEndDate	1/6/2017	1/7/2017
tblConstructionPhase	PhaseStartDate	1/1/2018	6/1/2017
tblGrading	AcresOfGrading	6.00	4.18
tblGrading	AcresOfGrading	0.00	4.18
tblLandUse	LandUseSquareFeet	140,130.00	140,129.00
tblLandUse	LotAcreage	3.22	4.18
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	2.59	0.88

tblVehicleTrips	SU_TR	2.59	0.88
tblVehicleTrips	WD_TR	2.59	0.88

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	15.1799	26.2803	18.9460	0.0292	6.9744	1.4727	8.0455	3.4234	1.3548	4.4089	0.0000	2,717.6909	2,717.6909	0.6803	0.0000	2,731.9769
Total	15.1799	26.2803	18.9460	0.0292	6.9744	1.4727	8.0455	3.4234	1.3548	4.4089	0.0000	2,717.6909	2,717.6909	0.6803	0.0000	2,731.9769

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	13.5025	3.5292	16.8106	0.0292	6.9744	0.0368	6.9785	3.4234	0.0341	3.4275	0.0000	2,717.6909	2,717.6909	0.6803	0.0000	2,731.9769
Total	13.5025	3.5292	16.8106	0.0292	6.9744	0.0368	6.9785	3.4234	0.0341	3.4275	0.0000	2,717.6909	2,717.6909	0.6803	0.0000	2,731.9769

	ROG	NOx	CO	SO2	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	11.05	86.57	11.27	0.00	0.00	97.50	13.26	0.00	97.48	22.26	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324
Energy	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224
Mobile	0.4398	0.9932	4.5190	0.0107	0.7618	0.0132	0.7750	0.2034	0.0122	0.2155		877.5574	877.5574	0.0356		878.3046
Total	4.2479	1.0592	4.5889	0.0111	0.7618	0.0183	0.7801	0.2034	0.0173	0.2206		956.6294	956.6294	0.0372	1.4500e-003	957.8594

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324
Energy	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224
Mobile	0.4398	0.9932	4.5190	0.0107	0.7618	0.0132	0.7750	0.2034	0.0122	0.2155		877.5574	877.5574	0.0356		878.3046
Total	4.2479	1.0592	4.5889	0.0111	0.7618	0.0183	0.7801	0.2034	0.0173	0.2206		956.6294	956.6294	0.0372	1.4500e-003	957.8594

	ROG	NOx	CO	SO2	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	Site Preparation	Site Preparation	1/1/2017	1/7/2017	5	5	
2	Grading	Grading	1/8/2017	1/30/2017	5	16	
3	Paving	Paving	1/31/2017	2/15/2017	5	12	
4	Building Construction	Building Construction	2/16/2017	12/31/2017	5	227	
5	Architectural Coating	Architectural Coating	6/1/2017	12/31/2017	5	152	

Acres of Grading (Site Preparation Phase): 4.18

Acres of Grading (Grading Phase): 4.18

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 210,194; Non-Residential Outdoor: 70,065 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	1	6.00	162	0.38
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	2.00	226	0.29
Building Construction	Forklifts	3	4.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	2.00	97	0.37
Building Construction	Welders	1	4.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	59.00	23.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.9087	0.0000	6.9087	3.4060	0.0000	3.4060			0.0000			0.0000
Off-Road	1.8239	19.2804	14.7282	0.0151		1.0707	1.0707		0.9850	0.9850		1,546.5386	1,546.5386	0.4739		1,556.4896
Total	1.8239	19.2804	14.7282	0.0151	6.9087	1.0707	7.9793	3.4060	0.9850	4.3910		1,546.5386	1,546.5386	0.4739		1,556.4896

3.2 Site Preparation - 2017**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0269	0.0335	0.3129	7.8000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.4000e-004	0.0179		62.7319	62.7319	3.2200e-003		62.7995
Total	0.0269	0.0335	0.3129	7.8000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.4000e-004	0.0179		62.7319	62.7319	3.2200e-003		62.7995

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					6.9087	0.0000	6.9087	3.4060	0.0000	3.4060			0.0000			0.0000
Off-Road	0.1839	0.7969	8.6419	0.0151		3.6800e-003	3.6800e-003		3.6800e-003	3.6800e-003	0.0000	1,546.5386	1,546.5386	0.4739		1,556.4896
Total	0.1839	0.7969	8.6419	0.0151	6.9087	3.6800e-003	6.9123	3.4060	3.6800e-003	3.4096	0.0000	1,546.5386	1,546.5386	0.4739		1,556.4896

3.2 Site Preparation - 2017**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0269	0.0335	0.3129	7.8000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.4000e-004	0.0179		62.7319	62.7319	3.2200e-003		62.7995
Total	0.0269	0.0335	0.3129	7.8000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.4000e-004	0.0179		62.7319	62.7319	3.2200e-003		62.7995

3.3 Grading - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.7936	0.0000	4.7936	2.5126	0.0000	2.5126			0.0000			0.0000
Off-Road	2.5124	26.2259	18.4375	0.0215		1.4719	1.4719		1.3541	1.3541		2,203.1838	2,203.1838	0.6751		2,217.3598
Total	2.5124	26.2259	18.4375	0.0215	4.7936	1.4719	6.2655	2.5126	1.3541	3.8667		2,203.1838	2,203.1838	0.6751		2,217.3598

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0436	0.0544	0.5085	1.2700e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		101.9393	101.9393	5.2300e-003		102.0492
Total	0.0436	0.0544	0.5085	1.2700e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		101.9393	101.9393	5.2300e-003		102.0492

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					4.7936	0.0000	4.7936	2.5126	0.0000	2.5126			0.0000			0.0000
Off-Road	0.2624	1.1370	14.1569	0.0215		5.2500e-003	5.2500e-003		5.2500e-003	5.2500e-003	0.0000	2,203.1838	2,203.1838	0.6751		2,217.3598
Total	0.2624	1.1370	14.1569	0.0215	4.7936	5.2500e-003	4.7989	2.5126	5.2500e-003	2.5178	0.0000	2,203.1838	2,203.1838	0.6751		2,217.3598

3.3 Grading - 2017**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0436	0.0544	0.5085	1.2700e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		101.9393	101.9393	5.2300e-003		102.0492
Total	0.0436	0.0544	0.5085	1.2700e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		101.9393	101.9393	5.2300e-003		102.0492

3.4 Paving - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609

3.4 Paving - 2017**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987
Total	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987

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	0.2161	0.9363	13.3248	0.0186		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2161	0.9363	13.3248	0.0186		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609

3.4 Paving - 2017**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987
Total	0.0671	0.0837	0.7823	1.9500e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		156.8296	156.8296	8.0500e-003		156.9987

3.5 Building Construction - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5365	12.2803	9.0880	0.0139		0.8477	0.8477		0.8091	0.8091		1,344.1638	1,344.1638	0.2621		1,349.6669
Total	1.5365	12.2803	9.0880	0.0139		0.8477	0.8477		0.8091	0.8091		1,344.1638	1,344.1638	0.2621		1,349.6669

3.5 Building Construction - 2017**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.2536	1.9954	3.2614	5.4300e-003	0.1527	0.0289	0.1816	0.0436	0.0266	0.0701		535.3339	535.3339	4.1200e-003		535.4203
Worker	0.1981	0.2468	2.3079	5.7600e-003	0.4847	3.5200e-003	0.4882	0.1286	3.2500e-003	0.1318		462.6474	462.6474	0.0238		463.1463
Total	0.4517	2.2422	5.5693	0.0112	0.6373	0.0324	0.6698	0.1721	0.0298	0.2020		997.9813	997.9813	0.0279		998.5666

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	0.1618	1.1080	8.9395	0.0139		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003	0.0000	1,344.1638	1,344.1638	0.2621		1,349.6669
Total	0.1618	1.1080	8.9395	0.0139		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003	0.0000	1,344.1638	1,344.1638	0.2621		1,349.6669

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.2536	1.9954	3.2614	5.4300e-003	0.1527	0.0289	0.1816	0.0436	0.0266	0.0701		535.3339	535.3339	4.1200e-003		535.4203
Worker	0.1981	0.2468	2.3079	5.7600e-003	0.4847	3.5200e-003	0.4882	0.1286	3.2500e-003	0.1318		462.6474	462.6474	0.0238		463.1463
Total	0.4517	2.2422	5.5693	0.0112	0.6373	0.0324	0.6698	0.1721	0.0298	0.2020		997.9813	997.9813	0.0279		998.5666

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.8191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	13.1514	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0403	0.0502	0.4694	1.1700e-003	0.0986	7.2000e-004	0.0993	0.0262	6.6000e-004	0.0268		94.0978	94.0978	4.8300e-003		94.1992
Total	0.0403	0.0502	0.4694	1.1700e-003	0.0986	7.2000e-004	0.0993	0.0262	6.6000e-004	0.0268		94.0978	94.0978	4.8300e-003		94.1992

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	12.8191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0297		282.0721
Total	12.8488	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0297		282.0721

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0403	0.0502	0.4694	1.1700e-003	0.0986	7.2000e-004	0.0993	0.0262	6.6000e-004	0.0268		94.0978	94.0978	4.8300e-003		94.1992
Total	0.0403	0.0502	0.4694	1.1700e-003	0.0986	7.2000e-004	0.0993	0.0262	6.6000e-004	0.0268		94.0978	94.0978	4.8300e-003		94.1992

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4398	0.9932	4.5190	0.0107	0.7618	0.0132	0.7750	0.2034	0.0122	0.2155		877.5574	877.5574	0.0356		878.3046
Unmitigated	0.4398	0.9932	4.5190	0.0107	0.7618	0.0132	0.7750	0.2034	0.0122	0.2155		877.5574	877.5574	0.0356		878.3046

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	123.31	123.31	123.31	360,018	360,018
Total	123.31	123.31	123.31	360,018	360,018

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
Unrefrigerated Warehouse-No	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224
NaturalGas Unmitigated	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224

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					
Unrefrigerated Warehouse-No Pail	671.851	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224
Total		7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224

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					
Unrefrigerated Warehouse-No Pail	0.671851	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224
Total		7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324
Unmitigated	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324

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	0.8008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3900e-003	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324
Total	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324

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	0.8008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3900e-003	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324
Total	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Bonita Road Self Storage (2018 Operations)
San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	140.13	1000sqft	4.18	140,129.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
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 - 4.18 acre self storage site. Most similar would be unrefrigerated warehouse area. Traffic to be modified per project trip generation study

Construction Phase - Proposed Construction

Off-road Equipment -

Off-road Equipment - CS

Off-road Equipment - CE

Off-road Equipment -

Off-road Equipment - Proposed Equipment

Grading - 4.18 acres

Architectural Coating - 150 g/l VOC Paint Max

Vehicle Trips - Traffic Study indicates that the project will generate .877 trips per 1000 SF

Area Coating - 150 g/l VOC Paint Max

Construction Off-road Equipment Mitigation - Tier 3 Mitigation

[illegible]

[illegible]

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	152.00
tblConstructionPhase	NumDays	230.00	227.00
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	18.00	12.00
tblConstructionPhase	PhaseEndDate	7/31/2018	12/31/2017
tblConstructionPhase	PhaseEndDate	12/29/2017	12/31/2017
tblConstructionPhase	PhaseEndDate	1/6/2017	1/7/2017
tblConstructionPhase	PhaseStartDate	1/1/2018	6/1/2017
tblGrading	AcresOfGrading	6.00	4.18
tblGrading	AcresOfGrading	0.00	4.18
tblLandUse	LandUseSquareFeet	140,130.00	140,129.00
tblLandUse	LotAcreage	3.22	4.18
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	2.59	0.88

tblVehicleTrips	SU_TR	2.59	0.88
tblVehicleTrips	WD_TR	2.59	0.88

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	15.1334	26.2743	18.9635	0.0297	6.9744	1.4727	8.0455	3.4234	1.3548	4.4089	0.0000	2,757.957 4	2,757.957 4	0.6803	0.0000	2,772.243 4
Total	15.1334	26.2743	18.9635	0.0297	6.9744	1.4727	8.0455	3.4234	1.3548	4.4089	0.0000	2,757.957 4	2,757.957 4	0.6803	0.0000	2,772.243 4

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	13.4561	3.4508	16.0463	0.0297	6.9744	0.0365	6.9785	3.4234	0.0338	3.4275	0.0000	2,757.957 4	2,757.957 4	0.6803	0.0000	2,772.243 4
Total	13.4561	3.4508	16.0463	0.0297	6.9744	0.0365	6.9785	3.4234	0.0338	3.4275	0.0000	2,757.957 4	2,757.957 4	0.6803	0.0000	2,772.243 4

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	11.08	86.87	15.38	0.00	0.00	97.52	13.26	0.00	97.50	22.26	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324
Energy	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224
Mobile	0.4145	0.9348	4.3255	0.0113	0.7618	0.0132	0.7749	0.2034	0.0122	0.2155		921.8725	921.8725	0.0356		922.6192
Total	4.2226	1.0008	4.3953	0.0117	0.7618	0.0182	0.7800	0.2034	0.0172	0.2206		1,000.9445	1,000.9445	0.0372	1.4500e-003	1,002.1740

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324
Energy	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224
Mobile	0.4145	0.9348	4.3255	0.0113	0.7618	0.0132	0.7749	0.2034	0.0122	0.2155		921.8725	921.8725	0.0356		922.6192
Total	4.2226	1.0008	4.3953	0.0117	0.7618	0.0182	0.7800	0.2034	0.0172	0.2206		1,000.9445	1,000.9445	0.0372	1.4500e-003	1,002.1740

	ROG	NOx	CO	SO2	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	Site Preparation	Site Preparation	1/1/2017	1/7/2017	5	5	
2	Grading	Grading	1/8/2017	1/30/2017	5	16	
3	Paving	Paving	1/31/2017	2/15/2017	5	12	
4	Building Construction	Building Construction	2/16/2017	12/31/2017	5	227	
5	Architectural Coating	Architectural Coating	6/1/2017	12/31/2017	5	152	

Acres of Grading (Site Preparation Phase): 4.18

Acres of Grading (Grading Phase): 4.18

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 210,194; Non-Residential Outdoor: 70,065 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	1	6.00	162	0.38
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	2.00	226	0.29
Building Construction	Forklifts	3	4.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	2.00	97	0.37
Building Construction	Welders	1	4.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	59.00	23.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.9087	0.0000	6.9087	3.4060	0.0000	3.4060			0.0000			0.0000
Off-Road	1.8239	19.2804	14.7282	0.0151		1.0707	1.0707		0.9850	0.9850		1,546.5386	1,546.5386	0.4739		1,556.4896
Total	1.8239	19.2804	14.7282	0.0151	6.9087	1.0707	7.9793	3.4060	0.9850	4.3910		1,546.5386	1,546.5386	0.4739		1,556.4896

3.2 Site Preparation - 2017**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0254	0.0298	0.3237	8.3000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.4000e-004	0.0179		66.8014	66.8014	3.2200e-003		66.8690
Total	0.0254	0.0298	0.3237	8.3000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.4000e-004	0.0179		66.8014	66.8014	3.2200e-003		66.8690

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					6.9087	0.0000	6.9087	3.4060	0.0000	3.4060			0.0000			0.0000
Off-Road	0.1839	0.7969	8.6419	0.0151		3.6800e-003	3.6800e-003		3.6800e-003	3.6800e-003	0.0000	1,546.5386	1,546.5386	0.4739		1,556.4896
Total	0.1839	0.7969	8.6419	0.0151	6.9087	3.6800e-003	6.9123	3.4060	3.6800e-003	3.4096	0.0000	1,546.5386	1,546.5386	0.4739		1,556.4896

3.2 Site Preparation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0254	0.0298	0.3237	8.3000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.4000e-004	0.0179		66.8014	66.8014	3.2200e-003		66.8690
Total	0.0254	0.0298	0.3237	8.3000e-004	0.0657	4.8000e-004	0.0662	0.0174	4.4000e-004	0.0179		66.8014	66.8014	3.2200e-003		66.8690

3.3 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.7936	0.0000	4.7936	2.5126	0.0000	2.5126			0.0000			0.0000
Off-Road	2.5124	26.2259	18.4375	0.0215		1.4719	1.4719		1.3541	1.3541		2,203.1838	2,203.1838	0.6751		2,217.3598
Total	2.5124	26.2259	18.4375	0.0215	4.7936	1.4719	6.2655	2.5126	1.3541	3.8667		2,203.1838	2,203.1838	0.6751		2,217.3598

3.3 Grading - 2017**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0413	0.0485	0.5260	1.3500e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		108.5523	108.5523	5.2300e-003		108.6622
Total	0.0413	0.0485	0.5260	1.3500e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		108.5523	108.5523	5.2300e-003		108.6622

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					4.7936	0.0000	4.7936	2.5126	0.0000	2.5126			0.0000			0.0000
Off-Road	0.2624	1.1370	14.1569	0.0215		5.2500e-003	5.2500e-003		5.2500e-003	5.2500e-003	0.0000	2,203.1838	2,203.1838	0.6751		2,217.3598
Total	0.2624	1.1370	14.1569	0.0215	4.7936	5.2500e-003	4.7989	2.5126	5.2500e-003	2.5178	0.0000	2,203.1838	2,203.1838	0.6751		2,217.3598

3.3 Grading - 2017**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0413	0.0485	0.5260	1.3500e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		108.5523	108.5523	5.2300e-003		108.6622
Total	0.0413	0.0485	0.5260	1.3500e-003	0.1068	7.8000e-004	0.1076	0.0283	7.2000e-004	0.0290		108.5523	108.5523	5.2300e-003		108.6622

3.4 Paving - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.6554	16.8035	12.4837	0.0186		1.0056	1.0056		0.9269	0.9269		1,873.8264	1,873.8264	0.5588		1,885.5609

3.4 Paving - 2017**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726
Total	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726

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	0.2161	0.9363	13.3248	0.0186		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2161	0.9363	13.3248	0.0186		4.3200e-003	4.3200e-003		4.3200e-003	4.3200e-003	0.0000	1,873.8264	1,873.8264	0.5588		1,885.5609

3.4 Paving - 2017**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726
Total	0.0635	0.0746	0.8093	2.0800e-003	0.1643	1.1900e-003	0.1655	0.0436	1.1000e-003	0.0447		167.0035	167.0035	8.0500e-003		167.1726

3.5 Building Construction - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5365	12.2803	9.0880	0.0139		0.8477	0.8477		0.8091	0.8091		1,344.1638	1,344.1638	0.2621		1,349.6669
Total	1.5365	12.2803	9.0880	0.0139		0.8477	0.8477		0.8091	0.8091		1,344.1638	1,344.1638	0.2621		1,349.6669

3.5 Building Construction - 2017**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.2199	1.9493	2.4015	5.4600e-003	0.1527	0.0286	0.1813	0.0436	0.0263	0.0699		539.4831	539.4831	4.0100e-003		539.5673
Worker	0.1875	0.2200	2.3874	6.1400e-003	0.4847	3.5200e-003	0.4882	0.1286	3.2500e-003	0.1318		492.6603	492.6603	0.0238		493.1591
Total	0.4074	2.1692	4.7889	0.0116	0.6373	0.0321	0.6695	0.1721	0.0296	0.2017		1,032.1434	1,032.1434	0.0278		1,032.7265

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	0.1618	1.1080	8.9395	0.0139		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003	0.0000	1,344.1638	1,344.1638	0.2621		1,349.6669
Total	0.1618	1.1080	8.9395	0.0139		3.0200e-003	3.0200e-003		3.0200e-003	3.0200e-003	0.0000	1,344.1638	1,344.1638	0.2621		1,349.6669

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.2199	1.9493	2.4015	5.4600e-003	0.1527	0.0286	0.1813	0.0436	0.0263	0.0699		539.4831	539.4831	4.0100e-003		539.5673
Worker	0.1875	0.2200	2.3874	6.1400e-003	0.4847	3.5200e-003	0.4882	0.1286	3.2500e-003	0.1318		492.6603	492.6603	0.0238		493.1591
Total	0.4074	2.1692	4.7889	0.0116	0.6373	0.0321	0.6695	0.1721	0.0296	0.2017		1,032.1434	1,032.1434	0.0278		1,032.7265

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.8191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	13.1514	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0381	0.0447	0.4856	1.2500e-003	0.0986	7.2000e-004	0.0993	0.0262	6.6000e-004	0.0268		100.2021	100.2021	4.8300e-003		100.3036
Total	0.0381	0.0447	0.4856	1.2500e-003	0.0986	7.2000e-004	0.0993	0.0262	6.6000e-004	0.0268		100.2021	100.2021	4.8300e-003		100.3036

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	12.8191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0297		282.0721
Total	12.8488	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0297		282.0721

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0381	0.0447	0.4856	1.2500e-003	0.0986	7.2000e-004	0.0993	0.0262	6.6000e-004	0.0268		100.2021	100.2021	4.8300e-003		100.3036
Total	0.0381	0.0447	0.4856	1.2500e-003	0.0986	7.2000e-004	0.0993	0.0262	6.6000e-004	0.0268		100.2021	100.2021	4.8300e-003		100.3036

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4145	0.9348	4.3255	0.0113	0.7618	0.0132	0.7749	0.2034	0.0122	0.2155		921.8725	921.8725	0.0356		922.6192
Unmitigated	0.4145	0.9348	4.3255	0.0113	0.7618	0.0132	0.7749	0.2034	0.0122	0.2155		921.8725	921.8725	0.0356		922.6192

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	123.31	123.31	123.31	360,018	360,018
Total	123.31	123.31	123.31	360,018	360,018

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
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224
NaturalGas Unmitigated	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224

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					
Unrefrigerated Warehouse-No Pail	671.851	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224
Total		7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224

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					
Unrefrigerated Warehouse-No Pail	0.671851	7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224
Total		7.2500e-003	0.0659	0.0553	4.0000e-004		5.0100e-003	5.0100e-003		5.0100e-003	5.0100e-003		79.0413	79.0413	1.5100e-003	1.4500e-003	79.5224

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324
Unmitigated	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324

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	0.8008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3900e-003	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324
Total	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324

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	0.8008					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.3900e-003	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324
Total	3.8009	1.4000e-004	0.0145	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005		0.0307	0.0307	8.0000e-005		0.0324

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Bonita Road Self Storage (2018 Operations)
San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	140.13	1000sqft	4.18	140,129.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2018
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 - 4.18 acre self storage site. Most similar would be unrefrigerated warehouse area. Traffic to be modified per proejct trip generation study

Construction Phase - Proposed Construction

Off-road Equipment -

Off-road Equipment - CS

Off-road Equipment - CE

Off-road Equipment -

Off-road Equipment - Proposed Equipment

Grading - 4.18 acres

Architectural Coating - 150 g/l VOC Paint Max

Vehicle Trips - Traffic Study indicates that the project will generate .877 trips per 1000 SF

Area Coating - 150 g/l VOC Paint Max

Construction Off-road Equipment Mitigation - Tier 3 Mitigation

[illegible]

[illegible]

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	18.00	152.00
tblConstructionPhase	NumDays	230.00	227.00
tblConstructionPhase	NumDays	8.00	16.00
tblConstructionPhase	NumDays	18.00	12.00
tblConstructionPhase	PhaseEndDate	7/31/2018	12/31/2017
tblConstructionPhase	PhaseEndDate	12/29/2017	12/31/2017
tblConstructionPhase	PhaseEndDate	1/6/2017	1/7/2017
tblConstructionPhase	PhaseStartDate	1/1/2018	6/1/2017
tblGrading	AcresOfGrading	6.00	4.18
tblGrading	AcresOfGrading	0.00	4.18
tblLandUse	LandUseSquareFeet	140,130.00	140,129.00
tblLandUse	LotAcreage	3.22	4.18
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	2.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2018
tblVehicleTrips	ST_TR	2.59	0.88

tblVehicleTrips	SU_TR	2.59	0.88
tblVehicleTrips	WD_TR	2.59	0.88

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	1.2601	2.1790	2.0760	3.5200e-003	0.1356	0.1336	0.2692	0.0502	0.1273	0.1775	0.0000	299.2876	299.2876	0.0413	0.0000	300.1555
Total	1.2601	2.1790	2.0760	3.5200e-003	0.1356	0.1336	0.2692	0.0502	0.1273	0.1775	0.0000	299.2876	299.2876	0.0413	0.0000	300.1555

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	1.0503	0.4126	2.0120	3.5200e-003	0.1356	4.2000e-003	0.1398	0.0502	3.9000e-003	0.0541	0.0000	299.2874	299.2874	0.0413	0.0000	300.1553
Total	1.0503	0.4126	2.0120	3.5200e-003	0.1356	4.2000e-003	0.1398	0.0502	3.9000e-003	0.0541	0.0000	299.2874	299.2874	0.0413	0.0000	300.1553

	ROG	NOx	CO	SO2	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	16.65	81.07	3.08	0.00	0.00	96.86	48.08	0.00	96.94	69.52	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6935	1.0000e-005	1.3100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6500e-003
Energy	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	202.2211	202.2211	7.8600e-003	1.8100e-003	202.9489
Mobile	0.0753	0.1800	0.8012	1.9700e-003	0.1354	2.4000e-003	0.1378	0.0362	2.2100e-003	0.0384	0.0000	145.8960	145.8960	5.8700e-003	0.0000	146.0191
Waste						0.0000	0.0000		0.0000	0.0000	26.7380	0.0000	26.7380	1.5802	0.0000	59.9215
Water						0.0000	0.0000		0.0000	0.0000	10.2806	137.8958	148.1764	1.0615	0.0261	178.5523
Total	0.7701	0.1920	0.8126	2.0400e-003	0.1354	3.3100e-003	0.1387	0.0362	3.1200e-003	0.0393	37.0186	486.0153	523.0339	2.6554	0.0279	587.4445

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6935	1.0000e-005	1.3100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6500e-003
Energy	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	202.2211	202.2211	7.8600e-003	1.8100e-003	202.9489
Mobile	0.0753	0.1800	0.8012	1.9700e-003	0.1354	2.4000e-003	0.1378	0.0362	2.2100e-003	0.0384	0.0000	145.8960	145.8960	5.8700e-003	0.0000	146.0191
Waste						0.0000	0.0000		0.0000	0.0000	26.7380	0.0000	26.7380	1.5802	0.0000	59.9215
Water						0.0000	0.0000		0.0000	0.0000	10.2806	137.8958	148.1764	1.0613	0.0260	178.5359
Total	0.7701	0.1920	0.8126	2.0400e-003	0.1354	3.3100e-003	0.1387	0.0362	3.1200e-003	0.0393	37.0186	486.0153	523.0339	2.6552	0.0279	587.4281

	ROG	NOx	CO	SO2	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	0.01	0.14	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2017	1/7/2017	5	5	
2	Grading	Grading	1/8/2017	1/30/2017	5	16	
3	Paving	Paving	1/31/2017	2/15/2017	5	12	
4	Building Construction	Building Construction	2/16/2017	12/31/2017	5	227	
5	Architectural Coating	Architectural Coating	6/1/2017	12/31/2017	5	152	

Acres of Grading (Site Preparation Phase): 4.18

Acres of Grading (Grading Phase): 4.18

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 210,194; Non-Residential Outdoor: 70,065 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	1	6.00	162	0.38
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	2	6.00	130	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	2.00	226	0.29
Building Construction	Forklifts	3	4.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	2.00	97	0.37
Building Construction	Welders	1	4.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	59.00	23.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0173	0.0000	0.0173	8.5100e-003	0.0000	8.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5600e-003	0.0482	0.0368	4.0000e-005		2.6800e-003	2.6800e-003		2.4600e-003	2.4600e-003	0.0000	3.5075	3.5075	1.0700e-003	0.0000	3.5301
Total	4.5600e-003	0.0482	0.0368	4.0000e-005	0.0173	2.6800e-003	0.0200	8.5100e-003	2.4600e-003	0.0110	0.0000	3.5075	3.5075	1.0700e-003	0.0000	3.5301

3.2 Site Preparation - 2017**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	8.0000e-005	7.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1437	0.1437	1.0000e-005	0.0000	0.1438
Total	6.0000e-005	8.0000e-005	7.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1437	0.1437	1.0000e-005	0.0000	0.1438

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					0.0173	0.0000	0.0173	8.5100e-003	0.0000	8.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	1.9900e-003	0.0216	4.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.5075	3.5075	1.0700e-003	0.0000	3.5301
Total	4.6000e-004	1.9900e-003	0.0216	4.0000e-005	0.0173	1.0000e-005	0.0173	8.5100e-003	1.0000e-005	8.5200e-003	0.0000	3.5075	3.5075	1.0700e-003	0.0000	3.5301

3.2 Site Preparation - 2017**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	8.0000e-005	7.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1437	0.1437	1.0000e-005	0.0000	0.1438
Total	6.0000e-005	8.0000e-005	7.8000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1437	0.1437	1.0000e-005	0.0000	0.1438

3.3 Grading - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0384	0.0000	0.0384	0.0201	0.0000	0.0201	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0201	0.2098	0.1475	1.7000e-004		0.0118	0.0118		0.0108	0.0108	0.0000	15.9896	15.9896	4.9000e-003	0.0000	16.0924
Total	0.0201	0.2098	0.1475	1.7000e-004	0.0384	0.0118	0.0501	0.0201	0.0108	0.0309	0.0000	15.9896	15.9896	4.9000e-003	0.0000	16.0924

3.3 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	4.3000e-004	4.0500e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.4000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7472	0.7472	4.0000e-005	0.0000	0.7480
Total	3.2000e-004	4.3000e-004	4.0500e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.4000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7472	0.7472	4.0000e-005	0.0000	0.7480

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					0.0384	0.0000	0.0384	0.0201	0.0000	0.0201	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1000e-003	9.1000e-003	0.1133	1.7000e-004		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	15.9895	15.9895	4.9000e-003	0.0000	16.0924
Total	2.1000e-003	9.1000e-003	0.1133	1.7000e-004	0.0384	4.0000e-005	0.0384	0.0201	4.0000e-005	0.0201	0.0000	15.9895	15.9895	4.9000e-003	0.0000	16.0924

3.3 Grading - 2017**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2000e-004	4.3000e-004	4.0500e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.4000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7472	0.7472	4.0000e-005	0.0000	0.7480
Total	3.2000e-004	4.3000e-004	4.0500e-003	1.0000e-005	8.3000e-004	1.0000e-005	8.4000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7472	0.7472	4.0000e-005	0.0000	0.7480

3.4 Paving - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.9300e-003	0.1008	0.0749	1.1000e-004		6.0300e-003	6.0300e-003		5.5600e-003	5.5600e-003	0.0000	10.1994	10.1994	3.0400e-003	0.0000	10.2633
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.9300e-003	0.1008	0.0749	1.1000e-004		6.0300e-003	6.0300e-003		5.5600e-003	5.5600e-003	0.0000	10.1994	10.1994	3.0400e-003	0.0000	10.2633

3.4 Paving - 2017**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	4.9000e-004	4.6700e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.8621	0.8621	4.0000e-005	0.0000	0.8630
Total	3.7000e-004	4.9000e-004	4.6700e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.8621	0.8621	4.0000e-005	0.0000	0.8630

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.3000e-003	5.6200e-003	0.0800	1.1000e-004		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	10.1994	10.1994	3.0400e-003	0.0000	10.2633
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.3000e-003	5.6200e-003	0.0800	1.1000e-004		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	10.1994	10.1994	3.0400e-003	0.0000	10.2633

3.4 Paving - 2017**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	4.9000e-004	4.6700e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.8621	0.8621	4.0000e-005	0.0000	0.8630
Total	3.7000e-004	4.9000e-004	4.6700e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.8621	0.8621	4.0000e-005	0.0000	0.8630

3.5 Building Construction - 2017**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1744	1.3938	1.0315	1.5800e-003		0.0962	0.0962		0.0918	0.0918	0.0000	138.4025	138.4025	0.0270	0.0000	138.9691
Total	0.1744	1.3938	1.0315	1.5800e-003		0.0962	0.0962		0.0918	0.0918	0.0000	138.4025	138.4025	0.0270	0.0000	138.9691

3.5 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0272	0.2280	0.3376	6.2000e-004	0.0170	3.2600e-003	0.0202	4.8600e-003	3.0000e-003	7.8600e-003	0.0000	55.3687	55.3687	4.2000e-004	0.0000	55.3775
Worker	0.0208	0.0276	0.2607	6.6000e-004	0.0537	4.0000e-004	0.0541	0.0143	3.7000e-004	0.0146	0.0000	48.1101	48.1101	2.4500e-003	0.0000	48.1615
Total	0.0480	0.2556	0.5983	1.2800e-003	0.0707	3.6600e-003	0.0743	0.0191	3.3700e-003	0.0225	0.0000	103.4788	103.4788	2.8700e-003	0.0000	103.5389

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	0.0184	0.1258	1.0146	1.5800e-003		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	138.4023	138.4023	0.0270	0.0000	138.9689
Total	0.0184	0.1258	1.0146	1.5800e-003		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	138.4023	138.4023	0.0270	0.0000	138.9689

3.5 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0272	0.2280	0.3376	6.2000e-004	0.0170	3.2600e-003	0.0202	4.8600e-003	3.0000e-003	7.8600e-003	0.0000	55.3687	55.3687	4.2000e-004	0.0000	55.3775
Worker	0.0208	0.0276	0.2607	6.6000e-004	0.0537	4.0000e-004	0.0541	0.0143	3.7000e-004	0.0146	0.0000	48.1101	48.1101	2.4500e-003	0.0000	48.1615
Total	0.0480	0.2556	0.5983	1.2800e-003	0.0707	3.6600e-003	0.0743	0.0191	3.3700e-003	0.0225	0.0000	103.4788	103.4788	2.8700e-003	0.0000	103.5389

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9743					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0253	0.1661	0.1420	2.3000e-004		0.0132	0.0132		0.0132	0.0132	0.0000	19.4047	19.4047	2.0500e-003	0.0000	19.4478
Total	0.9995	0.1661	0.1420	2.3000e-004		0.0132	0.0132		0.0132	0.0132	0.0000	19.4047	19.4047	2.0500e-003	0.0000	19.4478

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8300e-003	3.7600e-003	0.0355	9.0000e-005	7.3100e-003	5.0000e-005	7.3700e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	6.5521	6.5521	3.3000e-004	0.0000	6.5591
Total	2.8300e-003	3.7600e-003	0.0355	9.0000e-005	7.3100e-003	5.0000e-005	7.3700e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	6.5521	6.5521	3.3000e-004	0.0000	6.5591

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	0.9743					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.2600e-003	9.7900e-003	0.1393	2.3000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	19.4047	19.4047	2.0500e-003	0.0000	19.4477
Total	0.9765	9.7900e-003	0.1393	2.3000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	19.4047	19.4047	2.0500e-003	0.0000	19.4477

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8300e-003	3.7600e-003	0.0355	9.0000e-005	7.3100e-003	5.0000e-005	7.3700e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	6.5521	6.5521	3.3000e-004	0.0000	6.5591
Total	2.8300e-003	3.7600e-003	0.0355	9.0000e-005	7.3100e-003	5.0000e-005	7.3700e-003	1.9400e-003	5.0000e-005	1.9900e-003	0.0000	6.5521	6.5521	3.3000e-004	0.0000	6.5591

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0753	0.1800	0.8012	1.9700e-003	0.1354	2.4000e-003	0.1378	0.0362	2.2100e-003	0.0384	0.0000	145.8960	145.8960	5.8700e-003	0.0000	146.0191
Unmitigated	0.0753	0.1800	0.8012	1.9700e-003	0.1354	2.4000e-003	0.1378	0.0362	2.2100e-003	0.0384	0.0000	145.8960	145.8960	5.8700e-003	0.0000	146.0191

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	123.31	123.31	123.31	360,018	360,018
Total	123.31	123.31	123.31	360,018	360,018

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
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.511818	0.073499	0.191840	0.131575	0.036332	0.005186	0.012677	0.022513	0.001864	0.002072	0.006564	0.000601	0.003458

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	189.1349	189.1349	7.6100e-003	1.5800e-003	189.7831
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	189.1349	189.1349	7.6100e-003	1.5800e-003	189.7831
NaturalGas Mitigated	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0862	13.0862	2.5000e-004	2.4000e-004	13.1658
NaturalGas Unmitigated	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0862	13.0862	2.5000e-004	2.4000e-004	13.1658

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					
Unrefrigerated Warehouse-No Pail	245226	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0862	13.0862	2.5000e-004	2.4000e-004	13.1658
Total		1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0862	13.0862	2.5000e-004	2.4000e-004	13.1658

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					
Unrefrigerated Warehouse-No Pail	245226	1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0862	13.0862	2.5000e-004	2.4000e-004	13.1658
Total		1.3200e-003	0.0120	0.0101	7.0000e-005		9.1000e-004	9.1000e-004		9.1000e-004	9.1000e-004	0.0000	13.0862	13.0862	2.5000e-004	2.4000e-004	13.1658

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Pail	578733	189.1349	7.6100e-003	1.5800e-003	189.7831
Total		189.1349	7.6100e-003	1.5800e-003	189.7831

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Pail	578733	189.1349	7.6100e-003	1.5800e-003	189.7831
Total		189.1349	7.6100e-003	1.5800e-003	189.7831

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6935	1.0000e-005	1.3100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6500e-003
Unmitigated	0.6935	1.0000e-005	1.3100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6500e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1461					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.3100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6500e-003
Total	0.6935	1.0000e-005	1.3100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6500e-003

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	0.1461					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5473					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.3100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6500e-003
Total	0.6935	1.0000e-005	1.3100e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6500e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	148.1764	1.0613	0.0260	178.5359
Unmitigated	148.1764	1.0615	0.0261	178.5523

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Cool	32.4051 / 0	148.1764	1.0615	0.0261	178.5523
Total		148.1764	1.0615	0.0261	178.5523

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Pail	32.4051 / 0	148.1764	1.0613	0.0260	178.5359
Total		148.1764	1.0613	0.0260	178.5359

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	26.7380	1.5802	0.0000	59.9215
Unmitigated	26.7380	1.5802	0.0000	59.9215

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	131.72	26.7380	1.5802	0.0000	59.9215
Total		26.7380	1.5802	0.0000	59.9215

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	131.72	26.7380	1.5802	0.0000	59.9215
Total		26.7380	1.5802	0.0000	59.9215

9.0 Operational Offroad

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

ATTACHMENT B

SCREEN 3 – Unmitigated and Mitigated Scenarios

07/19/16
17:11:53

*** SCREEN3 MODEL RUN ***
 *** VERSION DATED 13043 ***

Bonita Self Storage (Unmitigated)

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = AREA
 EMISSION RATE (G/(S-M**2)) = 0.929000E-06
 SOURCE HEIGHT (M) = 3.0000
 LENGTH OF LARGER SIDE (M) = 130.0600
 LENGTH OF SMALLER SIDE (M) = 130.0600
 RECEPTOR HEIGHT (M) = 1.5000
 URBAN/RURAL OPTION = URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
10.	10.99	5	1.0	1.0	10000.0	3.00	45.
100.	16.90	5	1.0	1.0	10000.0	3.00	45.
200.	8.298	5	1.0	1.0	10000.0	3.00	45.
300.	5.091	5	1.0	1.0	10000.0	3.00	45.
400.	3.535	5	1.0	1.0	10000.0	3.00	45.
500.	2.625	5	1.0	1.0	10000.0	3.00	45.
600.	2.040	5	1.0	1.0	10000.0	3.00	43.
700.	1.641	5	1.0	1.0	10000.0	3.00	44.
800.	1.356	5	1.0	1.0	10000.0	3.00	43.
900.	1.145	5	1.0	1.0	10000.0	3.00	45.
1000.	0.9845	5	1.0	1.0	10000.0	3.00	45.
1100.	0.8589	5	1.0	1.0	10000.0	3.00	41.
1200.	0.7583	5	1.0	1.0	10000.0	3.00	37.
1300.	0.6770	5	1.0	1.0	10000.0	3.00	45.
1400.	0.6094	5	1.0	1.0	10000.0	3.00	35.
1500.	0.5531	5	1.0	1.0	10000.0	3.00	36.
1600.	0.5053	5	1.0	1.0	10000.0	3.00	39.
1700.	0.4643	5	1.0	1.0	10000.0	3.00	43.
1800.	0.4291	5	1.0	1.0	10000.0	3.00	32.
1900.	0.3984	5	1.0	1.0	10000.0	3.00	1.
2000.	0.3715	5	1.0	1.0	10000.0	3.00	1.
2100.	0.3475	5	1.0	1.0	10000.0	3.00	2.
2200.	0.3263	5	1.0	1.0	10000.0	3.00	27.
2300.	0.3073	5	1.0	1.0	10000.0	3.00	27.
2400.	0.2903	5	1.0	1.0	10000.0	3.00	43.
2500.	0.2750	5	1.0	1.0	10000.0	3.00	41.
2600.	0.2611	5	1.0	1.0	10000.0	3.00	40.
2700.	0.2484	5	1.0	1.0	10000.0	3.00	38.
2800.	0.2368	5	1.0	1.0	10000.0	3.00	1.
2900.	0.2263	5	1.0	1.0	10000.0	3.00	1.
3000.	0.2165	5	1.0	1.0	10000.0	3.00	1.
3500.	0.1775	5	1.0	1.0	10000.0	3.00	15.
4000.	0.1500	5	1.0	1.0	10000.0	3.00	41.

						Bonita	Unmit. OUT
4500.	0.1296	5	1.0	1.0	10000.0	3.00	6.
5000.	0.1140	5	1.0	1.0	10000.0	3.00	1.
5500.	0.1016	5	1.0	1.0	10000.0	3.00	2.
6000.	0.9152E-01	5	1.0	1.0	10000.0	3.00	6.
6500.	0.8322E-01	5	1.0	1.0	10000.0	3.00	15.
7000.	0.7629E-01	5	1.0	1.0	10000.0	3.00	23.
7500.	0.7039E-01	5	1.0	1.0	10000.0	3.00	23.
8000.	0.6532E-01	5	1.0	1.0	10000.0	3.00	26.
8500.	0.6092E-01	5	1.0	1.0	10000.0	3.00	30.
9000.	0.5706E-01	5	1.0	1.0	10000.0	3.00	32.
9500.	0.5366E-01	5	1.0	1.0	10000.0	3.00	31.
10000.	0.5063E-01	5	1.0	1.0	10000.0	3.00	29.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:

101.	16.91	5	1.0	1.0	10000.0	3.00	45.
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 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
----- SIMPLE TERRAIN	----- 16.91	----- 101.	----- 0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

07/19/16
18:31:40*** SCREEN3 MODEL RUN ***
*** VERSION DATED 13043 ***

Bonita Self Storage (Tier 4)

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = AREA
 EMISSION RATE (G/(S-M**2)) = 0.336000E-08
 SOURCE HEIGHT (M) = 3.0000
 LENGTH OF LARGER SIDE (M) = 130.0600
 LENGTH OF SMALLER SIDE (M) = 130.0600
 RECEPTOR HEIGHT (M) = 1.5000
 URBAN/RURAL OPTION = URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
10.	0.3973E-01	5	1.0	1.0	10000.0	3.00	45.
100.	0.6114E-01	5	1.0	1.0	10000.0	3.00	45.
200.	0.3001E-01	5	1.0	1.0	10000.0	3.00	45.
300.	0.1841E-01	5	1.0	1.0	10000.0	3.00	45.
400.	0.1279E-01	5	1.0	1.0	10000.0	3.00	45.
500.	0.9493E-02	5	1.0	1.0	10000.0	3.00	45.
600.	0.7378E-02	5	1.0	1.0	10000.0	3.00	43.
700.	0.5935E-02	5	1.0	1.0	10000.0	3.00	44.
800.	0.4905E-02	5	1.0	1.0	10000.0	3.00	43.
900.	0.4142E-02	5	1.0	1.0	10000.0	3.00	45.
1000.	0.3561E-02	5	1.0	1.0	10000.0	3.00	45.
1100.	0.3107E-02	5	1.0	1.0	10000.0	3.00	41.
1200.	0.2743E-02	5	1.0	1.0	10000.0	3.00	37.
1300.	0.2449E-02	5	1.0	1.0	10000.0	3.00	45.
1400.	0.2204E-02	5	1.0	1.0	10000.0	3.00	35.
1500.	0.2000E-02	5	1.0	1.0	10000.0	3.00	36.
1600.	0.1827E-02	5	1.0	1.0	10000.0	3.00	39.
1700.	0.1679E-02	5	1.0	1.0	10000.0	3.00	43.
1800.	0.1552E-02	5	1.0	1.0	10000.0	3.00	32.
1900.	0.1441E-02	5	1.0	1.0	10000.0	3.00	1.
2000.	0.1344E-02	5	1.0	1.0	10000.0	3.00	1.
2100.	0.1257E-02	5	1.0	1.0	10000.0	3.00	2.
2200.	0.1180E-02	5	1.0	1.0	10000.0	3.00	27.
2300.	0.1112E-02	5	1.0	1.0	10000.0	3.00	27.
2400.	0.1050E-02	5	1.0	1.0	10000.0	3.00	43.
2500.	0.9946E-03	5	1.0	1.0	10000.0	3.00	41.
2600.	0.9444E-03	5	1.0	1.0	10000.0	3.00	40.
2700.	0.8985E-03	5	1.0	1.0	10000.0	3.00	38.
2800.	0.8565E-03	5	1.0	1.0	10000.0	3.00	1.
2900.	0.8183E-03	5	1.0	1.0	10000.0	3.00	1.
3000.	0.7829E-03	5	1.0	1.0	10000.0	3.00	1.
3500.	0.6421E-03	5	1.0	1.0	10000.0	3.00	15.
4000.	0.5426E-03	5	1.0	1.0	10000.0	3.00	41.

Bonita Tier4 .OUT						
4500.	0.4689E-03	5	1.0	1.0	10000.0	3.00 6.
5000.	0.4124E-03	5	1.0	1.0	10000.0	3.00 1.
5500.	0.3675E-03	5	1.0	1.0	10000.0	3.00 2.
6000.	0.3310E-03	5	1.0	1.0	10000.0	3.00 6.
6500.	0.3010E-03	5	1.0	1.0	10000.0	3.00 15.
7000.	0.2759E-03	5	1.0	1.0	10000.0	3.00 23.
7500.	0.2546E-03	5	1.0	1.0	10000.0	3.00 23.
8000.	0.2362E-03	5	1.0	1.0	10000.0	3.00 26.
8500.	0.2203E-03	5	1.0	1.0	10000.0	3.00 30.
9000.	0.2064E-03	5	1.0	1.0	10000.0	3.00 32.
9500.	0.1941E-03	5	1.0	1.0	10000.0	3.00 31.
10000.	0.1831E-03	5	1.0	1.0	10000.0	3.00 29.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 10. M:
 101. 0.6115E-01 5 1.0 1.0 10000.0 3.00 45.

 *** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	0.6115E-01	101.	0.

 ** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **

ATTACHMENT C

Cancer Risk Calculations – Unmitigated and Mitigated Scenarios

Air Quality Health Risk Calculations

Bonita Self Storage (Unmit)

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.1299
	Number of Workdays	260
	Emission per day (lb/day)	0.999230769
	Construction day (Hours)	8
	Emission Rate (Grams/Second)	0.015717067
	Project Site Size (Acres)	4.18
	Project Site Size (meters)	16915.85985
Used as an input to Screen3	Length of Smalles Side (meters)	130.0609851
	Emission Rate over Grading Area	9.29132E-07

Concentration Annual 1.3528

New Method based on Risk Assessment
Guidelines - Guidance Manual for Preparation of
Health Risk Assessments - February 2015

Page 5-1 Calculate Point of
Maximum Impact and
Maximally Exposed Individual
Resident

1st find Dose (Equation 5.4.1.1) Page 5-24
2nd

5.4 Estimation of Dose

Duration	Construction Days 260	Construction Days converted to years				
		0-2	2-9	2-16	16-30	16-70
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	1.3528	1.3528	1.3528	1.3528	1.3528	1.3528
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00046883	0.00141557	0.00111817	0.00096752	0.00043506	0.00037662

8.2.4 Calculating Residential and Offsite Worker
Inhalation Cancer Risk

Equation 8.2.4 A Page 8-7

Construction Days	260	0.712328767				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	11	12	13	14
ED	0.25	0.712328767	0.712328767	0.712328767	0.712328767	0.712328767
AT	70	70	70	70	70	70
FAH (USE 1 if School for 3rd and 2-9) Page 8-5	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	1.56555E-05	0.000134687	9.91307E-05	9.35729E-05	4.62159E-05	4.30853E-05
	15.65545193	134.6869071	99.13072657	93.57287462	46.21585328	43.08527309

Cancer Risk Per Million 9-years	249.47
Cancer Risk Per Million 30-years	290.13
Cancer Risk Per Million 70-years	287.00

Air Quality Health Risk Calculations

Mitigated - Bonita Self Storage

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.00047
	Number of Workdays	260
	Emission per day (lb/day)	0.003615385
	Construction day (Hours)	8
	Emission Rate (Grams/Second)	5.6867E-05
	Project Site Size (Acres)	4.18
	Project Site Size (meters)	16915.85985
Used as an input to Screen3	Length of Smalles Side (meters)	130.0609851
	Emission Rate over Grading Area	3.36176E-09

1-Hr Concentration from Screen3 Output	Concentration 1-hr	0.061
	Concentration Annual	0.00488

New Method based on Risk Assessment
Guidelines - Guidance Manual for Preparation of
Health Risk Assessments - February 2015

Page 5-1 Calculate Point of
Maximum Impact and
Maximally Exposed Individual
Resident

1st find Dose (Equation 5.4.1.1) Page 5-24
2nd

5.4 Estimation of Dose

Duration	Construction Days 260	Construction Days converted to years				
		0-2	2-9	2-16	16-30	16-70
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.00488	0.00488	0.00488	0.00488	0.00488	0.00488
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000169	0.00000511	0.00000403	0.00000349	0.00000157	0.00000136

8.2.4 Calculating Residential and Offsite Worker
Inhalation Cancer Risk

Equation 8.2.4 A Page 8-7

Construction Days	260	0.712328767				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	11	12	13	14
ED (Must add up to Construction Time in years)	0.25	0.712328767	0.712328767	0.712328767	0.712328767	0.712328767
AT	70	70	70	70	70	70
FAH (USE 1 if School for 3rd and 2-9) Page 8-5	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	5.64744E-08	4.85861E-07	3.57598E-07	3.37549E-07	1.66716E-07	1.55423E-07
	0.056474427	0.485860516	0.357597535	0.337548513	0.16671597	0.155422925

Cancer Risk Per Million 9-years	0.90
Cancer Risk Per Million 30-years	1.05
Cancer Risk Per Million 70-years	1.04