

Appendices

Appendix 5.2-1 Air Quality Assessment

Appendices

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AIR QUALITY ASSESSMENT

**RESIDENTIAL CARE FACILITY
929 Genevieve Street
SOLANA BEACH CA**

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August 7, 2017

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LIST OF ACRONYMS

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

EXECUTIVE SUMMARY

This air quality impact study has been completed to determine the air quality impacts associated with the development of the proposed Residential Care development project. The proposed Project site is located at 929 Genevieve Street within the City of Solana Beach California. The Project proposes building 99 assisted living units and an open space park on a 2.9 acre site. All phases (i.e. demo, grading and construction) of the proposed project are anticipated to be complete sometime in 2018.

During construction of the proposed project, fugitive dust emissions will be expected during grading operations from heavy equipment usage and from construction workers commuting to and from the site. During short-term construction activities, the project will NOT exceed PM10 thresholds established by the San Diego Air Pollution Control District (SDAPCD) and will not require mitigation.

Additionally, emissions from the operation of the proposed project or from the project generated traffic, utilization of combustible fuel sources for hot water and heating, landscaping equipment, consumer products, and painting to name a few. Emissions generated during these operations were analyzed it was found that these operations would not exceed significance thresholds established by the SDAPCD, and therefore are considered less than significant under CEQA.

Furthermore, a screening-level health risk assessment was conducted to determine the potential for the project to result in a significant impact on nearby sensitive receptors during short-term construction activities. For purposes of this analysis, the primary pollutant of concern is diesel particulate matter (DPM) which is emitted by the operation of heavy diesel equipment during construction activities. The result of the health risk assessment indicates that the proposed project would increase diesel particulates to a level which would be in excess of 10 in one million exposed. Given this, all construction equipment would be required to meet Tier 4 standards and must have diesel particulate filters attached to the exhaust system of each piece of diesel equipment. This would be a requirement for the grading and construction contractors.

1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this Air Quality study is to determine if the proposed Residential Care Facility Project located at 929 Genevieve Street has a potential to create significant air quality impacts as defined by the California Environmental Quality Act (CEQA), which may be created from construction, area or operational emissions (short term or long term) from the proposed Project.

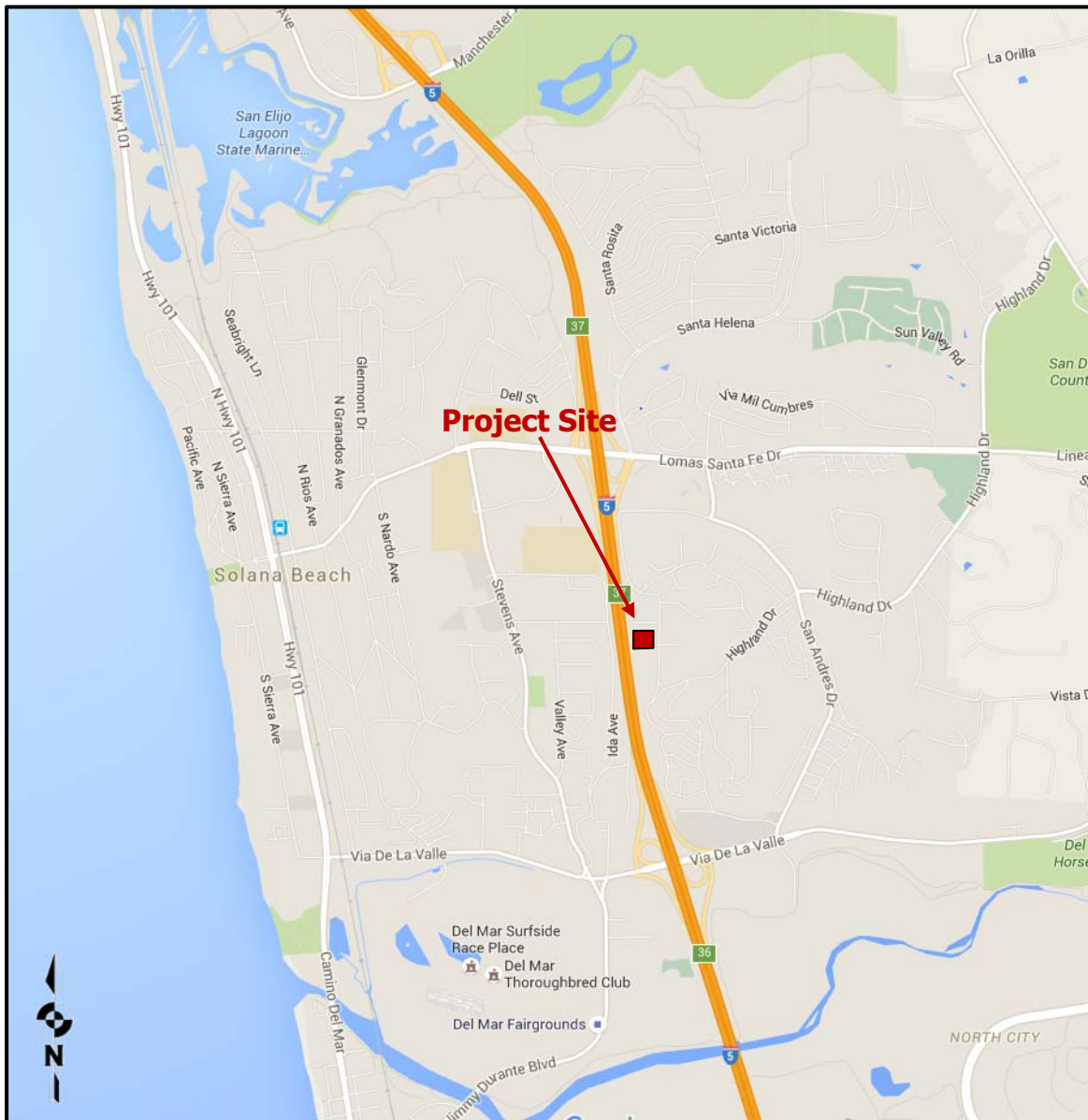
1.2 Project Location

The proposed development is located in the City of Solana Beach at 929 Genevieve Street. Access to the Project is proposed from a single driveway on Genevieve Street. To reach Genevieve Street, project traffic will be required to use Marine View Avenue. Overall travel to and from the project site is anticipated from Lomas Santa Fe Drive via San Andres Drive and Marine View Avenue. Interstate 5 to the west provides regional access to the Project site. A general project vicinity map is shown in Figure 1–A on the following page.

1.3 Project Description

The Project proposes building 99 senior housing units and an open space park on approximately 2.9 acres within the City of Solana Beach. The project would need to demolish an existing structure and all ancillary storage sheds as grub and grade the entire site. It is expected that demolition of the existing structures will occur over four days, mass grading the site in about two weeks, finish grade the site in about two weeks and trenching for all utilities in about 10 days. The project construction for the building including asphalt for parking would be expected to occur over seven months. The entire build out of the Project would be expected sometime 2019. The proposed site development plan is shown on Figure 1–B on Page 3 below.

Figure 1-A: Project Vicinity Map



Source: (Google , 2016)

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2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The Project site lies in the western portion of San Diego County in the City of Solana Beach. The existing use of the Project site is residential.

2.2 Climate (Solana Beach)

Meteorological trends within the City of Solana Beach are typically cooler given the close vicinity to the ocean. Median temperatures range from approximately 55°F in the winter to approximately 72°F in the summer (City-Data, 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.

2.3.2 State Standards and Definitions

The State of California Air Resources Board (CARB) 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. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The definitions for the criteria pollutants are shown in **Attachment A** at the end of this report.

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		
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 (Pararosaniline 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, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equalled 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 PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact 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 PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³ . The existing national 24- hour PM_{2.5} 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. 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. Currently, San Diego is in “non-attainment” status for O₃ and PM₁₀. Therefore, the County of San Diego developed a Regional Air Quality Strategy (RAQS) to provide control measures to try to achieve attainment status. The RAQS was adopted in 1991 and has been updated as recently as 2009.

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 threshold in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA). These screening criteria can be used to demonstrate that a Project's total emissions would not result in a significant impact as defined by CEQA. Since SDAPCD does not have AQIA threshold for emissions of Volatile Organic Compounds (VOCs), the use of the threshold for VOCs is from the South Coast Air Quality Management District for the Coachella Valley. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the Project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.2 below.

Non Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that propose to increase cancer risk between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the project increase the cancer risk to over 10 in one million.

Table 2.2: Screening Threshold for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)	Total Emissions (Tons per Year)
Construction Emissions		
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	100 and 55	15
Nitrogen Oxide (NO _x)	250	40
Sulfur Oxide (SO _x)	250	40
Carbon Monoxide (CO)	550	100
Volatile Organic Compounds (VOCs)	75	40
Reactive Organic Gases (ROG) SCAQMD	75	40
Operational Emissions		
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	100 and 55	15
Nitrogen Oxide (NO _x)	250	40
Sulfur Oxide (SO _x)	250	40
Carbon Monoxide (CO)	550	100
Lead and Lead Compounds	3.2	0.6
Volatile Organic Compounds (VOCs)	75	40
Reactive Organic Gases (ROG) SCAQMD	75	40

Projects creating cancer risks less than one in one million are not required to implement T-BACT technology. This report assumes that Volatile Organic Compounds (VOC) and Reactive Organic Gases (ROG) are essentially the same due to the fact that emissions generated from the Project represent non-methane organic compounds.

2.6 Local Air Quality

Criteria pollutants are measured continuously throughout the San Diego Air Basin. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS.

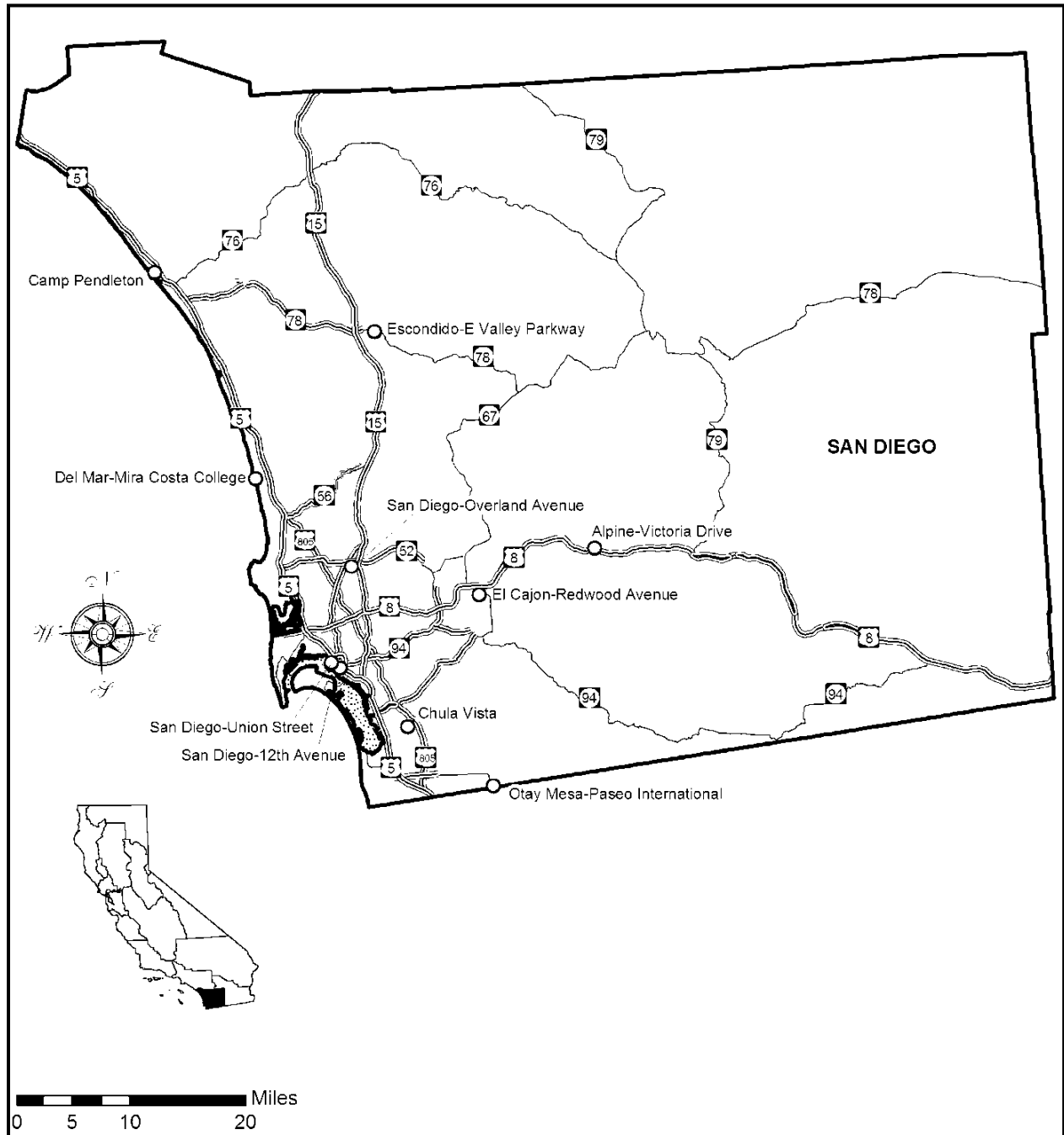
The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 10 monitoring sites, which collect data on criteria pollutants. Four additional sites collect meteorological data, which is used by the District to assist with pollutant forecasting, data analysis and characterization of pollutant transport.

SDAPCD published the five year air quality summary for all of the monitoring stations within the San Diego basin (SDAPCD, 2015). The proposed development project is closest to the Del Mar, Escondido and Camp Pendleton Monitoring stations. Table 2.3 below identifies the criteria pollutants monitored at the aforementioned station. Figure 2-A shows the relative locations of the monitoring sites.

Table 2.3: Ambient Air Quality Summary near Solana Beach

Pollutant	Closest Recorded Ambient Monitoring Site	Distance to the Project Site (miles)	Averaging Time	CAAQS	NAAQS	2012	2013	2014
O3 (ppm)	Del mar	2.5	1 Hour	0.09 ppm	-	0.09	0.08	0.10
		2.5	8 Hour	0.070 ppm	0.075 ppm	0.08	0.07	0.09
CO (ppm)	Escondido	14	8 Hour	9 ppm	9 ppm	3.8	2.6	3.1
PM10 (µg/m3)		14	24 Hour	50 µg/m3	150 µg/m3	33	80	43
PM2.5 (µg/m3)		17	24 Hour	-	35 µg/m3	N/A	34.2	26.9
NO2 (ppm)	Camp Pendleton	17	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.007	0.007	0.007
		17	1 Hour	0.18 ppm	-	0.061	0.081	0.060

Figure 2-A: San Diego Air Basin Monitoring Stations



3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod 2016.3.1 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2016. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project and uses methodologies presented in the US EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in **Attachment A** to this report.

The AERMOD dispersion model will be used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model will predict the maximum exposure distance and concentrations. The AERMOD 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, 2015):

Equation 1

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

Dose _{air}	=	Dose through inhalation (mg/kg/d)
C _{air}	=	Concentration in air (µg/m ³) Annual average DPM concentration in µg/m ³ –AERMOD
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 x 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, 2015):

Equation 2
$$\text{RISKinh-res} = \text{DOSEair} \times \text{CPF} \times \text{ASF} \times \text{ED/AT} \times \text{FAH}$$

RISKinh-res	=	Residential inhalation cancer risk
DOSEair	=	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.

3.2 Construction Assumptions

The Project construction dates were estimated based a hypothetical construction kickoff in early 2018 with demo of the existing residential unit onsite, grading and paving expected to last about two months. Once building Construction begins, it's expected that the project would be completed roughly 10 months later for a total construction duration of one year. Operations would be expected to begin early 2019. It should be noted that the project would be export roughly 26,200 CY of soil and all demolition debris from removing the

onsite structures. Table 4.1 below 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
Demolition	1/1/2018	1/7/2018	
Concrete/Industrial Saws			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			1
Site Preparation	1/8/2018	1/12/2018	
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			1
Grading	1/16/2018	2/20/2018	
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			2
Paving	2/21/2018	2/28/2018	
Cement and Mortar Mixers			1
Pavers			1
Paving Equipment			1
Rollers			2
Tractors/Loaders/Backhoes			1
Building Construction	3/1/2018	12/31/2018	
Forklifts			2
Generator Sets			1
Tractors/Loaders/Backhoes			1
Welders			3
Building Construction Crane	6/1/2018	6/21/2018	
Forklifts			2
Architectural Coating	5/1/2018	12/31/2018	
This equipment list is based upon equipment inventory within CalEEMod. The quantity and types are based upon assumptions provided by the project applicant.			

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 EMFAC2014. 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 2.74 trips per bed for assumed max beds of 99 or 271 average daily trips (LOS Engineering, Inc., 2014). These traffic numbers were utilized within the CalEEMod analysis. The model also estimates emission predictions 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 the CalEEMod analysis. Additionally, it was assumed an average of 10% of the structural surface area will be re-painted each year.

3.4 Odor Impacts

Odor producing components from the Project would include short-term odors from construction activities such as paving and possibly painting but would be considered short term and wouldn't be considered an impact.

4.0 FINDINGS

4.1 Construction Findings

The Project construction dates were estimated based a hypothetical construction kickoff in early 2018 with demo of the existing residential unit onsite, grading and paving expected to last about two months. Once building Construction begins, it's expected that the project would be completed roughly 10 months later for a total construction duration of one year. Operations would be expected to begin early 2019. It should be noted that the project would be export roughly 26,200 CY of soil and all demolition debris from removing the onsite structures. A summary of the daily and annual construction emissions calculated through CalEEMod is shown in Table 4.1 and 4.2 below.

Table 4.1: Expected Daily Construction Emissions Summary

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)
2018 (lb/day) Unmitigated Summer	12.81	59.80	23.32	0.11	8.71	1.40	10.02	3.94	1.35	5.15
2018 (lb/day) Unmitigated Winter	12.90	60.18	23.12	0.11	8.71	1.40	10.02	3.94	1.35	5.15
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
SDAPCD Impact?	No	No	No	No	-	-	No	-	-	No

Table 4.2: Expected Annual Construction Emissions Summary

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)
2018 (lb/day) Unmitigated	1.17	2.91	2.30	0.01	0.22	0.15	0.36	0.08	0.14	0.22
Significance Threshold (Tons/Year)	40	40	100	40	-	-	15	-	-	15
SDAPCD Impact?	No	No	No	No	-	-	No	-	-	No

Given these findings, Project emissions would NOT exceed SDAPCD air quality standards during construction. No Mitigation measures will be necessary. Given the project has no

direct impacts and the project is compatible with the general plan, there would not be any impacts to the City's Regional Air Quality Strategy (RAQS).

4.2 Health Risk

Based upon the air quality modeling, worst-case onsite PM₁₀ from onsite construction exhaust would cumulatively produce 0.1421 tons over the construction duration (260-working days) or an average of 0.0172 grams/second. The average emission rate over the grading area is 1.47x10⁻⁶ g/m²/s, which was calculated as follows:

$$\frac{0.0172 \frac{\text{grams}}{\text{second}}}{2.90 \text{ acres} * 4,046 \frac{\text{meters}^2}{\text{acre}}} = 1.47 * 10^{-6} \frac{\text{grams}}{\text{second} \text{ meters}^2}$$

Utilizing the AERMOD dispersion model, we find that the peak maximum annual concentration is 5.82 µg/m³ during the worst-case construction period of 260 days. Using the methodology discussed in Section 3.1 above, the 70-year cancer risk would be 763.11 individuals per million exposed which would be considered a significant impact.

It was found that utilizing Tier IV diesel equipment with diesel particulate filters attached inline to the exhaust system would reduce worst-case PM₁₀ from exhaust to .00058 tons over the construction duration (260-working days) or an average of 0.0000702 grams/second. Given this reduced emission, dispersion modeling predicts that worst case annual concentrations would be 0.0237 µg/m³. Given this the Inhalation Cancer risk would be reduced to 3.11 individual per one million exposed. Given this, the mitigated construction scenario would be considered less than significant under CEQA and would be in compliance with the City's thresholds. The calculations for both mitigated and unmitigated scenarios are shown in **Attachment C** to this report. Also, it should be noted that it was assumed that exposed residential units would be away from the house for two weeks per year.

Furthermore, based on discussions with the project applicant, no cumulative projects are identified near the project site. Given the fact that the projects point of maximum exposure is only 100 meters away from the project boundaries; no cumulative construction impacts would be expected at distances greater than four times this distance. Figures 4-A and 4-B on the following few pages shows gridded contour plots of both the unmitigated and the Tier IV mitigated AERMOD dispersion models using a gridded discrete receptor methodology.

Figure 4-A: Unmitigated On-Site Construction Diesel Particulates Dispersion Model

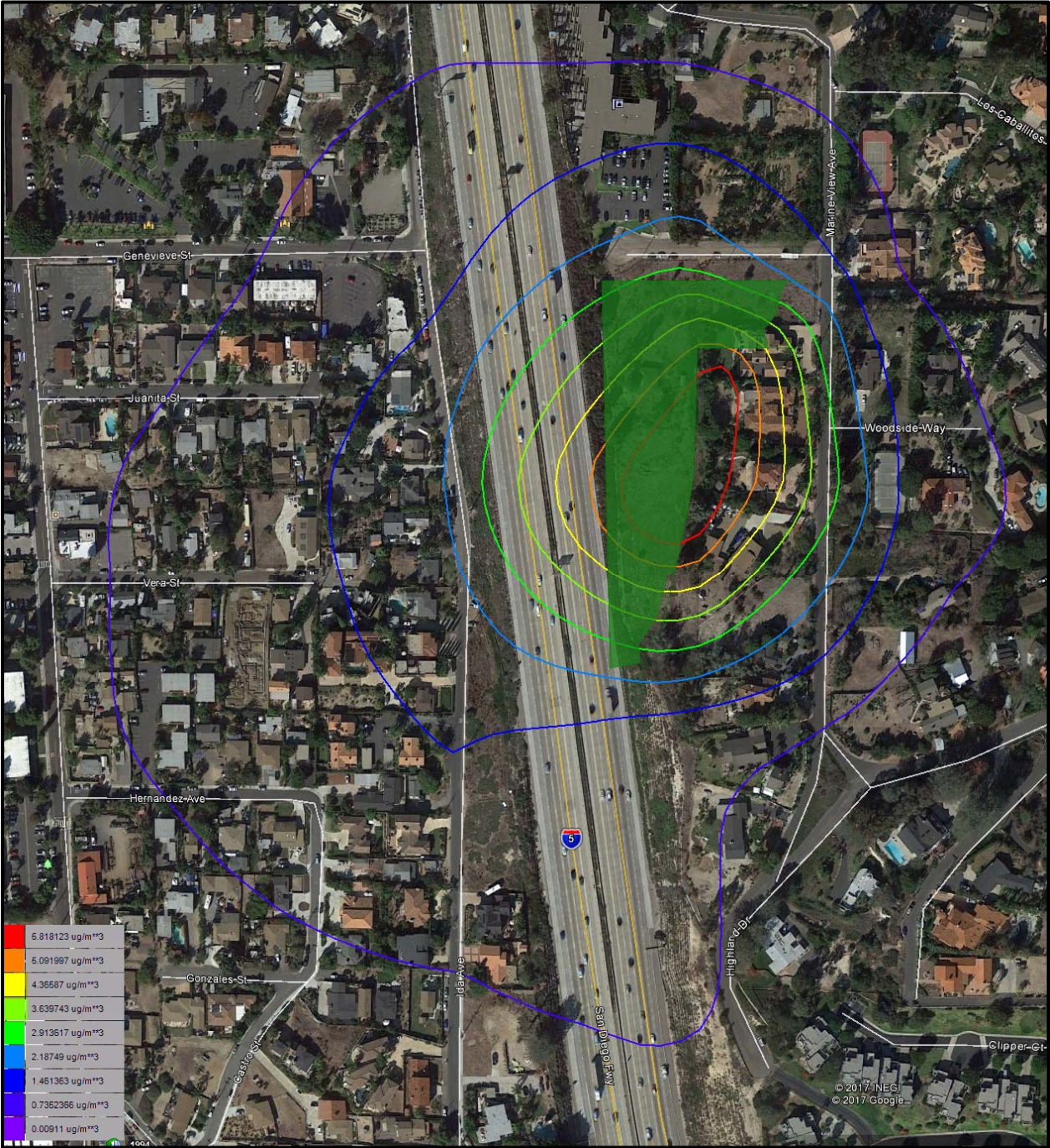
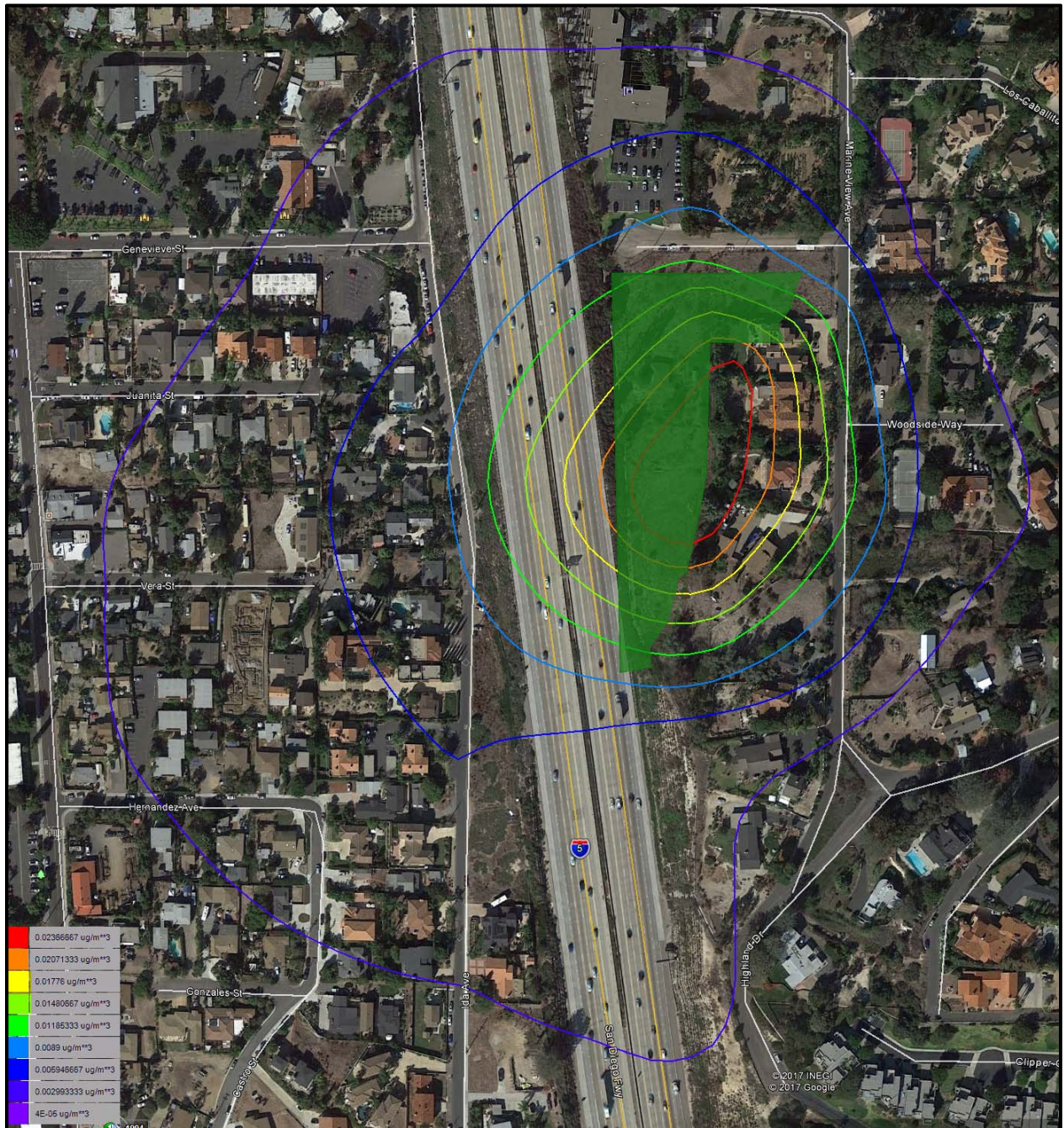


Figure 4-B: Mitigated On-Site Construction Diesel Particulates Dispersion Model



4.3 Operational Findings

Based on the Project's traffic study the proposed Project could add as many as 271 daily trips once the Project is operational in 2018. Additionally, the project would not be expected to have any wood or natural gas hearth devices.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by CalEEMod. The daily pollutants calculated are shown in Table 4.3 below. Based upon these calculations, no impacts are expected during operations of this project.

Table 4.3: Expected Daily Pollutant Generation

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Summer Scenario						
Area	2.45	0.10	8.21	0.00	0.05	0.05
Energy	0.03	0.22	0.09	0.00	0.02	0.02
Mobile	0.56	2.33	6.57	0.02	1.67	0.46
Total (Lb/Day)	3.04	2.65	14.88	0.02	1.73	0.52
SCAQMD Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Winter Scenario						
Area	2.45	0.10	8.21	0.00	0.05	0.05
Energy	0.03	0.22	0.09	0.00	0.02	0.02
Mobile	0.55	2.40	6.48	0.02	1.67	0.46
Total (Lb/Day)	3.03	2.72	14.78	0.02	1.73	0.52
SCAQMD Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within URBEMIS 2007						

4.4 Conclusion of Findings

Based upon findings in this report, construction health risks would be expected but can be fully mitigated using Tier IV construction equipment with diesel particulate filters installed on their exhaust pipes. Given this, the project grading and construction contractors would be required to utilize only Tier IV equipment. Furthermore, no operational impacts are expected and no mitigation requirements will be necessary.

5.0 REFERENCES

- California Air Resources Board. (10/1/15). *www.arb.ca.gov*. Retrieved from Ambient Air Quality Standards: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>
- City-Data. (2016). *Solana Beach City Data*. Retrieved 2015, from <http://www.city-data.com/city/Solana-Beach-California.html>
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- SDAPCD. (2015). *5 year air quality summary report*. Retrieved April 14, 2016, from http://www.sdapcd.org/content/dam/sdc/apcd/PDF/Misc/APCD_5-Year_Air_Quality_Summary_Annual_Report.pdf

6.0 CERTIFICATIONS

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

DRAFT

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Date August 7, 2017

ATTACHMENT A

Criteria Pollutant Definitions

1. **Carbon Monoxide (CO):** is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.
2. **Lead (Pb):** is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.
3. **Nitrogen Dioxide (NO₂):** is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO₂ is usually visible as a reddish-brown air layer over urban areas. NO₂ along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO₂ above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO₂ exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.
4. **Particulate Matter (PM₁₀ or PM_{2.5}):** is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM₁₀ particles are 10 microns (μm) or less and PM_{2.5} particles are 2.5 (μm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.
5. **Ozone (O₃):** is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.

6. **Sulfur Dioxide (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.
7. **Visibility Reducing Particles:** Particles in the Air that obstruct the visibility.
8. **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).
9. **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.
10. **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.

ATTACHMENT B

CalEEMod 2016 Summer, Winter, Annual

Solana Beach Senior Housing 2019 - San Diego County, Summer

Solana Beach Senior Housing 2019

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	99.00	Dwelling Unit	2.90	83,001.00	283

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
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

Solana Beach Senior Housing 2019 - San Diego County, Summer

Project Characteristics -

Land Use - Proposed Project

Construction Phase - cs

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment - ce

Grading - 26200 CY Export

Architectural Coating - Rule 67 Paint

Woodstoves - No FP

Area Coating - Rule 67 Paint

Water And Wastewater - Water 75 gallons per day per bed and 75 percent of potable water use for indoor water

Solid Waste - IS states 289 Tons/year

Construction Off-road Equipment Mitigation - Project will utilize Tier 4 equipment

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	175.00
tblConstructionPhase	NumDays	220.00	218.00
tblConstructionPhase	NumDays	220.00	15.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	6.00	26.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	3.00	5.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	NumberGas	54.45	0.00
tblFireplaces	NumberNoFireplace	9.90	99.00
tblFireplaces	NumberWood	34.65	0.00
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.58	0.59
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.19	0.18
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.6000e-003	5.5580e-003
tblFleetMix	MCY	6.2790e-003	6.1810e-003

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tblFleetMix	MDV	0.11	0.11
tblFleetMix	MH	1.3570e-003	1.2710e-003
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	1.8880e-003	1.9020e-003
tblFleetMix	SBUS	7.4200e-004	7.4500e-004
tblFleetMix	UBUS	2.0880e-003	2.0240e-003
tblGrading	MaterialExported	0.00	23,200.00
tblGrading	MaterialExported	0.00	3,000.00
tblLandUse	BuildingSpaceSquareFeet	99,000.00	83,001.00
tblLandUse	LandUseSquareFeet	99,000.00	83,001.00
tblLandUse	LotAcreage	6.19	2.90
tblOffRoadEquipment	HorsePower	231.00	226.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblSolidWaste	SolidWasteGenerationRate	90.34	289.00
tblWater	IndoorWaterUseRate	6,450,248.54	2,540,674.00
tblWater	OutdoorWaterUseRate	4,066,461.03	846,891.00
tblWoodstoves	NumberCatalytic	4.95	0.00
tblWoodstoves	NumberNoncatalytic	4.95	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00

2.0 Emissions Summary

Solana Beach Senior Housing 2019 - San Diego County, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	12.8100	59.7975	23.3174	0.1113	8.7089	1.3974	10.0174	3.9424	1.3467	5.1513	0.0000	11,924.0667	11,924.0667	1.5099	0.0000	11,961.8139
Maximum	12.8100	59.7975	23.3174	0.1113	8.7089	1.3974	10.0174	3.9424	1.3467	5.1513	0.0000	11,924.0667	11,924.0667	1.5099	0.0000	11,961.8139

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					
2018	10.0298	36.6007	22.5017	0.1113	8.7089	0.1452	8.8541	3.9424	0.1391	4.0815	0.0000	11,924.0667	11,924.0667	1.5099	0.0000	11,961.8139
Maximum	10.0298	36.6007	22.5017	0.1113	8.7089	0.1452	8.8541	3.9424	0.1391	4.0815	0.0000	11,924.0667	11,924.0667	1.5099	0.0000	11,961.8139

	ROG	NOx	CO	SO2	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	21.70	38.79	3.50	0.00	0.00	89.61	11.61	0.00	89.67	20.77	0.00	0.00	0.00	0.00	0.00	0.00

Solana Beach Senior Housing 2019 - San Diego County, Summer

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676
Energy	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550
Mobile	0.5606	2.3297	6.5746	0.0207	1.6426	0.0226	1.6652	0.4391	0.0213	0.4604		2,101.1770	2,101.1770	0.1139		2,104.0251
Total	3.0409	2.6465	14.8770	0.0226	1.6426	0.0855	1.7281	0.4391	0.0842	0.5233	0.0000	2,398.8571	2,398.8571	0.1338	5.1900e-003	2,403.7477

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	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676
Energy	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550
Mobile	0.5606	2.3297	6.5746	0.0207	1.6426	0.0226	1.6652	0.4391	0.0213	0.4604		2,101.1770	2,101.1770	0.1139		2,104.0251
Total	3.0409	2.6465	14.8770	0.0226	1.6426	0.0855	1.7281	0.4391	0.0842	0.5233	0.0000	2,398.8571	2,398.8571	0.1338	5.1900e-003	2,403.7477

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	1/7/2018	5	5	
2	Site Preparation	Site Preparation	1/8/2018	1/12/2018	5	5	
3	Grading	Grading	1/16/2018	2/20/2018	5	26	
4	Paving	Paving	2/21/2018	2/28/2018	5	6	
5	Building Construction	Building Construction	3/1/2018	12/31/2018	5	218	
6	Architectural Coating	Architectural Coating	5/1/2018	12/31/2018	5	175	
7	Building Construction Crane Usage	Building Construction	6/1/2018	6/21/2018	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13

Acres of Paving: 0

Residential Indoor: 168,077; Residential Outdoor: 56,026; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0
(Architectural Coating – sqft)

OffRoad Equipment

Solana Beach Senior Housing 2019 - San Diego County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction Crane Usage	Cranes	1	7.00	226	0.29

Trips and VMT

Solana Beach Senior Housing 2019 - San Diego County, Summer

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	18.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,900.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	71.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction Crane Usage	1	71.00	11.00	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

Clean Paved Roads

3.2 Demolition - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7973	0.0000	0.7973	0.1207	0.0000	0.1207			0.0000			0.0000
Off-Road	1.9516	19.1046	10.4373	0.0179		1.0639	1.0639		1.0001	1.0001		1,765.6139	1,765.6139	0.4110		1,775.8900
Total	1.9516	19.1046	10.4373	0.0179	0.7973	1.0639	1.8612	0.1207	1.0001	1.1208		1,765.6139	1,765.6139	0.4110		1,775.8900

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.2 Demolition - 2018**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	0.0330	1.1451	0.2362	2.9000e-003	0.0629	4.5000e-003	0.0674	0.0172	4.3100e-003	0.0216		314.9116	314.9116	0.0278		315.6056
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	0.0341	0.0245	0.2739	7.2000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		71.7780	71.7780	2.4600e-003		71.8394
Total	0.0670	1.1696	0.5100	3.6200e-003	0.1286	4.9700e-003	0.1336	0.0347	4.7500e-003	0.0394		386.6896	386.6896	0.0302		387.4450

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7973	0.0000	0.7973	0.1207	0.0000	0.1207			0.0000			0.0000
Off-Road	0.2051	0.8888	10.0343	0.0179		4.1000e-003	4.1000e-003		4.1000e-003	4.1000e-003	0.0000	1,765.6139	1,765.6139	0.4110		1,775.8900
Total	0.2051	0.8888	10.0343	0.0179	0.7973	4.1000e-003	0.8014	0.1207	4.1000e-003	0.1248	0.0000	1,765.6139	1,765.6139	0.4110		1,775.8900

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.2 Demolition - 2018**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	0.0330	1.1451	0.2362	2.9000e-003	0.0629	4.5000e-003	0.0674	0.0172	4.3100e-003	0.0216		314.9116	314.9116	0.0278		315.6056
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	0.0341	0.0245	0.2739	7.2000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		71.7780	71.7780	2.4600e-003		71.8394
Total	0.0670	1.1696	0.5100	3.6200e-003	0.1286	4.9700e-003	0.1336	0.0347	4.7500e-003	0.0394		386.6896	386.6896	0.0302		387.4450

3.3 Site Preparation - 2018**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					5.3536	0.0000	5.3536	2.9092	0.0000	2.9092			0.0000			0.0000
Off-Road	1.2532	13.2910	5.8741	0.0102		0.6973	0.6973		0.6415	0.6415		1,026.3306	1,026.3306	0.3195		1,034.3184
Total	1.2532	13.2910	5.8741	0.0102	5.3536	0.6973	6.0509	2.9092	0.6415	3.5507		1,026.3306	1,026.3306	0.3195		1,034.3184

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.3 Site Preparation - 2018**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	0.6865	23.8555	4.9200	0.0603	1.3106	0.0938	1.4044	0.3592	0.0898	0.4490		6,560.6591	6,560.6591	0.5783		6,575.1172
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	0.0213	0.0153	0.1712	4.5000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.7000e-004	0.0112		44.8612	44.8612	1.5400e-003		44.8996
Total	0.7078	23.8708	5.0912	0.0608	1.3516	0.0941	1.4458	0.3701	0.0901	0.4601		6,605.5203	6,605.5203	0.5799		6,620.0168

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3536	0.0000	5.3536	2.9092	0.0000	2.9092			0.0000			0.0000
Off-Road	0.1247	0.5404	5.4037	0.0102		2.4900e-003	2.4900e-003		2.4900e-003	2.4900e-003	0.0000	1,026.3306	1,026.3306	0.3195		1,034.3184
Total	0.1247	0.5404	5.4037	0.0102	5.3536	2.4900e-003	5.3561	2.9092	2.4900e-003	2.9117	0.0000	1,026.3306	1,026.3306	0.3195		1,034.3184

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.3 Site Preparation - 2018**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	0.6865	23.8555	4.9200	0.0603	1.3106	0.0938	1.4044	0.3592	0.0898	0.4490		6,560.659 1	6,560.659 1	0.5783		6,575.1172
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	0.0213	0.0153	0.1712	4.5000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.7000e-004	0.0112		44.8612	44.8612	1.5400e-003		44.8996
Total	0.7078	23.8708	5.0912	0.0608	1.3516	0.0941	1.4458	0.3701	0.0901	0.4601		6,605.520 3	6,605.520 3	0.5799		6,620.016 8

3.4 Grading - 2018**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					6.6777	0.0000	6.6777	3.3865	0.0000	3.3865			0.0000			0.0000
Off-Road	2.1515	24.2895	10.3804	0.0206		1.1683	1.1683		1.0748	1.0748		2,077.466 6	2,077.466 6	0.6467		2,093.635 2
Total	2.1515	24.2895	10.3804	0.0206	6.6777	1.1683	7.8460	3.3865	1.0748	4.4613		2,077.466 6	2,077.466 6	0.6467		2,093.635 2

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.4 Grading - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0210	35.4774	7.3170	0.0897	1.9491	0.1396	2.0886	0.5342	0.1335	0.6677		9,756.8776	9,756.8776	0.8601		9,778.3795
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	0.0426	0.0307	0.3423	9.0000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		89.7225	89.7225	3.0700e-003		89.7992
Total	1.0636	35.5081	7.6593	0.0906	2.0312	0.1401	2.1713	0.5559	0.1341	0.6900		9,846.6001	9,846.6001	0.8631		9,868.1787

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					6.6777	0.0000	6.6777	3.3865	0.0000	3.3865			0.0000			0.0000
Off-Road	0.2522	1.0927	10.9071	0.0206		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	2,077.4666	2,077.4666	0.6467		2,093.6352
Total	0.2522	1.0927	10.9071	0.0206	6.6777	5.0400e-003	6.6828	3.3865	5.0400e-003	3.3915	0.0000	2,077.4666	2,077.4666	0.6467		2,093.6352

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.4 Grading - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0210	35.4774	7.3170	0.0897	1.9491	0.1396	2.0886	0.5342	0.1335	0.6677		9,756.8776	9,756.8776	0.8601		9,778.3795
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	0.0426	0.0307	0.3423	9.0000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		89.7225	89.7225	3.0700e-003		89.7992
Total	1.0636	35.5081	7.6593	0.0906	2.0312	0.1401	2.1713	0.5559	0.1341	0.6900		9,846.6001	9,846.6001	0.8631		9,868.1787

3.5 Paving - 2018**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	1.4046	14.2518	11.9787	0.0178		0.8505	0.8505		0.7836	0.7836		1,774.2430	1,774.2430	0.5419		1,787.7896
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4046	14.2518	11.9787	0.0178		0.8505	0.8505		0.7836	0.7836		1,774.2430	1,774.2430	0.5419		1,787.7896

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.5 Paving - 2018**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	0.0639	0.0460	0.5135	1.3500e-003	0.1232	8.9000e-004	0.1241	0.0327	8.2000e-004	0.0335		134.5837	134.5837	4.6100e-003		134.6988
Total	0.0639	0.0460	0.5135	1.3500e-003	0.1232	8.9000e-004	0.1241	0.0327	8.2000e-004	0.0335		134.5837	134.5837	4.6100e-003		134.6988

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	0.2104	0.9117	12.9737	0.0178		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	1,774.2430	1,774.2430	0.5419		1,787.7896
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2104	0.9117	12.9737	0.0178		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	1,774.2430	1,774.2430	0.5419		1,787.7896

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3.5 Paving - 2018**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	0.0639	0.0460	0.5135	1.3500e-003	0.1232	8.9000e-004	0.1241	0.0327	8.2000e-004	0.0335		134.5837	134.5837	4.6100e-003		134.6988
Total	0.0639	0.0460	0.5135	1.3500e-003	0.1232	8.9000e-004	0.1241	0.0327	8.2000e-004	0.0335		134.5837	134.5837	4.6100e-003		134.6988

3.6 Building Construction - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3420	13.8869	13.1965	0.0193		0.9623	0.9623		0.9335	0.9335		1,749.1780	1,749.1780	0.3211		1,757.2066
Total	2.3420	13.8869	13.1965	0.0193		0.9623	0.9623		0.9335	0.9335		1,749.1780	1,749.1780	0.3211		1,757.2066

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3.6 Building Construction - 2018**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	0.0567	1.4493	0.3838	3.0700e-003	0.0745	0.0113	0.0858	0.0214	0.0108	0.0323		328.0089	328.0089	0.0260		328.6588
Worker	0.3022	0.2176	2.4305	6.4000e-003	0.5833	4.2000e-003	0.5875	0.1547	3.8700e-003	0.1586		637.0294	637.0294	0.0218		637.5744
Total	0.3589	1.6669	2.8143	9.4700e-003	0.6577	0.0155	0.6733	0.1761	0.0147	0.1909		965.0383	965.0383	0.0478		966.2332

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	0.2587	3.5633	12.3362	0.0193		3.8600e-003	3.8600e-003		3.8600e-003	3.8600e-003	0.0000	1,749.1780	1,749.1780	0.3211		1,757.2066
Total	0.2587	3.5633	12.3362	0.0193		3.8600e-003	3.8600e-003		3.8600e-003	3.8600e-003	0.0000	1,749.1780	1,749.1780	0.3211		1,757.2066

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3.6 Building Construction - 2018**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	0.0567	1.4493	0.3838	3.0700e-003	0.0745	0.0113	0.0858	0.0214	0.0108	0.0323		328.0089	328.0089	0.0260		328.6588
Worker	0.3022	0.2176	2.4305	6.4000e-003	0.5833	4.2000e-003	0.5875	0.1547	3.8700e-003	0.1586		637.0294	637.0294	0.0218		637.5744
Total	0.3589	1.6669	2.8143	9.4700e-003	0.6577	0.0155	0.6733	0.1761	0.0147	0.1909		965.0383	965.0383	0.0478		966.2332

3.7 Architectural Coating - 2018**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	8.9033					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	9.2019	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.7 Architectural Coating - 2018**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	0.0596	0.0429	0.4793	1.2600e-003	0.1150	8.3000e-004	0.1158	0.0305	7.6000e-004	0.0313		125.6114	125.6114	4.3000e-003		125.7189
Total	0.0596	0.0429	0.4793	1.2600e-003	0.1150	8.3000e-004	0.1158	0.0305	7.6000e-004	0.0313		125.6114	125.6114	4.3000e-003		125.7189

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	8.9033					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	281.4485	281.4485	0.0267		282.1171
Total	8.9330	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4485	281.4485	0.0267		282.1171

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.7 Architectural Coating - 2018**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	0.0596	0.0429	0.4793	1.2600e-003	0.1150	8.3000e-004	0.1158	0.0305	7.6000e-004	0.0313		125.6114	125.6114	4.3000e-003		125.7189
Total	0.0596	0.0429	0.4793	1.2600e-003	0.1150	8.3000e-004	0.1158	0.0305	7.6000e-004	0.0313		125.6114	125.6114	4.3000e-003		125.7189

3.8 Building Construction Crane Usage - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4886	5.8390	2.1589	4.9400e-003		0.2527	0.2527		0.2325	0.2325		497.0270	497.0270	0.1547		500.8953
Total	0.4886	5.8390	2.1589	4.9400e-003		0.2527	0.2527		0.2325	0.2325		497.0270	497.0270	0.1547		500.8953

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.8 Building Construction Crane Usage - 2018**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	0.0567	1.4493	0.3838	3.0700e-003	0.0745	0.0113	0.0858	0.0214	0.0108	0.0323		328.0089	328.0089	0.0260		328.6588
Worker	0.3022	0.2176	2.4305	6.4000e-003	0.5833	4.2000e-003	0.5875	0.1547	3.8700e-003	0.1586		637.0294	637.0294	0.0218		637.5744
Total	0.3589	1.6669	2.8143	9.4700e-003	0.6577	0.0155	0.6733	0.1761	0.0147	0.1909		965.0383	965.0383	0.0478		966.2332

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	0.0607	0.2630	2.2252	4.9400e-003		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	497.0270	497.0270	0.1547		500.8953
Total	0.0607	0.2630	2.2252	4.9400e-003		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	497.0270	497.0270	0.1547		500.8953

Solana Beach Senior Housing 2019 - San Diego County, Summer

3.8 Building Construction Crane Usage - 2018**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	0.0567	1.4493	0.3838	3.0700e-003	0.0745	0.0113	0.0858	0.0214	0.0108	0.0323		328.0089	328.0089	0.0260		328.6588
Worker	0.3022	0.2176	2.4305	6.4000e-003	0.5833	4.2000e-003	0.5875	0.1547	3.8700e-003	0.1586		637.0294	637.0294	0.0218		637.5744
Total	0.3589	1.6669	2.8143	9.4700e-003	0.6577	0.0155	0.6733	0.1761	0.0147	0.1909		965.0383	965.0383	0.0478		966.2332

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

Solana Beach Senior Housing 2019 - San Diego County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5606	2.3297	6.5746	0.0207	1.6426	0.0226	1.6652	0.4391	0.0213	0.4604		2,101.1770	2,101.1770	0.1139		2,104.0251
Unmitigated	0.5606	2.3297	6.5746	0.0207	1.6426	0.0226	1.6652	0.4391	0.0213	0.4604		2,101.1770	2,101.1770	0.1139		2,104.0251

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	271.26	217.80	241.56	740,609	740,609
Total	271.26	217.80	241.56	740,609	740,609

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
Congregate Care (Assisted Living)	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Solana Beach Senior Housing 2019 - San Diego County, Summer

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550
NaturalGas Unmitigated	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550

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					
Congregate Care (Assisted Living)	2405.27	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550
Total		0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550

Solana Beach Senior Housing 2019 - San Diego County, Summer

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	2.40527	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550
Total		0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550

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	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676
Unmitigated	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676

Solana Beach Senior Housing 2019 - San Diego County, Summer

6.2 Area by SubCategory**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2513	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450		14.7067	14.7067	0.0144		15.0676
Total	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676

Solana Beach Senior Housing 2019 - San Diego County, Summer

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2513	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450		14.7067	14.7067	0.0144		15.0676
Total	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676

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 Stationary Equipment

Solana Beach Senior Housing 2019 - San Diego County, Summer

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Solana Beach Senior Housing 2019 - San Diego County, Winter

Solana Beach Senior Housing 2019

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	99.00	Dwelling Unit	2.90	83,001.00	283

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
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

Solana Beach Senior Housing 2019 - San Diego County, Winter

Project Characteristics -

Land Use - Proposed Project

Construction Phase - cs

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment - ce

Grading - 26200 CY Export

Architectural Coating - Rule 67 Paint

Woodstoves - No FP

Area Coating - Rule 67 Paint

Water And Wastewater - Water 75 gallons per day per bed and 75 percent of potable water use for indoor water

Solid Waste - IS states 289 Tons/year

Construction Off-road Equipment Mitigation - Project will utilize Tier 4 equipment

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	175.00
tblConstructionPhase	NumDays	220.00	218.00
tblConstructionPhase	NumDays	220.00	15.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	6.00	26.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	3.00	5.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	NumberGas	54.45	0.00
tblFireplaces	NumberNoFireplace	9.90	99.00
tblFireplaces	NumberWood	34.65	0.00
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.58	0.59
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.19	0.18
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.6000e-003	5.5580e-003
tblFleetMix	MCY	6.2790e-003	6.1810e-003

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tblFleetMix	MDV	0.11	0.11
tblFleetMix	MH	1.3570e-003	1.2710e-003
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	1.8880e-003	1.9020e-003
tblFleetMix	SBUS	7.4200e-004	7.4500e-004
tblFleetMix	UBUS	2.0880e-003	2.0240e-003
tblGrading	MaterialExported	0.00	23,200.00
tblGrading	MaterialExported	0.00	3,000.00
tblLandUse	BuildingSpaceSquareFeet	99,000.00	83,001.00
tblLandUse	LandUseSquareFeet	99,000.00	83,001.00
tblLandUse	LotAcreage	6.19	2.90
tblOffRoadEquipment	HorsePower	231.00	226.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblSolidWaste	SolidWasteGenerationRate	90.34	289.00
tblWater	IndoorWaterUseRate	6,450,248.54	2,540,674.00
tblWater	OutdoorWaterUseRate	4,066,461.03	846,891.00
tblWoodstoves	NumberCatalytic	4.95	0.00
tblWoodstoves	NumberNoncatalytic	4.95	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00

2.0 Emissions Summary

Solana Beach Senior Housing 2019 - San Diego County, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	12.9008	60.1808	23.1245	0.1097	8.7089	1.3978	10.0207	3.9424	1.3471	5.1545	0.0000	11,756.6702	11,756.6702	1.5420	0.0000	11,795.2191
Maximum	12.9008	60.1808	23.1245	0.1097	8.7089	1.3978	10.0207	3.9424	1.3471	5.1545	0.0000	11,756.6702	11,756.6702	1.5420	0.0000	11,795.2191

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					
2018	10.1207	36.9839	22.3088	0.1097	8.7089	0.1485	8.8574	3.9424	0.1423	4.0847	0.0000	11,756.6702	11,756.6702	1.5420	0.0000	11,795.2191
Maximum	10.1207	36.9839	22.3088	0.1097	8.7089	0.1485	8.8574	3.9424	0.1423	4.0847	0.0000	11,756.6702	11,756.6702	1.5420	0.0000	11,795.2191

	ROG	NOx	CO	SO2	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	21.55	38.55	3.53	0.00	0.00	89.38	11.61	0.00	89.44	20.75	0.00	0.00	0.00	0.00	0.00	0.00

Solana Beach Senior Housing 2019 - San Diego County, Winter

2.2 Overall Operational**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676
Energy	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550
Mobile	0.5469	2.4047	6.4807	0.0197	1.6426	0.0228	1.6654	0.4391	0.0215	0.4605		1,992.1449	1,992.1449	0.1142		1,995.0003
Total	3.0272	2.7214	14.7831	0.0215	1.6426	0.0857	1.7283	0.4391	0.0844	0.5234	0.0000	2,289.8251	2,289.8251	0.1341	5.1900e-003	2,294.7228

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	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676
Energy	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550
Mobile	0.5469	2.4047	6.4807	0.0197	1.6426	0.0228	1.6654	0.4391	0.0215	0.4605		1,992.1449	1,992.1449	0.1142		1,995.0003
Total	3.0272	2.7214	14.7831	0.0215	1.6426	0.0857	1.7283	0.4391	0.0844	0.5234	0.0000	2,289.8251	2,289.8251	0.1341	5.1900e-003	2,294.7228

Solana Beach Senior Housing 2019 - San Diego County, Winter

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

3.0 Construction Detail**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	1/7/2018	5	5	
2	Site Preparation	Site Preparation	1/8/2018	1/12/2018	5	5	
3	Grading	Grading	1/16/2018	2/20/2018	5	26	
4	Paving	Paving	2/21/2018	2/28/2018	5	6	
5	Building Construction	Building Construction	3/1/2018	12/31/2018	5	218	
6	Architectural Coating	Architectural Coating	5/1/2018	12/31/2018	5	175	
7	Building Construction Crane Usage	Building Construction	6/1/2018	6/21/2018	5	15	

Acres of Grading (Site Preparation Phase): 0**Acres of Grading (Grading Phase): 13****Acres of Paving: 0****Residential Indoor: 168,077; Residential Outdoor: 56,026; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)****OffRoad Equipment**

Solana Beach Senior Housing 2019 - San Diego County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction Crane Usage	Cranes	1	7.00	226	0.29

Trips and VMT

Solana Beach Senior Housing 2019 - San Diego County, Winter

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	18.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,900.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	71.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction Crane Usage	1	71.00	11.00	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

Clean Paved Roads

3.2 Demolition - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7973	0.0000	0.7973	0.1207	0.0000	0.1207			0.0000			0.0000
Off-Road	1.9516	19.1046	10.4373	0.0179		1.0639	1.0639		1.0001	1.0001		1,765.6139	1,765.6139	0.4110		1,775.8900
Total	1.9516	19.1046	10.4373	0.0179	0.7973	1.0639	1.8612	0.1207	1.0001	1.1208		1,765.6139	1,765.6139	0.4110		1,775.8900

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.2 Demolition - 2018**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	0.0339	1.1573	0.2539	2.8500e-003	0.0629	4.6100e-003	0.0675	0.0172	4.4100e-003	0.0217		309.6860	309.6860	0.0288		310.4060
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	0.0385	0.0275	0.2598	6.8000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		67.3862	67.3862	2.3400e-003		67.4446
Total	0.0724	1.1849	0.5137	3.5300e-003	0.1286	5.0800e-003	0.1337	0.0347	4.8500e-003	0.0395		377.0721	377.0721	0.0311		377.8505

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7973	0.0000	0.7973	0.1207	0.0000	0.1207			0.0000			0.0000
Off-Road	0.2051	0.8888	10.0343	0.0179		4.1000e-003	4.1000e-003		4.1000e-003	4.1000e-003	0.0000	1,765.6139	1,765.6139	0.4110		1,775.8900
Total	0.2051	0.8888	10.0343	0.0179	0.7973	4.1000e-003	0.8014	0.1207	4.1000e-003	0.1248	0.0000	1,765.6139	1,765.6139	0.4110		1,775.8900

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.2 Demolition - 2018**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	0.0339	1.1573	0.2539	2.8500e-003	0.0629	4.6100e-003	0.0675	0.0172	4.4100e-003	0.0217		309.6860	309.6860	0.0288		310.4060
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	0.0385	0.0275	0.2598	6.8000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		67.3862	67.3862	2.3400e-003		67.4446
Total	0.0724	1.1849	0.5137	3.5300e-003	0.1286	5.0800e-003	0.1337	0.0347	4.8500e-003	0.0395		377.0721	377.0721	0.0311		377.8505

3.3 Site Preparation - 2018**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					5.3536	0.0000	5.3536	2.9092	0.0000	2.9092			0.0000			0.0000
Off-Road	1.2532	13.2910	5.8741	0.0102		0.6973	0.6973		0.6415	0.6415		1,026.3306	1,026.3306	0.3195		1,034.3184
Total	1.2532	13.2910	5.8741	0.0102	5.3536	0.6973	6.0509	2.9092	0.6415	3.5507		1,026.3306	1,026.3306	0.3195		1,034.3184

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.3 Site Preparation - 2018**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	0.7062	24.1106	5.2899	0.0593	1.3106	0.0961	1.4066	0.3592	0.0919	0.4511		6,451.7907	6,451.7907	0.6000		6,466.7905
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	0.0240	0.0172	0.1624	4.2000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.7000e-004	0.0112		42.1164	42.1164	1.4600e-003		42.1529
Total	0.7303	24.1279	5.4523	0.0597	1.3516	0.0964	1.4480	0.3701	0.0922	0.4622		6,493.9071	6,493.9071	0.6015		6,508.9434

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.3536	0.0000	5.3536	2.9092	0.0000	2.9092			0.0000			0.0000
Off-Road	0.1247	0.5404	5.4037	0.0102		2.4900e-003	2.4900e-003		2.4900e-003	2.4900e-003	0.0000	1,026.3306	1,026.3306	0.3195		1,034.3184
Total	0.1247	0.5404	5.4037	0.0102	5.3536	2.4900e-003	5.3561	2.9092	2.4900e-003	2.9117	0.0000	1,026.3306	1,026.3306	0.3195		1,034.3184

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.3 Site Preparation - 2018**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	0.7062	24.1106	5.2899	0.0593	1.3106	0.0961	1.4066	0.3592	0.0919	0.4511		6,451.7907	6,451.7907	0.6000		6,466.7905
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	0.0240	0.0172	0.1624	4.2000e-004	0.0411	3.0000e-004	0.0414	0.0109	2.7000e-004	0.0112		42.1164	42.1164	1.4600e-003		42.1529
Total	0.7303	24.1279	5.4523	0.0597	1.3516	0.0964	1.4480	0.3701	0.0922	0.4622		6,493.9071	6,493.9071	0.6015		6,508.9434

3.4 Grading - 2018**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					6.6777	0.0000	6.6777	3.3865	0.0000	3.3865			0.0000			0.0000
Off-Road	2.1515	24.2895	10.3804	0.0206		1.1683	1.1683		1.0748	1.0748		2,077.4666	2,077.4666	0.6467		2,093.6352
Total	2.1515	24.2895	10.3804	0.0206	6.6777	1.1683	7.8460	3.3865	1.0748	4.4613		2,077.4666	2,077.4666	0.6467		2,093.6352

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.4 Grading - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0503	35.8569	7.8671	0.0882	1.9491	0.1429	2.0919	0.5342	0.1367	0.6708		9,594.9709	9,594.9709	0.8923		9,617.2782
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	0.0481	0.0344	0.3247	8.5000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		84.2327	84.2327	2.9200e-003		84.3057
Total	1.0984	35.8913	8.1918	0.0891	2.0312	0.1434	2.1746	0.5559	0.1372	0.6932		9,679.2036	9,679.2036	0.8952		9,701.5839

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					6.6777	0.0000	6.6777	3.3865	0.0000	3.3865			0.0000			0.0000
Off-Road	0.2522	1.0927	10.9071	0.0206		5.0400e-003	5.0400e-003		5.0400e-003	5.0400e-003	0.0000	2,077.4666	2,077.4666	0.6467		2,093.6352
Total	0.2522	1.0927	10.9071	0.0206	6.6777	5.0400e-003	6.6828	3.3865	5.0400e-003	3.3915	0.0000	2,077.4666	2,077.4666	0.6467		2,093.6352

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.4 Grading - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.0503	35.8569	7.8671	0.0882	1.9491	0.1429	2.0919	0.5342	0.1367	0.6708		9,594.9709	9,594.9709	0.8923		9,617.2782
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	0.0481	0.0344	0.3247	8.5000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		84.2327	84.2327	2.9200e-003		84.3057
Total	1.0984	35.8913	8.1918	0.0891	2.0312	0.1434	2.1746	0.5559	0.1372	0.6932		9,679.2036	9,679.2036	0.8952		9,701.5839

3.5 Paving - 2018**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	1.4046	14.2518	11.9787	0.0178		0.8505	0.8505		0.7836	0.7836		1,774.2430	1,774.2430	0.5419		1,787.7896
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4046	14.2518	11.9787	0.0178		0.8505	0.8505		0.7836	0.7836		1,774.2430	1,774.2430	0.5419		1,787.7896

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.5 Paving - 2018**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	0.0721	0.0516	0.4871	1.2700e-003	0.1232	8.9000e-004	0.1241	0.0327	8.2000e-004	0.0335		126.3491	126.3491	4.3800e-003		126.4586
Total	0.0721	0.0516	0.4871	1.2700e-003	0.1232	8.9000e-004	0.1241	0.0327	8.2000e-004	0.0335		126.3491	126.3491	4.3800e-003		126.4586

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	0.2104	0.9117	12.9737	0.0178		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	1,774.2430	1,774.2430	0.5419		1,787.7896
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.2104	0.9117	12.9737	0.0178		4.2100e-003	4.2100e-003		4.2100e-003	4.2100e-003	0.0000	1,774.2430	1,774.2430	0.5419		1,787.7896

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.5 Paving - 2018**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	0.0721	0.0516	0.4871	1.2700e-003	0.1232	8.9000e-004	0.1241	0.0327	8.2000e-004	0.0335		126.3491	126.3491	4.3800e-003		126.4586
Total	0.0721	0.0516	0.4871	1.2700e-003	0.1232	8.9000e-004	0.1241	0.0327	8.2000e-004	0.0335		126.3491	126.3491	4.3800e-003		126.4586

3.6 Building Construction - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3420	13.8869	13.1965	0.0193		0.9623	0.9623		0.9335	0.9335		1,749.1780	1,749.1780	0.3211		1,757.2066
Total	2.3420	13.8869	13.1965	0.0193		0.9623	0.9623		0.9335	0.9335		1,749.1780	1,749.1780	0.3211		1,757.2066

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.6 Building Construction - 2018**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	0.0591	1.4518	0.4246	2.9900e-003	0.0745	0.0115	0.0860	0.0214	0.0110	0.0325		319.7677	319.7677	0.0277		320.4595
Worker	0.3414	0.2444	2.3056	6.0100e-003	0.5833	4.2000e-003	0.5875	0.1547	3.8700e-003	0.1586		598.0524	598.0524	0.0207		598.5705
Total	0.4005	1.6962	2.7302	9.0000e-003	0.6577	0.0157	0.6734	0.1761	0.0149	0.1910		917.8201	917.8201	0.0484		919.0300

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	0.2587	3.5633	12.3362	0.0193		3.8600e-003	3.8600e-003		3.8600e-003	3.8600e-003	0.0000	1,749.1780	1,749.1780	0.3211		1,757.2066
Total	0.2587	3.5633	12.3362	0.0193		3.8600e-003	3.8600e-003		3.8600e-003	3.8600e-003	0.0000	1,749.1780	1,749.1780	0.3211		1,757.2066

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.6 Building Construction - 2018**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	0.0591	1.4518	0.4246	2.9900e-003	0.0745	0.0115	0.0860	0.0214	0.0110	0.0325		319.7677	319.7677	0.0277		320.4595
Worker	0.3414	0.2444	2.3056	6.0100e-003	0.5833	4.2000e-003	0.5875	0.1547	3.8700e-003	0.1586		598.0524	598.0524	0.0207		598.5705
Total	0.4005	1.6962	2.7302	9.0000e-003	0.6577	0.0157	0.6734	0.1761	0.0149	0.1910		917.8201	917.8201	0.0484		919.0300

3.7 Architectural Coating - 2018**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	8.9033					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	9.2019	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.7 Architectural Coating - 2018**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	0.0673	0.0482	0.4546	1.1800e-003	0.1150	8.3000e-004	0.1158	0.0305	7.6000e-004	0.0313		117.9258	117.9258	4.0900e-003		118.0280
Total	0.0673	0.0482	0.4546	1.1800e-003	0.1150	8.3000e-004	0.1158	0.0305	7.6000e-004	0.0313		117.9258	117.9258	4.0900e-003		118.0280

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	8.9033					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	281.4485	281.4485	0.0267		282.1171
Total	8.9330	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4485	281.4485	0.0267		282.1171

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.7 Architectural Coating - 2018**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	0.0673	0.0482	0.4546	1.1800e-003	0.1150	8.3000e-004	0.1158	0.0305	7.6000e-004	0.0313		117.9258	117.9258	4.0900e-003		118.0280
Total	0.0673	0.0482	0.4546	1.1800e-003	0.1150	8.3000e-004	0.1158	0.0305	7.6000e-004	0.0313		117.9258	117.9258	4.0900e-003		118.0280

3.8 Building Construction Crane Usage - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4886	5.8390	2.1589	4.9400e-003		0.2527	0.2527		0.2325	0.2325		497.0270	497.0270	0.1547		500.8953
Total	0.4886	5.8390	2.1589	4.9400e-003		0.2527	0.2527		0.2325	0.2325		497.0270	497.0270	0.1547		500.8953

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.8 Building Construction Crane Usage - 2018**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	0.0591	1.4518	0.4246	2.9900e-003	0.0745	0.0115	0.0860	0.0214	0.0110	0.0325		319.7677	319.7677	0.0277		320.4595
Worker	0.3414	0.2444	2.3056	6.0100e-003	0.5833	4.2000e-003	0.5875	0.1547	3.8700e-003	0.1586		598.0524	598.0524	0.0207		598.5705
Total	0.4005	1.6962	2.7302	9.0000e-003	0.6577	0.0157	0.6734	0.1761	0.0149	0.1910		917.8201	917.8201	0.0484		919.0300

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	0.0607	0.2630	2.2252	4.9400e-003		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	497.0270	497.0270	0.1547		500.8953
Total	0.0607	0.2630	2.2252	4.9400e-003		1.2100e-003	1.2100e-003		1.2100e-003	1.2100e-003	0.0000	497.0270	497.0270	0.1547		500.8953

Solana Beach Senior Housing 2019 - San Diego County, Winter

3.8 Building Construction Crane Usage - 2018**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	0.0591	1.4518	0.4246	2.9900e-003	0.0745	0.0115	0.0860	0.0214	0.0110	0.0325		319.7677	319.7677	0.0277		320.4595
Worker	0.3414	0.2444	2.3056	6.0100e-003	0.5833	4.2000e-003	0.5875	0.1547	3.8700e-003	0.1586		598.0524	598.0524	0.0207		598.5705
Total	0.4005	1.6962	2.7302	9.0000e-003	0.6577	0.0157	0.6734	0.1761	0.0149	0.1910		917.8201	917.8201	0.0484		919.0300

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

Solana Beach Senior Housing 2019 - San Diego County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5469	2.4047	6.4807	0.0197	1.6426	0.0228	1.6654	0.4391	0.0215	0.4605		1,992.1449	1,992.1449	0.1142		1,995,0003
Unmitigated	0.5469	2.4047	6.4807	0.0197	1.6426	0.0228	1.6654	0.4391	0.0215	0.4605		1,992.1449	1,992.1449	0.1142		1,995,0003

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	271.26	217.80	241.56	740,609	740,609
Total	271.26	217.80	241.56	740,609	740,609

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
Congregate Care (Assisted Living)	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

Solana Beach Senior Housing 2019 - San Diego County, Winter

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550
NaturalGas Unmitigated	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550

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					
Congregate Care (Assisted Living)	2405.27	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550
Total		0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550

Solana Beach Senior Housing 2019 - San Diego County, Winter

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

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	2.40527	0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550
Total		0.0259	0.2217	0.0943	1.4100e-003		0.0179	0.0179		0.0179	0.0179		282.9734	282.9734	5.4200e-003	5.1900e-003	284.6550

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	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676
Unmitigated	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676

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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	0.4269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2513	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450		14.7067	14.7067	0.0144		15.0676
Total	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676

Solana Beach Senior Housing 2019 - San Diego County, Winter

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.4269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7762					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2513	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450		14.7067	14.7067	0.0144		15.0676
Total	2.4544	0.0951	8.2081	4.3000e-004		0.0450	0.0450		0.0450	0.0450	0.0000	14.7067	14.7067	0.0144	0.0000	15.0676

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 Stationary Equipment

Solana Beach Senior Housing 2019 - San Diego County, Winter

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Solana Beach Senior Housing 2019 - San Diego County, Annual

Solana Beach Senior Housing 2019

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	99.00	Dwelling Unit	2.90	83,001.00	283

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2019
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

Solana Beach Senior Housing 2019 - San Diego County, Annual

Project Characteristics -

Land Use - Proposed Project

Construction Phase - cs

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - ce

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment - ce

Grading - 26200 CY Export

Architectural Coating - Rule 67 Paint

Woodstoves - No FP

Area Coating - Rule 67 Paint

Water And Wastewater - Water 75 gallons per day per bed and 75 percent of potable water use for indoor water

Solid Waste - IS states 289 Tons/year

Construction Off-road Equipment Mitigation - Project will utilize Tier 4 equipment

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Residential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	150.00
tblAreaCoating	Area_EF_Residential_Exterior	250	150
tblAreaCoating	Area_EF_Residential_Interior	250	150
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3

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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	10.00	175.00
tblConstructionPhase	NumDays	220.00	218.00
tblConstructionPhase	NumDays	220.00	15.00
tblConstructionPhase	NumDays	20.00	5.00
tblConstructionPhase	NumDays	6.00	26.00
tblConstructionPhase	NumDays	10.00	6.00
tblConstructionPhase	NumDays	3.00	5.00
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	NumberGas	54.45	0.00
tblFireplaces	NumberNoFireplace	9.90	99.00
tblFireplaces	NumberWood	34.65	0.00
tblFleetMix	HHD	0.02	0.02
tblFleetMix	LDA	0.58	0.59
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.19	0.18
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.6000e-003	5.5580e-003
tblFleetMix	MCY	6.2790e-003	6.1810e-003

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tblFleetMix	MDV	0.11	0.11
tblFleetMix	MH	1.3570e-003	1.2710e-003
tblFleetMix	MHD	0.02	0.02
tblFleetMix	OBUS	1.8880e-003	1.9020e-003
tblFleetMix	SBUS	7.4200e-004	7.4500e-004
tblFleetMix	UBUS	2.0880e-003	2.0240e-003
tblGrading	MaterialExported	0.00	23,200.00
tblGrading	MaterialExported	0.00	3,000.00
tblLandUse	BuildingSpaceSquareFeet	99,000.00	83,001.00
tblLandUse	LandUseSquareFeet	99,000.00	83,001.00
tblLandUse	LotAcreage	6.19	2.90
tblOffRoadEquipment	HorsePower	231.00	226.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	UsageHours	8.00	7.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblSolidWaste	SolidWasteGenerationRate	90.34	289.00
tblWater	IndoorWaterUseRate	6,450,248.54	2,540,674.00
tblWater	OutdoorWaterUseRate	4,066,461.03	846,891.00
tblWoodstoves	NumberCatalytic	4.95	0.00
tblWoodstoves	NumberNoncatalytic	4.95	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00

2.0 Emissions Summary

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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					
2018	1.1678	2.9109	2.3021	5.2800e-003	0.2167	0.1461	0.3628	0.0825	0.1409	0.2234	0.0000	473.2913	473.2913	0.0628	0.0000	474.8615
Maximum	1.1678	2.9109	2.3021	5.2800e-003	0.2167	0.1461	0.3628	0.0825	0.1409	0.2234	0.0000	473.2913	473.2913	0.0628	0.0000	474.8615

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					
2018	0.8785	1.1606	2.2145	5.2800e-003	0.2167	4.5600e-003	0.2213	0.0825	4.3700e-003	0.0868	0.0000	473.2910	473.2910	0.0628	0.0000	474.8612
Maximum	0.8785	1.1606	2.2145	5.2800e-003	0.2167	4.5600e-003	0.2213	0.0825	4.3700e-003	0.0868	0.0000	473.2910	473.2910	0.0628	0.0000	474.8612

	ROG	NOx	CO	SO2	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	24.77	60.13	3.80	0.00	0.00	96.88	39.01	0.00	96.90	61.12	0.00	0.00	0.00	0.00	0.00	0.00

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2018	3-31-2018	1.2829	0.6402
2	4-1-2018	6-30-2018	1.1738	0.4837
3	7-1-2018	9-30-2018	1.2459	0.5705
		Highest	1.2829	0.6402

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	0.4247	8.5600e-003	0.7387	4.0000e-005		4.0500e-003	4.0500e-003		4.0500e-003	4.0500e-003	0.0000	1.2008	1.2008	1.1800e-003	0.0000	1.2302
Energy	4.7300e-003	0.0405	0.0172	2.6000e-004		3.2700e-003	3.2700e-003		3.2700e-003	3.2700e-003	0.0000	184.8534	184.8534	6.4500e-003	2.0100e-003	185.6132
Mobile	0.0928	0.4195	1.1146	3.4500e-003	0.2792	3.9500e-003	0.2831	0.0748	3.7100e-003	0.0785	0.0000	317.4036	317.4036	0.0179	0.0000	317.8499
Waste						0.0000	0.0000		0.0000	0.0000	58.6644	0.0000	58.6644	3.4670	0.0000	145.3385
Water						0.0000	0.0000		0.0000	0.0000	0.8060	13.8865	14.6925	0.0834	2.0700e-003	17.3932
Total	0.5222	0.4685	1.8705	3.7500e-003	0.2792	0.0113	0.2904	0.0748	0.0110	0.0858	59.4704	517.3443	576.8147	3.5758	4.0800e-003	667.4250

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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	0.4247	8.5600e-003	0.7387	4.0000e-005		4.0500e-003	4.0500e-003		4.0500e-003	4.0500e-003	0.0000	1.2008	1.2008	1.1800e-003	0.0000	1.2302
Energy	4.7300e-003	0.0405	0.0172	2.6000e-004		3.2700e-003	3.2700e-003		3.2700e-003	3.2700e-003	0.0000	184.8534	184.8534	6.4500e-003	2.0100e-003	185.6132
Mobile	0.0928	0.4195	1.1146	3.4500e-003	0.2792	3.9500e-003	0.2831	0.0748	3.7100e-003	0.0785	0.0000	317.4036	317.4036	0.0179	0.0000	317.8499
Waste						0.0000	0.0000		0.0000	0.0000	58.6644	0.0000	58.6644	3.4670	0.0000	145.3385
Water						0.0000	0.0000		0.0000	0.0000	0.8060	13.8865	14.6925	0.0834	2.0700e-003	17.3932
Total	0.5222	0.4685	1.8705	3.7500e-003	0.2792	0.0113	0.2904	0.0748	0.0110	0.0858	59.4704	517.3443	576.8147	3.5758	4.0800e-003	667.4250

	ROG	NOx	CO	SO2	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**

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	1/7/2018	5	5	
2	Site Preparation	Site Preparation	1/8/2018	1/12/2018	5	5	
3	Grading	Grading	1/16/2018	2/20/2018	5	26	
4	Paving	Paving	2/21/2018	2/28/2018	5	6	
5	Building Construction	Building Construction	3/1/2018	12/31/2018	5	218	
6	Architectural Coating	Architectural Coating	5/1/2018	12/31/2018	5	175	
7	Building Construction Crane Usage	Building Construction	6/1/2018	6/21/2018	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13

Acres of Paving: 0

Residential Indoor: 168,077; Residential Outdoor: 56,026; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction Crane Usage	Cranes	1	7.00	226	0.29

Trips and VMT

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Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	3	8.00	0.00	18.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	375.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	2,900.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	71.00	11.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	14.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction Crane Usage	1	71.00	11.00	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

Clean Paved Roads

3.2 Demolition - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9900e-003	0.0000	1.9900e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8800e-003	0.0478	0.0261	4.0000e-005		2.6600e-003	2.6600e-003		2.5000e-003	2.5000e-003	0.0000	4.0044	4.0044	9.3000e-004	0.0000	4.0277
Total	4.8800e-003	0.0478	0.0261	4.0000e-005	1.9900e-003	2.6600e-003	4.6500e-003	3.0000e-004	2.5000e-003	2.8000e-003	0.0000	4.0044	4.0044	9.3000e-004	0.0000	4.0277

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3.2 Demolition - 2018**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	8.0000e-005	2.9200e-003	6.1000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.7000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.7092	0.7092	6.0000e-005	0.0000	0.7108
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	9.0000e-005	7.0000e-005	6.5000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1544	0.1544	1.0000e-005	0.0000	0.1545
Total	1.7000e-004	2.9900e-003	1.2600e-003	1.0000e-005	3.1000e-004	1.0000e-005	3.3000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.8636	0.8636	7.0000e-005	0.0000	0.8653

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9900e-003	0.0000	1.9900e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.1000e-004	2.2200e-003	0.0251	4.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.0043	4.0043	9.3000e-004	0.0000	4.0277
Total	5.1000e-004	2.2200e-003	0.0251	4.0000e-005	1.9900e-003	1.0000e-005	2.0000e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	4.0043	4.0043	9.3000e-004	0.0000	4.0277

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3.2 Demolition - 2018**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	8.0000e-005	2.9200e-003	6.1000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.7000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.7092	0.7092	6.0000e-005	0.0000	0.7108
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	9.0000e-005	7.0000e-005	6.5000e-004	0.0000	1.6000e-004	0.0000	1.6000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1544	0.1544	1.0000e-005	0.0000	0.1545
Total	1.7000e-004	2.9900e-003	1.2600e-003	1.0000e-005	3.1000e-004	1.0000e-005	3.3000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.8636	0.8636	7.0000e-005	0.0000	0.8653

3.3 Site Preparation - 2018**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					0.0134	0.0000	0.0134	7.2700e-003	0.0000	7.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1300e-003	0.0332	0.0147	3.0000e-005		1.7400e-003	1.7400e-003		1.6000e-003	1.6000e-003	0.0000	2.3277	2.3277	7.2000e-004	0.0000	2.3458
Total	3.1300e-003	0.0332	0.0147	3.0000e-005	0.0134	1.7400e-003	0.0151	7.2700e-003	1.6000e-003	8.8700e-003	0.0000	2.3277	2.3277	7.2000e-004	0.0000	2.3458

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3.3 Site Preparation - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7400e-003	0.0609	0.0127	1.5000e-004	3.2100e-003	2.4000e-004	3.4500e-003	8.8000e-004	2.3000e-004	1.1100e-003	0.0000	14.7756	14.7756	1.3300e-003	0.0000	14.8090
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	4.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0965	0.0965	0.0000	0.0000	0.0966
Total	1.7900e-003	0.0609	0.0131	1.5000e-004	3.3100e-003	2.4000e-004	3.5500e-003	9.1000e-004	2.3000e-004	1.1400e-003	0.0000	14.8721	14.8721	1.3300e-003	0.0000	14.9055

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					0.0134	0.0000	0.0134	7.2700e-003	0.0000	7.2700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1000e-004	1.3500e-003	0.0135	3.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.3277	2.3277	7.2000e-004	0.0000	2.3458
Total	3.1000e-004	1.3500e-003	0.0135	3.0000e-005	0.0134	1.0000e-005	0.0134	7.2700e-003	1.0000e-005	7.2800e-003	0.0000	2.3277	2.3277	7.2000e-004	0.0000	2.3458

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3.3 Site Preparation - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.7400e-003	0.0609	0.0127	1.5000e-004	3.2100e-003	2.4000e-004	3.4500e-003	8.8000e-004	2.3000e-004	1.1100e-003	0.0000	14.7756	14.7756	1.3300e-003	0.0000	14.8090
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.0000e-005	4.0000e-005	4.1000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0965	0.0965	0.0000	0.0000	0.0966
Total	1.7900e-003	0.0609	0.0131	1.5000e-004	3.3100e-003	2.4000e-004	3.5500e-003	9.1000e-004	2.3000e-004	1.1400e-003	0.0000	14.8721	14.8721	1.3300e-003	0.0000	14.9055

3.4 Grading - 2018**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					0.0868	0.0000	0.0868	0.0440	0.0000	0.0440	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0280	0.3158	0.1350	2.7000e-004		0.0152	0.0152		0.0140	0.0140	0.0000	24.5004	24.5004	7.6300e-003	0.0000	24.6911
Total	0.0280	0.3158	0.1350	2.7000e-004	0.0868	0.0152	0.1020	0.0440	0.0140	0.0580	0.0000	24.5004	24.5004	7.6300e-003	0.0000	24.6911

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3.4 Grading - 2018**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	0.0134	0.4707	0.0982	1.1600e-003	0.0248	1.8300e-003	0.0266	6.8200e-003	1.7500e-003	8.5700e-003	0.0000	114.2648	114.2648	0.0103	0.0000	114.5226
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	4.4000e-004	4.2200e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	1.0033	1.0033	3.0000e-005	0.0000	1.0042
Total	0.0140	0.4712	0.1024	1.1700e-003	0.0259	1.8400e-003	0.0277	7.1000e-003	1.7600e-003	8.8500e-003	0.0000	115.2681	115.2681	0.0103	0.0000	115.5267

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					0.0868	0.0000	0.0868	0.0440	0.0000	0.0440	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2800e-003	0.0142	0.1418	2.7000e-004		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	24.5004	24.5004	7.6300e-003	0.0000	24.6911
Total	3.2800e-003	0.0142	0.1418	2.7000e-004	0.0868	7.0000e-005	0.0869	0.0440	7.0000e-005	0.0441	0.0000	24.5004	24.5004	7.6300e-003	0.0000	24.6911

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3.4 Grading - 2018**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	0.0134	0.4707	0.0982	1.1600e-003	0.0248	1.8300e-003	0.0266	6.8200e-003	1.7500e-003	8.5700e-003	0.0000	114.2648	114.2648	0.0103	0.0000	114.5226
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.6000e-004	4.4000e-004	4.2200e-003	1.0000e-005	1.0400e-003	1.0000e-005	1.0500e-003	2.8000e-004	1.0000e-005	2.8000e-004	0.0000	1.0033	1.0033	3.0000e-005	0.0000	1.0042
Total	0.0140	0.4712	0.1024	1.1700e-003	0.0259	1.8400e-003	0.0277	7.1000e-003	1.7600e-003	8.8500e-003	0.0000	115.2681	115.2681	0.0103	0.0000	115.5267

3.5 Paving - 2018**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	4.2100e-003	0.0428	0.0359	5.0000e-005		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	4.8287	4.8287	1.4700e-003	0.0000	4.8656
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.2100e-003	0.0428	0.0359	5.0000e-005		2.5500e-003	2.5500e-003		2.3500e-003	2.3500e-003	0.0000	4.8287	4.8287	1.4700e-003	0.0000	4.8656

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3.5 Paving - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.5000e-004	1.4600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3473	0.3473	1.0000e-005	0.0000	0.3476
Total	1.9000e-004	1.5000e-004	1.4600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3473	0.3473	1.0000e-005	0.0000	0.3476

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	6.3000e-004	2.7300e-003	0.0389	5.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8287	4.8287	1.4700e-003	0.0000	4.8656
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	6.3000e-004	2.7300e-003	0.0389	5.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8287	4.8287	1.4700e-003	0.0000	4.8656

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3.5 Paving - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-004	1.5000e-004	1.4600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3473	0.3473	1.0000e-005	0.0000	0.3476
Total	1.9000e-004	1.5000e-004	1.4600e-003	0.0000	3.6000e-004	0.0000	3.6000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3473	0.3473	1.0000e-005	0.0000	0.3476

3.6 Building Construction - 2018**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	0.2553	1.5137	1.4384	2.1000e-003		0.1049	0.1049		0.1018	0.1018	0.0000	172.9642	172.9642	0.0318	0.0000	173.7581
Total	0.2553	1.5137	1.4384	2.1000e-003		0.1049	0.1049		0.1018	0.1018	0.0000	172.9642	172.9642	0.0318	0.0000	173.7581

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3.6 Building Construction - 2018**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2900e-003	0.1601	0.0440	3.3000e-004	7.9600e-003	1.2400e-003	9.2000e-003	2.3000e-003	1.1900e-003	3.4900e-003	0.0000	32.0923	32.0923	2.6400e-003	0.0000	32.1584
Worker	0.0331	0.0262	0.2512	6.6000e-004	0.0621	4.6000e-004	0.0625	0.0165	4.2000e-004	0.0169	0.0000	59.7277	59.7277	2.0600e-003	0.0000	59.7792
Total	0.0394	0.1862	0.2952	9.9000e-004	0.0700	1.7000e-003	0.0717	0.0188	1.6100e-003	0.0204	0.0000	91.8200	91.8200	4.7000e-003	0.0000	91.9376

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	0.0282	0.3884	1.3447	2.1000e-003		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	172.9640	172.9640	0.0318	0.0000	173.7579
Total	0.0282	0.3884	1.3447	2.1000e-003		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	172.9640	172.9640	0.0318	0.0000	173.7579

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3.6 Building Construction - 2018**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.2900e-003	0.1601	0.0440	3.3000e-004	7.9600e-003	1.2400e-003	9.2000e-003	2.3000e-003	1.1900e-003	3.4900e-003	0.0000	32.0923	32.0923	2.6400e-003	0.0000	32.1584
Worker	0.0331	0.0262	0.2512	6.6000e-004	0.0621	4.6000e-004	0.0625	0.0165	4.2000e-004	0.0169	0.0000	59.7277	59.7277	2.0600e-003	0.0000	59.7792
Total	0.0394	0.1862	0.2952	9.9000e-004	0.0700	1.7000e-003	0.0717	0.0188	1.6100e-003	0.0204	0.0000	91.8200	91.8200	4.7000e-003	0.0000	91.9376

3.7 Architectural Coating - 2018**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	0.7790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0261	0.1755	0.1622	2.6000e-004		0.0132	0.0132		0.0132	0.0132	0.0000	22.3410	22.3410	2.1200e-003	0.0000	22.3941
Total	0.8052	0.1755	0.1622	2.6000e-004		0.0132	0.0132		0.0132	0.0132	0.0000	22.3410	22.3410	2.1200e-003	0.0000	22.3941

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3.7 Architectural Coating - 2018**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	5.2400e-003	4.1500e-003	0.0398	1.0000e-004	9.8200e-003	7.0000e-005	9.9000e-003	2.6100e-003	7.0000e-005	2.6800e-003	0.0000	9.4543	9.4543	3.3000e-004	0.0000	9.4624
Total	5.2400e-003	4.1500e-003	0.0398	1.0000e-004	9.8200e-003	7.0000e-005	9.9000e-003	2.6100e-003	7.0000e-005	2.6800e-003	0.0000	9.4543	9.4543	3.3000e-004	0.0000	9.4624

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	0.7790					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6000e-003	0.0113	0.1603	2.6000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	22.3410	22.3410	2.1200e-003	0.0000	22.3941
Total	0.7816	0.0113	0.1603	2.6000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	22.3410	22.3410	2.1200e-003	0.0000	22.3941

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3.7 Architectural Coating - 2018**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	5.2400e-003	4.1500e-003	0.0398	1.0000e-004	9.8200e-003	7.0000e-005	9.9000e-003	2.6100e-003	7.0000e-005	2.6800e-003	0.0000	9.4543	9.4543	3.3000e-004	0.0000	9.4624
Total	5.2400e-003	4.1500e-003	0.0398	1.0000e-004	9.8200e-003	7.0000e-005	9.9000e-003	2.6100e-003	7.0000e-005	2.6800e-003	0.0000	9.4543	9.4543	3.3000e-004	0.0000	9.4624

3.8 Building Construction Crane Usage - 2018**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.6600e-003	0.0438	0.0162	4.0000e-005		1.9000e-003	1.9000e-003		1.7400e-003	1.7400e-003	0.0000	3.3817	3.3817	1.0500e-003	0.0000	3.4080
Total	3.6600e-003	0.0438	0.0162	4.0000e-005		1.9000e-003	1.9000e-003		1.7400e-003	1.7400e-003	0.0000	3.3817	3.3817	1.0500e-003	0.0000	3.4080

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3.8 Building Construction Crane Usage - 2018**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	4.3000e-004	0.0110	3.0300e-003	2.0000e-005	5.5000e-004	9.0000e-005	6.3000e-004	1.6000e-004	8.0000e-005	2.4000e-004	0.0000	2.2082	2.2082	1.8000e-004	0.0000	2.2127
Worker	2.2800e-003	1.8000e-003	0.0173	5.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1300e-003	3.0000e-005	1.1600e-003	0.0000	4.1097	4.1097	1.4000e-004	0.0000	4.1133
Total	2.7100e-003	0.0128	0.0203	7.0000e-005	4.8200e-003	1.2000e-004	4.9300e-003	1.2900e-003	1.1000e-004	1.4000e-003	0.0000	6.3179	6.3179	3.2000e-004	0.0000	6.3260

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	4.6000e-004	1.9700e-003	0.0167	4.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.3817	3.3817	1.0500e-003	0.0000	3.4080
Total	4.6000e-004	1.9700e-003	0.0167	4.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.3817	3.3817	1.0500e-003	0.0000	3.4080

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3.8 Building Construction Crane Usage - 2018**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	4.3000e-004	0.0110	3.0300e-003	2.0000e-005	5.5000e-004	9.0000e-005	6.3000e-004	1.6000e-004	8.0000e-005	2.4000e-004	0.0000	2.2082	2.2082	1.8000e-004	0.0000	2.2127
Worker	2.2800e-003	1.8000e-003	0.0173	5.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1300e-003	3.0000e-005	1.1600e-003	0.0000	4.1097	4.1097	1.4000e-004	0.0000	4.1133
Total	2.7100e-003	0.0128	0.0203	7.0000e-005	4.8200e-003	1.2000e-004	4.9300e-003	1.2900e-003	1.1000e-004	1.4000e-003	0.0000	6.3179	6.3179	3.2000e-004	0.0000	6.3260

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

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	ROG	NOx	CO	SO2	Fugitive 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	0.0928	0.4195	1.1146	3.4500e-003	0.2792	3.9500e-003	0.2831	0.0748	3.7100e-003	0.0785	0.0000	317.4036	317.4036	0.0179	0.0000	317.8499
Unmitigated	0.0928	0.4195	1.1146	3.4500e-003	0.2792	3.9500e-003	0.2831	0.0748	3.7100e-003	0.0785	0.0000	317.4036	317.4036	0.0179	0.0000	317.8499

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	271.26	217.80	241.56	740,609	740,609
Total	271.26	217.80	241.56	740,609	740,609

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
Congregate Care (Assisted Living)	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.588316	0.042913	0.184449	0.110793	0.017294	0.005558	0.015534	0.023021	0.001902	0.002024	0.006181	0.000745	0.001271

5.0 Energy Detail

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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	138.0040	138.0040	5.5500e-003	1.1500e-003	138.4854
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	138.0040	138.0040	5.5500e-003	1.1500e-003	138.4854
NaturalGas Mitigated	4.7300e-003	0.0405	0.0172	2.6000e-004		3.2700e-003	3.2700e-003		3.2700e-003	3.2700e-003	0.0000	46.8494	46.8494	9.0000e-004	8.6000e-004	47.1278
NaturalGas Unmitigated	4.7300e-003	0.0405	0.0172	2.6000e-004		3.2700e-003	3.2700e-003		3.2700e-003	3.2700e-003	0.0000	46.8494	46.8494	9.0000e-004	8.6000e-004	47.1278

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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					
Congregate Care (Assisted Living)	877925	4.7300e-003	0.0405	0.0172	2.6000e-004		3.2700e-003	3.2700e-003		3.2700e-003	3.2700e-003	0.0000	46.8494	46.8494	9.0000e-004	8.6000e-004	47.1278
Total		4.7300e-003	0.0405	0.0172	2.6000e-004		3.2700e-003	3.2700e-003		3.2700e-003	3.2700e-003	0.0000	46.8494	46.8494	9.0000e-004	8.6000e-004	47.1278

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					
Congregate Care (Assisted Living)	877925	4.7300e-003	0.0405	0.0172	2.6000e-004		3.2700e-003	3.2700e-003		3.2700e-003	3.2700e-003	0.0000	46.8494	46.8494	9.0000e-004	8.6000e-004	47.1278
Total		4.7300e-003	0.0405	0.0172	2.6000e-004		3.2700e-003	3.2700e-003		3.2700e-003	3.2700e-003	0.0000	46.8494	46.8494	9.0000e-004	8.6000e-004	47.1278

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

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	422278	138.0040	5.5500e-003	1.1500e-003	138.4854
Total		138.0040	5.5500e-003	1.1500e-003	138.4854

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	422278	138.0040	5.5500e-003	1.1500e-003	138.4854
Total		138.0040	5.5500e-003	1.1500e-003	138.4854

6.0 Area Detail**6.1 Mitigation Measures Area**

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	ROG	NOx	CO	SO2	Fugitive 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	0.4247	8.5600e-003	0.7387	4.0000e-005		4.0500e-003	4.0500e-003		4.0500e-003	4.0500e-003	0.0000	1.2008	1.2008	1.1800e-003	0.0000	1.2302
Unmitigated	0.4247	8.5600e-003	0.7387	4.0000e-005		4.0500e-003	4.0500e-003		4.0500e-003	4.0500e-003	0.0000	1.2008	1.2008	1.1800e-003	0.0000	1.2302

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	0.0779					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0226	8.5600e-003	0.7387	4.0000e-005		4.0500e-003	4.0500e-003		4.0500e-003	4.0500e-003	0.0000	1.2008	1.2008	1.1800e-003	0.0000	1.2302
Total	0.4247	8.5600e-003	0.7387	4.0000e-005		4.0500e-003	4.0500e-003		4.0500e-003	4.0500e-003	0.0000	1.2008	1.2008	1.1800e-003	0.0000	1.2302

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6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0779					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3242					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0226	8.5600e-003	0.7387	4.0000e-005		4.0500e-003	4.0500e-003		4.0500e-003	4.0500e-003	0.0000	1.2008	1.2008	1.1800e-003	0.0000	1.2302
Total	0.4247	8.5600e-003	0.7387	4.0000e-005		4.0500e-003	4.0500e-003		4.0500e-003	4.0500e-003	0.0000	1.2008	1.2008	1.1800e-003	0.0000	1.2302

7.0 Water Detail**7.1 Mitigation Measures Water**

Solana Beach Senior Housing 2019 - San Diego County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	14.6925	0.0834	2.0700e-003	17.3932
Unmitigated	14.6925	0.0834	2.0700e-003	17.3932

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	2.54067 / 0.846891	14.6925	0.0834	2.0700e-003	17.3932
Total		14.6925	0.0834	2.0700e-003	17.3932

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7.2 Water by Land Use**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	2.54067 / 0.846891	14.6925	0.0834	2.0700e-003	17.3932
Total		14.6925	0.0834	2.0700e-003	17.3932

8.0 Waste Detail**8.1 Mitigation Measures Waste****Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	58.6644	3.4670	0.0000	145.3385
Unmitigated	58.6644	3.4670	0.0000	145.3385

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8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	289	58.6644	3.4670	0.0000	145.3385
Total		58.6644	3.4670	0.0000	145.3385

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	289	58.6644	3.4670	0.0000	145.3385
Total		58.6644	3.4670	0.0000	145.3385

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

User Defined Equipment

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

11.0 Vegetation

ATTACHMENT C

AERMOD Unmitigated, Mitigated

1 Attach C Aermod Unmitigated Output
AERMOD PRIME - (DATED 16216r)

AERMODPrMSPx VERSION
(C) COPYRIGHT 1998-2017, Trinity Consultants

Run Began on 8/03/2017 at 17:52:12

** BREEZE AERMOD
** Trinity Consultants
** VERSION 7.12

CO STARTING
CO TITLEONE PM10 Exhaust SB Construction Unmitigated
CO MODELOPT DFAULT CONC
CO RUNORNOT RUN
CO AVERTIME ANNUAL
CO POLLUTID PM10
CO FINISHED

SO STARTING
SO ELEVUNIT METERS
SO LOCATION 6Y1FY002 AREAPOLY 476169.4 3650116 40.23
** SRCDESCR PM 10 Exhaust
SO SRCPARAM 6Y1FY002 1.47E-06 4.15 9 1.93
SO AREAVERT 6Y1FY002 476169.4 3650116 476282.8 3650116 476280.4 3650079.5 476221 3650079.5
SO AREAVERT 6Y1FY002 476219 3650010.9 476215.6 3649991.9 476202.5 3649931.6 476189.8 3649909.7
SO AREAVERT 6Y1FY002 476173.3 3649906.8
SO SRCGROUP ALL
SO FINISHED

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RE ELEVUNIT METERS
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RE DISCCART 475836.4 3650384.7 38.78 51.96
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Attach C Aermod Unmitigated Output

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RE DISCCART 475836.4 3649995.9 11.89 89.78
** RCPDESCR grid

```

				Attach C Aermod Unmitigated Output	
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RE DISCCART	475711.6	3649607.1	12.7	61.82	
** RCPDESCR	grid				
RE DISCCART	475836.4	3649607.1	5.05	68.92	

Attach C Aermod Unmitigated Output

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Attach C Aermod Unmitigated Output

```

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** SENSITIV
** RCPDESCR EastResident2
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** SENSITIV
** RCPDESCR EastResident3
RE DISCCART 476059.1 3650039.8 28.19 98.34
** SENSITIV
** RCPDESCR WestResident
RE DISCCART 476215 3649883.9 48.04 68.58
** SENSITIV
** RCPDESCR SouthResident
RE FINISHED

```

```

ME STARTING
ME SURFFILE
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** SURFFILE
"C:\USERS\RYAN_000\ONEDRIVE\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\KMA2012V15181.SFC"
ME PROFILE
"C:\USERS\RYAN_000\ONEDRIVE\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\KMA2012V15181.PFL"
** PROFILE
"C:\USERS\RYAN_000\ONEDRIVE\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\KMA2012V15181.PFL"
ME SURFDATA 93107 2012 KERNEYMESACLOSESTMEDDATATOSITE
ME UAIRDATA 3190 2012 KERNEYMESACLOSESTMEDDATATOSITE
ME SITEDATA 00001016 2012 KERNEYMESACLOSESTMEDDATATOSITE
ME PROFBASE 20 METERS
ME STARTEND 2012 1 1 1 2012 12 31 24
ME FINISHED

```

```

OU STARTING
OU FILEFORM FIX
OU PLOTFILE ANNUAL ALL ALL`ANNUAL.plt 10000
OU FINISHED

```

```

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

```

```

** TERRFILE
C:\USERS\RYAN_000\ONEDRIVE\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\NEDU99~1\NEDU99048667.TIF 2 0
WGS84 11 0 474902.5 3648489.0 474910.4 3651566.5 477685.7 3651559.8 477678.7 3648482.3
** AMPTYPE NED
** AMPDATUM 2
** AMPZONE 11
** AMPHEMISPHERE N

** PROJECTION UTM
** DATUM WGE
** UNITS METER
** ZONE 11
** HEMISPHERE N
** ORIGINLON 0
** ORIGINLAT 0
** PARALLEL1 0
** PARALLEL2 0

```

Attach C Aermod Unmitigated Output

** AZIMUTH 0
** SCALEFACT 0
** FALSEEAST 0
** FALSENORTH 0

** POSTFMT UNIFORM
** TEMPLATE USERDEFINED
** AERMODEXE AERMOD_BREEZE_16216.EXE
** AERMAPEXE AERMAP_EPA_11103.EXE

*** SETUP Finishes Successfully ***

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Unmitigated
*** 08/03/17
*** AERMET - VERSION 15181 *** ***
*** 17:52:12

PAGE 1

*** MODELOPTs: RegDEFAULT CONC ELEV RURAL

*** MODEL SETUP OPTIONS SUMMARY ***

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

-- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

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

**Other Options Specified:
TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM10

**Model Calculates ANNUAL Averages Only

**This Run Includes: 1 Source(s); 1 Source Group(s); and 106 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 1 AREA type source(s)

Attach C Aermod Unmitigated Output
and: 0 LINE source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

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

**The AERMET Input Meteorological Data Version Date: 15181

**Output Options Selected:

Model Outputs Tables of ANNUAL Averages by Receptor

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

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

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 20.00 ; Decay Coef. = 0.000 ;
Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit
Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

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

**Input Runstream File: AERMOD.INP

**Output Print File: AERMOD.OUT

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Unmitigated
*** 08/03/17
*** AERMET - VERSION 15181 *** ***
*** 17:52:12

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** AREAPOLY SOURCE DATA ***

EMISSION RATE	NUMBER	EMISSION RATE	LOCATION OF AREA		BASE	RELEASE	NUMBER	INIT.	URBAN
SOURCE	PART.	(GRAMS/SEC	X	Y	ELEV.	HEIGHT	OF VERTS.	SZ	SOURCE
SCALAR VARY									
ID	CATS.	/METER**2)	(METERS)	(METERS)	(METERS)	(METERS)		(METERS)	
BY									
6Y1FY002	0	0.14700E-05	476169.4	3650116.0	40.2	4.15	9	1.93	NO

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Unmitigated
*** 08/03/17
*** AERMET - VERSION 15181 *** ***
*** 17:52:12

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

Attach C Aermod Unmitigated Output

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID

SOURCE IDs

ALL 6Y1FY002 ,
 *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Unmitigated
 *** 08/03/17
 *** AERMET - VERSION 15181 *** ***
 *** 17:52:12

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** DISCRETE CARTESIAN RECEPTORS ***
 (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
 (METERS)

(475586.8, 3650514.3,	20.1,	90.7,	0.0);	(475711.6, 3650514.3,
27.5, 89.7, 0.0);				
(475836.4, 3650514.3,	39.5,	89.7,	0.0);	(475961.2, 3650514.3,
52.5, 89.7, 0.0);				
(476086.0, 3650514.3,	42.0,	96.5,	0.0);	(476210.8, 3650514.3,
68.7, 89.8, 0.0);				
(476335.6, 3650514.3,	89.5,	89.5,	0.0);	(476460.4, 3650514.3,
86.5, 86.8, 0.0);				
(476585.2, 3650514.3,	66.9,	99.7,	0.0);	(476710.0, 3650514.3,
60.6, 99.7, 0.0);				
(475586.8, 3650384.7,	18.1,	89.8,	0.0);	(475711.6, 3650384.7,
26.7, 52.2, 0.0);				
(475836.4, 3650384.7,	38.8,	52.0,	0.0);	(475961.2, 3650384.7,
43.5, 89.8, 0.0);				
(476086.0, 3650384.7,	41.9,	96.6,	0.0);	(476210.8, 3650384.7,
56.6, 96.4, 0.0);				
(476335.6, 3650384.7,	64.1,	98.3,	0.0);	(476460.4, 3650384.7,
66.5, 99.3, 0.0);				
(476585.2, 3650384.7,	89.7,	98.3,	0.0);	(476710.0, 3650384.7,
94.0, 98.3, 0.0);				
(475586.8, 3650255.1,	18.6,	60.4,	0.0);	(475711.6, 3650255.1,
20.5, 89.8, 0.0);				
(475836.4, 3650255.1,	25.6,	89.8,	0.0);	(475961.2, 3650255.1,
33.2, 89.8, 0.0);				
(476086.0, 3650255.1,	38.8,	98.3,	0.0);	(476210.8, 3650255.1,
47.6, 98.3, 0.0);				
(476335.6, 3650255.1,	48.7,	99.7,	0.0);	(476460.4, 3650255.1,
60.0, 99.7, 0.0);				
(476585.2, 3650255.1,	71.4,	99.7,	0.0);	(476710.0, 3650255.1,
88.0, 99.7, 0.0);				
(475586.8, 3650125.5,	21.2,	60.4,	0.0);	(475711.6, 3650125.5,
12.7, 89.8, 0.0);				
(475836.4, 3650125.5,	16.4,	89.8,	0.0);	(475961.2, 3650125.5,
22.8, 98.3, 0.0);				
(476086.0, 3650125.5,	35.8,	98.2,	0.0);	(476210.8, 3650125.5,
41.2, 99.7, 0.0);				
(476335.6, 3650125.5,	48.4,	99.7,	0.0);	(476460.4, 3650125.5,
60.2, 99.7, 0.0);				

		Attach C	Aermod	Unmitigated	Output	
(476585.2, 3650125.5,	68.3,	99.7,	0.0);	(476710.0, 3650125.5,		
82.5, 99.7, 0.0);						
(475586.8, 3649995.9,	28.7,	60.7,	0.0);	(475711.6, 3649995.9,		
14.7, 61.8, 0.0);						
(475836.4, 3649995.9,	11.9,	89.8,	0.0);	(475961.2, 3649995.9,		
17.9, 98.3, 0.0);						
(476086.0, 3649995.9,	30.1,	96.1,	0.0);	(476210.8, 3649995.9,		
41.6, 68.6, 0.0);						
(476335.6, 3649995.9,	48.5,	99.7,	0.0);	(476460.4, 3649995.9,		
59.9, 99.7, 0.0);						
(476585.2, 3649995.9,	74.0,	76.4,	0.0);	(476710.0, 3649995.9,		
85.4, 85.4, 0.0);						
(475586.8, 3649866.3,	38.4,	59.0,	0.0);	(475711.6, 3649866.3,		
14.4, 61.8, 0.0);						
(475836.4, 3649866.3,	11.6,	68.6,	0.0);	(475961.2, 3649866.3,		
19.5, 69.6, 0.0);						
(476086.0, 3649866.3,	34.8,	68.8,	0.0);	(476210.8, 3649866.3,		
49.3, 68.6, 0.0);						
(476335.6, 3649866.3,	59.1,	68.6,	0.0);	(476460.4, 3649866.3,		
67.6, 67.6, 0.0);						
(476585.2, 3649866.3,	75.8,	75.8,	0.0);	(476710.0, 3649866.3,		
73.6, 86.5, 0.0);						
(475586.8, 3649736.7,	30.4,	61.8,	0.0);	(475711.6, 3649736.7,		
12.4, 61.8, 0.0);						
(475836.4, 3649736.7,	7.4,	69.6,	0.0);	(475961.2, 3649736.7,		
18.3, 69.6, 0.0);						
(476086.0, 3649736.7,	33.8,	68.9,	0.0);	(476210.8, 3649736.7,		
42.2, 70.1, 0.0);						
(476335.6, 3649736.7,	66.5,	67.2,	0.0);	(476460.4, 3649736.7,		
65.5, 65.5, 0.0);						
(476585.2, 3649736.7,	73.4,	73.9,	0.0);	(476710.0, 3649736.7,		
77.5, 77.5, 0.0);						
(475586.8, 3649607.1,	36.0,	38.7,	0.0);	(475711.6, 3649607.1,		
12.7, 61.8, 0.0);						
(475836.4, 3649607.1,	5.0,	68.9,	0.0);	(475961.2, 3649607.1,		
15.4, 69.6, 0.0);						
(476086.0, 3649607.1,	27.6,	69.6,	0.0);	(476210.8, 3649607.1,		
33.3, 78.8, 0.0);						
(476335.6, 3649607.1,	48.7,	68.6,	0.0);	(476460.4, 3649607.1,		
57.2, 57.2, 0.0);						
(476585.2, 3649607.1,	61.0,	80.0,	0.0);	(476710.0, 3649607.1,		
70.6, 74.7, 0.0);						
(475586.8, 3649477.5,	15.3,	61.8,	0.0);	(475711.6, 3649477.5,		
5.7, 61.8, 0.0);						
(475836.4, 3649477.5,	3.3,	68.6,	0.0);	(475961.2, 3649477.5,		
13.2, 68.8, 0.0);						
(476086.0, 3649477.5,	38.7,	50.8,	0.0);	(476210.8, 3649477.5,		
30.6, 68.9, 0.0);						
(476335.6, 3649477.5,	38.1,	69.4,	0.0);	(476460.4, 3649477.5,		
42.8, 80.0, 0.0);						
(476585.2, 3649477.5,	54.1,	73.4,	0.0);	(476710.0, 3649477.5,		
58.0, 73.5, 0.0);						

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Unmitigated
 *** 08/03/17
 *** AERMET - VERSION 15181 *** ***
 *** 17:52:12

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

Attach C Aermod Unmitigated Output

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*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
      (METERS)

```

5.6,	(475586.8, 3649347.9, 20.0, 56.1, 0.0);	(475711.6, 3649347.9,
	56.1, 0.0);	
7.0,	(475836.4, 3649347.9, 3.4, 67.2, 0.0);	(475961.2, 3649347.9,
	68.6, 0.0);	
26.1,	(476086.0, 3649347.9, 41.6, 50.8, 0.0);	(476210.8, 3649347.9,
	50.8, 0.0);	
31.2,	(476335.6, 3649347.9, 32.2, 68.5, 0.0);	(476460.4, 3649347.9,
	80.0, 0.0);	
41.5,	(476585.2, 3649347.9, 40.8, 74.7, 0.0);	(476710.0, 3649347.9,
	74.7, 0.0);	

```

*** AERMOD - VERSION 16216r ***      *** PM10 Exhaust SB Construction Unmitigated
***      08/03/17
*** AERMET - VERSION 15181 ***      ***
***      17:52:12

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*** MODELOPTs:      RegDFault  CONC  ELEV  RURAL
```

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

[illegible]

METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2012 1 1 1
AND END DATE: 2012 12 31 24

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

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

```

1.54, 3.09, 5.14, 8.23, 10.80,
*** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Unmitigated
*** 08/03/17
*** AERMET - VERSION 15181 *** ***
*** 17:52:12

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Attach C Aermod Unmitigated Output

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

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

Surface file: C:\USERS\RYAN_000\ONEDRIVE\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\
Met Version: 15181
Profile file: C:\USERS\RYAN_000\ONEDRIVE\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\
Surface format: FREE

Profile format: FREE

Surface station no.: 93107 Upper air station no.: 3190
Name: KERNEYMESACLOSESTMEDDATATOSITE Name:
KERNEYMESACLOSESTMEDDATATOSITE
Year: 2012 Year: 2012

First 24 hours of scalar data																		
YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD
HT	REF	TA		HT														
12	01	01	1	01	-0.5	0.025	-9.000	-9.000	-999.	9.	2.6	0.26	1.32	1.00	0.45	125.		
10.0	283.8			10.0														
12	01	01	1	02	-2.3	0.053	-9.000	-9.000	-999.	29.	5.8	0.34	1.32	1.00	0.89	334.		
10.0	283.8			10.0														
12	01	01	1	03	-0.6	0.027	-9.000	-9.000	-999.	11.	3.0	0.38	1.32	1.00	0.45	5.		
10.0	285.9			10.0														
12	01	01	1	04	-0.5	0.025	-9.000	-9.000	-999.	9.	2.6	0.26	1.32	1.00	0.45	77.		
10.0	284.9			10.0														
12	01	01	1	05	-0.6	0.027	-9.000	-9.000	-999.	10.	2.9	0.34	1.32	1.00	0.45	336.		
10.0	285.4			10.0														
12	01	01	1	06	-0.5	0.025	-9.000	-9.000	-999.	10.	2.7	0.29	1.32	1.00	0.45	233.		
10.0	284.2			10.0														
12	01	01	1	07	-0.5	0.025	-9.000	-9.000	-999.	10.	2.7	0.29	1.32	1.00	0.45	175.		
10.0	283.1			10.0														
12	01	01	1	08	27.3	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.31	1.32	0.49	0.00	0.		
10.0	283.1			10.0														
12	01	01	1	09	55.2	0.108	0.487	0.014	75.	85.	-2.0	0.37	1.32	0.29	0.45	329.		
10.0	286.4			10.0														
12	01	01	1	10	123.3	0.120	0.896	0.007	208.	100.	-1.3	0.37	1.32	0.22	0.45	321.		
10.0	291.4			10.0														
12	01	01	1	11	169.2	0.295	1.303	0.005	468.	384.	-13.6	0.37	1.32	0.20	1.79	320.		
10.0	295.4			10.0														
12	01	01	1	12	191.0	0.299	1.625	0.005	805.	392.	-12.5	0.37	1.32	0.19	1.79	310.		
10.0	297.0			10.0														
12	01	01	1	13	186.3	0.298	1.865	0.005	1245.	391.	-12.7	0.37	1.32	0.19	1.79	307.		
10.0	298.8			10.0														
12	01	01	1	14	160.2	0.293	1.884	0.005	1493.	381.	-14.1	0.37	1.32	0.20	1.79	305.		
10.0	299.9			10.0														
12	01	01	1	15	107.4	0.331	1.688	0.005	1601.	456.	-30.0	0.37	1.32	0.23	2.24	305.		
10.0	299.2			10.0														
12	01	01	1	16	36.1	0.304	1.180	0.005	1627.	403.	-69.5	0.37	1.32	0.32	2.24	300.		
10.0	296.4			10.0														
12	01	01	1	17	-4.7	0.079	-9.000	-9.000	-999.	139.	9.2	0.33	1.32	0.60	1.34	299.		
10.0	294.2			10.0														
12	01	01	1	18	-2.2	0.052	-9.000	-9.000	-999.	36.	5.8	0.33	1.32	1.00	0.89	279.		
10.0	292.0			10.0														
12	01	01	1	19	-0.5	0.025	-9.000	-9.000	-999.	10.	2.6	0.26	1.32	1.00	0.45	63.		

Attach C Aermod Unmitigated Output

10.0	289.9	10.0														
12	01	01	1	20	-0.6	0.027	-9.000	-9.000	-999.	11.	3.1	0.38	1.32	1.00	0.45	19.
10.0	288.1	10.0														
12	01	01	1	21	-2.2	0.052	-9.000	-9.000	-999.	29.	5.7	0.33	1.32	1.00	0.89	290.
10.0	287.0	10.0														
12	01	01	1	22	-2.4	0.054	-9.000	-9.000	-999.	30.	6.0	0.37	1.32	1.00	0.89	329.
10.0	285.4	10.0														
12	01	01	1	23	-2.3	0.053	-9.000	-9.000	-999.	29.	5.8	0.34	1.32	1.00	0.89	330.
10.0	284.9	10.0														
12	01	01	1	24	-0.6	0.026	-9.000	-9.000	-999.	10.	2.9	0.33	1.32	1.00	0.45	291.
10.0	284.9	10.0														

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	10.0	1	125.	0.45	283.8	48.0	-99.00	0.27

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

*** AERMOD - VERSION 16216r ***
 *** 08/03/17 ***
 *** AERMET - VERSION 15181 ***
 *** 17:52:12 ***

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE
 GROUP: ALL
 INCLUDING SOURCE(S): 6Y1FY002 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

**

CONC	X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)
0.14428	475586.80	3650514.30	0.11964	475711.60	3650514.30
0.08869	475836.40	3650514.30	0.19901	475961.20	3650514.30
0.01876	476086.00	3650514.30	0.17649	476210.80	3650514.30
0.00961	476335.60	3650514.30	0.01016	476460.40	3650514.30
0.01712	476585.20	3650514.30	0.01355	476710.00	3650514.30
0.18029	475586.80	3650384.70	0.13916	475711.60	3650384.70
0.32492	475836.40	3650384.70	0.27614	475961.20	3650384.70
0.05557	476086.00	3650384.70	0.31437	476210.80	3650384.70
0.02323	476335.60	3650384.70	0.02946	476460.40	3650384.70
0.00911	476585.20	3650384.70	0.01221	476710.00	3650384.70

Attach C Aermod Unmitigated Output					
	475586.80	3650255.10	0.16606	475711.60	3650255.10
0.21608					
	475836.40	3650255.10	0.29631	475961.20	3650255.10
0.43720					
	476086.00	3650255.10	0.63148	476210.80	3650255.10
0.31536					
	476335.60	3650255.10	0.17237	476460.40	3650255.10
0.05235					
	476585.20	3650255.10	0.02561	476710.00	3650255.10
0.01263					
	475586.80	3650125.50	0.20609	475711.60	3650125.50
0.27722					
	475836.40	3650125.50	0.40427	475961.20	3650125.50
0.66049					
	476086.00	3650125.50	1.31822	476210.80	3650125.50
2.79386					
	476335.60	3650125.50	0.55642	476460.40	3650125.50
0.09414					
	476585.20	3650125.50	0.04087	476710.00	3650125.50
0.01800					
	475586.80	3649995.90	0.26703	475711.60	3649995.90
0.36111					
	475836.40	3649995.90	0.56279	475961.20	3649995.90
1.00993					
	476086.00	3649995.90	2.25194	476210.80	3649995.90
7.55741					
	476335.60	3649995.90	1.21397	476460.40	3649995.90
0.17931					
	476585.20	3649995.90	0.05447	476710.00	3649995.90
0.02503					
	475586.80	3649866.30	0.36981	475711.60	3649866.30
0.41009					
	475836.40	3649866.30	0.59066	475961.20	3649866.30
0.90824					
	476086.00	3649866.30	1.50774	476210.80	3649866.30
0.84603					
	476335.60	3649866.30	0.23899	476460.40	3649866.30
0.13264					
	476585.20	3649866.30	0.06665	476710.00	3649866.30
0.04375					
	475586.80	3649736.70	0.30384	475711.60	3649736.70
0.35045					
	475836.40	3649736.70	0.45510	475961.20	3649736.70
0.60517					
	476086.00	3649736.70	0.71190	476210.80	3649736.70
0.88677					
	476335.60	3649736.70	0.07634	476460.40	3649736.70
0.09057					
	476585.20	3649736.70	0.05587	476710.00	3649736.70
0.04170					
	475586.80	3649607.10	0.27008	475711.60	3649607.10
0.27845					
	475836.40	3649607.10	0.34888	475961.20	3649607.10
0.39150					
	476086.00	3649607.10	0.38615	476210.80	3649607.10
0.42370					
	476335.60	3649607.10	0.30680	476460.40	3649607.10
0.11519					
	476585.20	3649607.10	0.07075	476710.00	3649607.10

Attach C Aermod Unmitigated Output

0.03775

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Unmitigated
 *** 08/03/17
 *** AERMET - VERSION 15181 *** ***
 *** 17:52:12

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE
 GROUP: ALL ***
 INCLUDING SOURCE(S): 6Y1FY002 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

**

CONC	X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)
0.23203	475586.80	3649477.50	0.19273	475711.60	3649477.50
0.25896	475836.40	3649477.50	0.25957	475961.20	3649477.50
0.27875	476086.00	3649477.50	0.31502	476210.80	3649477.50
0.28389	476335.60	3649477.50	0.30331	476460.40	3649477.50
0.07470	476585.20	3649477.50	0.11667	476710.00	3649477.50
0.18621	475586.80	3649347.90	0.17083	475711.60	3649347.90
0.18170	475836.40	3649347.90	0.19087	475961.20	3649347.90
0.19754	476086.00	3649347.90	0.23668	476210.80	3649347.90
0.18455	476335.60	3649347.90	0.19859	476460.40	3649347.90
0.16971	476585.20	3649347.90	0.19260	476710.00	3649347.90

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Unmitigated
 *** 08/03/17
 *** AERMET - VERSION 15181 *** ***
 *** 17:52:12

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE
 GROUP: ALL ***
 INCLUDING SOURCE(S): 6Y1FY002 ,

*** SENSITIVE DISCRETE RECEPTOR POINTS ***

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

**

Attach C Aermod Unmitigated Output

	X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)
--	-------------	-------------	------	-------------	-------------

CONC

	476219.20	3650127.50	2.62423	476300.20	3650109.80
1.66595	476232.10	3650058.50	6.54425	476231.20	3649999.10
6.02613	476059.10	3650039.80	1.73340	476215.00	3649883.90

1.39794

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Unmitigated
*** 08/03/17

*** AERMET - VERSION 15181 *** ***
*** 17:52:12

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

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

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

**

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

ALL	1ST HIGHEST VALUE IS	7.55741 AT (	476210.80,	3649995.90,	41.63,	68.58,
0.00) DC	2ND HIGHEST VALUE IS	6.54425 AT (	476232.10,	3650058.50,	41.88,	99.69,
0.00) SR	3RD HIGHEST VALUE IS	6.02613 AT (	476231.20,	3649999.10,	42.17,	98.92,
0.00) SR	4TH HIGHEST VALUE IS	2.79386 AT (	476210.80,	3650125.50,	41.24,	99.69,
0.00) DC	5TH HIGHEST VALUE IS	2.62423 AT (	476219.20,	3650127.50,	41.48,	99.69,
0.00) SR	6TH HIGHEST VALUE IS	2.25194 AT (	476086.00,	3649995.90,	30.07,	96.15,
0.00) DC	7TH HIGHEST VALUE IS	1.73340 AT (	476059.10,	3650039.80,	28.19,	98.34,
0.00) SR	8TH HIGHEST VALUE IS	1.66595 AT (	476300.20,	3650109.80,	45.50,	99.69,
0.00) SR	9TH HIGHEST VALUE IS	1.50774 AT (	476086.00,	3649866.30,	34.77,	68.78,
0.00) DC	10TH HIGHEST VALUE IS	1.39794 AT (	476215.00,	3649883.90,	48.04,	68.58,
0.00) SR						

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

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Unmitigated
*** 08/03/17

Attach C Aermod Unmitigated Output

*** AERMET - VERSION 15181 ***
*** 17:52:12

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

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

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 178 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 101 Calm Hours Identified

A Total of 77 Missing Hours Identified (0.88 Percent)

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

***** WARNING MESSAGES *****
*** NONE ***

*** AERMOD Finishes Successfully ***

1 AERMOD PRIME - (DATED 16216r)

AERMODPrMSPx VERSION
(C) COPYRIGHT 1998-2017, Trinity Consultants

Run Began on 8/03/2017 at 20:51:01

** BREEZE AERMOD
** Trinity Consultants
** VERSION 7.12

CO STARTING
CO TITLEONE PM10 Exhaust SB Construction Mitigated
CO MODELOPT DFAULT CONC
CO RUNORNOT RUN
CO AVERTIME ANNUAL
CO POLLUTID PM10
CO FINISHED

SO STARTING
SO ELEVUNIT METERS
SO LOCATION 6Y1FY002 AREAPOLY 476169.4 3650116 40.23
** SRCDESCR PM 10 Exhaust
SO SRCPARAM 6Y1FY002 5.98E-09 4.15 9 1.93
SO AREAVERT 6Y1FY002 476169.4 3650116 476282.8 3650116 476280.4 3650079.5 476221 3650079.5
SO AREAVERT 6Y1FY002 476219 3650010.9 476215.6 3649991.9 476202.5 3649931.6 476189.8 3649909.7
SO AREAVERT 6Y1FY002 476173.3 3649906.8
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE ELEVUNIT METERS
RE DISCCART 475586.8 3650514.3 20.08 90.73
** RCPDESCR grid
RE DISCCART 475711.6 3650514.3 27.51 89.73
** RCPDESCR grid
RE DISCCART 475836.4 3650514.3 39.52 89.73
** RCPDESCR grid
RE DISCCART 475961.2 3650514.3 52.5 89.73
** RCPDESCR grid
RE DISCCART 476086.0 3650514.3 41.98 96.5
** RCPDESCR grid
RE DISCCART 476210.8 3650514.3 68.69 89.78
** RCPDESCR grid
RE DISCCART 476335.6 3650514.3 89.5 89.5
** RCPDESCR grid
RE DISCCART 476460.4 3650514.3 86.51 86.8
** RCPDESCR grid
RE DISCCART 476585.2 3650514.3 66.91 99.69
** RCPDESCR grid
RE DISCCART 476710.0 3650514.3 60.6 99.69
** RCPDESCR grid
RE DISCCART 475586.8 3650384.7 18.05 89.84
** RCPDESCR grid
RE DISCCART 475711.6 3650384.7 26.68 52.2
** RCPDESCR grid
RE DISCCART 475836.4 3650384.7 38.78 51.96
** RCPDESCR grid
RE DISCCART 475961.2 3650384.7 43.53 89.78

Attach C Aermod mitigated output

```

** RCPDESCR grid
RE DISCCART 476086.0 3650384.7 41.93 96.61
** RCPDESCR grid
RE DISCCART 476210.8 3650384.7 56.61 96.38
** RCPDESCR grid
RE DISCCART 476335.6 3650384.7 64.1 98.34
** RCPDESCR grid
RE DISCCART 476460.4 3650384.7 66.55 99.27
** RCPDESCR grid
RE DISCCART 476585.2 3650384.7 89.72 98.34
** RCPDESCR grid
RE DISCCART 476710.0 3650384.7 94.01 98.33
** RCPDESCR grid
RE DISCCART 475586.8 3650255.1 18.58 60.38
** RCPDESCR grid
RE DISCCART 475711.6 3650255.1 20.48 89.78
** RCPDESCR grid
RE DISCCART 475836.4 3650255.1 25.59 89.78
** RCPDESCR grid
RE DISCCART 475961.2 3650255.1 33.25 89.78
** RCPDESCR grid
RE DISCCART 476086.0 3650255.1 38.82 98.34
** RCPDESCR grid
RE DISCCART 476210.8 3650255.1 47.57 98.34
** RCPDESCR grid
RE DISCCART 476335.6 3650255.1 48.69 99.69
** RCPDESCR grid
RE DISCCART 476460.4 3650255.1 60 99.69
** RCPDESCR grid
RE DISCCART 476585.2 3650255.1 71.38 99.69
** RCPDESCR grid
RE DISCCART 476710.0 3650255.1 88.03 99.69
** RCPDESCR grid
RE DISCCART 475586.8 3650125.5 21.16 60.38
** RCPDESCR grid
RE DISCCART 475711.6 3650125.5 12.71 89.78
** RCPDESCR grid
RE DISCCART 475836.4 3650125.5 16.36 89.78
** RCPDESCR grid
RE DISCCART 475961.2 3650125.5 22.84 98.34
** RCPDESCR grid
RE DISCCART 476086.0 3650125.5 35.79 98.23
** RCPDESCR grid
RE DISCCART 476210.8 3650125.5 41.24 99.69
** RCPDESCR grid
RE DISCCART 476335.6 3650125.5 48.45 99.69
** RCPDESCR grid
RE DISCCART 476460.4 3650125.5 60.16 99.69
** RCPDESCR grid
RE DISCCART 476585.2 3650125.5 68.35 99.69
** RCPDESCR grid
RE DISCCART 476710.0 3650125.5 82.46 99.69
** RCPDESCR grid
RE DISCCART 475586.8 3649995.9 28.65 60.73
** RCPDESCR grid
RE DISCCART 475711.6 3649995.9 14.7 61.82
** RCPDESCR grid
RE DISCCART 475836.4 3649995.9 11.89 89.78
** RCPDESCR grid

```

Attach C Aermod mitigated output

RE DISCCART	475961.2	3649995.9	17.85	98.34
** RCPDESCR	grid			
RE DISCCART	476086.0	3649995.9	30.07	96.15
** RCPDESCR	grid			
RE DISCCART	476210.8	3649995.9	41.63	68.58
** RCPDESCR	grid			
RE DISCCART	476335.6	3649995.9	48.51	99.69
** RCPDESCR	grid			
RE DISCCART	476460.4	3649995.9	59.88	99.69
** RCPDESCR	grid			
RE DISCCART	476585.2	3649995.9	74.02	76.36
** RCPDESCR	grid			
RE DISCCART	476710.0	3649995.9	85.37	85.37
** RCPDESCR	grid			
RE DISCCART	475586.8	3649866.3	38.4	59.04
** RCPDESCR	grid			
RE DISCCART	475711.6	3649866.3	14.4	61.82
** RCPDESCR	grid			
RE DISCCART	475836.4	3649866.3	11.56	68.58
** RCPDESCR	grid			
RE DISCCART	475961.2	3649866.3	19.49	69.6
** RCPDESCR	grid			
RE DISCCART	476086.0	3649866.3	34.77	68.78
** RCPDESCR	grid			
RE DISCCART	476210.8	3649866.3	49.29	68.58
** RCPDESCR	grid			
RE DISCCART	476335.6	3649866.3	59.06	68.61
** RCPDESCR	grid			
RE DISCCART	476460.4	3649866.3	67.62	67.62
** RCPDESCR	grid			
RE DISCCART	476585.2	3649866.3	75.81	75.81
** RCPDESCR	grid			
RE DISCCART	476710.0	3649866.3	73.57	86.5
** RCPDESCR	grid			
RE DISCCART	475586.8	3649736.7	30.38	61.82
** RCPDESCR	grid			
RE DISCCART	475711.6	3649736.7	12.38	61.82
** RCPDESCR	grid			
RE DISCCART	475836.4	3649736.7	7.36	69.59
** RCPDESCR	grid			
RE DISCCART	475961.2	3649736.7	18.27	69.6
** RCPDESCR	grid			
RE DISCCART	476086.0	3649736.7	33.77	68.92
** RCPDESCR	grid			
RE DISCCART	476210.8	3649736.7	42.2	70.11
** RCPDESCR	grid			
RE DISCCART	476335.6	3649736.7	66.51	67.18
** RCPDESCR	grid			
RE DISCCART	476460.4	3649736.7	65.55	65.55
** RCPDESCR	grid			
RE DISCCART	476585.2	3649736.7	73.36	73.93
** RCPDESCR	grid			
RE DISCCART	476710.0	3649736.7	77.49	77.49
** RCPDESCR	grid			
RE DISCCART	475586.8	3649607.1	35.99	38.71
** RCPDESCR	grid			
RE DISCCART	475711.6	3649607.1	12.7	61.82
** RCPDESCR	grid			
RE DISCCART	475836.4	3649607.1	5.05	68.92

Attach C Aermod mitigated output

```

** RCPDESCR grid
RE DISCCART 475961.2 3649607.1 15.35 69.6
** RCPDESCR grid
RE DISCCART 476086.0 3649607.1 27.55 69.59
** RCPDESCR grid
RE DISCCART 476210.8 3649607.1 33.32 78.84
** RCPDESCR grid
RE DISCCART 476335.6 3649607.1 48.73 68.58
** RCPDESCR grid
RE DISCCART 476460.4 3649607.1 57.23 57.23
** RCPDESCR grid
RE DISCCART 476585.2 3649607.1 60.99 79.97
** RCPDESCR grid
RE DISCCART 476710.0 3649607.1 70.56 74.68
** RCPDESCR grid
RE DISCCART 475586.8 3649477.5 15.3 61.82
** RCPDESCR grid
RE DISCCART 475711.6 3649477.5 5.7 61.82
** RCPDESCR grid
RE DISCCART 475836.4 3649477.5 3.26 68.58
** RCPDESCR grid
RE DISCCART 475961.2 3649477.5 13.25 68.78
** RCPDESCR grid
RE DISCCART 476086.0 3649477.5 38.71 50.81
** RCPDESCR grid
RE DISCCART 476210.8 3649477.5 30.59 68.92
** RCPDESCR grid
RE DISCCART 476335.6 3649477.5 38.11 69.41
** RCPDESCR grid
RE DISCCART 476460.4 3649477.5 42.82 79.97
** RCPDESCR grid
RE DISCCART 476585.2 3649477.5 54.09 73.44
** RCPDESCR grid
RE DISCCART 476710.0 3649477.5 57.98 73.51
** RCPDESCR grid
RE DISCCART 475586.8 3649347.9 20 56.1
** RCPDESCR grid
RE DISCCART 475711.6 3649347.9 5.59 56.1
** RCPDESCR grid
RE DISCCART 475836.4 3649347.9 3.43 67.18
** RCPDESCR grid
RE DISCCART 475961.2 3649347.9 7.01 68.58
** RCPDESCR grid
RE DISCCART 476086.0 3649347.9 41.59 50.81
** RCPDESCR grid
RE DISCCART 476210.8 3649347.9 26.09 50.81
** RCPDESCR grid
RE DISCCART 476335.6 3649347.9 32.24 68.54
** RCPDESCR grid
RE DISCCART 476460.4 3649347.9 31.24 79.97
** RCPDESCR grid
RE DISCCART 476585.2 3649347.9 40.77 74.68
** RCPDESCR grid
RE DISCCART 476710.0 3649347.9 41.48 74.74
** RCPDESCR grid
RE DISCCART 476219.2 3650127.5 41.48 99.69
** SENSITIV
** RCPDESCR NorthResident
RE DISCCART 476300.2 3650109.8 45.5 99.69

```

Attach C Aermod mitigated output

```

** SENSITIV
** RCPDESCR EastResident1
RE DISCCART 476232.1 3650058.5 41.88 99.69
** SENSITIV
** RCPDESCR EastResident2
RE DISCCART 476231.2 3649999.1 42.17 98.92
** SENSITIV
** RCPDESCR EastResident3
RE DISCCART 476059.1 3650039.8 28.19 98.34
** SENSITIV
** RCPDESCR WestResident
RE DISCCART 476215 3649883.9 48.04 68.58
** SENSITIV
** RCPDESCR SouthResident
RE FINISHED

```

```

ME STARTING
ME SURFFILE
"C:\Users\ryan_000\OneDrive\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\KMA2012V15181.SFC"
** SURFFILE
"C:\Users\ryan_000\OneDrive\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\KMA2012V15181.SFC"
ME PROFFILE
"C:\Users\ryan_000\OneDrive\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\KMA2012V15181.PFL"
** PROFFILE
"C:\Users\ryan_000\OneDrive\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\KMA2012V15181.PFL"
ME SURFDATA 93107 2012 KERNEYMESA
ME UAIRDATA 3190 2012 KERNEYMESA
ME SITEDATA 00001016 2012 KERNEYMESA
ME PROFBASE 20 METERS
ME STARTEND 2012 1 1 1 2012 12 31 24
ME FINISHED

```

```

OU STARTING
OU FILEFORM FIX
OU PLOTFILE ANNUAL ALL ALL`ANNUAL.plt 10000
OU FINISHED

```

```

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

```

```

** TERRFILE
C:\USERS\RYAN_000\ONEDRIVE\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\NEDU99~1\NEDU99048667.TIF 2 0
WGS84 11 0 474902.5 3648489.0 474910.4 3651566.5 477685.7 3651559.8 477678.7 3648482.3
** AMPTYPE NED
** AMPDATUM 2
** AMPZONE 11
** AMPHEMISPHERE N

** PROJECTION UTM
** DATUM WGE
** UNITS METER
** ZONE 11
** HEMISPHERE N
** ORIGINLON 0
** ORIGINLAT 0
** PARALLEL1 0
** PARALLEL2 0

```

Attach C Aermod mitigated output

** AZIMUTH 0
** SCALEFACT 0
** FALSEEAST 0
** FALSENORTH 0

** POSTFMT UNFORM
** TEMPLATE UserDefined
** AERMODEXE AERMOD_BREEZE_16216.exe
** AERMAPEXE AERMAP_EPA_11103.EXE

*** SETUP Finishes Successfully ***

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Mitigated
*** 08/03/17
*** AERMET - VERSION 15181 *** ***
*** 20:51:01

PAGE 1

*** MODELOPTs: RegDEFAULT CONC ELEV RURAL

*** MODEL SETUP OPTIONS SUMMARY ***

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

-- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

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

**Other Options Specified:
TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM10

**Model Calculates ANNUAL Averages Only

**This Run Includes: 1 Source(s); 1 Source Group(s); and 106 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 1 AREA type source(s)

Attach C Aermod mitigated output
and: 0 LINE source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

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

**The AERMET Input Meteorological Data Version Date: 15181

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

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

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 20.00 ; Decay Coef. = 0.000 ;
Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit
Factor = 0.10000E+07
Output Units = MICROGRAMS/M**3

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

**Input Runstream File: AERMOD.INP

**Output Print File: AERMOD.OUT

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Mitigated
*** 08/03/17
*** AERMET - VERSION 15181 *** ***
*** 20:51:01

PAGE 2

*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** AREAPOLY SOURCE DATA ***

EMISSION RATE	NUMBER	EMISSION RATE	LOCATION OF AREA		BASE	RELEASE	NUMBER	INIT.	URBAN
SOURCE	PART.	(GRAMS/SEC	X	Y	ELEV.	HEIGHT	OF VERTS.	SZ	SOURCE
SCALAR VARY									
ID	CATS.	/METER**2)	(METERS)	(METERS)	(METERS)	(METERS)		(METERS)	
BY									
6Y1FY002	0	0.59800E-08	476169.4	3650116.0	40.2	4.15	9	1.93	NO

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Mitigated
*** 08/03/17
*** AERMET - VERSION 15181 *** ***
*** 20:51:01

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

Attach C Aermod mitigated output

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID

SOURCE IDs

ALL 6Y1FY002 ,
 *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Mitigated
 *** 08/03/17
 *** AERMET - VERSION 15181 *** ***
 *** 20:51:01

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** DISCRETE CARTESIAN RECEPTORS ***
 (X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
 (METERS)

(475586.8, 3650514.3,	20.1,	90.7,	0.0);	(475711.6, 3650514.3,
27.5, 89.7, 0.0);				
(475836.4, 3650514.3,	39.5,	89.7,	0.0);	(475961.2, 3650514.3,
52.5, 89.7, 0.0);				
(476086.0, 3650514.3,	42.0,	96.5,	0.0);	(476210.8, 3650514.3,
68.7, 89.8, 0.0);				
(476335.6, 3650514.3,	89.5,	89.5,	0.0);	(476460.4, 3650514.3,
86.5, 86.8, 0.0);				
(476585.2, 3650514.3,	66.9,	99.7,	0.0);	(476710.0, 3650514.3,
60.6, 99.7, 0.0);				
(475586.8, 3650384.7,	18.1,	89.8,	0.0);	(475711.6, 3650384.7,
26.7, 52.2, 0.0);				
(475836.4, 3650384.7,	38.8,	52.0,	0.0);	(475961.2, 3650384.7,
43.5, 89.8, 0.0);				
(476086.0, 3650384.7,	41.9,	96.6,	0.0);	(476210.8, 3650384.7,
56.6, 96.4, 0.0);				
(476335.6, 3650384.7,	64.1,	98.3,	0.0);	(476460.4, 3650384.7,
66.5, 99.3, 0.0);				
(476585.2, 3650384.7,	89.7,	98.3,	0.0);	(476710.0, 3650384.7,
94.0, 98.3, 0.0);				
(475586.8, 3650255.1,	18.6,	60.4,	0.0);	(475711.6, 3650255.1,
20.5, 89.8, 0.0);				
(475836.4, 3650255.1,	25.6,	89.8,	0.0);	(475961.2, 3650255.1,
33.2, 89.8, 0.0);				
(476086.0, 3650255.1,	38.8,	98.3,	0.0);	(476210.8, 3650255.1,
47.6, 98.3, 0.0);				
(476335.6, 3650255.1,	48.7,	99.7,	0.0);	(476460.4, 3650255.1,
60.0, 99.7, 0.0);				
(476585.2, 3650255.1,	71.4,	99.7,	0.0);	(476710.0, 3650255.1,
88.0, 99.7, 0.0);				
(475586.8, 3650125.5,	21.2,	60.4,	0.0);	(475711.6, 3650125.5,
12.7, 89.8, 0.0);				
(475836.4, 3650125.5,	16.4,	89.8,	0.0);	(475961.2, 3650125.5,
22.8, 98.3, 0.0);				
(476086.0, 3650125.5,	35.8,	98.2,	0.0);	(476210.8, 3650125.5,
41.2, 99.7, 0.0);				
(476335.6, 3650125.5,	48.4,	99.7,	0.0);	(476460.4, 3650125.5,
60.2, 99.7, 0.0);				

Attach C Aermod mitigated output

(476585.2, 3650125.5,	68.3,	99.7,	0.0);	(476710.0, 3650125.5,
82.5, 99.7, 0.0);				
(475586.8, 3649995.9,	28.7,	60.7,	0.0);	(475711.6, 3649995.9,
14.7, 61.8, 0.0);				
(475836.4, 3649995.9,	11.9,	89.8,	0.0);	(475961.2, 3649995.9,
17.9, 98.3, 0.0);				
(476086.0, 3649995.9,	30.1,	96.1,	0.0);	(476210.8, 3649995.9,
41.6, 68.6, 0.0);				
(476335.6, 3649995.9,	48.5,	99.7,	0.0);	(476460.4, 3649995.9,
59.9, 99.7, 0.0);				
(476585.2, 3649995.9,	74.0,	76.4,	0.0);	(476710.0, 3649995.9,
85.4, 85.4, 0.0);				
(475586.8, 3649866.3,	38.4,	59.0,	0.0);	(475711.6, 3649866.3,
14.4, 61.8, 0.0);				
(475836.4, 3649866.3,	11.6,	68.6,	0.0);	(475961.2, 3649866.3,
19.5, 69.6, 0.0);				
(476086.0, 3649866.3,	34.8,	68.8,	0.0);	(476210.8, 3649866.3,
49.3, 68.6, 0.0);				
(476335.6, 3649866.3,	59.1,	68.6,	0.0);	(476460.4, 3649866.3,
67.6, 67.6, 0.0);				
(476585.2, 3649866.3,	75.8,	75.8,	0.0);	(476710.0, 3649866.3,
73.6, 86.5, 0.0);				
(475586.8, 3649736.7,	30.4,	61.8,	0.0);	(475711.6, 3649736.7,
12.4, 61.8, 0.0);				
(475836.4, 3649736.7,	7.4,	69.6,	0.0);	(475961.2, 3649736.7,
18.3, 69.6, 0.0);				
(476086.0, 3649736.7,	33.8,	68.9,	0.0);	(476210.8, 3649736.7,
42.2, 70.1, 0.0);				
(476335.6, 3649736.7,	66.5,	67.2,	0.0);	(476460.4, 3649736.7,
65.5, 65.5, 0.0);				
(476585.2, 3649736.7,	73.4,	73.9,	0.0);	(476710.0, 3649736.7,
77.5, 77.5, 0.0);				
(475586.8, 3649607.1,	36.0,	38.7,	0.0);	(475711.6, 3649607.1,
12.7, 61.8, 0.0);				
(475836.4, 3649607.1,	5.0,	68.9,	0.0);	(475961.2, 3649607.1,
15.4, 69.6, 0.0);				
(476086.0, 3649607.1,	27.6,	69.6,	0.0);	(476210.8, 3649607.1,
33.3, 78.8, 0.0);				
(476335.6, 3649607.1,	48.7,	68.6,	0.0);	(476460.4, 3649607.1,
57.2, 57.2, 0.0);				
(476585.2, 3649607.1,	61.0,	80.0,	0.0);	(476710.0, 3649607.1,
70.6, 74.7, 0.0);				
(475586.8, 3649477.5,	15.3,	61.8,	0.0);	(475711.6, 3649477.5,
5.7, 61.8, 0.0);				
(475836.4, 3649477.5,	3.3,	68.6,	0.0);	(475961.2, 3649477.5,
13.2, 68.8, 0.0);				
(476086.0, 3649477.5,	38.7,	50.8,	0.0);	(476210.8, 3649477.5,
30.6, 68.9, 0.0);				
(476335.6, 3649477.5,	38.1,	69.4,	0.0);	(476460.4, 3649477.5,
42.8, 80.0, 0.0);				
(476585.2, 3649477.5,	54.1,	73.4,	0.0);	(476710.0, 3649477.5,
58.0, 73.5, 0.0);				

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Mitigated
 *** 08/03/17
 *** AERMET - VERSION 15181 *** ***
 *** 20:51:01

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

Attach C Aermod mitigated output

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*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
      (METERS)

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5.6,	(475586.8, 3649347.9, 56.1, 0.0);	20.0,	56.1,	0.0);	(475711.6, 3649347.9,
7.0,	(475836.4, 3649347.9, 68.6, 0.0);	3.4,	67.2,	0.0);	(475961.2, 3649347.9,
26.1,	(476086.0, 3649347.9, 50.8, 0.0);	41.6,	50.8,	0.0);	(476210.8, 3649347.9,
31.2,	(476335.6, 3649347.9, 80.0, 0.0);	32.2,	68.5,	0.0);	(476460.4, 3649347.9,
41.5,	(476585.2, 3649347.9, 74.7, 0.0);	40.8,	74.7,	0.0);	(476710.0, 3649347.9,

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^ *** AERMOD - VERSION 16216r ***      *** PM10 Exhaust SB Construction Mitigated
    ***      08/03/17
*** AERMET - VERSION 15181 ***      ***
    ***      20:51:01

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*** MODELOPTs:      RegDFault  CONC  ELEV  RURAL
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*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

[illegible]

METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2012 1 1 1
AND END DATE: 2012 12 31 24

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

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

```

1.54, 3.09, 5.14, 8.23, 10.80,
*** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Mitigated
*** 08/03/17
*** AERMET - VERSION 15181 *** ***
*** 20:51:01

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Attach C Aermod mitigated output

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

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

Surface file: C:\Users\ryan_000\OneDrive\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\
Met Version: 15181
Profile file: C:\Users\ryan_000\OneDrive\LDNWOR~1\GENEVI~1\4-12-16\AQMODE~1\BREEZE~1\KMA_20~1\
Surface format: FREE

Profile format: FREE

Surface station no.: 93107
Name: KERNEYMESA

Upper air station no.: 3190
Name: KERNEYMESA

Year: 2012

Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD
HT	REF	TA		HT														
12	01	01	1	01	-0.5	0.025	-9.000	-9.000	-999.	9.	2.6	0.26	1.32	1.00	0.45	125.		
10.0	283.8			10.0														
12	01	01	1	02	-2.3	0.053	-9.000	-9.000	-999.	29.	5.8	0.34	1.32	1.00	0.89	334.		
10.0	283.8			10.0														
12	01	01	1	03	-0.6	0.027	-9.000	-9.000	-999.	11.	3.0	0.38	1.32	1.00	0.45	5.		
10.0	285.9			10.0														
12	01	01	1	04	-0.5	0.025	-9.000	-9.000	-999.	9.	2.6	0.26	1.32	1.00	0.45	77.		
10.0	284.9			10.0														
12	01	01	1	05	-0.6	0.027	-9.000	-9.000	-999.	10.	2.9	0.34	1.32	1.00	0.45	336.		
10.0	285.4			10.0														
12	01	01	1	06	-0.5	0.025	-9.000	-9.000	-999.	10.	2.7	0.29	1.32	1.00	0.45	233.		
10.0	284.2			10.0														
12	01	01	1	07	-0.5	0.025	-9.000	-9.000	-999.	10.	2.7	0.29	1.32	1.00	0.45	175.		
10.0	283.1			10.0														
12	01	01	1	08	27.3	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.31	1.32	0.49	0.00	0.		
10.0	283.1			10.0														
12	01	01	1	09	55.2	0.108	0.487	0.014	75.	85.	-2.0	0.37	1.32	0.29	0.45	329.		
10.0	286.4			10.0														
12	01	01	1	10	123.3	0.120	0.896	0.007	208.	100.	-1.3	0.37	1.32	0.22	0.45	321.		
10.0	291.4			10.0														
12	01	01	1	11	169.2	0.295	1.303	0.005	468.	384.	-13.6	0.37	1.32	0.20	1.79	320.		
10.0	295.4			10.0														
12	01	01	1	12	191.0	0.299	1.625	0.005	805.	392.	-12.5	0.37	1.32	0.19	1.79	310.		
10.0	297.0			10.0														
12	01	01	1	13	186.3	0.298	1.865	0.005	1245.	391.	-12.7	0.37	1.32	0.19	1.79	307.		
10.0	298.8			10.0														
12	01	01	1	14	160.2	0.293	1.884	0.005	1493.	381.	-14.1	0.37	1.32	0.20	1.79	305.		
10.0	299.9			10.0														
12	01	01	1	15	107.4	0.331	1.688	0.005	1601.	456.	-30.0	0.37	1.32	0.23	2.24	305.		
10.0	299.2			10.0														
12	01	01	1	16	36.1	0.304	1.180	0.005	1627.	403.	-69.5	0.37	1.32	0.32	2.24	300.		
10.0	296.4			10.0														
12	01	01	1	17	-4.7	0.079	-9.000	-9.000	-999.	139.	9.2	0.33	1.32	0.60	1.34	299.		
10.0	294.2			10.0														
12	01	01	1	18	-2.2	0.052	-9.000	-9.000	-999.	36.	5.8	0.33	1.32	1.00	0.89	279.		
10.0	292.0			10.0														
12	01	01	1	19	-0.5	0.025	-9.000	-9.000	-999.	10.	2.6	0.26	1.32	1.00	0.45	63.		

Attach C Aermod mitigated output

10.0	289.9	10.0														
12	01	01	1	20	-0.6	0.027	-9.000	-9.000	-999.	11.	3.1	0.38	1.32	1.00	0.45	19.
10.0	288.1	10.0														
12	01	01	1	21	-2.2	0.052	-9.000	-9.000	-999.	29.	5.7	0.33	1.32	1.00	0.89	290.
10.0	287.0	10.0														
12	01	01	1	22	-2.4	0.054	-9.000	-9.000	-999.	30.	6.0	0.37	1.32	1.00	0.89	329.
10.0	285.4	10.0														
12	01	01	1	23	-2.3	0.053	-9.000	-9.000	-999.	29.	5.8	0.34	1.32	1.00	0.89	330.
10.0	284.9	10.0														
12	01	01	1	24	-0.6	0.026	-9.000	-9.000	-999.	10.	2.9	0.33	1.32	1.00	0.45	291.
10.0	284.9	10.0														

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	10.0	1	125.	0.45	283.8	48.0	-99.00	0.27

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

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Mitigated
 *** 08/03/17
 *** AERMET - VERSION 15181 *** ***
 *** 20:51:01

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE
 GROUP: ALL ***
 INCLUDING SOURCE(S): 6Y1FY002 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

**

CONC	X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)
0.00059	475586.80	3650514.30	0.00049	475711.60	3650514.30
0.00036	475836.40	3650514.30	0.00081	475961.20	3650514.30
0.00008	476086.00	3650514.30	0.00072	476210.80	3650514.30
0.00004	476335.60	3650514.30	0.00004	476460.40	3650514.30
0.00007	476585.20	3650514.30	0.00006	476710.00	3650514.30
0.00073	475586.80	3650384.70	0.00057	475711.60	3650384.70
0.00132	475836.40	3650384.70	0.00112	475961.20	3650384.70
0.00023	476086.00	3650384.70	0.00128	476210.80	3650384.70
0.00009	476335.60	3650384.70	0.00012	476460.40	3650384.70
0.00004	476585.20	3650384.70	0.00005	476710.00	3650384.70

Attach C Aermod mitigated output					
0.00088	475586.80	3650255.10	0.00068	475711.60	3650255.10
0.00178	475836.40	3650255.10	0.00121	475961.20	3650255.10
0.00128	476086.00	3650255.10	0.00257	476210.80	3650255.10
0.00021	476335.60	3650255.10	0.00070	476460.40	3650255.10
0.00005	476585.20	3650255.10	0.00010	476710.00	3650255.10
0.00113	475586.80	3650125.50	0.00084	475711.60	3650125.50
0.00269	475836.40	3650125.50	0.00164	475961.20	3650125.50
0.01137	476086.00	3650125.50	0.00536	476210.80	3650125.50
0.00038	476335.60	3650125.50	0.00226	476460.40	3650125.50
0.00007	476585.20	3650125.50	0.00017	476710.00	3650125.50
0.00147	475586.80	3649995.90	0.00109	475711.60	3649995.90
0.00411	475836.40	3649995.90	0.00229	475961.20	3649995.90
0.03074	476086.00	3649995.90	0.00916	476210.80	3649995.90
0.00073	476335.60	3649995.90	0.00494	476460.40	3649995.90
0.00010	476585.20	3649995.90	0.00022	476710.00	3649995.90
0.00167	475586.80	3649866.30	0.00150	475711.60	3649866.30
0.00369	475836.40	3649866.30	0.00240	475961.20	3649866.30
0.00344	476086.00	3649866.30	0.00613	476210.80	3649866.30
0.00054	476335.60	3649866.30	0.00097	476460.40	3649866.30
0.00018	476585.20	3649866.30	0.00027	476710.00	3649866.30
0.00143	475586.80	3649736.70	0.00124	475711.60	3649736.70
0.00246	475836.40	3649736.70	0.00185	475961.20	3649736.70
0.00361	476086.00	3649736.70	0.00290	476210.80	3649736.70
0.00037	476335.60	3649736.70	0.00031	476460.40	3649736.70
0.00017	476585.20	3649736.70	0.00023	476710.00	3649736.70
0.00113	475586.80	3649607.10	0.00110	475711.60	3649607.10
0.00159	475836.40	3649607.10	0.00142	475961.20	3649607.10
0.00172	476086.00	3649607.10	0.00157	476210.80	3649607.10
0.00047	476335.60	3649607.10	0.00125	476460.40	3649607.10
	476585.20	3649607.10	0.00029	476710.00	3649607.10

Attach C Aermod mitigated output

0.00015

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Mitigated
 *** 08/03/17
 *** AERMET - VERSION 15181 *** ***
 *** 20:51:01

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE
 GROUP: ALL ***
 INCLUDING SOURCE(S): 6Y1FY002 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

**

	X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)
CONC					
- - - - -					
- - - - -					
0.00094	475586.80	3649477.50	0.00078	475711.60	3649477.50
0.00105	475836.40	3649477.50	0.00106	475961.20	3649477.50
0.00113	476086.00	3649477.50	0.00128	476210.80	3649477.50
0.00115	476335.60	3649477.50	0.00123	476460.40	3649477.50
0.00030	476585.20	3649477.50	0.00047	476710.00	3649477.50
0.00076	475586.80	3649347.90	0.00069	475711.60	3649347.90
0.00074	475836.40	3649347.90	0.00078	475961.20	3649347.90
0.00080	476086.00	3649347.90	0.00096	476210.80	3649347.90
0.00075	476335.60	3649347.90	0.00081	476460.40	3649347.90
0.00069	476585.20	3649347.90	0.00078	476710.00	3649347.90

▲ *** AERMOD - VERSION 16216r *** *** PM10 Exhaust SB Construction Mitigated
 *** 08/03/17
 *** AERMET - VERSION 15181 *** ***
 *** 20:51:01

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE
 GROUP: ALL ***
 INCLUDING SOURCE(S): 6Y1FY002 ,

*** SENSITIVE DISCRETE RECEPTOR POINTS ***

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

**

Attach C Aermod mitigated output					
CONC	X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)
0.00678	476219.20	3650127.50	0.01068	476300.20	3650109.80
0.02451	476232.10	3650058.50	0.02662	476231.20	3649999.10
0.00569	476059.10	3650039.80	0.00705	476215.00	3649883.90

*** AERMOD - VERSION 16216r ***
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

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

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

GROUP	NETWORK ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF
TYPE	GRID-ID			
ALL	1ST HIGHEST VALUE IS	0.03074 AT (	476210.80, 3649995.90, 41.63, 68.58,	
0.00)	DC			
	2ND HIGHEST VALUE IS	0.02662 AT (	476232.10, 3650058.50, 41.88, 99.69,	
0.00)	SR			
	3RD HIGHEST VALUE IS	0.02451 AT (	476231.20, 3649999.10, 42.17, 98.92,	
0.00)	SR			
	4TH HIGHEST VALUE IS	0.01137 AT (	476210.80, 3650125.50, 41.24, 99.69,	
0.00)	DC			
	5TH HIGHEST VALUE IS	0.01068 AT (	476219.20, 3650127.50, 41.48, 99.69,	
0.00)	SR			
	6TH HIGHEST VALUE IS	0.00916 AT (	476086.00, 3649995.90, 30.07, 96.15,	
0.00)	DC			
	7TH HIGHEST VALUE IS	0.00705 AT (	476059.10, 3650039.80, 28.19, 98.34,	
0.00)	SR			
	8TH HIGHEST VALUE IS	0.00678 AT (	476300.20, 3650109.80, 45.50, 99.69,	
0.00)	SR			
	9TH HIGHEST VALUE IS	0.00613 AT (	476086.00, 3649866.30, 34.77, 68.78,	
0.00)	DC			
	10TH HIGHEST VALUE IS	0.00569 AT (	476215.00, 3649883.90, 48.04, 68.58,	
0.00)	SR			

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

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL

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

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

A Total of 0 Fatal Error Message(s)
A Total of 0 Warning Message(s)
A Total of 178 Informational Message(s)

A Total of 8784 Hours Were Processed

A Total of 101 Calm Hours Identified

A Total of 77 Missing Hours Identified (0.88 Percent)

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

***** WARNING MESSAGES *****
*** NONE ***

*** AERMOD Finishes Successfully ***

ATTACHMENT D

Cancer Risk Calculations (Unmitigated/Mitigated)

**Air Quality Health Risk Calculations
Genevieve Senior Housing (Unmitigated)**

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.1421
	Number of Workdays	260
	Emission per day (lb/day)	1.093076923
	Construction day (Hours)	8
	Emission Rate (Grams/Second)	0.017193189
	Project Site Size (Acres)	2.9
	Project Site Size (meters)	11735.88362
	Length of Smalles Side (meters)	108.3322834
Used as an input to AERMOD	Emission Rate over Grading Area	1.46501E-06

Concentration Annual **5.82**

Based on Risk Assessment Guidelines - Guidance
Manual for Preparation of Health Risk
Assessments - February 2015

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

5.4 Estimation of Dose

	Construction Days	Construction Days converted to years				
Duration	260	0.712328767				
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	5.82	5.82	5.82	5.82	5.82	5.82
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	0.00201698	0.00609005	0.00481058	0.00416246	0.00187171	0.00162029
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	3	3	1	1
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	6.73527E-05	0.000579448	0.000116312	0.000100642	1.52946E-05	1.32401E-05
	67.35269829	579.4484027	116.3124621	100.6420259	15.29456091	13.24006766
Cancer Risk Per Million 9-years	763.11					
Cancer Risk Per Million 30-years	762.74					
Cancer Risk Per Million 70-years	760.68					

Air Quality Health Risk Calculations
Genevieve Senior Housing (Mitigated Tier IV)

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.00058
	Number of Workdays	260
	Emission per day (lb/day)	0.004461538
	Construction day (Hours)	8
	Emission Rate (Grams/Second)	7.01763E-05
	Project Site Size (Acres)	2.9
	Project Site Size (meters)	11735.88362
	Length of Smalles Side (meters)	108.3322834
Used as an input to AERMOD	Emission Rate over Grading Area	5.97963E-09

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Based on Risk Assessment Guidelines - Guidance
Manual for Preparation of Health Risk
Assessments - February 2015

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

5.4 Estimation of Dose

	Construction Days	Construction Days converted to years				
Duration	260	0.712328767				
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual) - From F15	0.0237	0.0237	0.0237	0.0237	0.0237	0.0237
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	0.00000821	0.00002480	0.00001959	0.00001695	0.00000762	0.00000660

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	3	3	1	1
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	2.74271E-07	2.35961E-06	4.73644E-07	4.09831E-07	6.2282E-08	5.39157E-08
	0.274271297	2.359609475	0.473643531	0.40983093	0.062281975	0.053915739
Cancer Risk Per Million 9-years	3.11					
Cancer Risk Per Million 30-years	3.11					
Cancer Risk Per Million 70-years	3.10					