AIR QUALITY ASSESSMENT

AES BATTERY ENERGY STORAGE SYSTEM PROJECT
MPA-18-010; SAN DIEGO COUNTY, CA

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EXECUTIVE SUMMARY

This air quality analysis has been completed to determine air quality impacts, which may be associated with the construction of the proposed approximate 40-Megawatt (MW) battery energy storage project. The project site is generally located within the northwestern area of the County of San Diego. The proposed project would consist of battery energy storage system (BESS) facilities on multiple parcels of land held in common ownership.

All construction phases of the proposed project are anticipated to start in 2019 and be completed in 2021. The project was found to have significant health risk impacts from diesel exhaust during construction without the use of at least Tier 3 or better diesel equipment fitted with diesel particulate filters (DPF). Using the proposed Tier 3 equipment would generate less than significant impacts.

Based upon the analysis of construction activities, no criteria pollutant impacts would be expected. No further mitigation requirements will be necessary beyond Tiering requirements discussed above.

The project would likely generate short-term odors from temporary construction equipment such as paving equipment. Since odors from this equipment would be short-term, no significant odor impacts would be expected. Also, the project would not produce long-term odors and would therefore produce less than significant odor impacts.

The project site is consistent with the General Plan Category and zoning for the site. Based on this, the proposed project was accounted for in the County's General plan. Therefore, no cumulative operation impacts would be anticipated since the proposed use would be consistent with the Regional Air Quality Strategy (RAQS) and State Implementation Plan (SIP).

1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this Air Quality study is to determine potential air quality impacts (if any) that may be created during the construction or operation of the proposed Battery Energy Storage System (BESS) Project, which would be constructed in the town of Fallbrook in northern San Diego County. Should impacts be determined, the intent of this study would be to recommend mitigation measures, which would reduce those impacts. Daily operations of the project will be primarily from maintenance and worker trips, although some emissions are expected, they would be minimal and below the screening level thresholds within the San Diego County Guidelines for Determining Significance for Air Quality (County of San Diego, 2007).

1.2 Project Location

The project site is located within the northwestern portion of the unincorporated community of Fallbrook, in northwestern San Diego County (County), approximately 19 miles inland from the Pacific Ocean, 6 miles northeast of Camp Pendleton, 3 miles south of Riverside County, and 3 miles west of Interstate 15. A general project vicinity map is shown in Figure 1-A.

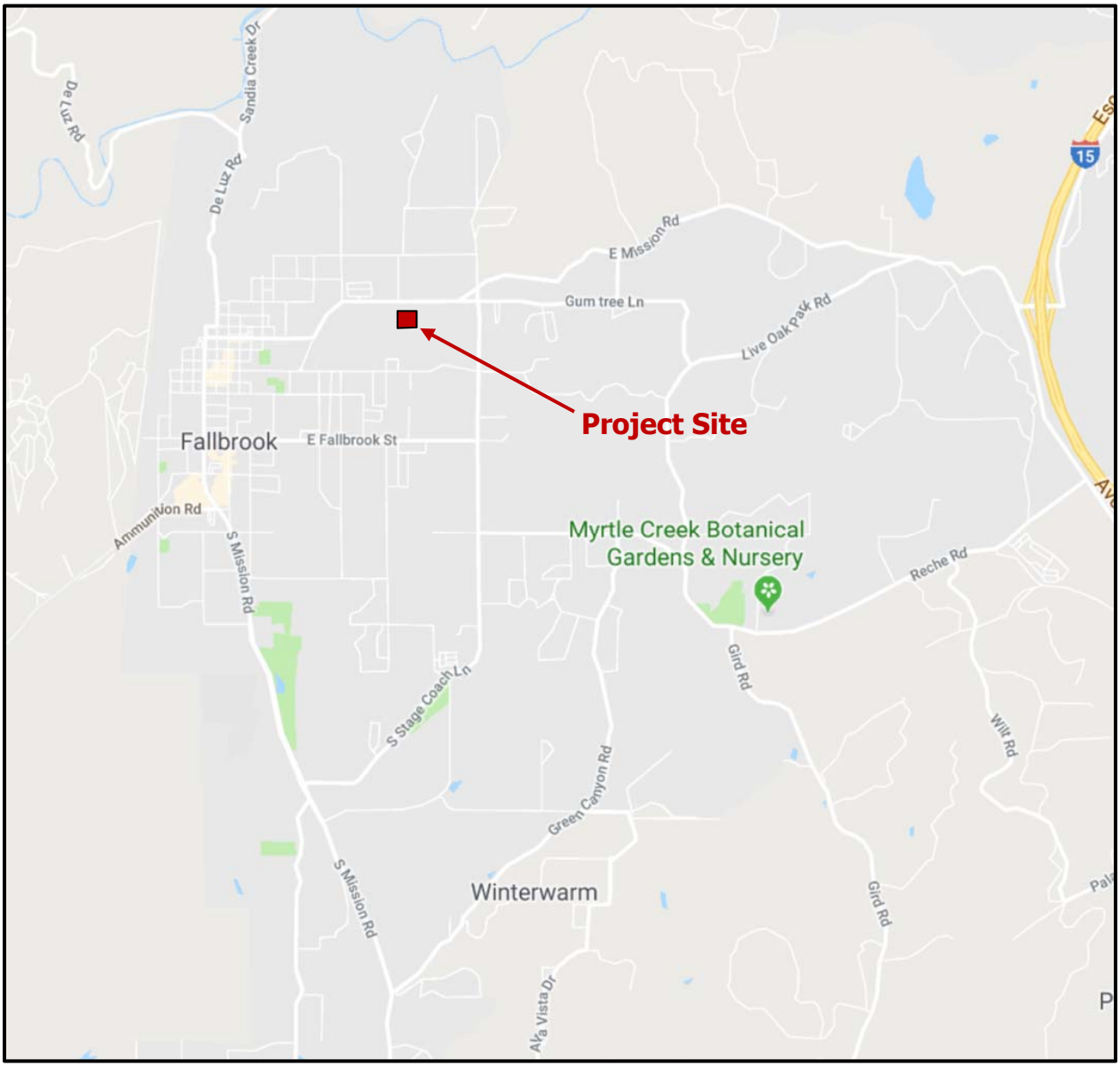
1.3 Project Description

The project proposes to construct 40 megawatts (MW) of battery energy storage on parcels designated for M52 Limited Impact Industrial uses in Fallbrook as well as a 24-foot wide project access road via East Mission Road to the north side of the site. Offsite improvements to connect the BEES into the 69-kV Avocado substation 450 feet to the west will also be required. Construction of the project is anticipated to begin in late 2019 and be completed early 2021.

The utility connection from the project to the substation would exit the site on the south and continue to the southern border of parcel 105-410-19 before turning west and then run along the northern portion of parcel 105-410-44 and ultimately connect to the Avocado substation. The proposed BESS system would consist of up to 16 battery storage systems of which each system is 756 Square Feet (SF) in size and would include necessary voltage converters. Figure 1-B on Page 3 of this report shows the Conceptual Plan of the project.

The proposed project would be operated by San Diego Gas and Electric (SDG&E) remotely, however would require periodic site visits for maintenance activities along with basic landscaping and weed control. Onsite site visits would be expected a four-person crew accessing the site twice monthly.

Figure 1-A: Project Vicinity Map



Source: (Google, 2018)

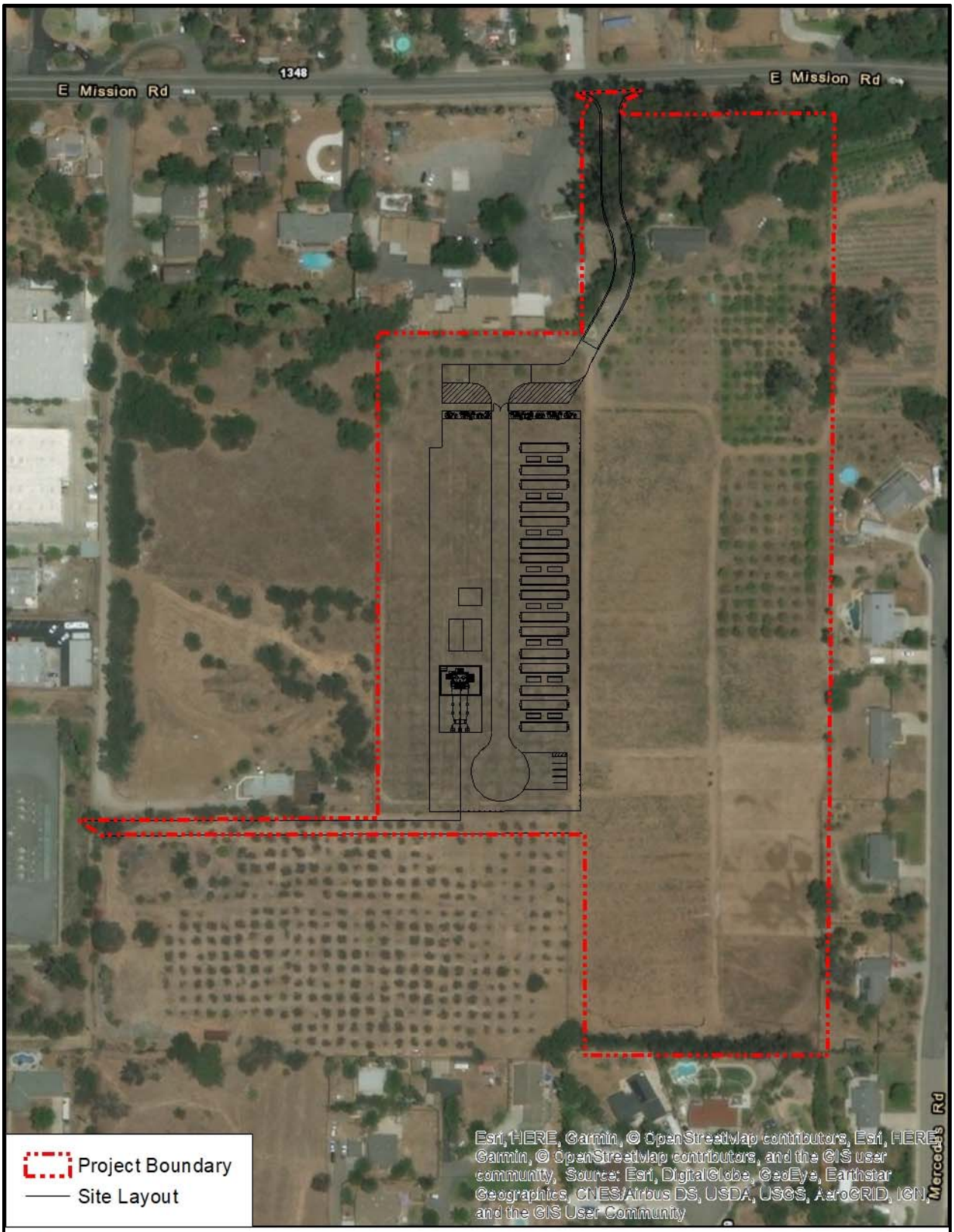


Figure 1-B: Overall Project Layout

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The subject property is generally level and has been disturbed for mostly agricultural uses and storage of construction equipment and various rural residential uses. Currently the site is generally devoid of significant vegetation. The site is generally flat, and onsite elevations are at or around 800 feet above mean sea level (AMSL). The project site is mostly surrounded by agricultural uses though a sensitive residential receptor shares the eastern property line with the project site.

2.2 Climate and Meteorology

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

Meteorological trends within the Valley Center area are generally similar to that of Escondido daytime highs ranging between 65ºF in the winter to approximately 88ºF in the summer with August usually being the hottest month. Median temperatures range from approximately 57ºF in the winter to approximately 78ºF in the summer. Precipitation is generally about 16.2 inches per year (WRCC, 2018). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant pattern though throughout the year is usually from the west or westerly (WRCC, 2018).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

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

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. ***Primary Standards*** set limits for the intention of protecting public health, which includes sensitive populations such as asthmatics, children and elderly. ***Secondary Standards*** set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

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

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

refining and metal processing. Effects from SO_2 exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO_2 results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.

2.3.2 State Standards and Definitions

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

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

Table 2.1: Ambient Air Quality Standards

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

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent procedure which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3 , as was the annual secondary standard of 15 µg/m3 . The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
12. The CARB 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 CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

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

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. California Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as "non-attainment areas" for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the $PM_{2.5}$ standard and many areas are in non-attainment for PM_{10} as well. 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 County. Therefore, the SDAPCD developed a Regional Air Quality Strategy (RAQS) to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on Volatile Organic Compounds (VOCs) and oxides of nitrogen (NO_X). Currently, San Diego is in "non-attainment" status for federal and state O_3 and State $PM_{10,}$ $PM_{2.5.}$ An attainment plan is available for O_3. The RAQS was adopted in 1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

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

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

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

San Diego County Air Basin Attainment Status by Pollutant			
Pollutant	Average Time	California Standards	Federal Standards
Ozone (O_3)	1 Hour	Non-attainment	No Federal Standard
	8 Hour	Non-attainment	Non-attainment
Respirable Particulate Matter (PM10)	24 Hour	Non-attainment	Unclassified[1]
	Annual Arithmetic Mean	Non-attainment	Unclassified[2]
Fine Particulate Matter PM2.5	24 Hour	No State Standard	Attainment
	Annual Arithmetic Mean	Non-attainment	Attainment
Carbon Monoxide (CO)	8 hour	Attainment	Maintenance Area[3]
	1 hour		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	No State Standard	Attainment
	1 Hour	Attainment	No Federal Standard
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	No State Standard	Attainment
	24 Hour	Attainment	Attainment
	1 Hour	Attainment	No Federal Standard
Lead	30 Day Average	Attainment	No Federal Standard
	Calendar Quarter	No State Standard	Attainment
Visibility Reducing Particles	8 Hour (10AM to 6PM, PST)	Unclassified	No Federal Standard
Sulfates	24 Hour	Attainment	No Federal Standard
Hydrogen Sulfide	1 Hour	Unclassified	No Federal Standard

1. Data reflects status as of December 2017.

2. Unclassified; indicates data are not sufficient for determining attainment or nonattainment.

3. Maintenance Area (defined by U.S. Department of Transportation) is any geographic region of the United States previously designated nonattainment pursuant to the CAA Amendments of 1990 and subsequently redesignated to attainment subject to the requirement to develop a maintenance plan under section 175A of the CAA, as amended.

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

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

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

A: Conflict with or obstruct implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?

B: Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?

C: Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard (PM10, PM2.5 or exceed quantitative thresholds for O3 precursors, NOX and VOCs)?

D: Expose sensitive receptors (including, but not limited to, schools, hospitals, residences, resident care facilities, or day-care centers) to substantial pollutant concentrations?

E: Create objectionable odors affecting a substantial number of people?

2.5 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

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

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

The U.S. EPA uses the term VOC and the CARB's Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term however for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because Air Quality models directly calculates ROG in place of VOC.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

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

2.6 Local Air Quality

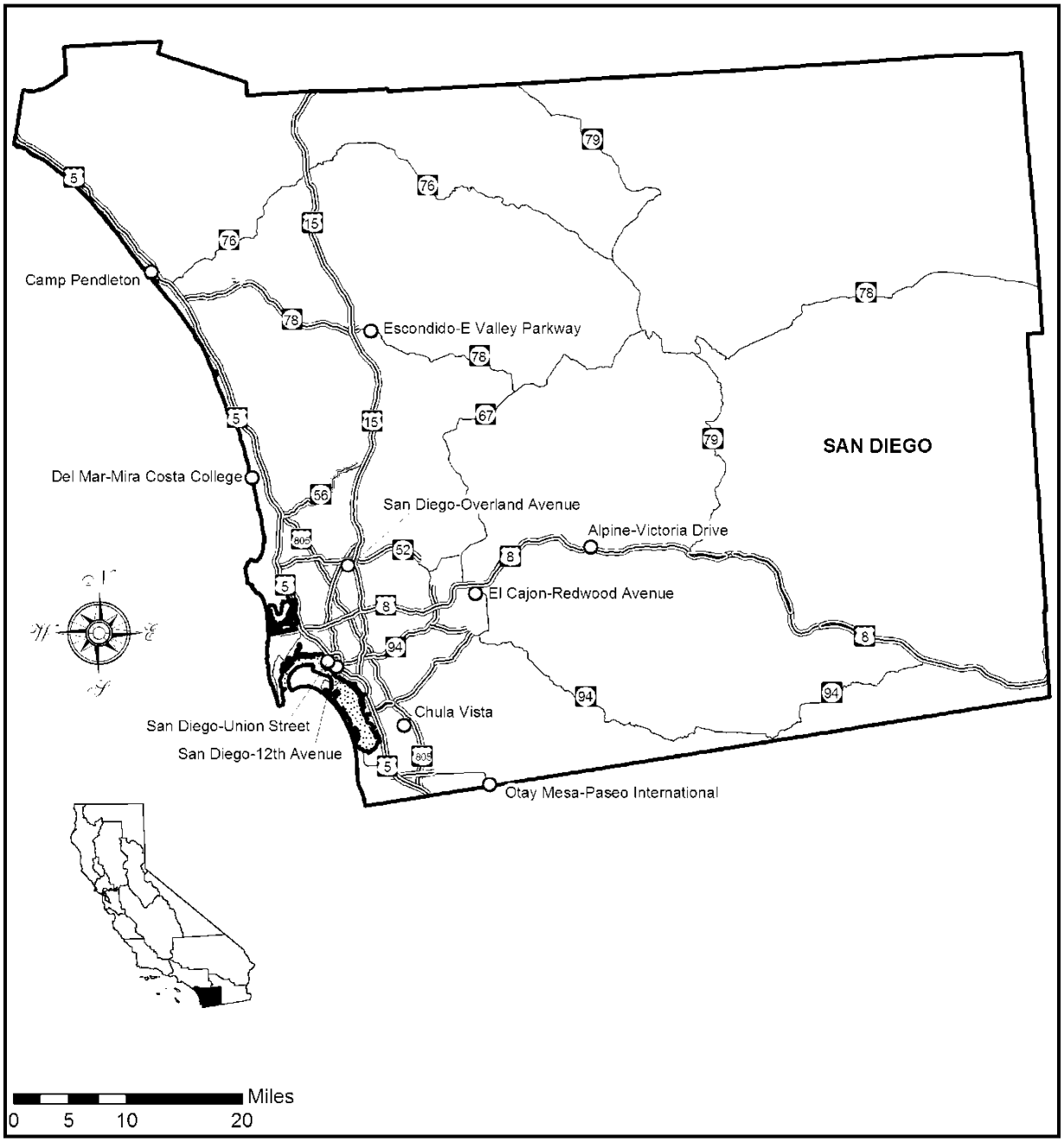
Criteria pollutants are measured continuously throughout the SDAB. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data. The District operates 11 monitoring sites, which collect data on criteria pollutants. The proposed development project is closest to the Camp Pendleton and Escondido Monitoring stations which are located approximately 7.17 and 20 miles respectively from the project site. Table 2.4 on the following page identifies the criteria pollutants monitored at the aforementioned station.

Four additional sites collect meteorological data which is used by the District to assist with pollutant forecasting, data analysis and characterization of pollutant transport. Figure 2-A on Page 13 below shows the relative locations of the monitoring sites. SDAPCD published the five year air quality summary for all of the monitoring stations however only data within the last three years is shown as this adequately identifies the background ambient air quality environment (SDAPCD, 2018).

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

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2015	2016	2017
O^3 (ppm)	Camp Pendleton or Escondido Monitoring Station (Escondido Location Identified with *	1 Hour	0.09 ppm	-	0.09	0.08	0.09
		8 Hour	0.070 ppm	0.070 ppm	0.08	0.07	0.08
* PM_{10} (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	30	-	-
		Annual Arithmetic Mean	20 µg/m3	-	19.4	-	-
* $PM_{2.5}$ ($\mu g/m^3$)		24 Hour	-	35 µg/m3	29.4	-	-
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	8.6	-	-
NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.006	0.006	0.006
		1 Hour	0.18 ppm	-	0.060	0.072	0.063
CO (ppm)		1 Hour	20 ppm	35 ppm	3.1	-	-
		8 Hour	9 ppm	9 ppm	2.0	-	-

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



3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod 2016.3.2 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2017. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the project and uses methodologies presented in the U.S. EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in ***Attachment A*** to this report.

The AERMOD dispersion model will be used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model will predict the maximum exposure distance and concentrations. The notable toxic air contaminant from construction is diesel exhaust since exposure to diesel exhaust is known to cause cancer and acute and chronic health effects. Diesel exhaust emissions can be estimated using the annual PM_{10} exhaust emissions from onsite construction operations obtained from the annual CalEEMod model output by summing each onsite source for the construction duration. The AERMOD input/output file for the proposed project is shown in ***Attachments B and -C*** at the end of this report for both unmitigated and mitigated scenarios.

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

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

$Dose_{air}$	=	Dose through inhalation (mg/kg/d)
C_{air}	=	Concentration in air (µg/m3) Annual average DPM concentration in µg/m3 – 1-hr concentration are corrected to an annual average by multiplying the 1-hr average by 0.08 (US EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
1x10-6	=	Milligrams to micrograms conversion (10^{-3} mg/ µg), cubic meters to liters conversion (10^{-3} m^3/l)

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

Equation 2

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

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

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

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

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

3.2 Construction Assumptions

The project construction dates were estimated based on a construction kickoff starting late 2019 with construction ending sometime early 2021. Also, the project is expected to export roughly 1,390 Cubic Yards of soil offsite. The project construction crews would then prepare

and grade the site to allow for the facility development. Once earthwork activities are completed, paving and building construction activities would follow. Also, as noted earlier, the project boundary shares property lines with sensitive receptors to include residential uses.

CalEEMod 2016.3.2 was utilized for all calculations. Table 3.1 shows the expected timeframes for the construction processes for all the project infrastructure, facilities, improvements and structures at the proposed project location, as well as the expected number of pieces of equipment. It should be noted that grading will include 1,460 cubic yards of cut and 70 cubic yards of fill, including an estimated 1,390 cubic yards of export. CalEEMod has been updated to reflect the anticipated construction activities.

Table 3.1: Expected Construction Equipment and Durations

Equipment Identification	Proposed Start	Proposed Completion	Quantity
Site Preparation	10/29/2019	10/31/2019	
Excavators			1
Rubber Tired Dozers			1
Grading and Access Road Grading	11/01/2019	11/21/2019	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Paving Access Road	11/22/2019	12/05/2019	
Pavers			1
Paving Equipment			2
Rollers			2
Building Construction including Offsite Connections	12/07/2019	01/29/2021	
Generator Sets			1
Rough Terrain Forklifts			1
Crane Use to set BESS	04/01/2020	04/21/2020	
Cranes			1
This equipment list is based upon equipment inventory within CalEEMod. The quantity and types are based upon assumptions from projects of similar size and scope.			

3.3 Operational Assumptions

Once operational, the project would generate air emissions from daily operations. Operational sources would include area sources such as landscaping, energy usage from electrical only for battery cooling, water usage for limited landscaping, mobile vehicle usage and minimal solid waste generated from the site during maintenance activities (i.e., landscape debris). CalEEMod has been updated to reflect project related operational conditions.

Mobile sources would be generated from traffic associated with monthly maintenance site visits which would occur twice monthly on average. Estimated trip generation would be between 2 to 4 trips twice per month. For purposes of analysis, it's assumed that the project would generate 4 trips per day using a rural setting.

3.4 Micro Scale Operational Emissions

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

In the event the proposed project traffic adds vehicular trips to either an intersection that operates at Level of Service (LOS) E or F or any intersection where the project trips re-classify the intersection level of service to LOS E or F and when peak-hour trips exceed 3,000 the project must quantify CO levels (County of San Diego, 2007).

The proposed project would not likely generate enough traffic to generate significant CO impacts. This is largely due to the fact that the project would not likely add enough trips to the nearby roadway networks, to result in changes to traffic flow. This decision would be based on County evaluation of the project under the County's Traffic Guidelines (County of San Diego, 2011).

3.5 Odor Impacts (Onsite)

Potential onsite odor generators would include short-term construction odors from activities such as paving and possibly painting. Odors created during short-term construction activities would most likely be from placing asphalt which has a slight odor from the bitumen and solvents used within hot asphalt. Impacts associated with asphalt operations are short-term, less than one month, as shown in Table 3.1 above and are expected to be less than significant. Further discussion of onsite odor impacts is not included in this report.

4.0 FINDINGS

4.1 Construction Health Risks

Based upon the annual air quality modeling results attached to this report, worst-case unmitigated PM_{10} from exhaust emissions would cumulatively produce 0.04835 tons over the construction duration of 458-days) or an average of 0.0011 grams/second. The average emission rate over the grading area is $1.55x10^{-8}$ g/m^2/s, which was calculated as follows:

$$\frac{0.0011\,\frac{grams}{second}}{3.24\ acres * 4{,}046\,\frac{meters^2}{acre}} = 8.44 * 10^{-8}\ \frac{\frac{grams}{meters^2}}{second}$$

Utilizing the AERMOD dispersion model, we find that the annual concentration is 0.237 µg/m^3 during construction. Utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk for the closest residential receptor was found to be 52.48 which would exceed the 10 per one million exposed significance threshold which would be a potentially significant impact.

It was found that these impacts can be reduces to less than significant through the utilization of Tier 3 or better equipment with diesel particulate filtration. It was found that Tier 3 equipment would cumulatively produce 0.0075 tons of PM_{10} over the same construction duration above or 0.00017 grams/second. Based on this the mitigated average emission rate over the grading area is $1.32x10^{-8}$ g/m^2/s. Utilizing the AERMOD dispersion model, we find that the annual concentration is 0.037 µg/m^3 during construction. Given this, the inhalation cancer risk for the closest residential receptor was found to be 8.19 per one million exposed which would be considered a less than significant impact under CEQA. Detailed calculations for both the unmitigated and mitigated scenario are shown in ***Attachment D*** to this report.

Finally, there are known chronic health risks associated with diesel exhaust which are considered non-cancer risks. These risks are calculated based on methods identified in Section 3.1 of this report. From this we find that the annual concentration of 0.0037 µg/m3 divided by the REL of 5 µg/m^3 yields a Health Hazard Index of 0.0074, which is less than one. Therefore, no chronic health risks are expected and all health risks are considered less than significant.

4.2 Construction Emission Findings

Construction emissions in pounds per day from the construction operations and equipment identified in Section 3.2 above is shown in Table 4.1. Based on these numbers, the project would not exceed County standards and would not require mitigation to comply.

Table 4.1: Expected Construction Emissions Summary – Pounds per Day

Year	ROG	NO_x	CO	SO_2	PM_{10} (Dust)	PM_{10} (Exhaust)	PM_{10} (Total)	$PM_{2.5}$ (Dust)	$PM_{2.5}$ (Exhaust)	$PM_{2.5}$ (Total)
2019	0.621	12.413	12.921	0.029	6.814	0.070	6.884	3.438	0.069	3.508
2020	0.309	6.611	8.376	0.014	0.000	0.058	0.058	0.000	0.058	0.058
2021	0.185	4.212	5.688	0.009	0.000	0.044	0.044	0.000	0.044	0.044
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
Impact?	**No**	**No**	**No**	**No**	-	-	**No**	-	-	**No**

4.3 Operational Findings

Project Buildout is expected early 2021 and the first full year of operations would be expected in 2022 and was modeled as such. The project traffic generation of 4 trips during a worst-case day was estimated by the project applicant and was used within this analysis. Additionally, the model was run for the winter, summer scenarios to determine maximum daily operational impacts for operation.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by EMFAC2014; CALEEMOD 2016.3.2 performs this calculation. The daily pollutants calculated for summer and winter are shown in Tables 4.2 and 4.3.

Table 4.2: Expected Summer Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0062	0.0248	0.0680	0.0002	0.0206	0.0056
Total (Unmitigated)	**0.0062**	**0.0248**	**0.0681**	**0.0002**	**0.0206**	**0.0056**
County Thresholds	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**
Daily pollutant generation assumes trip distances within CalEEMod The final numbers are all rounded within Excel and are reported as rounded numbers.						

Table 4.3: Expected Winter Daily Pollutant Generation

	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0060	0.0254	0.0673	0.0002	0.0206	0.0056
Total (Unmitigated)	**0.0060**	**0.0254**	**0.0674**	**0.0002**	**0.0206**	**0.0056**
County Thresholds	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

Daily pollutant generation assumes trip distances within CalEEMod
The final numbers are all rounded within Excel and are reported as rounded numbers.

Based upon these calculations, the proposed project would produce less than significant air quality impacts under CEQA.

4.4 Odor Impact Findings

The project may create temporary construction odors from combustion engine equipment but would not be considered significant due to the highly dispersive nature of diesel exhaust. Operational odors would not be expected. Therefore, less than significant impacts are expected.

4.5 Cumulative Construction Impacts

Cumulative construction impacts would exist when multiple construction projects occur at the same time and when those construction project maximum exposure contours intersect. To illustrate this, if a project was to produce air quality emissions simultaneous to a nearby construction project the addition of both project emissions could exceed significance thresholds. For this project, the construction emissions are well below significance as shown in Table 4.2 above. If a nearby project was to be under construction at the same time, that project would need to produce significantly more emissions and be relatively close to the proposed project site. This scenario is not expected so the cumulative impacts would be less than significant.

4.6 Cumulative Operations Impacts

The proposed project would create around 40 MW of battery storage within the project site which is consistent with the General Plan Category and zoning for this site. Based on this, the proposed project would be accounted for in the County's General plan. Since the project would

generate less than significant direct impacts, the project would also generate less than significant cumulative impacts.

Based on this, the proposed project would not conflict with or block the implementation of the RAQS. Given this status, the project would have been considered consistent with the RAQS and SIP.

4.7 Conclusion of Findings

All construction phases of the proposed project are anticipated to start in 2019 and be completed in 2021. The project was found to have significant health risk impacts from diesel exhaust during construction without the use of at least Tier 3 or better diesel equipment fitted with diesel particulate filters (DPF). Using the proposed Tier 3 equipment would generate less than significant impacts.

Based upon the analysis of construction activities, no criteria pollutant impacts would be expected. No further mitigation requirements will be necessary beyond Tiering requirements discussed above.

The project would likely generate short-term odors from temporary construction equipment such as paving equipment. Since odors from this equipment would be short-term, no significant odor impacts would be expected. Also, the project would not produce Long-term odors and would therefore produce less than significant odor impacts.

The project site is consistent with the General Plan Category and zoning for the site. Based on this, the proposed project was accounted for in the County's General plan. Therefore, no cumulative operation impacts would be anticipated since the proposed use would be consistent with the RAQS and SIP.

5.0 REFERENCES

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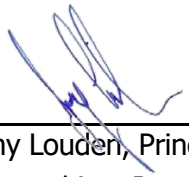
6.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the air quality environment and impacts within and surrounding the proposed development. The report was prepared by Jeremy Louden; a County approved CEQA Consultant for Air Quality.



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760-473-1253

Date April 5, 2019

ATTACHMENT A

CALEEMOD 2016.3.2

AES BESS

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	3.24	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	511.99	**CH4 Intensity (lb/MWhr)**	0.021	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2022 is first fully operational year

Land Use - Project would install battery storage containers and SDGE would operate site remotly

Construction Phase - Project would install fully constructed containers shipped to the site on trucks. Cranes lift the units off and set them on either a concrete pad or Steel colums driven into the ground

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CE

Grading -

Architectural Coating -

Vehicle Trips - 4 trips per day

Energy Use - Electrical from AC units within Pods and Area Lighting

Water And Wastewater - Basic onsite landscaping will be watered 100 gal/day

Solid Waste - solid waste is not likely though 1 ton per year was assumed. Systems will be remotly managed.

Construction Off-road Equipment Mitigation - Tier 3 equipment

Trips and VMT -

Table Name	Column Name	Default Value	New Value
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	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
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tblConstEquipMitigation	Tier	No Change	Tier 3
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tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	18.00	10.00
tblConstructionPhase	NumDays	230.00	300.00
tblConstructionPhase	NumDays	230.00	15.00
tblEnergyUse	LightingElect	0.00	1,800.00
tblEnergyUse	NT24E	0.00	667,000.00
tblGrading	MaterialExported	0.00	1,390.00
tblLandUse	LotAcreage	0.00	3.24

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.021
tblProjectCharacteristics	CO2IntensityFactor	720.49	511.99
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.00	1.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	4.00
tblWater	OutdoorWaterUseRate	0.00	36,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.0048	24.1118	10.3415	0.0287	6.8141	0.9403	7.7544	3.4383	0.8655	4.3038	0.0000	2,911.8819	2,911.8819	0.7106	0.0000	2,929.6457
2020	0.8792	9.2774	6.9920	0.0138	0.0000	0.4360	0.4360	0.0000	0.4168	0.4168	0.0000	1,320.5258	1,320.5258	0.2607	0.0000	1,327.0424
2021	0.4344	4.1738	5.1186	8.7300e-003	0.0000	0.2068	0.2068	0.0000	0.2037	0.2037	0.0000	831.6404	831.6404	0.0993	0.0000	834.1219
Maximum	**2.0048**	**24.1118**	**10.3415**	**0.0287**	**6.8141**	**0.9403**	**7.7544**	**3.4383**	**0.8655**	**4.3038**	**0.0000**	**2,911.8819**	**2,911.8819**	**0.7106**	**0.0000**	**2,929.6457**

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					
2019	0.6212	12.4125	12.9206	0.0287	6.8141	0.0697	6.8838	3.4383	0.0692	3.5075	0.0000	2,911.8819	2,911.8819	0.7106	0.0000	2,929.6457
2020	0.3085	6.6105	8.3757	0.0138	0.0000	0.0579	0.0579	0.0000	0.0579	0.0579	0.0000	1,320.5258	1,320.5258	0.2607	0.0000	1,327.0424
2021	0.1845	4.2120	5.6878	8.7300e-003	0.0000	0.0443	0.0443	0.0000	0.0443	0.0443	0.0000	831.6404	831.6404	0.0993	0.0000	834.1219
Maximum	**0.6212**	**12.4125**	**12.9206**	**0.0287**	**6.8141**	**0.0697**	**6.8838**	**3.4383**	**0.0692**	**3.5075**	**0.0000**	**2,911.8819**	**2,911.8819**	**0.7106**	**0.0000**	**2,929.6457**

AES BESS - 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	N20	CO2e
Percent Reduction	**66.42**	**38.14**	**-20.19**	**0.00**	**0.00**	**89.14**	**16.80**	**0.00**	**88.47**	**26.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	6.1800e-003	0.0248	0.0680	2.4000e-004	0.0204	1.9000e-004	0.0206	5.4500e-003	1.8000e-004	5.6200e-003		24.1146	24.1146	1.2300e-003		24.1455
Total	**6.1900e-003**	**0.0248**	**0.0681**	**2.4000e-004**	**0.0204**	**1.9000e-004**	**0.0206**	**5.4500e-003**	**1.8000e-004**	**5.6200e-003**		**24.1149**	**24.1149**	**1.2300e-003**	**0.0000**	**24.1457**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	6.1800e-003	0.0248	0.0680	2.4000e-004	0.0204	1.9000e-004	0.0206	5.4500e-003	1.8000e-004	5.6200e-003		24.1146	24.1146	1.2300e-003		24.1455
Total	**6.1900e-003**	**0.0248**	**0.0681**	**2.4000e-004**	**0.0204**	**1.9000e-004**	**0.0206**	**5.4500e-003**	**1.8000e-004**	**5.6200e-003**		**24.1149**	**24.1149**	**1.2300e-003**	**0.0000**	**24.1457**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/29/2019	10/31/2019	5	3	
2	Grading and Access Road	Grading	11/1/2019	11/21/2019	5	15	
3	Paving access Road	Paving	11/22/2019	12/5/2019	5	10	
4	Building Construction including Offsite Connections	Building Construction	12/7/2019	1/29/2021	5	300	
5	Crane Use to set Units	Building Construction	4/1/2020	4/21/2020	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Grading and Access Road	Excavators	1	8.00	158	0.38
Grading and Access Road	Graders	1	8.00	187	0.41
Grading and Access Road	Rubber Tired Dozers	1	8.00	247	0.40
Paving access Road	Pavers	1	8.00	130	0.42
Paving access Road	Paving Equipment	2	6.00	132	0.36
Paving access Road	Rollers	2	6.00	80	0.38
Building Construction including Offsite Connections	Generator Sets	1	8.00	84	0.74
Building Construction including Offsite Connections	Rough Terrain Forklifts	1	5.00	100	0.40
Crane Use to set Units	Cranes	1	7.00	231	0.29

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Access Road	3	8.00	0.00	137.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving access Road	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction including Offsite Conn	2	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Crane Use to set Units	1	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2019

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					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.3953	14.7563	7.5473	0.0137		0.7181	0.7181		0.6606	0.6606		1,356.5541	1,356.5541	0.4292		1,367.2840
Total	**1.3953**	**14.7563**	**7.5473**	**0.0137**	**6.0221**	**0.7181**	**6.7402**	**3.3102**	**0.6606**	**3.9709**		**1,356.5541**	**1,356.5541**	**0.4292**		**1,367.2840**

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	0.0272	0.0203	0.2275	6.7000e-004	0.0639	4.4000e-004	0.0643	0.0169	4.0000e-004	0.0173		67.0223	67.0223	2.0800e-003		67.0744
Total	**0.0272**	**0.0203**	**0.2275**	**6.7000e-004**	**0.0639**	**4.4000e-004**	**0.0643**	**0.0169**	**4.0000e-004**	**0.0173**		**67.0223**	**67.0223**	**2.0800e-003**		**67.0744**

3.2 Site Preparation - 2019

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					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	0.3362	6.4994	8.4486	0.0137		0.0408	0.0408		0.0408	0.0408	0.0000	1,356.5541	1,356.5541	0.4292		1,367.2840
Total	**0.3362**	**6.4994**	**8.4486**	**0.0137**	**6.0221**	**0.0408**	**6.0629**	**3.3102**	**0.0408**	**3.3510**	**0.0000**	**1,356.5541**	**1,356.5541**	**0.4292**		**1,367.2840**

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	0.0272	0.0203	0.2275	6.7000e-004	0.0639	4.4000e-004	0.0643	0.0169	4.0000e-004	0.0173		67.0223	67.0223	2.0800e-003		67.0744
Total	**0.0272**	**0.0203**	**0.2275**	**6.7000e-004**	**0.0639**	**4.4000e-004**	**0.0643**	**0.0169**	**4.0000e-004**	**0.0173**		**67.0223**	**67.0223**	**2.0800e-003**		**67.0744**

3.3 Grading and Access Road - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.8820	21.3359	9.3854	0.0203		0.9292	0.9292		0.8549	0.8549		2,014.1812	2,014.1812	0.6373		2,030.1128
Total	**1.8820**	**21.3359**	**9.3854**	**0.0203**	**6.5523**	**0.9292**	**7.4816**	**3.3675**	**0.8549**	**4.2224**		**2,014.1812**	**2,014.1812**	**0.6373**		**2,030.1128**

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	0.0793	2.7434	0.5922	7.2500e-003	0.1596	0.0104	0.1700	0.0437	9.9000e-003	0.0536		790.4651	790.4651	0.0700		792.2139
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	0.0435	0.0326	0.3640	1.0800e-003	0.1022	7.0000e-004	0.1029	0.0271	6.5000e-004	0.0277		107.2356	107.2356	3.3300e-003		107.3190
Total	**0.1228**	**2.7760**	**0.9562**	**8.3300e-003**	**0.2618**	**0.0111**	**0.2728**	**0.0708**	**0.0106**	**0.0814**		**897.7007**	**897.7007**	**0.0733**		**899.5329**

3.3 Grading and Access Road - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	0.4984	9.6366	11.9644	0.0203		0.0586	0.0586		0.0586	0.0586	0.0000	2,014.1812	2,014.1812	0.6373		2,030.1128
Total	**0.4984**	**9.6366**	**11.9644**	**0.0203**	**6.5523**	**0.0586**	**6.6110**	**3.3675**	**0.0586**	**3.4261**	**0.0000**	**2,014.1812**	**2,014.1812**	**0.6373**		**2,030.1128**

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	0.0793	2.7434	0.5922	7.2500e-003	0.1596	0.0104	0.1700	0.0437	9.9000e-003	0.0536		790.4651	790.4651	0.0700		792.2139
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	0.0435	0.0326	0.3640	1.0800e-003	0.1022	7.0000e-004	0.1029	0.0271	6.5000e-004	0.0277		107.2356	107.2356	3.3300e-003		107.3190
Total	**0.1228**	**2.7760**	**0.9562**	**8.3300e-003**	**0.2618**	**0.0111**	**0.2728**	**0.0708**	**0.0106**	**0.0814**		**897.7007**	**897.7007**	**0.0733**		**899.5329**

3.4 Paving access Road - 2019

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	0.9470	9.8707	9.5478	0.0148		0.5419	0.5419		0.4986	0.4986		1,460.0028	1,460.0028	0.4619		1,471.5510
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9470**	**9.8707**	**9.5478**	**0.0148**		**0.5419**	**0.5419**		**0.4986**	**0.4986**		**1,460.0028**	**1,460.0028**	**0.4619**		**1,471.5510**

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	0.0707	0.0529	0.5914	1.7500e-003	0.1661	1.1400e-003	0.1672	0.0440	1.0500e-003	0.0451		174.2579	174.2579	5.4200e-003		174.3933
Total	**0.0707**	**0.0529**	**0.5914**	**1.7500e-003**	**0.1661**	**1.1400e-003**	**0.1672**	**0.0440**	**1.0500e-003**	**0.0451**		**174.2579**	**174.2579**	**5.4200e-003**		**174.3933**

3.4 Paving access Road - 2019

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	0.3629	7.3544	11.1902	0.0148		0.0605	0.0605		0.0605	0.0605	0.0000	1,460.0028	1,460.0028	0.4619		1,471.5510
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3629**	**7.3544**	**11.1902**	**0.0148**		**0.0605**	**0.0605**		**0.0605**	**0.0605**	**0.0000**	**1,460.0028**	**1,460.0028**	**0.4619**		**1,471.5510**

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	0.0707	0.0529	0.5914	1.7500e-003	0.1661	1.1400e-003	0.1672	0.0440	1.0500e-003	0.0451		174.2579	174.2579	5.4200e-003		174.3933
Total	**0.0707**	**0.0529**	**0.5914**	**1.7500e-003**	**0.1661**	**1.1400e-003**	**0.1672**	**0.0440**	**1.0500e-003**	**0.0451**		**174.2579**	**174.2579**	**5.4200e-003**		**174.3933**

3.5 Building Construction including Offsite Connections - 2019

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	0.5330	4.9341	5.1598	8.7300e-003		0.2774	0.2774		0.2732	0.2732		836.1380	836.1380	0.1069		838.8103
Total	**0.5330**	**4.9341**	**5.1598**	**8.7300e-003**		**0.2774**	**0.2774**		**0.2732**	**0.2732**		**836.1380**	**836.1380**	**0.1069**		**838.8103**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Building Construction including Offsite Connections - 2019

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	0.1845	4.2120	5.6878	8.7300e-003		0.0443	0.0443		0.0443	0.0443	0.0000	836.1380	836.1380	0.1069		838.8103
Total	**0.1845**	**4.2120**	**5.6878**	**8.7300e-003**		**0.0443**	**0.0443**		**0.0443**	**0.0443**	**0.0000**	**836.1380**	**836.1380**	**0.1069**		**838.8103**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Building Construction including Offsite Connections - 2020

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	0.4825	4.5598	5.1411	8.7300e-003		0.2415	0.2415		0.2378	0.2378		831.5849	831.5849	0.1025		834.1482
Total	**0.4825**	**4.5598**	**5.1411**	**8.7300e-003**		**0.2415**	**0.2415**		**0.2378**	**0.2378**		**831.5849**	**831.5849**	**0.1025**		**834.1482**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Building Construction including Offsite Connections - 2020

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	0.1845	4.2120	5.6878	8.7300e-003		0.0443	0.0443		0.0443	0.0443	0.0000	831.5849	831.5849	0.1025		834.1482
Total	**0.1845**	**4.2120**	**5.6878**	**8.7300e-003**		**0.0443**	**0.0443**		**0.0443**	**0.0443**	**0.0000**	**831.5849**	**831.5849**	**0.1025**		**834.1482**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Building Construction including Offsite Connections - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4344	4.1738	5.1186	8.7300e-003		0.2068	0.2068		0.2037	0.2037		831.6404	831.6404	0.0993		834.1219
Total	**0.4344**	**4.1738**	**5.1186**	**8.7300e-003**		**0.2068**	**0.2068**		**0.2037**	**0.2037**		**831.6404**	**831.6404**	**0.0993**		**834.1219**

Unmitigated Construction Off-Site

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

3.5 Building Construction including Offsite Connections - 2021

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	0.1845	4.2120	5.6878	8.7300e-003		0.0443	0.0443		0.0443	0.0443	0.0000	831.6404	831.6404	0.0993		834.1219
Total	**0.1845**	**4.2120**	**5.6878**	**8.7300e-003**		**0.0443**	**0.0443**		**0.0443**	**0.0443**	**0.0000**	**831.6404**	**831.6404**	**0.0993**		**834.1219**

Mitigated Construction Off-Site

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

3.6 Crane Use to set Units - 2020

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	0.3967	4.7176	1.8509	5.0500e-003		0.1945	0.1945		0.1789	0.1789		488.9409	488.9409	0.1581		492.8943
Total	**0.3967**	**4.7176**	**1.8509**	**5.0500e-003**		**0.1945**	**0.1945**		**0.1789**	**0.1789**		**488.9409**	**488.9409**	**0.1581**		**492.8943**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.6 Crane Use to set Units - 2020

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	0.1241	2.3985	2.6879	5.0500e-003		0.0137	0.0137		0.0137	0.0137	0.0000	488.9409	488.9409	0.1581		492.8943
Total	**0.1241**	**2.3985**	**2.6879**	**5.0500e-003**		**0.0137**	**0.0137**		**0.0137**	**0.0137**	**0.0000**	**488.9409**	**488.9409**	**0.1581**		**492.8943**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.1800e-003	0.0248	0.0680	2.4000e-004	0.0204	1.9000e-004	0.0206	5.4500e-003	1.8000e-004	5.6200e-003		24.1146	24.1146	1.2300e-003		24.1455
Unmitigated	6.1800e-003	0.0248	0.0680	2.4000e-004	0.0204	1.9000e-004	0.0206	5.4500e-003	1.8000e-004	5.6200e-003		24.1146	24.1146	1.2300e-003		24.1455

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	4.00	0.00	0.00	6,864	6,864
Total	4.00	0.00	0.00	6,864	6,864

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

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

6.0 Area Detail

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

AES BESS

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	3.24	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	511.99	**CH4 Intensity (lb/MWhr)**	0.021	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2022 is first fully operational year

Land Use - Project would install battery storage containers and SDGE would operate site remotly

Construction Phase - Project would install fully constructed containers shipped to the site on trucks. Cranes lift the units off and set them on either a concrete pad or Steel colums driven into the ground

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CE

Grading -

Architectural Coating -

Vehicle Trips - 4 trips per day

Energy Use - Electrical from AC units within Pods and Area Lighting

Water And Wastewater - Basic onsite landscaping will be watered 100 gal/day

Solid Waste - solid waste is not likely though 1 ton per year was assumed. Systems will be remotly managed.

Construction Off-road Equipment Mitigation - Tier 3 equipment

Trips and VMT -

Table Name	Column Name	Default Value	New Value
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	2.00
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	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	18.00	10.00
tblConstructionPhase	NumDays	230.00	300.00
tblConstructionPhase	NumDays	230.00	15.00
tblEnergyUse	LightingElect	0.00	1,800.00
tblEnergyUse	NT24E	0.00	667,000.00
tblGrading	MaterialExported	0.00	1,390.00
tblLandUse	LotAcreage	0.00	3.24

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.021
tblProjectCharacteristics	CO2IntensityFactor	720.49	511.99
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.00	1.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	4.00
tblWater	OutdoorWaterUseRate	0.00	36,500.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	2.0139	24.1439	10.3568	0.0285	6.8141	0.9405	7.7546	3.4383	0.8657	4.3040	0.0000	2,891.9708	2,891.9708	0.7129	0.0000	2,909.7929
2020	0.8792	9.2774	6.9920	0.0138	0.0000	0.4360	0.4360	0.0000	0.4168	0.4168	0.0000	1,320.5258	1,320.5258	0.2607	0.0000	1,327.0424
2021	0.4344	4.1738	5.1186	8.7300e-003	0.0000	0.2068	0.2068	0.0000	0.2037	0.2037	0.0000	831.6404	831.6404	0.0993	0.0000	834.1219
Maximum	**2.0139**	**24.1439**	**10.3568**	**0.0285**	**6.8141**	**0.9405**	**7.7546**	**3.4383**	**0.8657**	**4.3040**	**0.0000**	**2,891.9708**	**2,891.9708**	**0.7129**	**0.0000**	**2,909.7929**

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					
2019	0.6303	12.4446	12.9359	0.0285	6.8141	0.0699	6.8841	3.4383	0.0694	3.5077	0.0000	2,891.9708	2,891.9708	0.7129	0.0000	2,909.7929
2020	0.3085	6.6105	8.3757	0.0138	0.0000	0.0579	0.0579	0.0000	0.0579	0.0579	0.0000	1,320.5258	1,320.5258	0.2607	0.0000	1,327.0424
2021	0.1845	4.2120	5.6878	8.7300e-003	0.0000	0.0443	0.0443	0.0000	0.0443	0.0443	0.0000	831.6404	831.6404	0.0993	0.0000	834.1219
Maximum	**0.6303**	**12.4446**	**12.9359**	**0.0285**	**6.8141**	**0.0699**	**6.8841**	**3.4383**	**0.0694**	**3.5077**	**0.0000**	**2,891.9708**	**2,891.9708**	**0.7129**	**0.0000**	**2,909.7929**

AES BESS - 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	N20	CO2e
Percent Reduction	**66.24**	**38.11**	**-20.17**	**0.00**	**0.00**	**89.13**	**16.80**	**0.00**	**88.45**	**26.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	5.9900e-003	0.0254	0.0673	2.2000e-004	0.0204	1.9000e-004	0.0206	5.4500e-003	1.8000e-004	5.6300e-003		22.8676	22.8676	1.2400e-003		22.8987
Total	**6.0000e-003**	**0.0254**	**0.0674**	**2.2000e-004**	**0.0204**	**1.9000e-004**	**0.0206**	**5.4500e-003**	**1.8000e-004**	**5.6300e-003**		**22.8678**	**22.8678**	**1.2400e-003**	**0.0000**	**22.8990**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	5.9900e-003	0.0254	0.0673	2.2000e-004	0.0204	1.9000e-004	0.0206	5.4500e-003	1.8000e-004	5.6300e-003		22.8676	22.8676	1.2400e-003		22.8987
Total	**6.0000e-003**	**0.0254**	**0.0674**	**2.2000e-004**	**0.0204**	**1.9000e-004**	**0.0206**	**5.4500e-003**	**1.8000e-004**	**5.6300e-003**		**22.8678**	**22.8678**	**1.2400e-003**	**0.0000**	**22.8990**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/29/2019	10/31/2019	5	3	
2	Grading and Access Road	Grading	11/1/2019	11/21/2019	5	15	
3	Paving access Road	Paving	11/22/2019	12/5/2019	5	10	
4	Building Construction including Offsite Connections	Building Construction	12/7/2019	1/29/2021	5	300	
5	Crane Use to set Units	Building Construction	4/1/2020	4/21/2020	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Grading and Access Road	Excavators	1	8.00	158	0.38
Grading and Access Road	Graders	1	8.00	187	0.41
Grading and Access Road	Rubber Tired Dozers	1	8.00	247	0.40
Paving access Road	Pavers	1	8.00	130	0.42
Paving access Road	Paving Equipment	2	6.00	132	0.36
Paving access Road	Rollers	2	6.00	80	0.38
Building Construction including Offsite Connections	Generator Sets	1	8.00	84	0.74
Building Construction including Offsite Connections	Rough Terrain Forklifts	1	5.00	100	0.40
Crane Use to set Units	Cranes	1	7.00	231	0.29

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Access Road	3	8.00	0.00	137.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving access Road	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction including Offsite Conn	2	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Crane Use to set Units	1	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2019

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					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	1.3953	14.7563	7.5473	0.0137		0.7181	0.7181		0.6606	0.6606		1,356.5541	1,356.5541	0.4292		1,367.2840
Total	**1.3953**	**14.7563**	**7.5473**	**0.0137**	**6.0221**	**0.7181**	**6.7402**	**3.3102**	**0.6606**	**3.9709**		**1,356.5541**	**1,356.5541**	**0.4292**		**1,367.2840**

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	0.0315	0.0228	0.2105	6.3000e-004	0.0639	4.4000e-004	0.0643	0.0169	4.0000e-004	0.0173		62.8914	62.8914	1.9600e-003		62.9403
Total	**0.0315**	**0.0228**	**0.2105**	**6.3000e-004**	**0.0639**	**4.4000e-004**	**0.0643**	**0.0169**	**4.0000e-004**	**0.0173**		**62.8914**	**62.8914**	**1.9600e-003**		**62.9403**

3.2 Site Preparation - 2019

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					6.0221	0.0000	6.0221	3.3102	0.0000	3.3102			0.0000			0.0000
Off-Road	0.3362	6.4994	8.4486	0.0137		0.0408	0.0408		0.0408	0.0408	0.0000	1,356.5541	1,356.5541	0.4292		1,367.2840
Total	**0.3362**	**6.4994**	**8.4486**	**0.0137**	**6.0221**	**0.0408**	**6.0629**	**3.3102**	**0.0408**	**3.3510**	**0.0000**	**1,356.5541**	**1,356.5541**	**0.4292**		**1,367.2840**

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	0.0315	0.0228	0.2105	6.3000e-004	0.0639	4.4000e-004	0.0643	0.0169	4.0000e-004	0.0173		62.8914	62.8914	1.9600e-003		62.9403
Total	**0.0315**	**0.0228**	**0.2105**	**6.3000e-004**	**0.0639**	**4.4000e-004**	**0.0643**	**0.0169**	**4.0000e-004**	**0.0173**		**62.8914**	**62.8914**	**1.9600e-003**		**62.9403**

3.3 Grading and Access Road - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.8820	21.3359	9.3854	0.0203		0.9292	0.9292		0.8549	0.8549		2,014.1812	2,014.1812	0.6373		2,030.1128
Total	**1.8820**	**21.3359**	**9.3854**	**0.0203**	**6.5523**	**0.9292**	**7.4816**	**3.3675**	**0.8549**	**4.2224**		**2,014.1812**	**2,014.1812**	**0.6373**		**2,030.1128**

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	0.0815	2.7715	0.6346	7.1300e-003	0.1596	0.0106	0.1702	0.0437	0.0101	0.0539		777.1634	777.1634	0.0725		778.9755
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	0.0503	0.0365	0.3369	1.0100e-003	0.1022	7.0000e-004	0.1029	0.0271	6.5000e-004	0.0277		100.6262	100.6262	3.1300e-003		100.7045
Total	**0.1318**	**2.8081**	**0.9715**	**8.1400e-003**	**0.2618**	**0.0113**	**0.2731**	**0.0708**	**0.0108**	**0.0816**		**877.7896**	**877.7896**	**0.0756**		**879.6801**

3.3 Grading and Access Road - 2019

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	0.4984	9.6366	11.9644	0.0203		0.0586	0.0586		0.0586	0.0586	0.0000	2,014.1812	2,014.1812	0.6373		2,030.1128
Total	**0.4984**	**9.6366**	**11.9644**	**0.0203**	**6.5523**	**0.0586**	**6.6110**	**3.3675**	**0.0586**	**3.4261**	**0.0000**	**2,014.1812**	**2,014.1812**	**0.6373**		**2,030.1128**

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	0.0815	2.7715	0.6346	7.1300e-003	0.1596	0.0106	0.1702	0.0437	0.0101	0.0539		777.1634	777.1634	0.0725		778.9755
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	0.0503	0.0365	0.3369	1.0100e-003	0.1022	7.0000e-004	0.1029	0.0271	6.5000e-004	0.0277		100.6262	100.6262	3.1300e-003		100.7045
Total	**0.1318**	**2.8081**	**0.9715**	**8.1400e-003**	**0.2618**	**0.0113**	**0.2731**	**0.0708**	**0.0108**	**0.0816**		**877.7896**	**877.7896**	**0.0756**		**879.6801**

3.4 Paving access Road - 2019

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	0.9470	9.8707	9.5478	0.0148		0.5419	0.5419		0.4986	0.4986		1,460.0028	1,460.0028	0.4619		1,471.5510
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9470**	**9.8707**	**9.5478**	**0.0148**		**0.5419**	**0.5419**		**0.4986**	**0.4986**		**1,460.0028**	**1,460.0028**	**0.4619**		**1,471.5510**

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	0.0818	0.0594	0.5474	1.6400e-003	0.1661	1.1400e-003	0.1672	0.0440	1.0500e-003	0.0451		163.5176	163.5176	5.0900e-003		163.6449
Total	**0.0818**	**0.0594**	**0.5474**	**1.6400e-003**	**0.1661**	**1.1400e-003**	**0.1672**	**0.0440**	**1.0500e-003**	**0.0451**		**163.5176**	**163.5176**	**5.0900e-003**		**163.6449**

3.4 Paving access Road - 2019

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	0.3629	7.3544	11.1902	0.0148		0.0605	0.0605		0.0605	0.0605	0.0000	1,460.0028	1,460.0028	0.4619		1,471.5510
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.3629**	**7.3544**	**11.1902**	**0.0148**		**0.0605**	**0.0605**		**0.0605**	**0.0605**	**0.0000**	**1,460.0028**	**1,460.0028**	**0.4619**		**1,471.5510**

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	0.0818	0.0594	0.5474	1.6400e-003	0.1661	1.1400e-003	0.1672	0.0440	1.0500e-003	0.0451		163.5176	163.5176	5.0900e-003		163.6449
Total	**0.0818**	**0.0594**	**0.5474**	**1.6400e-003**	**0.1661**	**1.1400e-003**	**0.1672**	**0.0440**	**1.0500e-003**	**0.0451**		**163.5176**	**163.5176**	**5.0900e-003**		**163.6449**

3.5 Building Construction including Offsite Connections - 2019

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	0.5330	4.9341	5.1598	8.7300e-003		0.2774	0.2774		0.2732	0.2732		836.1380	836.1380	0.1069		838.8103
Total	**0.5330**	**4.9341**	**5.1598**	**8.7300e-003**		**0.2774**	**0.2774**		**0.2732**	**0.2732**		**836.1380**	**836.1380**	**0.1069**		**838.8103**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Building Construction including Offsite Connections - 2019

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	0.1845	4.2120	5.6878	8.7300e-003		0.0443	0.0443		0.0443	0.0443	0.0000	836.1380	836.1380	0.1069		838.8103
Total	**0.1845**	**4.2120**	**5.6878**	**8.7300e-003**		**0.0443**	**0.0443**		**0.0443**	**0.0443**	**0.0000**	**836.1380**	**836.1380**	**0.1069**		**838.8103**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Building Construction including Offsite Connections - 2020

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	0.4825	4.5598	5.1411	8.7300e-003		0.2415	0.2415		0.2378	0.2378		831.5849	831.5849	0.1025		834.1482
Total	**0.4825**	**4.5598**	**5.1411**	**8.7300e-003**		**0.2415**	**0.2415**		**0.2378**	**0.2378**		**831.5849**	**831.5849**	**0.1025**		**834.1482**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Building Construction including Offsite Connections - 2020

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	0.1845	4.2120	5.6878	8.7300e-003		0.0443	0.0443		0.0443	0.0443	0.0000	831.5849	831.5849	0.1025		834.1482
Total	**0.1845**	**4.2120**	**5.6878**	**8.7300e-003**		**0.0443**	**0.0443**		**0.0443**	**0.0443**	**0.0000**	**831.5849**	**831.5849**	**0.1025**		**834.1482**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.5 Building Construction including Offsite Connections - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4344	4.1738	5.1186	8.7300e-003		0.2068	0.2068		0.2037	0.2037		831.6404	831.6404	0.0993		834.1219
Total	**0.4344**	**4.1738**	**5.1186**	**8.7300e-003**		**0.2068**	**0.2068**		**0.2037**	**0.2037**		**831.6404**	**831.6404**	**0.0993**		**834.1219**

Unmitigated Construction Off-Site

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

3.5 Building Construction including Offsite Connections - 2021

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	0.1845	4.2120	5.6878	8.7300e-003		0.0443	0.0443		0.0443	0.0443	0.0000	831.6404	831.6404	0.0993		834.1219
Total	**0.1845**	**4.2120**	**5.6878**	**8.7300e-003**		**0.0443**	**0.0443**		**0.0443**	**0.0443**	**0.0000**	**831.6404**	**831.6404**	**0.0993**		**834.1219**

Mitigated Construction Off-Site

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

3.6 Crane Use to set Units - 2020

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	0.3967	4.7176	1.8509	5.0500e-003		0.1945	0.1945		0.1789	0.1789		488.9409	488.9409	0.1581		492.8943
Total	**0.3967**	**4.7176**	**1.8509**	**5.0500e-003**		**0.1945**	**0.1945**		**0.1789**	**0.1789**		**488.9409**	**488.9409**	**0.1581**		**492.8943**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.6 Crane Use to set Units - 2020

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	0.1241	2.3985	2.6879	5.0500e-003		0.0137	0.0137		0.0137	0.0137	0.0000	488.9409	488.9409	0.1581		492.8943
Total	**0.1241**	**2.3985**	**2.6879**	**5.0500e-003**		**0.0137**	**0.0137**		**0.0137**	**0.0137**	**0.0000**	**488.9409**	**488.9409**	**0.1581**		**492.8943**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.9900e-003	0.0254	0.0673	2.2000e-004	0.0204	1.9000e-004	0.0206	5.4500e-003	1.8000e-004	5.6300e-003		22.8676	22.8676	1.2400e-003		22.8987
Unmitigated	5.9900e-003	0.0254	0.0673	2.2000e-004	0.0204	1.9000e-004	0.0206	5.4500e-003	1.8000e-004	5.6300e-003		22.8676	22.8676	1.2400e-003		22.8987

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	4.00	0.00	0.00	6,864	6,864
Total	4.00	0.00	0.00	6,864	6,864

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

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

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

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					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

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

6.0 Area Detail

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	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**1.0000e-005**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

AES BESS

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	3.24	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	511.99	**CH4 Intensity (lb/MWhr)**	0.021	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2022 is first fully operational year

Land Use - Project would install battery storage containers and SDGE would operate site remotly

Construction Phase - Project would install fully constructed containers shipped to the site on trucks. Cranes lift the units off and set them on either a concrete pad or Steel colums driven into the ground

Off-road Equipment - ce

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - CE

Grading -

Architectural Coating -

Vehicle Trips - 4 trips per day

Energy Use - Electrical from AC units within Pods and Area Lighting

Water And Wastewater - Basic onsite landscaping will be watered 100 gal/day

Solid Waste - solid waste is not likely though 1 ton per year was assumed. Systems will be remotly managed.

Construction Off-road Equipment Mitigation - Tier 3 equipment

Trips and VMT -

Table Name	Column Name	Default Value	New Value
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	2.00
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	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	8.00	15.00
tblConstructionPhase	NumDays	18.00	10.00
tblConstructionPhase	NumDays	230.00	300.00
tblConstructionPhase	NumDays	230.00	15.00
tblEnergyUse	LightingElect	0.00	1,800.00
tblEnergyUse	NT24E	0.00	667,000.00
tblGrading	MaterialExported	0.00	1,390.00
tblLandUse	LotAcreage	0.00	3.24

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.021
tblProjectCharacteristics	CO2IntensityFactor	720.49	511.99
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.00	1.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	WD_TR	0.00	4.00
tblWater	OutdoorWaterUseRate	0.00	36,500.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.0268	0.2950	0.1835	3.9000e-004	0.0610	0.0132	0.0742	0.0310	0.0123	0.0433	0.0000	35.4876	35.4876	8.3700e-003	0.0000	35.6968
2020	0.0662	0.6327	0.6874	1.1800e-003	0.0000	0.0331	0.0331	0.0000	0.0325	0.0325	0.0000	102.1533	102.1533	0.0133	0.0000	102.4848
2021	4.5600e-003	0.0438	0.0537	9.0000e-005	0.0000	2.1700e-003	2.1700e-003	0.0000	2.1400e-003	2.1400e-003	0.0000	7.9217	7.9217	9.5000e-004	0.0000	7.9454
Maximum	**0.0662**	**0.6327**	**0.6874**	**1.1800e-003**	**0.0610**	**0.0331**	**0.0742**	**0.0310**	**0.0325**	**0.0433**	**0.0000**	**102.1533**	**102.1533**	**0.0133**	**0.0000**	**102.4848**

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					
2019	8.9600e-003	0.1762	0.2169	3.9000e-004	0.0610	1.2700e-003	0.0623	0.0310	1.2700e-003	0.0323	0.0000	35.4875	35.4875	8.3700e-003	0.0000	35.6968
2020	0.0251	0.5698	0.7653	1.1800e-003	0.0000	5.9000e-003	5.9000e-003	0.0000	5.9000e-003	5.9000e-003	0.0000	102.1531	102.1531	0.0133	0.0000	102.4847
2021	1.9400e-003	0.0442	0.0597	9.0000e-005	0.0000	4.6000e-004	4.6000e-004	0.0000	4.6000e-004	4.6000e-004	0.0000	7.9217	7.9217	9.5000e-004	0.0000	7.9454
Maximum	**0.0251**	**0.5698**	**0.7653**	**1.1800e-003**	**0.0610**	**5.9000e-003**	**0.0623**	**0.0310**	**5.9000e-003**	**0.0323**	**0.0000**	**102.1531**	**102.1531**	**0.0133**	**0.0000**	**102.4847**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**63.10**	**18.67**	**-12.68**	**0.00**	**0.00**	**84.26**	**37.30**	**0.00**	**83.75**	**50.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**10-29-2019**	**1-28-2020**	0.3676	0.2280
2	**1-29-2020**	**4-28-2020**	0.2022	0.1618
3	**4-29-2020**	**7-28-2020**	0.1639	0.1429
4	**7-29-2020**	**10-28-2020**	0.1657	0.1445
5	**10-29-2020**	**1-28-2021**	0.1613	0.1445
6	**1-29-2021**	**4-28-2021**	0.0016	0.0016
		Highest	0.3676	0.2280

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.6000e-004	3.3100e-003	8.6300e-003	3.0000e-005	2.5900e-003	2.0000e-005	2.6100e-003	6.9000e-004	2.0000e-005	7.2000e-004	0.0000	2.7234	2.7234	1.4000e-004	0.0000	2.7270
Waste						0.0000	0.0000		0.0000	0.0000	0.2030	0.0000	0.2030	0.0120	0.0000	0.5029
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0942	0.0942	0.0000	0.0000	0.0945
Total	**7.6000e-004**	**3.3100e-003**	**8.6400e-003**	**3.0000e-005**	**2.5900e-003**	**2.0000e-005**	**2.6100e-003**	**6.9000e-004**	**2.0000e-005**	**7.2000e-004**	**0.2030**	**2.8176**	**3.0206**	**0.0121**	**0.0000**	**3.3244**

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	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	7.6000e-004	3.3100e-003	8.6300e-003	3.0000e-005	2.5900e-003	2.0000e-005	2.6100e-003	6.9000e-004	2.0000e-005	7.2000e-004	0.0000	2.7234	2.7234	1.4000e-004	0.0000	2.7270
Waste						0.0000	0.0000		0.0000	0.0000	0.2030	0.0000	0.2030	0.0120	0.0000	0.5029
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0942	0.0942	0.0000	0.0000	0.0945
Total	**7.6000e-004**	**3.3100e-003**	**8.6400e-003**	**3.0000e-005**	**2.5900e-003**	**2.0000e-005**	**2.6100e-003**	**6.9000e-004**	**2.0000e-005**	**7.2000e-004**	**0.2030**	**2.8176**	**3.0206**	**0.0121**	**0.0000**	**3.3244**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	10/29/2019	10/31/2019	5	3	
2	Grading and Access Road	Grading	11/1/2019	11/21/2019	5	15	
3	Paving access Road	Paving	11/22/2019	12/5/2019	5	10	
4	Building Construction including Offsite Connections	Building Construction	12/7/2019	1/29/2021	5	300	
5	Crane Use to set Units	Building Construction	4/1/2020	4/21/2020	5	15	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Grading and Access Road	Excavators	1	8.00	158	0.38
Grading and Access Road	Graders	1	8.00	187	0.41
Grading and Access Road	Rubber Tired Dozers	1	8.00	247	0.40
Paving access Road	Pavers	1	8.00	130	0.42
Paving access Road	Paving Equipment	2	6.00	132	0.36
Paving access Road	Rollers	2	6.00	80	0.38
Building Construction including Offsite Connections	Generator Sets	1	8.00	84	0.74
Building Construction including Offsite Connections	Rough Terrain Forklifts	1	5.00	100	0.40
Crane Use to set Units	Cranes	1	7.00	231	0.29

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading and Access Road	3	8.00	0.00	137.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving access Road	5	13.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction including Offsite Conn	2	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Crane Use to set Units	1	0.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2019

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					9.0300e-003	0.0000	9.0300e-003	4.9700e-003	0.0000	4.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0900e-003	0.0221	0.0113	2.0000e-005		1.0800e-003	1.0800e-003		9.9000e-004	9.9000e-004	0.0000	1.8460	1.8460	5.8000e-004	0.0000	1.8606
Total	**2.0900e-003**	**0.0221**	**0.0113**	**2.0000e-005**	**9.0300e-003**	**1.0800e-003**	**0.0101**	**4.9700e-003**	**9.9000e-004**	**5.9600e-003**	**0.0000**	**1.8460**	**1.8460**	**5.8000e-004**	**0.0000**	**1.8606**

3.2 Site Preparation - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.0864	0.0864	0.0000	0.0000	0.0865
Total	**4.0000e-005**	**3.0000e-005**	**3.2000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0864**	**0.0864**	**0.0000**	**0.0000**	**0.0865**

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					9.0300e-003	0.0000	9.0300e-003	4.9700e-003	0.0000	4.9700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0000e-004	9.7500e-003	0.0127	2.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	1.8460	1.8460	5.8000e-004	0.0000	1.8606
Total	**5.0000e-004**	**9.7500e-003**	**0.0127**	**2.0000e-005**	**9.0300e-003**	**6.0000e-005**	**9.0900e-003**	**4.9700e-003**	**6.0000e-005**	**5.0300e-003**	**0.0000**	**1.8460**	**1.8460**	**5.8000e-004**	**0.0000**	**1.8606**

3.2 Site Preparation - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0000e-005	3.0000e-005	3.2000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.0864	0.0864	0.0000	0.0000	0.0865
Total	**4.0000e-005**	**3.0000e-005**	**3.2000e-004**	**0.0000**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**2.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0864**	**0.0864**	**0.0000**	**0.0000**	**0.0865**

3.3 Grading and Access Road - 2019

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					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0141	0.1600	0.0704	1.5000e-004		6.9700e-003	6.9700e-003		6.4100e-003	6.4100e-003	0.0000	13.7043	13.7043	4.3400e-003	0.0000	13.8127
Total	**0.0141**	**0.1600**	**0.0704**	**1.5000e-004**	**0.0491**	**6.9700e-003**	**0.0561**	**0.0253**	**6.4100e-003**	**0.0317**	**0.0000**	**13.7043**	**13.7043**	**4.3400e-003**	**0.0000**	**13.8127**

3.3 Grading and Access Road - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-004	0.0210	4.5800e-003	5.0000e-005	1.1700e-003	8.0000e-005	1.2500e-003	3.2000e-004	8.0000e-005	4.0000e-004	0.0000	5.3402	5.3402	4.8000e-004	0.0000	5.3523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.7000e-004	2.5400e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6915	0.6915	2.0000e-005	0.0000	0.6921
Total	**9.3000e-004**	**0.0213**	**7.1200e-003**	**6.0000e-005**	**1.9200e-003**	**9.0000e-005**	**2.0000e-003**	**5.2000e-004**	**8.0000e-005**	**6.0000e-004**	**0.0000**	**6.0318**	**6.0318**	**5.0000e-004**	**0.0000**	**6.0444**

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					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7400e-003	0.0723	0.0897	1.5000e-004		4.4000e-004	4.4000e-004		4.4000e-004	4.4000e-004	0.0000	13.7042	13.7042	4.3400e-003	0.0000	13.8126
Total	**3.7400e-003**	**0.0723**	**0.0897**	**1.5000e-004**	**0.0491**	**4.4000e-004**	**0.0496**	**0.0253**	**4.4000e-004**	**0.0257**	**0.0000**	**13.7042**	**13.7042**	**4.3400e-003**	**0.0000**	**13.8126**

3.3 Grading and Access Road - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-004	0.0210	4.5800e-003	5.0000e-005	1.1700e-003	8.0000e-005	1.2500e-003	3.2000e-004	8.0000e-005	4.0000e-004	0.0000	5.3402	5.3402	4.8000e-004	0.0000	5.3523
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.7000e-004	2.5400e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6915	0.6915	2.0000e-005	0.0000	0.6921
Total	**9.3000e-004**	**0.0213**	**7.1200e-003**	**6.0000e-005**	**1.9200e-003**	**9.0000e-005**	**2.0000e-003**	**5.2000e-004**	**8.0000e-005**	**6.0000e-004**	**0.0000**	**6.0318**	**6.0318**	**5.0000e-004**	**0.0000**	**6.0444**

3.4 Paving access Road - 2019

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	4.7300e-003	0.0494	0.0477	7.0000e-005		2.7100e-003	2.7100e-003		2.4900e-003	2.4900e-003	0.0000	6.6225	6.6225	2.1000e-003	0.0000	6.6748
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**4.7300e-003**	**0.0494**	**0.0477**	**7.0000e-005**		**2.7100e-003**	**2.7100e-003**		**2.4900e-003**	**2.4900e-003**	**0.0000**	**6.6225**	**6.6225**	**2.1000e-003**	**0.0000**	**6.6748**

3.4 Paving access Road - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.9000e-004	2.7500e-003	1.0000e-005	8.1000e-004	1.0000e-005	8.2000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7492	0.7492	2.0000e-005	0.0000	0.7498
Total	**3.6000e-004**	**2.9000e-004**	**2.7500e-003**	**1.0000e-005**	**8.1000e-004**	**1.0000e-005**	**8.2000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7492**	**0.7492**	**2.0000e-005**	**0.0000**	**0.7498**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.8100e-003	0.0368	0.0560	7.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	6.6225	6.6225	2.1000e-003	0.0000	6.6748
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.8100e-003**	**0.0368**	**0.0560**	**7.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**6.6225**	**6.6225**	**2.1000e-003**	**0.0000**	**6.6748**

3.4 Paving access Road - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.6000e-004	2.9000e-004	2.7500e-003	1.0000e-005	8.1000e-004	1.0000e-005	8.2000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7492	0.7492	2.0000e-005	0.0000	0.7498
Total	**3.6000e-004**	**2.9000e-004**	**2.7500e-003**	**1.0000e-005**	**8.1000e-004**	**1.0000e-005**	**8.2000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7492**	**0.7492**	**2.0000e-005**	**0.0000**	**0.7498**

3.5 Building Construction including Offsite Connections - 2019

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	4.5300e-003	0.0419	0.0439	7.0000e-005		2.3600e-003	2.3600e-003		2.3200e-003	2.3200e-003	0.0000	6.4475	6.4475	8.2000e-004	0.0000	6.4681
Total	**4.5300e-003**	**0.0419**	**0.0439**	**7.0000e-005**		**2.3600e-003**	**2.3600e-003**		**2.3200e-003**	**2.3200e-003**	**0.0000**	**6.4475**	**6.4475**	**8.2000e-004**	**0.0000**	**6.4681**

3.5 Building Construction including Offsite Connections - 2019

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.5700e-003	0.0358	0.0484	7.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	6.4475	6.4475	8.2000e-004	0.0000	6.4681
Total	**1.5700e-003**	**0.0358**	**0.0484**	**7.0000e-005**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**6.4475**	**6.4475**	**8.2000e-004**	**0.0000**	**6.4681**

3.5 Building Construction including Offsite Connections - 2019

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction including Offsite Connections - 2020

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	0.0632	0.5973	0.6735	1.1400e-003		0.0316	0.0316		0.0312	0.0312	0.0000	98.8266	98.8266	0.0122	0.0000	99.1312
Total	**0.0632**	**0.5973**	**0.6735**	**1.1400e-003**		**0.0316**	**0.0316**		**0.0312**	**0.0312**	**0.0000**	**98.8266**	**98.8266**	**0.0122**	**0.0000**	**99.1312**

3.5 Building Construction including Offsite Connections - 2020

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0242	0.5518	0.7451	1.1400e-003		5.8000e-003	5.8000e-003		5.8000e-003	5.8000e-003	0.0000	98.8264	98.8264	0.0122	0.0000	99.1311
Total	**0.0242**	**0.5518**	**0.7451**	**1.1400e-003**		**5.8000e-003**	**5.8000e-003**		**5.8000e-003**	**5.8000e-003**	**0.0000**	**98.8264**	**98.8264**	**0.0122**	**0.0000**	**99.1311**

3.5 Building Construction including Offsite Connections - 2020

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.5 Building Construction including Offsite Connections - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5600e-003	0.0438	0.0537	9.0000e-005		2.1700e-003	2.1700e-003		2.1400e-003	2.1400e-003	0.0000	7.9217	7.9217	9.5000e-004	0.0000	7.9454
Total	**4.5600e-003**	**0.0438**	**0.0537**	**9.0000e-005**		**2.1700e-003**	**2.1700e-003**		**2.1400e-003**	**2.1400e-003**	**0.0000**	**7.9217**	**7.9217**	**9.5000e-004**	**0.0000**	**7.9454**

3.5 Building Construction including Offsite Connections - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9400e-003	0.0442	0.0597	9.0000e-005		4.6000e-004	4.6000e-004		4.6000e-004	4.6000e-004	0.0000	7.9217	7.9217	9.5000e-004	0.0000	7.9454
Total	**1.9400e-003**	**0.0442**	**0.0597**	**9.0000e-005**		**4.6000e-004**	**4.6000e-004**		**4.6000e-004**	**4.6000e-004**	**0.0000**	**7.9217**	**7.9217**	**9.5000e-004**	**0.0000**	**7.9454**

3.5 Building Construction including Offsite Connections - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.6 Crane Use to set Units - 2020

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	2.9800e-003	0.0354	0.0139	4.0000e-005		1.4600e-003	1.4600e-003		1.3400e-003	1.3400e-003	0.0000	3.3267	3.3267	1.0800e-003	0.0000	3.3536
Total	**2.9800e-003**	**0.0354**	**0.0139**	**4.0000e-005**		**1.4600e-003**	**1.4600e-003**		**1.3400e-003**	**1.3400e-003**	**0.0000**	**3.3267**	**3.3267**	**1.0800e-003**	**0.0000**	**3.3536**

3.6 Crane Use to set Units - 2020

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	9.3000e-004	0.0180	0.0202	4.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004	0.0000	3.3267	3.3267	1.0800e-003	0.0000	3.3536
Total	**9.3000e-004**	**0.0180**	**0.0202**	**4.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**	**0.0000**	**3.3267**	**3.3267**	**1.0800e-003**	**0.0000**	**3.3536**

3.6 Crane Use to set Units - 2020

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	7.6000e-004	3.3100e-003	8.6300e-003	3.0000e-005	2.5900e-003	2.0000e-005	2.6100e-003	6.9000e-004	2.0000e-005	7.2000e-004	0.0000	2.7234	2.7234	1.4000e-004	0.0000	2.7270
Unmitigated	7.6000e-004	3.3100e-003	8.6300e-003	3.0000e-005	2.5900e-003	2.0000e-005	2.6100e-003	6.9000e-004	2.0000e-005	7.2000e-004	0.0000	2.7234	2.7234	1.4000e-004	0.0000	2.7270

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	4.00	0.00	0.00	6,864	6,864
Total	4.00	0.00	0.00	6,864	6,864

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

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

5.0 Energy Detail

Historical Energy Use: N

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0942	0.0000	0.0000	0.0945
Unmitigated	0.0942	0.0000	0.0000	0.0945

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0.0365	0.0942	0.0000	0.0000	0.0945
Total		**0.0942**	**0.0000**	**0.0000**	**0.0945**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0.0365	0.0942	0.0000	0.0000	0.0945
Total		**0.0942**	**0.0000**	**0.0000**	**0.0945**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.2030	0.0120	0.0000	0.5029
Unmitigated	0.2030	0.0120	0.0000	0.5029

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	1	0.2030	0.0120	0.0000	0.5029
Total		**0.2030**	**0.0120**	**0.0000**	**0.5029**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	1	0.2030	0.0120	0.0000	0.5029
Total		**0.2030**	**0.0120**	**0.0000**	**0.5029**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT B

AERMOD - Unmitigated

```
1                     AERMOD PRIME - (DATED  18081)

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

 Run Began on  2/10/2019 at  9:54:27

** BREEZE AERMOD
** Trinity Consultants
** VERSION  8.1

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

SO STARTING
SO ELEVUNIT  METERS
SO LOCATION  MPPB5004  AREAPOLY  478222.1  3694262.1  0
** SRCDESCR  Grading Area Source
SO SRCPARAM  MPPB5004  8.44E-08  3  21  1
SO AREAVERT  MPPB5004  478222.1 3694262.1  478223.7 3694208.1  478228.8 3694199.5  478230.3
3694187.3
SO AREAVERT  MPPB5004  478209.4 3694153.7  478208.4 3694150.6  478156 3694150.6  478155
3694115
SO AREAVERT  MPPB5004  478149.4 3694115  478149.8 3693962.1  478214.4 3693962.9  478216
3694142.9
SO AREAVERT  MPPB5004  478216.7 3694147.1  478235.1 3694178.8  478237.7 3694187.8  478236
3694203.2
SO AREAVERT  MPPB5004  478230.9 3694211.3  478230.9 3694241.7  478230.9 3694263.8  478230.9
3694263.8
SO AREAVERT  MPPB5004  478222.1 3694262.1
SO SRCGROUP  ALL
SO FINISHED

RE STARTING
RE ELEVUNIT  METERS
RE GRIDCART MPPB5005 STA
** GRDDESCR  Gridded Receptor
RE GRIDCART MPPB5005 XYINC  477800  21  40.9  3694466.3  21  -42.3
RE GRIDCART MPPB5005 ELEV  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  2  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  3  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  4  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  5  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  7  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  8  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  9  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  10  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  11  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  12  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
```

```
RE GRIDCART MPPB5005 ELEV  13  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  14  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  15  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  16  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  17  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  18  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  19  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  20  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  21  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  2  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  3  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  4  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  5  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  7  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  8  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  9  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  10  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  11  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  12  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  13  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  14  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  15  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  16  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  17  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  18  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  19  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  20  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  21  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 END
RE DISCCART  478175.6  3694174.3  1.5  0
** SENSITIV
** RCPDESCR  R1
RE DISCCART  478099.7  3694207.3  1.5  0
** SENSITIV
** RCPDESCR  R2
RE DISCCART  478348.4  3694098.5  1.5  0
** SENSITIV
** RCPDESCR  R3
RE DISCCART  478339.3  3693996.8  1.5  0
** SENSITIV
** RCPDESCR  R4
RE FINISHED

ME STARTING
ME SURFFILE  "C:\Users\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.SFC"
** SURFFILE  "C:\Users\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.SFC"
ME PROFFILE  "C:\Users\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.PFL"
** PROFFILE  "C:\Users\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.PFL"
ME SURFDATA  53120 2012
ME UAIRDATA  3190 2012
ME SITEDATA  00001002 2012
ME PROFBASE  0  METERS
ME FINISHED
```

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

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


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

** PROJECTIONWKT
PROJCS["UTM_6326_Zone11",GEOGCS["WGS_84",DATUM["World_Geodetic_System_1984",SPHEROID["WGS_19
84",6378137,298.257223563],TOWGS84[0,0,0,0,0,0,0]],PRIMEM["Greenwich",0],UNIT["Degree",0.017
4532925199433]],PROJECTION["Universal_Transverse_Mercator"],PARAMETER["Zone",11],UNIT["Meter
",1,AUTHORITY["EPSG","9001"]]]
** PROJECTION  UTM
** DATUM  WGE
** UNITS  METER
** ZONE  11
** HEMISPHERE  N
** ORIGINLON  0
** ORIGINLAT  0
** PARALLEL1  0
** PARALLEL2  0
** AZIMUTH  0
** SCALEFACT  0
** FALSEEAST  0
** FALSENORTH  0

** POSTFMT  UNFORM
** TEMPLATE UserDefined
** AERMODEXE  AERMOD_BREEZE_18081_64.EXE
** AERMAPEXE  AERMAP_EPA_18081_64.EXE



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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            3 Warning Message(s)
 A Total of            0 Informational Message(s)


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

```
    ********   WARNING MESSAGES   ********
 ME W186     105       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
0.40
 MX W403     105       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA
Data
 MX W402     105       PFLCNV: Turbulence data being used with ADJ_U* w/o DFAULT
Option

 *********************************
 *** SETUP Finishes Successfully ***
 *********************************

 *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Unmitigated
                ***        02/10/19
 *** AERMET - VERSION  15181 ***   ***
               ***        09:54:27

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

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

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

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

 **Model Uses RURAL Dispersion Only.

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

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

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM10

 **Model Calculates ANNUAL Averages Only

 **This Run Includes:      1 Source(s);       1 Source Group(s); and     445 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
```

```
                and:      0 VOLUME source(s)
                and:      1 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with      0 line(s)


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

 **The AERMET Input Meteorological Data Version Date:  15181

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

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

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =     0.00 ;  Decay Coef. =
0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                                ;  Emission Rate
Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Unmitigated
                ***        02/10/19
 *** AERMET - VERSION  15181 ***   ***
               ***        09:54:27

                           PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  SigA Data


                                                *** AREAPOLY SOURCE DATA ***

              NUMBER EMISSION RATE   LOCATION OF AREA  BASE     RELEASE  NUMBER      INIT.
 URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC       X        Y      ELEV.    HEIGHT  OF VERTS.     SZ
 SOURCE  SCALAR VARY
     ID         CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS)            (METERS)
            BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -

 MPPB5004         0   0.84400E-07  478222.1 3694262.1     0.0     3.00      21         1.00
   NO
```

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	MPPB5004 ,

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

477800.0, 477840.9, 477881.8, 477922.7, 477963.6, 478004.5, 478045.4,
478086.3, 478127.2, 478168.1,
478209.0, 478249.9, 478290.8, 478331.7, 478372.6, 478413.5, 478454.4,
478495.3, 478536.2, 478577.1,
478618.0,

*** Y-COORDINATES OF GRID ***
(METERS)

3694466.3, 3694424.0, 3694381.7, 3694339.4, 3694297.1, 3694254.8, 3694212.5,
3694170.2, 3694127.9, 3694085.6,
3694043.3, 3694001.0, 3693958.7, 3693916.4, 3693874.1, 3693831.8, 3693789.5,
3693747.2, 3693704.9, 3693662.6,
3693620.3,

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)				
	477800.00	477840.90	477881.80	477922.70	477963.60
478004.50	478045.40	478086.30	478127.20		
3693620.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693662.60	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693704.90	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693747.20	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693789.50	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693831.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693874.10	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693916.40	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693958.70	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694001.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694043.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694085.60	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694127.90	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694170.20	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694212.50	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694254.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694297.10	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694339.40	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694381.70	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694424.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694466.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		

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

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)				
	478168.10	478209.00	478249.90	478290.80	478331.70
478372.60	478413.50	478454.40	478495.30		
3693620.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693662.60	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693704.90	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693747.20	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693789.50	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693831.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693874.10	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693916.40	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693958.70	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694001.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694043.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694085.60	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694127.90	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694170.20	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694212.50	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694254.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694297.10	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694339.40	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694381.70	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694424.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694466.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		

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

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)		
	478536.20	478577.10	478618.00
3693620.30	0.00	0.00	0.00
3693662.60	0.00	0.00	0.00
3693704.90	0.00	0.00	0.00
3693747.20	0.00	0.00	0.00
3693789.50	0.00	0.00	0.00
3693831.80	0.00	0.00	0.00
3693874.10	0.00	0.00	0.00
3693916.40	0.00	0.00	0.00
3693958.70	0.00	0.00	0.00
3694001.00	0.00	0.00	0.00
3694043.30	0.00	0.00	0.00
3694085.60	0.00	0.00	0.00
3694127.90	0.00	0.00	0.00
3694170.20	0.00	0.00	0.00
3694212.50	0.00	0.00	0.00
3694254.80	0.00	0.00	0.00
3694297.10	0.00	0.00	0.00
3694339.40	0.00	0.00	0.00
3694381.70	0.00	0.00	0.00
3694424.00	0.00	0.00	0.00
3694466.30	0.00	0.00	0.00

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

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)				
	477800.00	477840.90	477881.80	477922.70	477963.60
478004.50	478045.40	478086.30	478127.20		

```
  3693620.30 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693662.60 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693704.90 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693747.20 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693789.50 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693831.80 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693874.10 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693916.40 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693958.70 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694001.00 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694043.30 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694085.60 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694127.90 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694170.20 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694212.50 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694254.80 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694297.10 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694339.40 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694381.70 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694424.00 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694466.30 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
 *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Unmitigated
                ***       02/10/19
 *** AERMET - VERSION  15181 ***   ***
              ***       09:54:27

                          PAGE   9
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  SigA Data

                                *** NETWORK ID: MPPB5005 ;  NETWORK TYPE: GRIDCART ***

                                            * HILL HEIGHT SCALES IN METERS *
```

```
    Y-COORD  |                                                  X-COORD (METERS)
    (METERS) |     478168.10    478209.00    478249.90    478290.80    478331.70
478372.60    478413.50    478454.40    478495.30
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

  3693620.30 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693662.60 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693704.90 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693747.20 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693789.50 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693831.80 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693874.10 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693916.40 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693958.70 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694001.00 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694043.30 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694085.60 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694127.90 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694170.20 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694212.50 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694254.80 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694297.10 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694339.40 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694381.70 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694424.00 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694466.30 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
 *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Unmitigated
               ***        02/10/19
 *** AERMET - VERSION  15181 ***   ***
              ***        09:54:27

                          PAGE  10
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  SigA Data
```

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 478536.20	478577.10	478618.00
3693620.30	0.00	0.00	0.00
3693662.60	0.00	0.00	0.00
3693704.90	0.00	0.00	0.00
3693747.20	0.00	0.00	0.00
3693789.50	0.00	0.00	0.00
3693831.80	0.00	0.00	0.00
3693874.10	0.00	0.00	0.00
3693916.40	0.00	0.00	0.00
3693958.70	0.00	0.00	0.00
3694001.00	0.00	0.00	0.00
3694043.30	0.00	0.00	0.00
3694085.60	0.00	0.00	0.00
3694127.90	0.00	0.00	0.00
3694170.20	0.00	0.00	0.00
3694212.50	0.00	0.00	0.00
3694254.80	0.00	0.00	0.00
3694297.10	0.00	0.00	0.00
3694339.40	0.00	0.00	0.00
3694381.70	0.00	0.00	0.00
3694424.00	0.00	0.00	0.00
3694466.30	0.00	0.00	0.00

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

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

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

```
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1
1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1
```

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,

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

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

Surface file: C:\Users\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.SFC
Met Version: 15181
Profile file: C:\Users\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.PFL

Surface format: FREE

Profile format: FREE

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

Year: 2012 Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
12	01	01	1	01	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	51.	10.0	282.5	10.0
12	01	01	1	02	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	64.	10.0	281.9	10.0
12	01	01	1	03	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	31.	10.0	280.9	10.0
12	01	01	1	04	-2.9	0.056	-9.000	-9.000	-999.	32.	5.5	0.15	1.10	1.00	1.18	130.	10.0	280.4	10.0
12	01	01	1	05	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	47.	10.0	280.4	10.0
12	01	01	1	06	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	39.	10.0	279.8	10.0
12	01	01	1	07	-0.7	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00					

```
0.44   60.   10.0  279.2   10.0
 12 01 01   1 08   -0.5  0.029 -9.000 -9.000 -999.   12.      4.0  0.47   1.10   0.50
0.44   42.   10.0  280.4   10.0
 12 01 01   1 09   33.3  0.106  0.323  0.014   36.   83.     -3.2  0.47   1.10   0.30
0.44   44.   10.0  285.4   10.0
 12 01 01   1 10   85.9  0.121  0.634  0.011  106.  101.     -1.8  0.48   1.10   0.23
0.44  232.   10.0  291.4   10.0
 12 01 01   1 11  123.6  0.252  0.982  0.005  273.  303.    -11.5  0.48   1.10   0.21
1.34  242.   10.0  297.5   10.0
 12 01 01   1 12  141.2  0.255  1.253  0.005  496.  309.    -10.4  0.48   1.10   0.20
1.34  249.   10.0  299.8   10.0
 12 01 01   1 13  139.0  0.308  1.399  0.005  700.  410.    -18.6  0.48   1.10   0.20
1.78  244.   10.0  300.4   10.0
 12 01 01   1 14  118.4  0.303  1.510  0.005 1033.  401.    -20.9  0.48   1.10   0.21
1.78  241.   10.0  301.4   10.0
 12 01 01   1 15   79.3  0.291  1.390  0.005 1204.  377.    -27.6  0.48   1.10   0.24
1.78  260.   10.0  301.4   10.0
 12 01 01   1 16   24.5  0.162  0.951  0.005 1244.  167.    -15.4  0.51   1.10   0.34
0.89  292.   10.0  299.8   10.0
 12 01 01   1 17   -2.5  0.060 -9.000 -9.000 -999.   45.      7.5  0.51   1.10   0.61
0.89  282.   10.0  296.9   10.0
 12 01 01   1 18   -0.6  0.029 -9.000 -9.000 -999.   12.      3.4  0.47   1.10   1.00
0.44   10.   10.0  293.1   10.0
 12 01 01   1 19   -4.0  0.066 -9.000 -9.000 -999.   40.      6.3  0.11   1.10   1.00
1.48  329.   10.0  290.4   10.0
 12 01 01   1 20   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   65.   10.0  288.1   10.0
 12 01 01   1 21   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   61.   10.0  286.4   10.0
 12 01 01   1 22   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   33.   10.0  285.4   10.0
 12 01 01   1 23   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   50.   10.0  284.2   10.0
 12 01 01   1 24   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   42.   10.0  283.1   10.0


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

 F indicates top of profile (=1) or below (=0)
1 *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Unmitigated
                ***       02/10/19
 *** AERMET - VERSION  15181 ***   ***
               ***       09:54:27

                          PAGE  13
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  SigA Data

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   1 YEARS
FOR SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     MPPB5004    ,

                                  *** NETWORK ID: MPPB5005 ;  NETWORK TYPE: GRIDCART ***
```

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

Y-COORD (METERS)	X-COORD (METERS)				
	477800.00	477840.90	477881.80	477922.70	477963.60
478004.50	478045.40	478086.30	478127.20		
3693620.30	0.03818	0.03796	0.03727	0.03623	0.03484
0.03315	0.03147	0.03021	0.02946		
3693662.60	0.04447	0.04487	0.04459	0.04366	0.04217
0.04016	0.03791	0.03602	0.03483		
3693704.90	0.05180	0.05315	0.05373	0.05336	0.05201
0.04974	0.04683	0.04400	0.04206		
3693747.20	0.06055	0.06312	0.06503	0.06588	0.06534
0.06320	0.05963	0.05548	0.05222		
3693789.50	0.07109	0.07532	0.07914	0.08203	0.08337
0.08243	0.07874	0.07294	0.06735		
3693831.80	0.08324	0.08997	0.09675	0.10301	0.10788
0.11017	0.10830	0.10132	0.09181		
3693874.10	0.09587	0.10605	0.11728	0.12919	0.14083
0.15045	0.15519	0.15084	0.13606		
3693916.40	0.10740	0.12153	0.13822	0.15786	0.18049
0.20514	0.22861	0.24235	0.22958		
3693958.70	0.11561	0.13347	0.15556	0.18326	0.21847
0.26350	0.32059	0.38943	0.44896		
3694001.00	0.11813	0.13818	0.16378	0.19708	0.24135
0.30160	0.38525	0.50071	0.63559		
3694043.30	0.11428	0.13410	0.15976	0.19367	0.23952
0.30295	0.39252	0.51816	0.66453		
3694085.60	0.10468	0.12196	0.14412	0.17320	0.21257
0.26784	0.34844	0.46798	0.62136		
3694127.90	0.09070	0.10397	0.12058	0.14188	0.17002
0.20856	0.26358	0.34579	0.46571		
3694170.20	0.07499	0.08409	0.09508	0.10854	0.12524
0.14609	0.17195	0.20281	0.23227		
3694212.50	0.06007	0.06582	0.07245	0.08009	0.08881
0.09860	0.10931	0.12058	0.13103		
3694254.80	0.04733	0.05083	0.05470	0.05896	0.06356
0.06838	0.07324	0.07787	0.08191		
3694297.10	0.03741	0.03963	0.04201	0.04450	0.04691
0.04901	0.05061	0.05130	0.05024		
3694339.40	0.03014	0.03162	0.03310	0.03446	0.03549
0.03612	0.03631	0.03566	0.03371		
3694381.70	0.02480	0.02577	0.02661	0.02723	0.02755
0.02763	0.02743	0.02648	0.02468		
3694424.00	0.02076	0.02134	0.02176	0.02197	0.02200
0.02192	0.02157	0.02052	0.01904		
3694466.30	0.01760	0.01792	0.01808	0.01809	0.01801
0.01788	0.01743	0.01639	0.01524		

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

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS
FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MPPB5004 ,

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

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

Y-COORD (METERS)	X-COORD (METERS)									
	478168.10	478209.00	478249.90	478290.80	478331.70	478372.60	478413.50	478454.40	478495.30
3693620.30	0.02905	0.02882	0.02884	0.02897	0.02904	0.02900	0.02881	0.02849	0.02809
3693662.60	0.03425	0.03401	0.03407	0.03426	0.03434	0.03423	0.03392	0.03343	0.03275
3693704.90	0.04115	0.04090	0.04107	0.04134	0.04141	0.04117	0.04061	0.03972	0.03845
3693747.20	0.05068	0.05041	0.05078	0.05119	0.05119	0.05063	0.04944	0.04760	0.04522
3693789.50	0.06447	0.06419	0.06500	0.06563	0.06529	0.06369	0.06087	0.05714	0.05292
3693831.80	0.08585	0.08559	0.08746	0.08815	0.08608	0.08133	0.07496	0.06797	0.06106
3693874.10	0.12261	0.12255	0.12696	0.12497	0.11581	0.10344	0.09077	0.07909	0.06886
3693916.40	0.19773	0.19972	0.20459	0.18230	0.15339	0.12757	0.10631	0.08921	0.07555
3693958.70	0.42938	0.42079	0.34537	0.25328	0.19185	0.14947	0.11917	0.09694	0.08027
3694001.00	0.71696	0.69886	0.46938	0.30896	0.21915	0.16335	0.12638	0.10069	0.08216
3694043.30	0.74830	0.73029	0.49654	0.32286	0.22456	0.16473	0.12600	0.09960	0.08084
3694085.60	0.71713	0.69494	0.46245	0.29638	0.20684	0.15303	0.11793	0.09374	0.07640
3694127.90	0.57757	0.57465	0.36887	0.24237	0.17385	0.13158	0.10345	0.08367	0.06918
3694170.20	0.24665	0.26640	0.25492	0.18043	0.13473	0.10547	0.08545	0.07097	0.06003
3694212.50	0.14245	0.15314	0.17115	0.12440	0.09708	0.07965	0.06717	0.05768	0.05018
3694254.80	0.08865	0.09813	0.10890	0.07936	0.06627	0.05763	0.05091	0.04538	0.04073
3694297.10	0.04850	0.04702	0.04816	0.04756	0.04455	0.04124	0.03804	0.03509	0.03241
3694339.40	0.03192	0.03120	0.03137	0.03143	0.03104				

0.03013 0.02879 0.02726 0.02572
3694381.70 | 0.02344 0.02319 0.02336 0.02321 0.02307
0.02287 0.02237 0.02160 0.02069
3694424.00 | 0.01824 0.01823 0.01844 0.01825 0.01804
0.01800 0.01788 0.01752 0.01698
3694466.30 | 0.01473 0.01485 0.01507 0.01492 0.01465
0.01459 0.01461 0.01451 0.01423

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

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MPPB5004 ,

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

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

Y-COORD (METERS)	X-COORD (METERS)		
	478536.20	478577.10	478618.00
3693620.30	0.02757	0.02689	0.02602
3693662.60	0.03184	0.03068	0.02931
3693704.90	0.03683	0.03493	0.03290
3693747.20	0.04248	0.03957	0.03667
3693789.50	0.04856	0.04433	0.04037
3693831.80	0.05463	0.04884	0.04372
3693874.10	0.06013	0.05273	0.04648
3693916.40	0.06459	0.05573	0.04851
3693958.70	0.06749	0.05752	0.04961
3694001.00	0.06837	0.05784	0.04964
3694043.30	0.06705	0.05661	0.04851
3694085.60	0.06357	0.05382	0.04623
3694127.90	0.05821	0.04972	0.04301
3694170.20	0.05149	0.04466	0.03911
3694212.50	0.04409	0.03903	0.03476
3694254.80	0.03674	0.03326	0.03021
3694297.10	0.02999	0.02778	0.02576
3694339.40	0.02427	0.02291	0.02163
3694381.70	0.01977	0.01889	0.01806
3694424.00	0.01636	0.01575	0.01517
3694466.30	0.01381	0.01335	0.01290

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

INCLUDING SOURCE(S): MPPB5004 ,

*** SENSITIVE DISCRETE RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
478175.60	3694174.30	0.23670	478099.70	3694207.30	0.13034
478348.40	3694098.50	0.17304	478339.30	3693996.80	0.20332

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

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

NETWORK GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.74830 AT (478168.10, 3694043.30, 0.00, 0.00, 0.00)	GC	MPPB5005
	2ND HIGHEST VALUE IS	0.73029 AT (478209.00, 3694043.30, 0.00, 0.00, 0.00)	GC	MPPB5005
	3RD HIGHEST VALUE IS	0.71713 AT (478168.10, 3694085.60, 0.00, 0.00, 0.00)	GC	MPPB5005
	4TH HIGHEST VALUE IS	0.71696 AT (478168.10, 3694001.00, 0.00, 0.00, 0.00)	GC	MPPB5005
	5TH HIGHEST VALUE IS	0.69886 AT (478209.00, 3694001.00, 0.00, 0.00, 0.00)	GC	MPPB5005
	6TH HIGHEST VALUE IS	0.69494 AT (478209.00, 3694085.60, 0.00, 0.00, 0.00)	GC	MPPB5005
	7TH HIGHEST VALUE IS	0.66453 AT (478127.20, 3694043.30, 0.00,		

```
0.00,    0.00)  GC  MPPB5005
          8TH HIGHEST VALUE IS       0.63559 AT (  478127.20,  3694001.00,     0.00,
0.00,    0.00)  GC  MPPB5005
          9TH HIGHEST VALUE IS       0.62136 AT (  478127.20,  3694085.60,     0.00,
0.00,    0.00)  GC  MPPB5005
         10TH HIGHEST VALUE IS       0.57757 AT (  478168.10,  3694127.90,     0.00,
0.00,    0.00)  GC  MPPB5005


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↟ *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Unmitigated
               ***        02/10/19
 *** AERMET - VERSION  15181 ***   ***
              ***        09:54:27

                         PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  SigA Data

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            3 Warning Message(s)
 A Total of          378 Informational Message(s)

 A Total of         8784 Hours Were Processed

 A Total of          250 Calm Hours Identified

 A Total of          128 Missing Hours Identified (  1.46 Percent)


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


    ********   WARNING MESSAGES   ********
 ME W186     105       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
0.40
 MX W403     105       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA
Data
 MX W402     105       PFLCNV: Turbulence data being used with ADJ_U* w/o DFAULT
Option

    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
```

ATTACHMENT C

AERMOD - Mitigated

```
1                     AERMOD PRIME - (DATED  18081)

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

 Run Began on  2/10/2019 at  9:54:24

** BREEZE AERMOD
** Trinity Consultants
** VERSION  8.1

CO STARTING
CO TITLEONE  PM10 Exhaust Mitigated Tier3
CO MODELOPT  DFAULT  CONC  NODRYDPLT  NOWETDPLT
CO RUNORNOT  RUN
CO AVERTIME  ANNUAL
CO POLLUTID  PM10
CO FINISHED

SO STARTING
SO ELEVUNIT  METERS
SO LOCATION  MPPB5004  AREAPOLY  478222.1  3694262.1  0
** SRCDESCR  Grading Area Source
SO SRCPARAM  MPPB5004  1.32E-08  3  21  1
SO AREAVERT  MPPB5004  478222.1 3694262.1  478223.7 3694208.1  478228.8 3694199.5  478230.3
3694187.3
SO AREAVERT  MPPB5004  478209.4 3694153.7  478208.4 3694150.6  478156 3694150.6  478155
3694115
SO AREAVERT  MPPB5004  478149.4 3694115  478149.8 3693962.1  478214.4 3693962.9  478216
3694142.9
SO AREAVERT  MPPB5004  478216.7 3694147.1  478235.1 3694178.8  478237.7 3694187.8  478236
3694203.2
SO AREAVERT  MPPB5004  478230.9 3694211.3  478230.9 3694241.7  478230.9 3694263.8  478230.9
3694263.8
SO AREAVERT  MPPB5004  478222.1 3694262.1
SO SRCGROUP  ALL
SO FINISHED

RE STARTING
RE ELEVUNIT  METERS
RE GRIDCART MPPB5005 STA
** GRDDESCR  Gridded Receptor
RE GRIDCART MPPB5005 XYINC  477800  21  40.9  3694466.3  21  -42.3
RE GRIDCART MPPB5005 ELEV  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  2  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  3  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  4  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  5  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  7  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  8  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  9  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  10  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  11  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  12  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
```

```
RE GRIDCART MPPB5005 ELEV  13  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  14  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  15  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  16  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  17  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  18  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  19  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  20  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 ELEV  21  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  1  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  2  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  3  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  4  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  5  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  6  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  7  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  8  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  9  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  10  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  11  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  12  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  13  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  14  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  15  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  16  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  17  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  18  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  19  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  20  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 HILL  21  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0
RE GRIDCART MPPB5005 END
RE DISCCART  478175.6  3694174.3  1.5  0
** SENSITIV
** RCPDESCR  R1
RE DISCCART  478099.7  3694207.3  1.5  0
** SENSITIV
** RCPDESCR  R2
RE DISCCART  478348.4  3694098.5  1.5  0
** SENSITIV
** RCPDESCR  R3
RE DISCCART  478339.3  3693996.8  1.5  0
** SENSITIV
** RCPDESCR  R4
RE FINISHED

ME STARTING
ME SURFFILE  "C:\USERS\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.SFC"
** SURFFILE  "C:\USERS\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.SFC"
ME PROFFILE  "C:\USERS\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.PFL"
** PROFFILE  "C:\USERS\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.PFL"
ME SURFDATA  53120 2012
ME UAIRDATA  3190 2012
ME SITEDATA  00001002 2012
ME PROFBASE  0  METERS
ME FINISHED
```

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

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


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

** PROJECTIONWKT
PROJCS["UTM_6326_Zone11",GEOGCS["WGS_84",DATUM["World_Geodetic_System_1984",SPHEROID["WGS_19
84",6378137,298.257223563],TOWGS84[0,0,0,0,0,0,0]],PRIMEM["Greenwich",0],UNIT["Degree",0.017
4532925199433]],PROJECTION["Universal_Transverse_Mercator"],PARAMETER["Zone",11],UNIT["Meter
",1,AUTHORITY["EPSG","9001"]]]
** PROJECTION  UTM
** DATUM  WGE
** UNITS  METER
** ZONE  11
** HEMISPHERE  N
** ORIGINLON  0
** ORIGINLAT  0
** PARALLEL1  0
** PARALLEL2  0
** AZIMUTH  0
** SCALEFACT  0
** FALSEEAST  0
** FALSENORTH  0

** POSTFMT  UNFORM
** TEMPLATE UserDefined
** AERMODEXE  AERMOD_BREEZE_18081_64.EXE
** AERMAPEXE  AERMAP_EPA_18081_64.EXE



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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            3 Warning Message(s)
 A Total of            0 Informational Message(s)


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

```
    ********   WARNING MESSAGES   ********
 ME W186     105       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
0.40
 MX W403     105       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA
Data
 MX W402     105       PFLCNV: Turbulence data being used with ADJ_U* w/o DFAULT
Option

 *********************************
 *** SETUP Finishes Successfully ***
 *********************************

 *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Mitigated Tier3
                ***        02/10/19
 *** AERMET - VERSION  15181 ***   ***
               ***        09:54:24

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

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - -

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

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

 **Model Uses RURAL Dispersion Only.

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

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

 **Model Assumes No FLAGPOLE Receptor Heights.

 **The User Specified a Pollutant Type of:  PM10

 **Model Calculates ANNUAL Averages Only

 **This Run Includes:      1 Source(s);       1 Source Group(s); and     445 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
```

```
                and:      0 VOLUME source(s)
                and:      1 AREA type source(s)
                and:      0 LINE source(s)
                and:      0 OPENPIT source(s)
                and:      0 BUOYANT LINE source(s) with      0 line(s)


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

 **The AERMET Input Meteorological Data Version Date:  15181

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

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

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =     0.00 ;  Decay Coef. =
0.000     ;  Rot. Angle =     0.0
                 Emission Units = GRAMS/SEC                              ;  Emission Rate
Unit Factor =   0.10000E+07
                 Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.6 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Mitigated Tier3
                ***        02/10/19
 *** AERMET - VERSION  15181 ***   ***
               ***        09:54:24

                           PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  SigA Data


                                                *** AREAPOLY SOURCE DATA ***

              NUMBER EMISSION RATE   LOCATION OF AREA  BASE     RELEASE  NUMBER      INIT.
 URBAN  EMISSION RATE
   SOURCE       PART.  (GRAMS/SEC       X        Y      ELEV.    HEIGHT  OF VERTS.     SZ
 SOURCE  SCALAR VARY
     ID         CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS)            (METERS)
            BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
 - - - - - - - - - - - - - - - - - -

 MPPB5004         0   0.13200E-07  478222.1 3694262.1     0.0     3.00      21         1.00
   NO
```

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	MPPB5004 ,

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

477800.0, 477840.9, 477881.8, 477922.7, 477963.6, 478004.5, 478045.4,
478086.3, 478127.2, 478168.1,
478209.0, 478249.9, 478290.8, 478331.7, 478372.6, 478413.5, 478454.4,
478495.3, 478536.2, 478577.1,
478618.0,

*** Y-COORDINATES OF GRID ***
(METERS)

3694466.3, 3694424.0, 3694381.7, 3694339.4, 3694297.1, 3694254.8, 3694212.5,
3694170.2, 3694127.9, 3694085.6,
3694043.3, 3694001.0, 3693958.7, 3693916.4, 3693874.1, 3693831.8, 3693789.5,
3693747.2, 3693704.9, 3693662.6,
3693620.3,

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)				
	477800.00	477840.90	477881.80	477922.70	477963.60
478004.50	478045.40	478086.30	478127.20		
3693620.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693662.60	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693704.90	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693747.20	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693789.50	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693831.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693874.10	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693916.40	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693958.70	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694001.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694043.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694085.60	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694127.90	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694170.20	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694212.50	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694254.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694297.10	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694339.40	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694381.70	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694424.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694466.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		

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

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)				
	478168.10	478209.00	478249.90	478290.80	478331.70
478372.60	478413.50	478454.40	478495.30		
3693620.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693662.60	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693704.90	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693747.20	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693789.50	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693831.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693874.10	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693916.40	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3693958.70	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694001.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694043.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694085.60	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694127.90	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694170.20	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694212.50	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694254.80	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694297.10	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694339.40	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694381.70	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694424.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		
3694466.30	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00		

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)		
	478536.20	478577.10	478618.00
3693620.30	0.00	0.00	0.00
3693662.60	0.00	0.00	0.00
3693704.90	0.00	0.00	0.00
3693747.20	0.00	0.00	0.00
3693789.50	0.00	0.00	0.00
3693831.80	0.00	0.00	0.00
3693874.10	0.00	0.00	0.00
3693916.40	0.00	0.00	0.00
3693958.70	0.00	0.00	0.00
3694001.00	0.00	0.00	0.00
3694043.30	0.00	0.00	0.00
3694085.60	0.00	0.00	0.00
3694127.90	0.00	0.00	0.00
3694170.20	0.00	0.00	0.00
3694212.50	0.00	0.00	0.00
3694254.80	0.00	0.00	0.00
3694297.10	0.00	0.00	0.00
3694339.40	0.00	0.00	0.00
3694381.70	0.00	0.00	0.00
3694424.00	0.00	0.00	0.00
3694466.30	0.00	0.00	0.00

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)				
	477800.00	477840.90	477881.80	477922.70	477963.60
478004.50	478045.40	478086.30	478127.20		

3693620.30	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3693662.60	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3693704.90	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3693747.20	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3693789.50	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3693831.80	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3693874.10	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3693916.40	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3693958.70	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694001.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694043.30	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694085.60	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694127.90	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694170.20	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694212.50	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694254.80	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694297.10	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694339.40	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694381.70	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694424.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			
3694466.30	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00			

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

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

```
    Y-COORD  |                                                X-COORD (METERS)
    (METERS) |     478168.10    478209.00    478249.90    478290.80    478331.70
478372.60    478413.50    478454.40    478495.30
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - -

  3693620.30 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693662.60 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693704.90 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693747.20 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693789.50 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693831.80 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693874.10 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693916.40 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3693958.70 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694001.00 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694043.30 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694085.60 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694127.90 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694170.20 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694212.50 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694254.80 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694297.10 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694339.40 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694381.70 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694424.00 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
  3694466.30 |          0.00         0.00         0.00         0.00         0.00
0.00         0.00         0.00         0.00
 *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Mitigated Tier3
               ***        02/10/19
 *** AERMET - VERSION  15181 ***   ***
              ***        09:54:24

                          PAGE  10
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  SigA Data
```

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 478536.20	478577.10	478618.00
3693620.30	0.00	0.00	0.00
3693662.60	0.00	0.00	0.00
3693704.90	0.00	0.00	0.00
3693747.20	0.00	0.00	0.00
3693789.50	0.00	0.00	0.00
3693831.80	0.00	0.00	0.00
3693874.10	0.00	0.00	0.00
3693916.40	0.00	0.00	0.00
3693958.70	0.00	0.00	0.00
3694001.00	0.00	0.00	0.00
3694043.30	0.00	0.00	0.00
3694085.60	0.00	0.00	0.00
3694127.90	0.00	0.00	0.00
3694170.20	0.00	0.00	0.00
3694212.50	0.00	0.00	0.00
3694254.80	0.00	0.00	0.00
3694297.10	0.00	0.00	0.00
3694339.40	0.00	0.00	0.00
3694381.70	0.00	0.00	0.00
3694424.00	0.00	0.00	0.00
3694466.30	0.00	0.00	0.00

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***

(1=YES; 0=NO)

```
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1
1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1
1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1
1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1
1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1
1 1 1   1 1 1 1 1 1 1 1 1 1
          1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1
1 1 1   1 1 1 1 1 1 1 1 1 1
```

```
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1
1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1

               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  18081 ***   ***  PM10 Exhaust Mitigated Tier3
                ***        02/10/19
 *** AERMET - VERSION  15181 ***   ***
               ***        09:54:24

                           PAGE  12
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  SigA Data

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

   Surface file:   C:\USERS\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.SFC
         Met Version:  15181
   Profile file:   C:\USERS\XEONRT\AMAZON~1\LDN\METDAT~1\ESCOND~1\ESCONDIDO-2012-V15181.PFL

   Surface format: FREE

   Profile format: FREE

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

                  Year:   2012                                      Year:   2012

 First 24 hours of scalar data
 YR MO DY JDY HR     H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF
WS   WD     HT  REF TA     HT
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - -
 12 01 01   1 01   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   51.   10.0  282.5   10.0
 12 01 01   1 02   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   64.   10.0  281.9   10.0
 12 01 01   1 03   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   31.   10.0  280.9   10.0
 12 01 01   1 04   -2.9  0.056 -9.000 -9.000 -999.   32.      5.5  0.15   1.10   1.00
1.18  130.   10.0  280.4   10.0
 12 01 01   1 05   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   47.   10.0  280.4   10.0
 12 01 01   1 06   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   39.   10.0  279.8   10.0
 12 01 01   1 07   -0.7  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
```

```
0.44   60.   10.0  279.2   10.0
 12 01 01   1 08   -0.5  0.029 -9.000 -9.000 -999.   12.      4.0  0.47   1.10   0.50
0.44   42.   10.0  280.4   10.0
 12 01 01   1 09   33.3  0.106  0.323  0.014   36.   83.     -3.2  0.47   1.10   0.30
0.44   44.   10.0  285.4   10.0
 12 01 01   1 10   85.9  0.121  0.634  0.011  106.  101.     -1.8  0.48   1.10   0.23
0.44  232.   10.0  291.4   10.0
 12 01 01   1 11  123.6  0.252  0.982  0.005  273.  303.    -11.5  0.48   1.10   0.21
1.34  242.   10.0  297.5   10.0
 12 01 01   1 12  141.2  0.255  1.253  0.005  496.  309.    -10.4  0.48   1.10   0.20
1.34  249.   10.0  299.8   10.0
 12 01 01   1 13  139.0  0.308  1.399  0.005  700.  410.    -18.6  0.48   1.10   0.20
1.78  244.   10.0  300.4   10.0
 12 01 01   1 14  118.4  0.303  1.510  0.005 1033.  401.    -20.9  0.48   1.10   0.21
1.78  241.   10.0  301.4   10.0
 12 01 01   1 15   79.3  0.291  1.390  0.005 1204.  377.    -27.6  0.48   1.10   0.24
1.78  260.   10.0  301.4   10.0
 12 01 01   1 16   24.5  0.162  0.951  0.005 1244.  167.    -15.4  0.51   1.10   0.34
0.89  292.   10.0  299.8   10.0
 12 01 01   1 17   -2.5  0.060 -9.000 -9.000 -999.   45.      7.5  0.51   1.10   0.61
0.89  282.   10.0  296.9   10.0
 12 01 01   1 18   -0.6  0.029 -9.000 -9.000 -999.   12.      3.4  0.47   1.10   1.00
0.44   10.   10.0  293.1   10.0
 12 01 01   1 19   -4.0  0.066 -9.000 -9.000 -999.   40.      6.3  0.11   1.10   1.00
1.48  329.   10.0  290.4   10.0
 12 01 01   1 20   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   65.   10.0  288.1   10.0
 12 01 01   1 21   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   61.   10.0  286.4   10.0
 12 01 01   1 22   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   33.   10.0  285.4   10.0
 12 01 01   1 23   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   50.   10.0  284.2   10.0
 12 01 01   1 24   -0.6  0.029 -9.000 -9.000 -999.   12.      3.3  0.47   1.10   1.00
0.44   42.   10.0  283.1   10.0


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

 F indicates top of profile (=1) or below (=0)
1 *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Mitigated Tier3
                ***       02/10/19
 *** AERMET - VERSION  15181 ***   ***
               ***       09:54:24

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

                   *** THE ANNUAL AVERAGE CONCENTRATION    VALUES AVERAGED OVER   1 YEARS
FOR SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     MPPB5004    ,

                                  *** NETWORK ID: MPPB5005 ;  NETWORK TYPE: GRIDCART ***
```

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

Y-COORD (METERS)	X-COORD (METERS)				
	477800.00	477840.90	477881.80	477922.70	477963.60
478004.50	478045.40	478086.30	478127.20		
3693620.30	0.00597	0.00594	0.00583	0.00567	0.00545
0.00518	0.00492	0.00472	0.00461		
3693662.60	0.00695	0.00702	0.00697	0.00683	0.00660
0.00628	0.00593	0.00563	0.00545		
3693704.90	0.00810	0.00831	0.00840	0.00834	0.00813
0.00778	0.00732	0.00688	0.00658		
3693747.20	0.00947	0.00987	0.01017	0.01030	0.01022
0.00988	0.00933	0.00868	0.00817		
3693789.50	0.01112	0.01178	0.01238	0.01283	0.01304
0.01289	0.01232	0.01141	0.01053		
3693831.80	0.01302	0.01407	0.01513	0.01611	0.01687
0.01723	0.01694	0.01585	0.01436		
3693874.10	0.01499	0.01659	0.01834	0.02021	0.02202
0.02353	0.02427	0.02359	0.02128		
3693916.40	0.01680	0.01901	0.02162	0.02469	0.02823
0.03208	0.03575	0.03790	0.03591		
3693958.70	0.01808	0.02087	0.02433	0.02866	0.03417
0.04121	0.05014	0.06091	0.07022		
3694001.00	0.01848	0.02161	0.02562	0.03082	0.03775
0.04717	0.06025	0.07831	0.09941		
3694043.30	0.01787	0.02097	0.02499	0.03029	0.03746
0.04738	0.06139	0.08104	0.10393		
3694085.60	0.01637	0.01907	0.02254	0.02709	0.03325
0.04189	0.05450	0.07319	0.09718		
3694127.90	0.01418	0.01626	0.01886	0.02219	0.02659
0.03262	0.04122	0.05408	0.07284		
3694170.20	0.01173	0.01315	0.01487	0.01698	0.01959
0.02285	0.02689	0.03172	0.03633		
3694212.50	0.00939	0.01029	0.01133	0.01253	0.01389
0.01542	0.01710	0.01886	0.02049		
3694254.80	0.00740	0.00795	0.00856	0.00922	0.00994
0.01069	0.01145	0.01218	0.01281		
3694297.10	0.00585	0.00620	0.00657	0.00696	0.00734
0.00767	0.00791	0.00802	0.00786		
3694339.40	0.00471	0.00495	0.00518	0.00539	0.00555
0.00565	0.00568	0.00558	0.00527		
3694381.70	0.00388	0.00403	0.00416	0.00426	0.00431
0.00432	0.00429	0.00414	0.00386		
3694424.00	0.00325	0.00334	0.00340	0.00344	0.00344
0.00343	0.00337	0.00321	0.00298		
3694466.30	0.00275	0.00280	0.00283	0.00283	0.00282
0.00280	0.00273	0.00256	0.00238		

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

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS
FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MPPB5004 ,

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

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

Y-COORD (METERS)	X-COORD (METERS)									
	478168.10	478209.00	478249.90	478290.80	478331.70	478372.60	478413.50	478454.40	478495.30
3693620.30	0.00454	0.00451	0.00451	0.00453	0.00454	0.00454	0.00451	0.00446	0.00439
3693662.60	0.00536	0.00532	0.00533	0.00536	0.00537	0.00535	0.00530	0.00523	0.00512
3693704.90	0.00644	0.00640	0.00642	0.00647	0.00648	0.00644	0.00635	0.00621	0.00601
3693747.20	0.00793	0.00788	0.00794	0.00801	0.00801	0.00792	0.00773	0.00744	0.00707
3693789.50	0.01008	0.01004	0.01017	0.01026	0.01021	0.00996	0.00952	0.00894	0.00828
3693831.80	0.01343	0.01339	0.01368	0.01379	0.01346	0.01272	0.01172	0.01063	0.00955
3693874.10	0.01918	0.01917	0.01986	0.01954	0.01811	0.01618	0.01420	0.01237	0.01077
3693916.40	0.03092	0.03124	0.03200	0.02851	0.02399	0.01995	0.01663	0.01395	0.01182
3693958.70	0.06715	0.06581	0.05401	0.03961	0.03000	0.02338	0.01864	0.01516	0.01255
3694001.00	0.11213	0.10930	0.07341	0.04832	0.03427	0.02555	0.01977	0.01575	0.01285
3694043.30	0.11703	0.11422	0.07766	0.05049	0.03512	0.02576	0.01971	0.01558	0.01264
3694085.60	0.11216	0.10869	0.07233	0.04635	0.03235	0.02393	0.01844	0.01466	0.01195
3694127.90	0.09033	0.08987	0.05769	0.03791	0.02719	0.02058	0.01618	0.01309	0.01082
3694170.20	0.03858	0.04166	0.03987	0.02822	0.02107	0.01650	0.01336	0.01110	0.00939
3694212.50	0.02228	0.02395	0.02677	0.01946	0.01518	0.01246	0.01051	0.00902	0.00785
3694254.80	0.01386	0.01535	0.01703	0.01241	0.01036	0.00901	0.00796	0.00710	0.00637
3694297.10	0.00758	0.00735	0.00753	0.00744	0.00697	0.00645	0.00595	0.00549	0.00507
3694339.40	0.00499	0.00488	0.00491	0.00492	0.00485				

0.00471 0.00450 0.00426 0.00402
3694381.70 | 0.00367 0.00363 0.00365 0.00363 0.00361
0.00358 0.00350 0.00338 0.00324
3694424.00 | 0.00285 0.00285 0.00288 0.00285 0.00282
0.00282 0.00280 0.00274 0.00266
3694466.30 | 0.00230 0.00232 0.00236 0.00233 0.00229
0.00228 0.00228 0.00227 0.00222

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

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS
FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): MPPB5004 ,

*** NETWORK ID: MPPB5005 ; NETWORK TYPE: GRIDCART ***

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

Y-COORD (METERS)	X-COORD (METERS)		
	478536.20	478577.10	478618.00
3693620.30	0.00431	0.00421	0.00407
3693662.60	0.00498	0.00480	0.00458
3693704.90	0.00576	0.00546	0.00515
3693747.20	0.00664	0.00619	0.00574
3693789.50	0.00760	0.00693	0.00631
3693831.80	0.00854	0.00764	0.00684
3693874.10	0.00940	0.00825	0.00727
3693916.40	0.01010	0.00872	0.00759
3693958.70	0.01056	0.00900	0.00776
3694001.00	0.01069	0.00905	0.00776
3694043.30	0.01049	0.00885	0.00759
3694085.60	0.00994	0.00842	0.00723
3694127.90	0.00910	0.00778	0.00673
3694170.20	0.00805	0.00699	0.00612
3694212.50	0.00690	0.00610	0.00544
3694254.80	0.00575	0.00520	0.00473
3694297.10	0.00469	0.00434	0.00403
3694339.40	0.00380	0.00358	0.00338
3694381.70	0.00309	0.00295	0.00283
3694424.00	0.00256	0.00246	0.00237
3694466.30	0.00216	0.00209	0.00202

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

INCLUDING SOURCE(S): MPPB5004 ,

*** SENSITIVE DISCRETE RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
478175.60	3694174.30	0.03702	478099.70	3694207.30	0.02039
478348.40	3694098.50	0.02706	478339.30	3693996.80	0.03180

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

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

NETWORK GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
ALL	1ST HIGHEST VALUE IS	0.11703 AT (478168.10, 3694043.30, 0.00, 0.00, 0.00)	GC	MPPB5005
	2ND HIGHEST VALUE IS	0.11422 AT (478209.00, 3694043.30, 0.00, 0.00, 0.00)	GC	MPPB5005
	3RD HIGHEST VALUE IS	0.11216 AT (478168.10, 3694085.60, 0.00, 0.00, 0.00)	GC	MPPB5005
	4TH HIGHEST VALUE IS	0.11213 AT (478168.10, 3694001.00, 0.00, 0.00, 0.00)	GC	MPPB5005
	5TH HIGHEST VALUE IS	0.10930 AT (478209.00, 3694001.00, 0.00, 0.00, 0.00)	GC	MPPB5005
	6TH HIGHEST VALUE IS	0.10869 AT (478209.00, 3694085.60, 0.00, 0.00, 0.00)	GC	MPPB5005
	7TH HIGHEST VALUE IS	0.10393 AT (478127.20, 3694043.30, 0.00,		

```
0.00,    0.00)  GC  MPPB5005
          8TH HIGHEST VALUE IS       0.09941 AT (  478127.20,  3694001.00,     0.00,
0.00,    0.00)  GC  MPPB5005
          9TH HIGHEST VALUE IS       0.09718 AT (  478127.20,  3694085.60,     0.00,
0.00,    0.00)  GC  MPPB5005
         10TH HIGHEST VALUE IS       0.09033 AT (  478168.10,  3694127.90,     0.00,
0.00,    0.00)  GC  MPPB5005


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↟ *** AERMOD - VERSION  18081 ***   ***  PM10 Exhaust Mitigated Tier3
               ***        02/10/19
 *** AERMET - VERSION  15181 ***   ***
              ***        09:54:24

                          PAGE  18
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  SigA Data

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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            3 Warning Message(s)
 A Total of          378 Informational Message(s)

 A Total of         8784 Hours Were Processed

 A Total of          250 Calm Hours Identified

 A Total of          128 Missing Hours Identified (  1.46 Percent)


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


    ********   WARNING MESSAGES   ********
 ME W186     105       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
0.40
 MX W403     105       PFLCNV: Turbulence data is being used w/o ADJ_U* option       SigA
Data
 MX W402     105       PFLCNV: Turbulence data being used with ADJ_U* w/o DFAULT
Option

    ***********************************
    *** AERMOD Finishes Successfully ***
    ***********************************
```

ATTACHMENT D

Health Risk Calculations - Construction Unmitigated and Mitigated

Air Quality Health Risk Calculations (Worst-Case)
AES Battery Storage Project Unmitigated

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	**0.04835**
	Construction Start	**10/29/2019**
	Construction Complete	**1/29/2021**
	Days	**458**
	Construction Emission per day (lb/day)	**0.211135371**
	Annual Duration (Days)	**365**
	Annualized Emission Rate (Grams/Second)	**0.001106994**
	Project Site Size (Acres)	**3.24**
	Project Site Size (meters^2)	**13111.81481**
	Length of Smalles Side (meters)	**114.506833**
Used as an input to AERMOD	Emission Rate over Grading Area(g/s-m^2)	**8.44E-08**
From AERMOD	Concentration Annual (Ug/M^3)	**0.04347**

	Days	Days to years					
Duration	458	1.254794521					
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70	
Cair (annual) - From F15	0.237	0.237	0.237	0.237	0.237	0.237	
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	0.00008213	0.00024800	0.00019589	0.00016950	0.00007622	0.00006598	
Construction Days	458	1.254794521					
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1	
Age Sensitivity Factor	10	10	3	3	1	1	
ED	0.25	1.254794521	1.254794521	1.254794521	1.254794521	1.254794521	
AT	70	70	70	70	70	70	
FAH	0.85	0.85	0.72	0.72	0.73	0.73	
Risk for Each Age Group	2.74271E-06	4.15654E-05	8.34341E-06	7.21933E-06	1.09712E-06	9.49746E-07	
Risk per million Exposed	2.742712971	41.56542844	8.343412973	7.21932946	1.097120942	0.949746487	
Cancer Risk Per Million 9-years	52.65						
Cancer Risk Per Million 30-years	52.62						
Cancer Risk Per Million 70-years	**52.48**						

Air Quality Health Risk Calculations (Worst-Case)
AES Battery Storage Project Mitigated

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	**0.00754**
	Construction Start	**10/29/2019**
	Construction Complete	**1/29/2021**
	Days	**458**
	Construction Emission per day (lb/day)	**0.032925764**
	Annual Duration (Days)	**365**
	Annualized Emission Rate (Grams/Second)	**0.000172632**
	Project Site Size (Acres)	**3.24**
	Project Site Size (meters^2)	**13111.81481**
	Length of Smalles Side (meters)	**114.506833**
Used as an input to AERMOD	Emission Rate over Grading Area(g/s-m^2)	**1.32E-08**
From AERMOD	Concentration Annual (Ug/M^3)	**0.04347**

	Days	Days to years					
Duration	458	1.254794521					
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70	
Cair (annual) - From F15	0.037	0.037	0.037	0.037	0.037	0.037	
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	0.00001282	0.00003872	0.00003058	0.00002646	0.00001190	0.00001030	
Construction Days	458	1.254794521					
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1	
Age Sensitivity Factor	10	10	3	3	1	1	
ED	0.25	1.254794521	1.254794521	1.254794521	1.254794521	1.254794521	
AT	70	70	70	70	70	70	
FAH	0.85	0.85	0.72	0.72	0.73	0.73	
Risk for Each Age Group	4.28187E-07	6.48912E-06	1.30256E-06	1.12707E-06	1.7128E-07	1.48273E-07	
Risk per million Exposed	0.428187257	6.48911752	1.302558143	1.127068312	0.171280485	0.148272658	
Cancer Risk Per Million 9-years	8.22						
Cancer Risk Per Million 30-years	8.22						
Cancer Risk Per Million 70-years	**8.19**						