AIR QUALITY ASSESSMENT

RUGGED SOLAR PROJECT
PDS2017-MUP-12-007W1, PDS2017-MUP-12-007TE
PDS2017-ER-12-21-003A, PDS2017-ER-12-21-003B

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EXECUTIVE SUMMARY

This air quality impact study has been completed to determine the air quality impacts associated with the development of the proposed Modified Rugged Solar project (Modified Project) development located on nine parcels totaling approximately 765 gross acres of which roughly 391.2 acres would require grading. More specifically, the applicants are seeking an extension of and modification to Major Use Permit (PDS2017-MUP-12-007), which was approved by the County Board of Supervisors in 2015. The Rugged Solar Project (Approved Project) is one of four individual solar energy projects analyzed in the Soitec Solar Development Program Environmental Impact Report (PEIR), certified by the County Board of Supervisors in 2015. The Project is located in the unincorporated community of Boulevard in the eastern portion of San Diego County, CA. The Modified Project proposes a construction start date in 2022 (beginning with grading activities) with full build out later that year. The first full year of operations is expected in 2023.

The purpose of this analysis is to evaluate the potential environmental impacts associated with the proposed Modified Project's air quality emissions. This report does not provide a comparison between the Approved Project but instead provides estimated air quality emissions associated with the Modified Project. It should be noted however, all previously approved mitigation measures or Project Design Features (PDF) within the Approved Project's 2015 PEIR will remain as conditions or approval and are incorporated within this analysis. Based on review of the PEIR the following PDF applies to this Project.

PDF-AQ-1:

The applicant will apply water three times per day or as necessary depending on weather conditions to suppress fugitive dust during grubbing, clearing, grading, trenching, and soil compaction and/or apply a nontoxic soil binding agent to help with soil stabilization during construction. These measures will be applied to all active construction areas, unpaved access roads, parking areas, and staging areas as necessary.

- Sweepers and water trucks will be used to control dust and debris at public street access points.
- Internal fire access roadways will be stabilized by paving, application of an aggregate base material (such as disintegrated granite), or chip sealing after rough grading.
- Exposed stockpiles (e.g., dirt, sand) will be covered and/or watered or stabilized with nontoxic soil binders, tarps, fencing or other suppression methods as needed to control emissions.
- Traffic speeds on unpaved roads will be limited to 15 miles per hour (mph).
- All haul and dump trucks entering or leaving the site with soil or fill material will maintain at least 2 feet of freeboard, or cover loads of all haul and dump trucks securely.

- Disturbed areas will be covered with a nontoxic soil binding agent (Such as EP&A's Envirotac II and Rhinosnot Dust Control, Erosion Control and Soil Stabilization).

Based on the revised Project Description, the Project would also incorporate an additional PDF to include Tier 4 equipment and is identified below:

PDF-AQ-2:

- *The Project would use 100% Tier 4 construction equipment as defined by the United States (U.S.) Environmental Protection Agency (EPA)/ California Air Resources Board (CARB)-certified construction equipment. The Project applicant has confirmed commitment to this feature. Project grading and building plans shall include a note stating, "Construction activities shall require all equipment to be Tier 4.*

In addition, cumulative Air Quality impacts during construction were reviewed. Impacts may be possible if the proposed Project simultaneously performs earthwork activities with any adjacent or very close (approximately ½ mile) construction project. Through consultation with the County no reasonable or foreseeable projects are located within this area and overlap with the Project construction is not expected. Therefore, no cumulative impacts would be anticipated.

The Project would likely generate short term odors from temporary construction activities including the operation of diesel-powered construction equipment and paving activities. Since odors from this equipment would be short term, no significant odor impacts would be expected. The Project would not produce long term odors and would therefore not produce long term significant odor impacts.

Additionally, emissions will be generated from both area and operational sources which are the result of modified Project generated traffic, landscaping maintenance equipment, consumer products, and annual maintenance as well as architectural coating. These sources were found to generate less than significant air quality impacts.

The Project traffic study was reviewed to determine if the Project would have the potential to generate significant Carbon Monoxide (CO) hot spots. It was determined that since the intersections operating at LOS E or worse do not have more than 3,000 vehicles within the intersection or worse (County of San Diego, 2007) a less than significant CO impact is expected.

The Project site development plan has been previously approved under Major Use Permit (PDS2017-MUP-12-007). The proposed Modified Project size has a smaller footprint, generates fewer operational trips, uses less water and would require a fewer number of employees. Given this, the Project site development plan is consistent with the General Plan Category and zoning

for the commercial site, would be consistent with the Regional Air Quality Strategy (RAQS) and State Implementation Plan (SIP), and would not result in any significant impacts related to air quality during operation. Therefore, the Project would not result in a cumulatively considerable air quality impacts during Project operation.

1.0 INTRODUCTION

1.1 Purpose of this Study

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

1.2 Project Location

The proposed development is located in the eastern portion of San Diego County approximately 50 miles east of the City of San Diego, 90 miles west of the Arizona/California border, and approximately two miles north of Interstate (I-) 8 and the community of Boulevard which lies south of I-8. The project site is accessible from I-8 via Ribbonwood Road and McCain Valley Road off Old Highway 80. The vicinity map is shown in Figure 1-A.

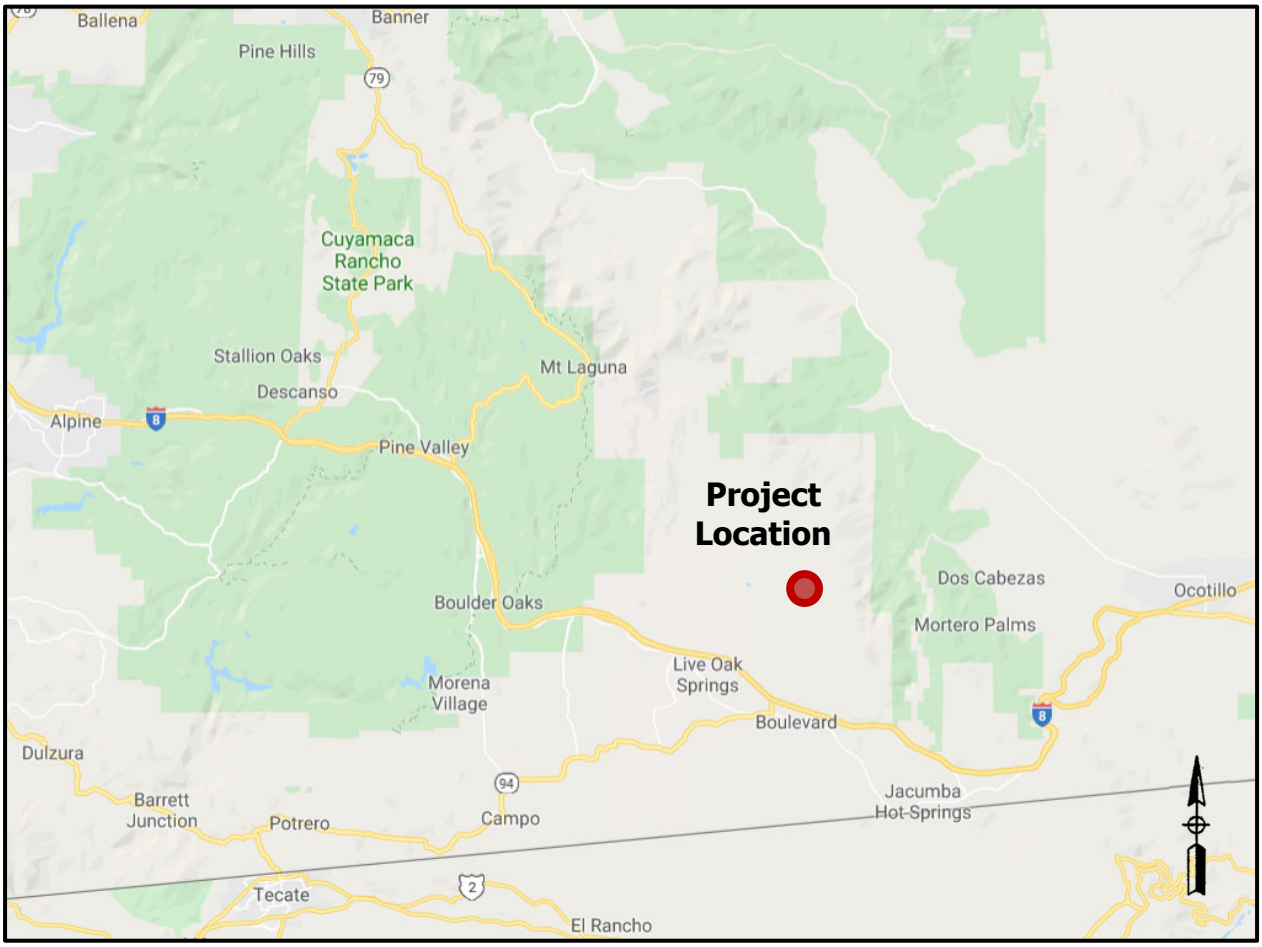
1.3 Project Description

The applicants are seeking an extension of and modification to Major Use Permit (PDS2017-MUP-12-007), which was approved by the County Board of Supervisors in 2015. The Rugged Solar Project is one of four individual solar energy projects analyzed in the Soitec Solar Development Program Environmental Impact Report (PEIR), certified in 2015.

The proposed Project (Modified Project) would reduce the development footprint from 498.2 acres to 391.2 acres and would modify the technology utilized for power generation. The power output would also be slightly less and would produce up to 74 megawatts (MW) of alternating current (AC) (MWac) photovoltaic (PV) power compared the 80 MWac system currently approved. In addition, the Modified Project would utilize a simpler tracking system (single axis vice dual axis) when compared to the Approved Project and would require less maintenance, less water and a smaller footprint per watt installed. Construction is expected in early 2022 and first year of full operations is expected in 2023.

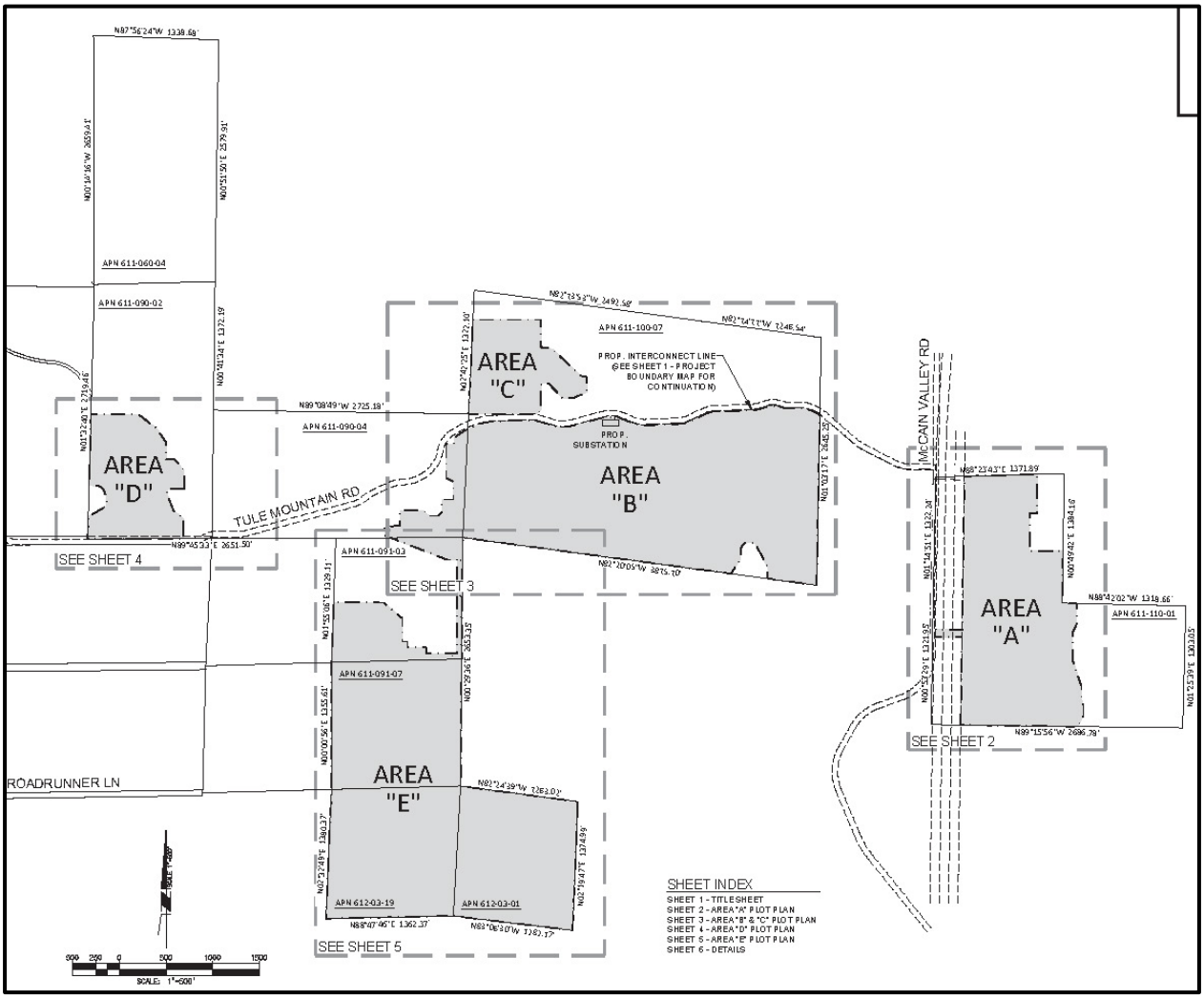
The Proposed Project would produce up to 74 MWac generating capacity. The Modified project would also include fewer inverter stations, which convert the DC power from the PV modules to AC power as compared to the Approved Project. A general project footprint is shown in Figure 1-B.

Figure 1-A: Project Vicinity Map



Source: (Google, 2019)

Figure 1-B: Modified Project Layout



Source: (Michael Baker International, 2019)

Substation

Similar to the Approved Project, the Modified Project would include an on-site substation that would be located within the central portion of the Project site. The substation would be located approximately 0.5 mile west of the proposed Operations and Maintenance (O&M) building and will connect to the existing Tule gen-tie.

Access Roads

Access to the Project site would be from existing McCain Valley Road, Tule Mountain Road, and Ribbonwood Road. No improvements to the existing roadways are proposed. Subarrays would be connected via service roads. The central subarray would also include an access road leading south crossing Tule Creek to provide access to the southern subarray.

Project Design Features

The proposed project would include a number of PDFs some of which were previously disclosed in the 2015 PEIR and are identified as PDF-AQ-1 below. The revised Project description would also require Tier 4 equipment for 100% of all diesel equipment onsite (PDF-AQ-2). For purposes of analysis, his report only assumes 90% are Tier 4.

PDF-AQ-1:

The applicants will apply water three times per day or as necessary depending on weather conditions to suppress fugitive dust during grubbing, clearing, grading, trenching, and soil compaction and/or apply a nontoxic soil binding agent to help with soil stabilization during construction. These measures will be applied to all active construction areas, unpaved access roads, parking areas, and staging areas as necessary.

- Sweepers and water trucks will be used to control dust and debris at public street access points.
- Internal fire access roadways will be stabilized by paving, application of an aggregate base material (such as disintegrated granite), or chip sealing after rough grading.
- Exposed stockpiles (e.g., dirt, sand) will be covered and/or watered or stabilized with nontoxic soil binders, tarps, fencing or other suppression methods as needed to control emissions.
- Traffic speeds on unpaved roads will be limited to 15 miles per hour (mph).
- All haul and dump trucks entering or leaving the site with soil or fill material will maintain at least 2 feet of freeboard, or cover loads of all haul and dump trucks securely.
- Disturbed areas will be covered with a nontoxic soil binding agent (Such as EP&A's Envirotac II and Rhinosnot Dust Control, Erosion Control and Soil Stabilization).

Based on the revised Project Description, the Project would also incorporate an additional PDF to include Tier 4 equipment and is identified below:

PDF-AQ-2:

- The Project would use 100% Tier 4 construction equipment as defined by the United States (U.S.) Environmental Protection Agency (EPA)/ California Air Resources Board (CARB)-certified construction equipment. The Project applicant has confirmed commitment to this feature. Project grading and building plans shall include a note stating, "Construction activities shall require all equipment to be Tier 4.

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The existing project site is located approximately 2 miles north of I-8 and 6 miles north of the U.S.-Mexico Border within the unincorporated community of Boulevard. The existing use of the Project site is mostly used for recreation and agricultural purposes. The project is surrounded by large lot, single-family residences to the west and south, a low-security detention center to the south, high desert open space to the north and east as well as an off road vehicle park to the north. The existing topography onsite is best described as diverse with elevations ranging from approximately 3,500 to 3,700 feet above mean sea level.

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 Boulevard area have daytime highs ranging between 62ºF in the winter to approximately 94ºF in the summer with August usually being the hottest month. Minimum temperatures range from approximately 34ºF in the winter to approximately 53ºF in the summer. Precipitation is generally about 14.8 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

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

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

Table 2.1: Ambient Air Quality Standards

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

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

Source: (OEHHA, February 2015)

2.3.3 Regional Standards

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

The San Diego County 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} and $PM_{2.5.}$ An attainment plan is available for O_3. The RAQS was adopted in 1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

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

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

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

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

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

2.4 California Environmental Quality Act (CEQA) Significance Thresholds

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

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management district 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 applicable air quality plan?
B: 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?
C: Expose sensitive receptors to substantial pollutant concentrations?
D: Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

The SDAPCD has established recommended trigger levels in Rule 20.2 and 20.3 for new or modified stationary sources. Through the County's Guidelines for Determining Significance and Report Format and Content Requirements, the County has adopted these trigger levels

as Screening Level Thresholds[1] (SLTs) for use in determining CEQA air quality impacts (County of San Diego, 2007). These SLTs can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. However, since SDAPCD does not have recommended trigger level for VOCs, the County has adopted the South Coast Air Quality Management District's (SCAQMD's) VOC threshold for the Coachella Valley.

Should emissions be found to exceed these County adopted SLTs, 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 SLTs for construction and operational activities are shown in Table 2.3.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

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

Non-Criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that Projects that propose to increase cancer risk to less than one per one million have a less than significant impact. Projects that propose an increased cancer risk to greater than one in one million require implementation of 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. Upon providing T-BACT equipment a less than significant impact is expected when the risk is between one and ten per one million exposed. At no time shall the Project increase the incremental cancer risk to over ten in one million or a health hazard index (chronic and acute) greater than one.

[1] County SLTs are tied to achieving or maintaining attainment designations with the NAAQS and CAAQS. The federal and State ambient air quality standards, in turn, are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health.

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 (SDAPCD, 2021). SDAPCD operates monitoring sites, which collect data on criteria pollutants. The proposed development project is closest to the Alpine and El Cajon and monitoring stations which are located approximately 30, and 39 miles from the Project site. Table 2.4 on the following page identifies the criteria pollutants monitored at the stations.

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

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2018	2019	2020	Days Exceeded over 3 years
* O^3 (ppm)	El Cajon or Alpine Monitoring Location	1 Hour	0.09 ppm	No Standard	0.10	0.11	0.11	9
		8 Hour	0.070 ppm	0.070 ppm	0.08	0.08	0.09	60
PM_{10} (µg/m3)		24 Hour	50 µg/m3	150 µg/m3	43	38	55	N/A
		Annual Arithmetic Mean	20 µg/m3	No Standard	22.7	19.3	23.5	N/A
$PM_{2.5}$ (µg/m^3)		24 Hour	No Standard	35 µg/m3	36.2	23.8	38.2	N/A
		Annual Arithmetic Mean	12 µg/m3	15 µg/m3	9.6	8.6	10.3	N/A
* NO_2 (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.003	0.003	0.003	N/A
		1 Hour	0.18 ppm	0.100 ppm	0.031	0.029	0.021	N/A
CO (ppm)		1 Hour	20 ppm	35 ppm	1.5	1.3	1.5	N/A
		8 Hour	9 ppm	9 ppm	1.1	1.0	1.4	N/A

Notes:
Days exceeded marked with "N/A" indicate no data available as this information is not reported.
* Data was selected from the closest Alpine Location

3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using t CalEEMod 2016.3.2 air quality model, which was developed by BREEZE Software for 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 County recognizes CalEEMod as an acceptable model for projects of this nature. It should be noted that CalEEMod has since developed version 2020.4.0 though at the time this report was started was not available. CalEEMod 2016.3.2 contains higher emissions factors, therefore modeling with version 2016.3.2 would yield slightly higher emissions and is more conservative compared to version 2020.4.0.

The AERMOD dispersion model will be used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model identifies 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 files for the proposed Modified Project are shown in ***Attachment B***.

Once the dispersed concentrations of diesel particulates are estimated, 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 algorithm calculate this dose for exposure through the inhalation pathways. The cancer risk dose calculation is defined in Equation 1 below (OEHHA, February 2015):

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

$Dose_{air}$	=	Dose through inhalation (mg/kg/d)
C_{air}	=	Concentration in air (µg/m^3) Annual average DPM concentration in µg/m^3 - AERSCREEN predicts a 1-hr concentration and is corrected to an annual average by multiplying the 1-hr average by 0.08 (US EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)

EF	=	Exposure frequency (unitless, days/365 days)
1x10-6	=	Milligrams to micrograms conversion (10^{-3} mg/ µg), cubic meters to liters conversion (10^{-3} m^3/l)

Cancer risk 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 C***. The cancer risk calculation is defined in Equation 2 below (OEHHA, February 2015):

Equation 2

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

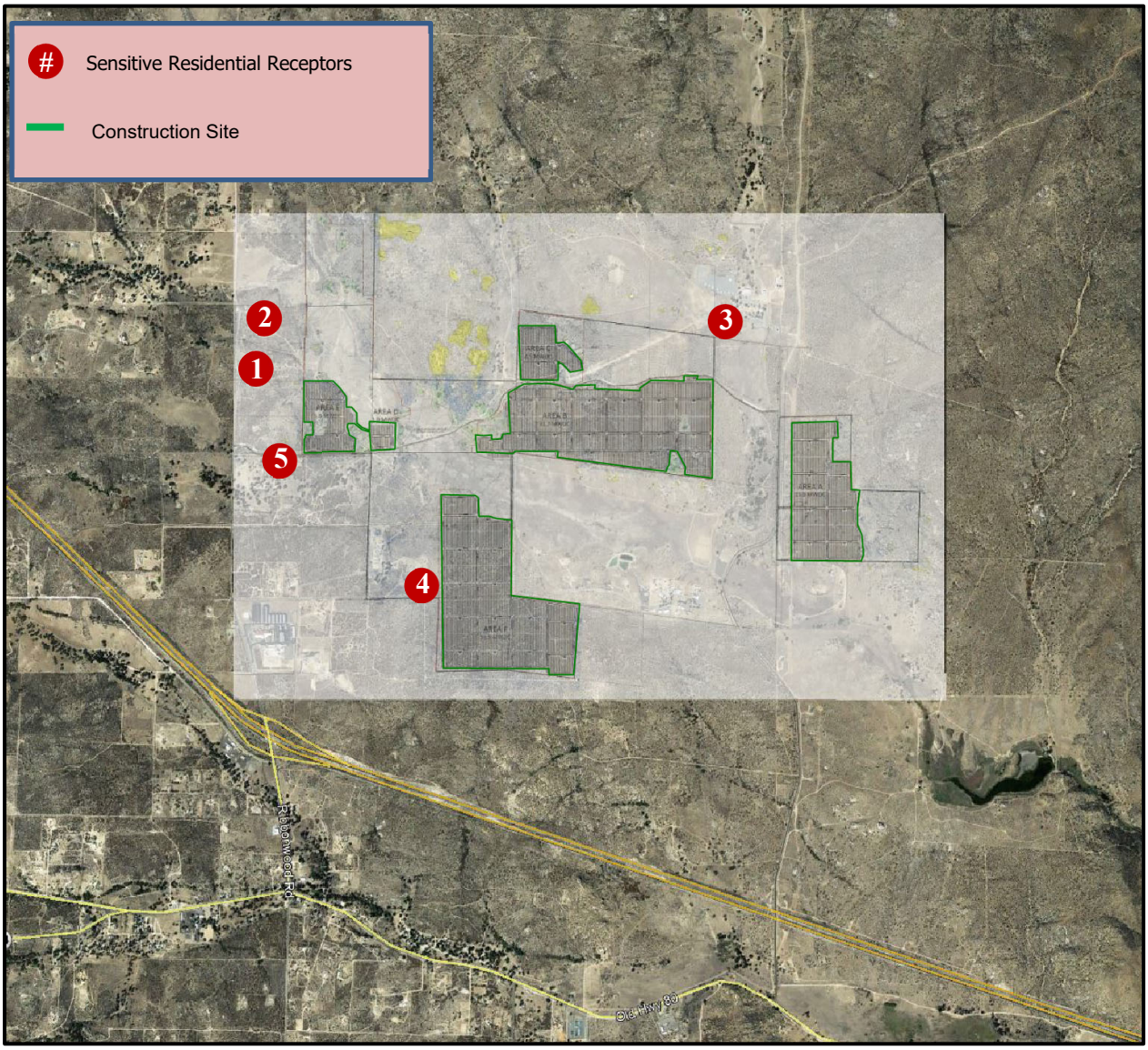
$RISK_{inh\text{-}res}$	=	Residential inhalation cancer risk
$DOSE_{air}$	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group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

The 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, February 2015). Diesel Exhaust has a REL of 5 µg/m^3 and targets the respiratory system.

A graphical representation of the modeling locations is shown on a site aerial below in Figure 3-A. The red points (1-5) represent the sensitive residential receptor locations where air quality emissions are calculated by AERMOD. The green polygon represents the grading area.

Figure 3-A: Construction Health Risk Model Setup



Source: (Google Earth Pro, 2020)

3.2 Construction Assumptions

The Project construction dates were estimated based on a construction kickoff starting early 2022 with construction ending later that year. The Earthwork associated with Project construction would include site preparation and grading. Following the completion of earthwork activities, paving and building/array construction activities occur. The number of vehicle trips generated during construction activities would vary from phase to phase. Grading and earthwork activities would generate as many as 216 daily trips, which represents the greatest number of trips generated during project construction and an average of 160 average daily trips would be generated over the project duration. CalEEMod was manually updated to reflect the maximum number of trips per construction task and includes trips for water and material deliveries. CalEEMod was also updated to reflect an average worker trip length of 35 miles one way. Table 3.1 shows the expected timeframes for the construction activities for all infrastructure, improvements, as well as the expected number of pieces of equipment, based on information provided by the Project applicant. Earthwork activities will be balanced.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Clear and Grubb	01/16/2022	01/31/2022	
Crawler Tractors			2
Off-Highway Trucks			2
Tractors/Loaders/Backhoes			1
Access Roads, Contouring for Solar Arrays	02/01/2022	03/31/2022	
Crawler Tractors			1
Excavators			1
Off-Highway Trucks			2
Rollers			1
Solar Array & Facilities Construction	04/01/2022	09/30/2022	
Cranes			2
Forklifts			2
Generator Sets			2
Other Construction Equipment			2
Tractors/Loaders/Backhoes			1
Offsite Gen-Tie Connection (to Substation)	10/01/2022	12/31/2022	
Cranes			2
Forklifts			2
Off-Highway Trucks			2
Tractors/Loaders/Backhoes			2
Site Entrance Paving & Internal Access Finish Work	10/01/2022	12/30/2022	
Off-Highway Trucks			9
Pavers			2
Rollers			1
Painting O&M Building	10/01/2022	10/14/2022	
Air Compressors			1

As noted in Section 1.3 of this analysis, the Project would use 100% Tier 4 construction equipment as defined by the U.S. EPA/ CARB-certified construction equipment. The Project applicant has confirmed commitment to this feature. To be conservative, the modeling within CalEEMod limited Tier 4 to 90% of the equipment.

3.3 Operational Emissions

Once construction is completed the Project would generate emissions from daily operations. Operational emissions sources would include area sources, energy consumption, water consumption, mobile vehicle usage, and from solid waste generated from the site. CalEEMod has been designed to provide worst case estimates for planning purposes. Based on review of the Project plans, CalEEMod has been updated to include a 391.2 acre PV site as well as a 6,300 SF O&M facility. Area Sources within the model include landscaping, consumer products, and architectural coatings as part of regular maintenance. Energy sources would be from the consumption of natural gas. Water would be consumed by the project generating emissions from conveyance and solid waste would be generated by the project generate emissions from landfilling activities. Mobile sources would be generated from Project related traffic. Based on the Project traffic study, the Project would generate an average of 8 daily trips during operations (DUDEK, 2022). CalEEMod was updated to reflect this operational trip generation.

The Project was modeled assuming a rural setting with default settings for waste and energy within CalEEMod. The proposed modified Project would wash panels once per year and would apply soil binding agents as well once per year to minimize dust. Given this, the water estimates are expected to be 1.41 Acre Feet annually. Also, the project water demand would be provided from only the onsite water wells. For this purpose, CalEEMod was updated to only include the electrical distribution intensity to represent the onsite water distribution. The Supply and Treatment intensities which would represent the electrical usage from an offsite water agency to distribution water were reduced to zero as this effort would not be necessary.

3.4 Micro Scale Operational Emissions

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

In the event the proposed Project traffic adds vehicular trips to either an intersection that operates at LOS E or F or any intersection where the Project trips re-classifies the intersection level of service to LOS E or F and when peak-hour trips exceed 3,000 the Project must quantify

CO levels (County of San Diego, 2007). The ITS Transportation Project-Level Carbon Monoxide Protocol recommends running the EMFAC model to determine emission rates for the Project year as well as conduct dispersion modeling utilizing CALINE to determine worst-case emission concentrations. Based on review of the Project traffic study, none of the intersection would produce peak hour trips exceeding 3,000 trips. Given this, CO hotspot impacts from the Project would be less than significant.

3.5 Odor Impacts (Onsite)

Potential onsite odor generators would include short term construction odors from activities such the operation of diesel-fueled construction equipment, paving activities, and the application of architectural coatings. Odors created from paving would include asphalt laying, which has a slight odor from the bitumen and solvents used within hot asphalt. Impacts associated with construction activities would be short term and not exist after project construction. Thus, short-term construction odors would be less than significant.

The Project would operate as a solar farm. Long-term odors are not typically generated from sources such as solar farms. Given this, a less then significant long term odor impact is expected.

4.0 FINDINGS

4.1 Construction Findings

The maximum daily emissions generated during construction activities based on the assumptions and equipment identified in Section 3.2 above is shown in Table 4.1. Based on these numbers, the Project would not exceed the County Screening-Level thresholds and would not require mitigation to comply. It should be noted that the project will utilize 100 percent Tier 4 equipment but to be conservative only 90 percent of equipment was modeled as Tier 4.

Table 4.1: Maximum Daily Construction Emissions Summary

Year	Criteria Pollutant (lbs/day)									
	VOC	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)
2022	16.01	26.88	97.49	0.24	4.03	0.50	4.18	1.07	0.49	1.27
Screening-Level Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
Significant?	**No**	**No**	**No**	**No**	-	-	**No**	-	-	**No**

4.2 Health Risk

Based upon the annual heath risk modeling results provided as ***Attachment C*** to this report, PM_{10} from exhaust emissions would cumulatively produce 0.0255 tons (over the construction duration of 349 days) or an average of 0.00077 grams/second. The average emission rate over the grading area is $4.96x10^{-10}$ $g/m^2/s$, which was calculated as follows:

$$\frac{0.00077\,\frac{grams}{sec\,o\,nd}}{381.5acres * 4{,}046\,\frac{meters^2}{acre}} = 4.96 * 10^{-10}\,\frac{\frac{grams}{meters^2}}{sec\,o\,nd}$$

Utilizing the AERMOD dispersion model, we find that the annual concentration is 0.01806 $\mu g/m^3$ during construction at the closest receptor to the centroid of construction (receptor 4). Utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk for the closest residential receptor was found to be 3.10 per one million exposed. The PDF identified in the Project Description would be considered T-BACT. Based on this, the Cancer Risk of 3.1

would be considered less than the 10 in one million threshold with the application of T-BACT and would have a less than significant health risk for nearby receptors.

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 0.01806 µg/m^3 divided by the REL of 5 µg/m^3 yields a Health Hazard Index of 0.0036, which is less than one. Therefore, no chronic health risks are expected and all health risks are considered less than significant.

4.3 Operational Findings

Based on the Project's traffic study the proposed Modified Project would generate approximately 8 daily trips once the Project is fully operational sometime in the year 2023. These estimated daily trips were used in place of CalEEMod defaults to estimate mobile emissions associated with Project operations. Trip distances were estimated based on CalEEMod defaults for a rural Project setting. Additionally, the model was run for the winter and summer scenarios to determine operational impacts during the first year of 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, respectively.

Table 4.2: Summer Maximum Daily Pollutant Generation

Source	Criteria Pollutant (lbs/day)					
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Area	0.150	0.000	0.001	0.000	0.000	0.000
Energy	0.002	0.017	0.014	0.000	0.001	0.001
Mobile	0.030	0.128	0.560	0.002	0.218	0.059
Total	**0.182**	**0.145**	**0.575**	**0.002**	**0.219**	**0.061**
Screening Level Threshold	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**
The final numbers are all rounded within Excel and are reported as rounded numbers.						

Table 4.3: Winter Maximum Daily Pollutant Generation

Source	Criteria Pollutant (lbs/day)					
	VOC	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
Area	0.150	0.000	0.001	0.000	0.000	0.000
Energy	0.002	0.017	0.014	0.000	0.001	0.001
Mobile	0.029	0.135	0.520	0.002	0.218	0.059
Total	**0.181**	**0.152**	**0.535**	**0.002**	**0.219**	**0.061**
Screening Level Threshold	75	250	550	250	100	55
Significant?	**No**	**No**	**No**	**No**	**No**	**No**
The final numbers are all rounded within Excel and are reported as rounded numbers.						

Based upon these calculations, the proposed Project would not exceed County operational air quality Screening-Level Thresholds and would not be required to implement mitigation measures to comply with CEQA and County thresholds. Therefore, the project's operational emissions impacts would be less than significant.

4.4 Cumulative Impacts

Cumulative construction impacts could occur if construction activities for adjacent/nearby projects occur simultaneously. These impacts could be significant when construction emissions locally mix together and produce localized levels in excess of County standards. To illustrate this, if a project was to produce air quality emissions simultaneous to an adjacent construction project, the emissions from the combined activities could exceed significance thresholds.

The Project's construction emissions are well below significance as shown in Table 4.1 above and were found to be at least 6 times lower than respective thresholds. If a nearby Project was to be under construction at the same time, that project would need to produce significantly more emissions which would likely be more than twice the size of the proposed Project site.

Through consultation with the County no reasonable or foreseeable projects are located within a ½ mile that would overlap with the Project construction. Therefore, no cumulative impacts would be anticipated.

4.5 Conclusion of Findings

The Project would include multiple PDFs identified in Section 1.3 of this report. These PDFs have been assumed within this analysis.

Cumulative Air Quality impacts during construction may be possible if the proposed Project simultaneously performs earthwork activities with any adjacent or very close (approximately ½ mile) construction project. Through consultation with the County no reasonable or foreseeable projects are located within this area that would overlap with the Project construction. Therefore, no cumulative impacts would be anticipated.

The modified Project would likely generate short term odors from temporary construction activities including the operation of diesel-powered construction equipment and paving activities. Since odors from this equipment would be short term, no significant odor impacts would be expected. The modified Project would not produce long term odors and would therefore not produce long term significant odor impacts.

Additionally, emissions will be generated from both area and operational sources which are the result of modified Project generated traffic, landscaping maintenance equipment, consumer products, and annual maintenance as well as architectural coating. These sources were found to generate less than significant air quality impacts.

The modified Project traffic study was reviewed to determine if the Project would have the potential to generate significant Carbon Monoxide (CO) hot spots. It was determined that since the intersections operating at LOS E or worse do not have more than 3,000 vehicles within the intersection or worse (County of San Diego, 2007) a less than significant CO impact would be expected.

The Project site development plan has been previously approved under Major Use Permit (PDS2017-MUP-12-007). The Modified Project size has a smaller footprint, generates fewer operational trips, uses less water and would require a fewer number of employees. Given this, the Project site development plan is consistent with the General Plan Category and zoning for the commercial site, would be consistent with the RAQS and SIP, and would not result in any significant impacts related to air quality during operation. Therefore, the Project would not result in a cumulatively considerable air quality impacts during Project operation.

5.0 References

County of San Diego. (2007, March 19). *AQ-Guidelines.* Retrieved from https://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf

County of San Diego. (2012, October 25). *San Diego Grading Ordinance.* Retrieved August 2015, from http://www.sandiegocounty.gov/: http://www.sandiegocounty.gov/dpw/land/landpdf/gradingordinance.pdf

DUDEK. (2019). *Trip Generation Analysis for Rugged Solar.*

Google. (2019). Retrieved 2019, from maps.google.com

Michael Baker International. (2019). *Rugged Solar.*

OEHHA. (February 2015). *Air Toxics Hot Spots Program - Risk Assessment Guidelines - Guidance Manual for Preparation of Health Risk Assessments.* OEHHA. Retrieved from https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0

SDAPCD. (2019). Retrieved 2019, from https://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning/attainment-status.html

SDAPCD. (2021). *5 Year Summary 2016 - 2020.* Retrieved 2015, from https://www.sdapcd.org/content/dam/sdc/apcd/monitoring/5-Year_Air_Quality.pdf

U.S. EPA. (2018). *Regulations for Emissions from Heavy Equipment with Compression-Ignition (Diesel) Engines.* Retrieved from https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-heavy-equipment-compression

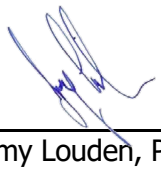
US EPA. (1992). *Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised .* US EPA. Retrieved from http://www.epa.gov/scram001/guidance/guide/EPA-454R-92-019_OCR.pdf

WRCC. (2018). Retrieved from https://wrcc.dri.edu/Climate/comp_table_show.php?stype=wind_dir_avg

WRCC. (2018). *CAMPO, CALIFORNIA (041424)*. Retrieved from https://wrcc.dri.edu/summary/Climsmsca.html: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca1424

6.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the air quality environment and impacts within and surrounding the proposed Rugged Solar development. This report was prepared utilizing the latest emission rates and reduction methodologies. This report was prepared by Jeremy Louden; a County approved CEQA Consultant for Air Quality.



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Date April 15, 2022

ATTACHMENT A

CalEEMod

Rugged Solar (PV)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	5.40	1000sqft	0.50	5,400.00	0
User Defined Industrial	1.00	User Defined Unit	391.00	1.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 392 acres disturbed for project

Construction Phase - Schedule Provided by Project Engineer

Off-road Equipment - Construction Equipment

Off-road Equipment - CE OHT used for water truck

Off-road Equipment - Construction Equipment Off Highway Truck used for water truck

Off-road Equipment - Off Highway truck in place of boom truck

Off-road Equipment -

Off-road Equipment - Off highway trucks inlcude dump trucks (6) Water Truck (2) and Chip Seal Truck

Off-road Equipment - Other Construction Equipment assumed as a pile driver

Trips and VMT - Trips provide by project applicant

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - 8 trips per day assuming 35 mile trip distance

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating -

Energy Use - Electricity Consumption (O&M) Building, Conservativly included electrical consumption from tracking system from approved 2015 techncial study
See Table "Rugged Solar Farm Project Other Operational Electricy Usage" Page 67

Water And Wastewater - O&M would consume onsite well water at the rate of 1.41

Solid Waste -

Construction Off-road Equipment Mitigation - Tier 4 90%

Energy Mitigation - PV Watts Calculator: 225,264 PV modules. Each module would be 420W

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	2,701.00	2,700.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	8,102.00	8,100.00
tblAreaCoating	Area_Nonresidential_Exterior	2701	2700
tblAreaCoating	Area_Nonresidential_Interior	8102	8100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	240.00	11.00

tblConstructionPhase	NumDays	620.00	43.00
tblConstructionPhase	NumDays	6,200.00	131.00
tblConstructionPhase	NumDays	6,200.00	65.00
tblConstructionPhase	NumDays	440.00	65.00
tblConstructionPhase	NumDays	440.00	10.00
tblEnergyUse	NT24E	0.00	1,375,203.00
tblGrading	AcresOfGrading	21.50	24.00
tblLandUse	LandUseSquareFeet	0.00	1.00
tblLandUse	LotAcreage	0.12	0.50
tblLandUse	LotAcreage	0.00	391.00
tblOffRoadEquipment	HorsePower	158.00	40.00
tblOffRoadEquipment	HorsePower	80.00	102.00
tblOffRoadEquipment	HorsePower	97.00	131.00
tblOffRoadEquipment	HorsePower	97.00	131.00
tblOffRoadEquipment	HorsePower	212.00	215.00
tblOffRoadEquipment	HorsePower	212.00	215.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	156.00
tblTripsAndVMT	HaulingTripNumber	0.00	72.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	1.00	32.00
tblTripsAndVMT	VendorTripNumber	1.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	120.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripNumber	13.00	22.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	2.00	144.00
tblTripsAndVMT	WorkerTripNumber	2.00	40.00
tblTripsAndVMT	WorkerTripNumber	30.00	24.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblVehicleTrips	CW_TL	14.70	35.00
tblVehicleTrips	CW_TTP	0.00	100.00

tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	0.00	8.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	0.00	8.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	0.00	8.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	1,248,750.00	59,450.00
tblWater	OutdoorWaterUseRate	0.00	400,000.00

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					
2022	21.4799	80.0241	66.2756	0.2377	4.0279	2.7191	5.6060	1.0724	2.5091	3.2946	0.0000	23,473.3368	23,473.3368	5.9616	0.0000	23,622.3763
Maximum	**21.4799**	**80.0241**	**66.2756**	**0.2377**	**4.0279**	**2.7191**	**5.6060**	**1.0724**	**2.5091**	**3.2946**	**0.0000**	**23,473.3368**	**23,473.3368**	**5.9616**	**0.0000**	**23,622.3763**

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					
2022	16.0078	26.8785	97.4939	0.2377	4.0279	0.5043	4.1835	1.0724	0.4878	1.2733	0.0000	23,473.3368	23,473.3368	5.9616	0.0000	23,622.3762
Maximum	**16.0078**	**26.8785**	**97.4939**	**0.2377**	**4.0279**	**0.5043**	**4.1835**	**1.0724**	**0.4878**	**1.2733**	**0.0000**	**23,473.3368**	**23,473.3368**	**5.9616**	**0.0000**	**23,622.3762**

	ROG	NOx	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	**25.48**	**66.41**	**-47.10**	**0.00**	**0.00**	**81.45**	**25.38**	**0.00**	**80.56**	**61.35**	**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	0.1499	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003
Energy	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401
Mobile	0.0298	0.1282	0.5603	2.2900e-003	0.2161	1.6200e-003	0.2177	0.0578	1.5100e-003	0.0593		232.8732	232.8732	0.0103		233.1301
Total	**0.1816**	**0.1450**	**0.5750**	**2.3900e-003**	**0.2161**	**2.8900e-003**	**0.2190**	**0.0578**	**2.7800e-003**	**0.0605**		**252.9951**	**252.9951**	**0.0107**	**3.7000e-004**	**253.3717**

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	0.1499	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003
Energy	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401
Mobile	0.0298	0.1282	0.5603	2.2900e-003	0.2161	1.6200e-003	0.2177	0.0578	1.5100e-003	0.0593		232.8732	232.8732	0.0103		233.1301
Total	**0.1816**	**0.1450**	**0.5750**	**2.3900e-003**	**0.2161**	**2.8900e-003**	**0.2190**	**0.0578**	**2.7800e-003**	**0.0605**		**252.9951**	**252.9951**	**0.0107**	**3.7000e-004**	**253.3717**

	ROG	NOx	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	Clear and Grubb	Site Preparation	1/16/2022	1/31/2022	5	11	
2	Access Roads, Contouring for Solar Arrays	Grading	2/1/2022	3/31/2022	5	43	
3	Solar Array & Facilities Construction	Building Construction	4/1/2022	9/30/2022	5	131	
4	Offsite Gen-Tie Connection (to Substation)	Building Construction	10/1/2022	12/31/2022	5	65	
5	Site Entrance Paving & Internal Access Finish Work	Paving	10/1/2022	12/30/2022	5	65	
6	Painting O&M Building	Architectural Coating	10/1/2022	10/14/2022	5	10	

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: 8,100; Non-Residential Outdoor: 2,700; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Rugged Solar (PV) - San Diego County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clear and Grubb	Crawler Tractors	2	8.00	215	0.43
Clear and Grubb	Off-Highway Trucks	2	8.00	402	0.38
Clear and Grubb	Tractors/Loaders/Backhoes	1	8.00	131	0.37
Access Roads, Contouring for Solar Arrays	Crawler Tractors	1	8.00	215	0.43
Access Roads, Contouring for Solar Arrays	Excavators	1	8.00	40	0.38
Access Roads, Contouring for Solar Arrays	Off-Highway Trucks	2	8.00	402	0.38
Access Roads, Contouring for Solar Arrays	Rollers	1	8.00	100	0.38
Solar Array & Facilities Construction	Cranes	2	7.00	231	0.29
Solar Array & Facilities Construction	Forklifts	2	8.00	89	0.20
Solar Array & Facilities Construction	Generator Sets	2	8.00	84	0.74
Solar Array & Facilities Construction	Other Construction Equipment	2	8.00	172	0.42
Solar Array & Facilities Construction	Tractors/Loaders/Backhoes	1	7.00	131	0.37
Offsite Gen-Tie Connection (to Substation)	Cranes	2	8.00	231	0.29
Offsite Gen-Tie Connection (to Substation)	Forklifts	2	8.00	89	0.20
Offsite Gen-Tie Connection (to Substation)	Off-Highway Trucks	2	8.00	402	0.38
Offsite Gen-Tie Connection (to Substation)	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Entrance Paving & Internal Access Finish Work	Off-Highway Trucks	9	8.00	402	0.38
Site Entrance Paving & Internal Access Finish Work	Pavers	2	8.00	130	0.42
Site Entrance Paving & Internal Access Finish Work	Rollers	1	8.00	102	0.38
Painting O&M Building	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clear and Grubb	5	22.00	20.00	12.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Access Roads, Contouring for Solar A	5	30.00	16.00	12.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Solar Array & Facilities Construction	9	144.00	32.00	12.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Gen-Tie Connection (to Substa	8	40.00	20.00	156.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Entrance Paving & Internal Access Fini	12	24.00	120.00	72.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Painting O&M Building	1	10.00	0.00	0.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Clear and Grubb - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0605	0.0000	1.0605	0.1145	0.0000	0.1145			0.0000			0.0000
Off-Road	2.2255	21.7115	14.0451	0.0465		0.8280	0.8280		0.7617	0.7617		4,497.4233	4,497.4233	1.4546		4,533.7873
Total	**2.2255**	**21.7115**	**14.0451**	**0.0465**	**1.0605**	**0.8280**	**1.8885**	**0.1145**	**0.7617**	**0.8763**		**4,497.4233**	**4,497.4233**	**1.4546**		**4,533.7873**

3.2 Clear and Grubb - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.6000e-003	0.2559	0.0680	8.3000e-004	0.0191	7.2000e-004	0.0198	5.2200e-003	6.9000e-004	5.9200e-003		91.0525	91.0525	8.0700e-003		91.2543
Vendor	0.0532	1.8519	0.4674	4.9500e-003	0.1225	3.3700e-003	0.1258	0.0353	3.2200e-003	0.0385		533.4163	533.4163	0.0383		534.3737
Worker	0.1853	0.1339	1.5809	5.5000e-003	0.5852	3.6600e-003	0.5889	0.1552	3.3700e-003	0.1585		548.7125	548.7125	0.0142		549.0673
Total	**0.2461**	**2.2418**	**2.1163**	**0.0113**	**0.7267**	**7.7500e-003**	**0.7345**	**0.1956**	**7.2800e-003**	**0.2029**		**1,173.1813**	**1,173.1813**	**0.0606**		**1,174.6952**

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					1.0605	0.0000	1.0605	0.1145	0.0000	0.1145			0.0000			0.0000
Off-Road	0.6899	3.7472	21.6615	0.0465		0.1454	0.1454		0.1393	0.1393	0.0000	4,497.4233	4,497.4233	1.4546		4,533.7873
Total	**0.6899**	**3.7472**	**21.6615**	**0.0465**	**1.0605**	**0.1454**	**1.2059**	**0.1145**	**0.1393**	**0.2538**	**0.0000**	**4,497.4233**	**4,497.4233**	**1.4546**		**4,533.7873**

3.2 Clear and Grubb - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.6000e-003	0.2559	0.0680	8.3000e-004	0.0191	7.2000e-004	0.0198	5.2200e-003	6.9000e-004	5.9200e-003		91.0525	91.0525	8.0700e-003		91.2543
Vendor	0.0532	1.8519	0.4674	4.9500e-003	0.1225	3.3700e-003	0.1258	0.0353	3.2200e-003	0.0385		533.4163	533.4163	0.0383		534.3737
Worker	0.1853	0.1339	1.5809	5.5000e-003	0.5852	3.6600e-003	0.5889	0.1552	3.3700e-003	0.1585		548.7125	548.7125	0.0142		549.0673
Total	**0.2461**	**2.2418**	**2.1163**	**0.0113**	**0.7267**	**7.7500e-003**	**0.7345**	**0.1956**	**7.2800e-003**	**0.2029**		**1,173.1813**	**1,173.1813**	**0.0606**		**1,174.6952**

3.3 Access Roads, Contouring for Solar Arrays - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5919	0.0000	0.5919	0.0639	0.0000	0.0639			0.0000			0.0000
Off-Road	1.8917	17.2697	12.5361	0.0391		0.6890	0.6890		0.6338	0.6338		3,786.2366	3,786.2366	1.2246		3,816.8503
Total	**1.8917**	**17.2697**	**12.5361**	**0.0391**	**0.5919**	**0.6890**	**1.2809**	**0.0639**	**0.6338**	**0.6978**		**3,786.2366**	**3,786.2366**	**1.2246**		**3,816.8503**

3.3 Access Roads, Contouring for Solar Arrays - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9500e-003	0.0655	0.0174	2.1000e-004	4.8800e-003	1.8000e-004	5.0600e-003	1.3400e-003	1.8000e-004	1.5100e-003		23.2925	23.2925	2.0600e-003		23.3441
Vendor	0.0425	1.4815	0.3739	3.9600e-003	0.0980	2.6900e-003	0.1007	0.0282	2.5800e-003	0.0308		426.7330	426.7330	0.0306		427.4990
Worker	0.2527	0.1827	2.1558	7.5000e-003	0.7980	4.9900e-003	0.8030	0.2116	4.6000e-003	0.2162		748.2443	748.2443	0.0194		748.7281
Total	**0.2972**	**1.7297**	**2.5471**	**0.0117**	**0.9008**	**7.8600e-003**	**0.9087**	**0.2411**	**7.3600e-003**	**0.2485**		**1,198.2698**	**1,198.2698**	**0.0521**		**1,199.5712**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5919	0.0000	0.5919	0.0639	0.0000	0.0639			0.0000			0.0000
Off-Road	0.4935	2.7364	19.0207	0.0391		0.0637	0.0637		0.0637	0.0637	0.0000	3,786.2366	3,786.2366	1.2246		3,816.8503
Total	**0.4935**	**2.7364**	**19.0207**	**0.0391**	**0.5919**	**0.0637**	**0.6556**	**0.0639**	**0.0637**	**0.1276**	**0.0000**	**3,786.2366**	**3,786.2366**	**1.2246**		**3,816.8503**

3.3 Access Roads, Contouring for Solar Arrays - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9500e-003	0.0655	0.0174	2.1000e-004	4.8800e-003	1.8000e-004	5.0600e-003	1.3400e-003	1.8000e-004	1.5100e-003		23.2925	23.2925	2.0600e-003		23.3441
Vendor	0.0425	1.4815	0.3739	3.9600e-003	0.0980	2.6900e-003	0.1007	0.0282	2.5800e-003	0.0308		426.7330	426.7330	0.0306		427.4990
Worker	0.2527	0.1827	2.1558	7.5000e-003	0.7980	4.9900e-003	0.8030	0.2116	4.6000e-003	0.2162		748.2443	748.2443	0.0194		748.7281
Total	**0.2972**	**1.7297**	**2.5471**	**0.0117**	**0.9008**	**7.8600e-003**	**0.9087**	**0.2411**	**7.3600e-003**	**0.2485**		**1,198.2698**	**1,198.2698**	**0.0521**		**1,199.5712**

3.4 Solar Array & Facilities Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4414	24.2301	23.3150	0.0423		1.2024	1.2024		1.1297	1.1297		4,066.6641	4,066.6641	0.9714		4,090.9501
Total	**2.4414**	**24.2301**	**23.3150**	**0.0423**		**1.2024**	**1.2024**		**1.1297**	**1.1297**		**4,066.6641**	**4,066.6641**	**0.9714**		**4,090.9501**

3.4 Solar Array & Facilities Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.4000e-004	0.0215	5.7100e-003	7.0000e-005	1.6000e-003	6.0000e-005	1.6600e-003	4.4000e-004	6.0000e-005	5.0000e-004		7.6456	7.6456	6.8000e-004		7.6626
Vendor	0.0851	2.9631	0.7479	7.9200e-003	0.1959	5.3900e-003	0.2013	0.0564	5.1500e-003	0.0616		853.4661	853.4661	0.0613		854.9980
Worker	1.2131	0.8767	10.3478	0.0360	3.8304	0.0240	3.8543	1.0156	0.0221	1.0376		3,591.5724	3,591.5724	0.0929		3,593.8948
Total	**1.2988**	**3.8613**	**11.1014**	**0.0440**	**4.0279**	**0.0294**	**4.0573**	**1.0724**	**0.0273**	**1.0997**		**4,452.6841**	**4,452.6841**	**0.1549**		**4,456.5553**

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	0.5957	3.2445	26.7164	0.0423		0.1262	0.1262		0.1209	0.1209	0.0000	4,066.6641	4,066.6641	0.9714		4,090.9501
Total	**0.5957**	**3.2445**	**26.7164**	**0.0423**		**0.1262**	**0.1262**		**0.1209**	**0.1209**	**0.0000**	**4,066.6641**	**4,066.6641**	**0.9714**		**4,090.9501**

3.4 Solar Array & Facilities Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.4000e-004	0.0215	5.7100e-003	7.0000e-005	1.6000e-003	6.0000e-005	1.6600e-003	4.4000e-004	6.0000e-005	5.0000e-004		7.6456	7.6456	6.8000e-004		7.6626
Vendor	0.0851	2.9631	0.7479	7.9200e-003	0.1959	5.3900e-003	0.2013	0.0564	5.1500e-003	0.0616		853.4661	853.4661	0.0613		854.9980
Worker	1.2131	0.8767	10.3478	0.0360	3.8304	0.0240	3.8543	1.0156	0.0221	1.0376		3,591.5724	3,591.5724	0.0929		3,593.8948
Total	**1.2988**	**3.8613**	**11.1014**	**0.0440**	**4.0279**	**0.0294**	**4.0573**	**1.0724**	**0.0273**	**1.0997**		**4,452.6841**	**4,452.6841**	**0.1549**		**4,456.5553**

3.5 Offsite Gen-Tie Connection (to Substation) - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3594	21.8571	17.2855	0.0473		0.9594	0.9594		0.8826	0.8826		4,574.1708	4,574.1708	1.4794		4,611.1553
Total	**2.3594**	**21.8571**	**17.2855**	**0.0473**		**0.9594**	**0.9594**		**0.8826**	**0.8826**		**4,574.1708**	**4,574.1708**	**1.4794**		**4,611.1553**

3.5 Offsite Gen-Tie Connection (to Substation) - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0167	0.5630	0.1496	1.8200e-003	0.0419	1.5900e-003	0.0435	0.0115	1.5200e-003	0.0130		200.3156	200.3156	0.0178		200.7594
Vendor	0.0532	1.8519	0.4674	4.9500e-003	0.1225	3.3700e-003	0.1258	0.0353	3.2200e-003	0.0385		533.4163	533.4163	0.0383		534.3737
Worker	0.3370	0.2435	2.8744	0.0100	1.0640	6.6500e-003	1.0706	0.2821	6.1300e-003	0.2882		997.6590	997.6590	0.0258		998.3041
Total	**0.4068**	**2.6584**	**3.4914**	**0.0168**	**1.2284**	**0.0116**	**1.2400**	**0.3289**	**0.0109**	**0.3397**		**1,731.3908**	**1,731.3908**	**0.0819**		**1,733.4372**

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	0.8322	5.5299	23.8522	0.0473		0.2473	0.2473		0.2329	0.2329	0.0000	4,574.1708	4,574.1708	1.4794		4,611.1553
Total	**0.8322**	**5.5299**	**23.8522**	**0.0473**		**0.2473**	**0.2473**		**0.2329**	**0.2329**	**0.0000**	**4,574.1708**	**4,574.1708**	**1.4794**		**4,611.1553**

3.5 Offsite Gen-Tie Connection (to Substation) - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0167	0.5630	0.1496	1.8200e-003	0.0419	1.5900e-003	0.0435	0.0115	1.5200e-003	0.0130		200.3156	200.3156	0.0178		200.7594
Vendor	0.0532	1.8519	0.4674	4.9500e-003	0.1225	3.3700e-003	0.1258	0.0353	3.2200e-003	0.0385		533.4163	533.4163	0.0383		534.3737
Worker	0.3370	0.2435	2.8744	0.0100	1.0640	6.6500e-003	1.0706	0.2821	6.1300e-003	0.2882		997.6590	997.6590	0.0258		998.3041
Total	**0.4068**	**2.6584**	**3.4914**	**0.0168**	**1.2284**	**0.0116**	**1.2400**	**0.3289**	**0.0109**	**0.3397**		**1,731.3908**	**1,731.3908**	**0.0819**		**1,733.4372**

3.6 Site Entrance Paving & Internal Access Finish Work - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.3815	42.5217	38.3683	0.1317		1.6398	1.6398		1.5087	1.5087		12,745.3659	12,745.3659	4.1221		12,848.4186
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**5.3815**	**42.5217**	**38.3683**	**0.1317**		**1.6398**	**1.6398**		**1.5087**	**1.5087**		**12,745.3659**	**12,745.3659**	**4.1221**		**12,848.4186**

3.6 Site Entrance Paving & Internal Access Finish Work - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7200e-003	0.2598	0.0690	8.4000e-004	0.0194	7.3000e-004	0.0201	5.3000e-003	7.0000e-004	6.0100e-003		92.4533	92.4533	8.1900e-003		92.6582
Vendor	0.3189	11.1116	2.8045	0.0297	0.7348	0.0202	0.7550	0.2116	0.0193	0.2309		3,200.4978	3,200.4978	0.2298		3,206.2424
Worker	0.2022	0.1461	1.7246	6.0000e-003	0.6384	3.9900e-003	0.6424	0.1693	3.6800e-003	0.1729		598.5954	598.5954	0.0155		598.9825
Total	**0.5288**	**11.5175**	**4.5982**	**0.0365**	**1.3925**	**0.0249**	**1.4175**	**0.3861**	**0.0237**	**0.4098**		**3,891.5465**	**3,891.5465**	**0.2535**		**3,897.8830**

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	1.6115	6.9830	63.0011	0.1317		0.2149	0.2149		0.2149	0.2149	0.0000	12,745.3659	12,745.3659	4.1221		12,848.4186
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6115**	**6.9830**	**63.0011**	**0.1317**		**0.2149**	**0.2149**		**0.2149**	**0.2149**	**0.0000**	**12,745.3659**	**12,745.3659**	**4.1221**		**12,848.4186**

3.6 Site Entrance Paving & Internal Access Finish Work - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7200e-003	0.2598	0.0690	8.4000e-004	0.0194	7.3000e-004	0.0201	5.3000e-003	7.0000e-004	6.0100e-003		92.4533	92.4533	8.1900e-003		92.6582
Vendor	0.3189	11.1116	2.8045	0.0297	0.7348	0.0202	0.7550	0.2116	0.0193	0.2309		3,200.4978	3,200.4978	0.2298		3,206.2424
Worker	0.2022	0.1461	1.7246	6.0000e-003	0.6384	3.9900e-003	0.6424	0.1693	3.6800e-003	0.1729		598.5954	598.5954	0.0155		598.9825
Total	**0.5288**	**11.5175**	**4.5982**	**0.0365**	**1.3925**	**0.0249**	**1.4175**	**0.3861**	**0.0237**	**0.4098**		**3,891.5465**	**3,891.5465**	**0.2535**		**3,897.8830**

3.7 Painting O&M Building - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.5145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**12.7190**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Painting O&M Building - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0842	0.0609	0.7186	2.5000e-003	0.2660	1.6600e-003	0.2677	0.0705	1.5300e-003	0.0721		249.4148	249.4148	6.4500e-003		249.5760
Total	**0.0842**	**0.0609**	**0.7186**	**2.5000e-003**	**0.2660**	**1.6600e-003**	**0.2677**	**0.0705**	**1.5300e-003**	**0.0721**		**249.4148**	**249.4148**	**6.4500e-003**		**249.5760**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.5145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**12.5442**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Painting O&M Building - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0842	0.0609	0.7186	2.5000e-003	0.2660	1.6600e-003	0.2677	0.0705	1.5300e-003	0.0721		249.4148	249.4148	6.4500e-003		249.5760
Total	**0.0842**	**0.0609**	**0.7186**	**2.5000e-003**	**0.2660**	**1.6600e-003**	**0.2677**	**0.0705**	**1.5300e-003**	**0.0721**		**249.4148**	**249.4148**	**6.4500e-003**		**249.5760**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0298	0.1282	0.5603	2.2900e-003	0.2161	1.6200e-003	0.2177	0.0578	1.5100e-003	0.0593		232.8732	232.8732	0.0103		233.1301
Unmitigated	0.0298	0.1282	0.5603	2.2900e-003	0.2161	1.6200e-003	0.2177	0.0578	1.5100e-003	0.0593		232.8732	232.8732	0.0103		233.1301

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
User Defined Industrial	8.00	8.00	8.00	101,920	101,920
Total	8.00	8.00	8.00	101,920	101,920

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
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3
User Defined Industrial	35.00	6.60	6.60	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
User Defined Industrial	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401
NaturalGas Unmitigated	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401

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					
General Light Industry	171.025	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401
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		**1.8400e-003**	**0.0168**	**0.0141**	**1.0000e-004**		**1.2700e-003**	**1.2700e-003**		**1.2700e-003**	**1.2700e-003**		**20.1206**	**20.1206**	**3.9000e-004**	**3.7000e-004**	**20.2401**

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					
General Light Industry	0.171025	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401
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		**1.8400e-003**	**0.0168**	**0.0141**	**1.0000e-004**		**1.2700e-003**	**1.2700e-003**		**1.2700e-003**	**1.2700e-003**		**20.1206**	**20.1206**	**3.9000e-004**	**3.7000e-004**	**20.2401**

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	0.1499	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003
Unmitigated	0.1499	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0343					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003
Total	**0.1499**	**1.0000e-005**	**6.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-003**	**1.4000e-003**	**0.0000**		**1.4900e-003**

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	0.0343					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003
Total	**0.1499**	**1.0000e-005**	**6.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-003**	**1.4000e-003**	**0.0000**		**1.4900e-003**

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

Rugged Solar (PV)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	5.40	1000sqft	0.50	5,400.00	0
User Defined Industrial	1.00	User Defined Unit	391.00	1.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 392 acres disturbed for project

Construction Phase - Schedule Provided by Project Engineer

Off-road Equipment - Construction Equipment

Off-road Equipment - CE OHT used for water truck

Off-road Equipment - Construction Equipment Off Highway Truck used for water truck

Off-road Equipment - Off Highway truck in place of boom truck

Off-road Equipment -

Off-road Equipment - Off highway trucks inlcude dump trucks (6) Water Truck (2) and Chip Seal Truck

Off-road Equipment - Other Construction Equipment assumed as a pile driver

Trips and VMT - Trips provide by project applicant

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - 8 trips per day assuming 35 mile trip distance

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating -

Energy Use - Electricity Consumption (O&M) Building, Conservativly included electrical consumption from tracking system from approved 2015 techncial study
See Table "Rugged Solar Farm Project Other Operational Electricy Usage" Page 67

Water And Wastewater - O&M would consume onsite well water at the rate of 1.41

Solid Waste -

Construction Off-road Equipment Mitigation - Tier 4 90%

Energy Mitigation - PV Watts Calculator: 225,264 PV modules. Each module would be 420W

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	2,701.00	2,700.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	8,102.00	8,100.00
tblAreaCoating	Area_Nonresidential_Exterior	2701	2700
tblAreaCoating	Area_Nonresidential_Interior	8102	8100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	240.00	11.00

tblConstructionPhase	NumDays	620.00	43.00
tblConstructionPhase	NumDays	6,200.00	131.00
tblConstructionPhase	NumDays	6,200.00	65.00
tblConstructionPhase	NumDays	440.00	65.00
tblConstructionPhase	NumDays	440.00	10.00
tblEnergyUse	NT24E	0.00	1,375,203.00
tblGrading	AcresOfGrading	21.50	24.00
tblLandUse	LandUseSquareFeet	0.00	1.00
tblLandUse	LotAcreage	0.12	0.50
tblLandUse	LotAcreage	0.00	391.00
tblOffRoadEquipment	HorsePower	158.00	40.00
tblOffRoadEquipment	HorsePower	80.00	102.00
tblOffRoadEquipment	HorsePower	97.00	131.00
tblOffRoadEquipment	HorsePower	97.00	131.00
tblOffRoadEquipment	HorsePower	212.00	215.00
tblOffRoadEquipment	HorsePower	212.00	215.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	156.00
tblTripsAndVMT	HaulingTripNumber	0.00	72.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	1.00	32.00
tblTripsAndVMT	VendorTripNumber	1.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	120.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripNumber	13.00	22.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	2.00	144.00
tblTripsAndVMT	WorkerTripNumber	2.00	40.00
tblTripsAndVMT	WorkerTripNumber	30.00	24.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblVehicleTrips	CW_TL	14.70	35.00
tblVehicleTrips	CW_TTP	0.00	100.00

tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	0.00	8.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	0.00	8.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	0.00	8.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	1,248,750.00	59,450.00
tblWater	OutdoorWaterUseRate	0.00	400,000.00

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					
2022	21.6246	80.0211	66.1477	0.2356	4.0279	2.7203	5.6072	1.0724	2.5102	3.2957	0.0000	23,248.6092	23,248.6092	5.9761	0.0000	23,398.0103
Maximum	**21.6246**	**80.0211**	**66.1477**	**0.2356**	**4.0279**	**2.7203**	**5.6072**	**1.0724**	**2.5102**	**3.2957**	**0.0000**	**23,248.6092**	**23,248.6092**	**5.9761**	**0.0000**	**23,398.0103**

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					
2022	16.1525	26.8755	97.3660	0.2356	4.0279	0.5054	4.1837	1.0724	0.4889	1.2744	0.0000	23,248.6092	23,248.6092	5.9761	0.0000	23,398.0103
Maximum	**16.1525**	**26.8755**	**97.3660**	**0.2356**	**4.0279**	**0.5054**	**4.1837**	**1.0724**	**0.4889**	**1.2744**	**0.0000**	**23,248.6092**	**23,248.6092**	**5.9761**	**0.0000**	**23,398.0103**

	ROG	NOx	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	**25.30**	**66.41**	**-47.19**	**0.00**	**0.00**	**81.42**	**25.39**	**0.00**	**80.52**	**61.33**	**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	0.1499	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003
Energy	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401
Mobile	0.0291	0.1351	0.5203	2.1800e-003	0.2161	1.6200e-003	0.2177	0.0578	1.5100e-003	0.0593		221.3831	221.3831	0.0101		221.6348
Total	**0.1808**	**0.1519**	**0.5350**	**2.2800e-003**	**0.2161**	**2.8900e-003**	**0.2190**	**0.0578**	**2.7800e-003**	**0.0605**		**241.5051**	**241.5051**	**0.0105**	**3.7000e-004**	**241.8764**

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	0.1499	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003
Energy	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401
Mobile	0.0291	0.1351	0.5203	2.1800e-003	0.2161	1.6200e-003	0.2177	0.0578	1.5100e-003	0.0593		221.3831	221.3831	0.0101		221.6348
Total	**0.1808**	**0.1519**	**0.5350**	**2.2800e-003**	**0.2161**	**2.8900e-003**	**0.2190**	**0.0578**	**2.7800e-003**	**0.0605**		**241.5051**	**241.5051**	**0.0105**	**3.7000e-004**	**241.8764**

	ROG	NOx	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	Clear and Grubb	Site Preparation	1/16/2022	1/31/2022	5	11	
2	Access Roads, Contouring for Solar Arrays	Grading	2/1/2022	3/31/2022	5	43	
3	Solar Array & Facilities Construction	Building Construction	4/1/2022	9/30/2022	5	131	
4	Offsite Gen-Tie Connection (to Substation)	Building Construction	10/1/2022	12/31/2022	5	65	
5	Site Entrance Paving & Internal Access Finish Work	Paving	10/1/2022	12/30/2022	5	65	
6	Painting O&M Building	Architectural Coating	10/1/2022	10/14/2022	5	10	

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: 8,100; Non-Residential Outdoor: 2,700; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clear and Grubb	Crawler Tractors	2	8.00	215	0.43
Clear and Grubb	Off-Highway Trucks	2	8.00	402	0.38
Clear and Grubb	Tractors/Loaders/Backhoes	1	8.00	131	0.37
Access Roads, Contouring for Solar Arrays	Crawler Tractors	1	8.00	215	0.43
Access Roads, Contouring for Solar Arrays	Excavators	1	8.00	40	0.38
Access Roads, Contouring for Solar Arrays	Off-Highway Trucks	2	8.00	402	0.38
Access Roads, Contouring for Solar Arrays	Rollers	1	8.00	100	0.38
Solar Array & Facilities Construction	Cranes	2	7.00	231	0.29
Solar Array & Facilities Construction	Forklifts	2	8.00	89	0.20
Solar Array & Facilities Construction	Generator Sets	2	8.00	84	0.74
Solar Array & Facilities Construction	Other Construction Equipment	2	8.00	172	0.42
Solar Array & Facilities Construction	Tractors/Loaders/Backhoes	1	7.00	131	0.37
Offsite Gen-Tie Connection (to Substation)	Cranes	2	8.00	231	0.29
Offsite Gen-Tie Connection (to Substation)	Forklifts	2	8.00	89	0.20
Offsite Gen-Tie Connection (to Substation)	Off-Highway Trucks	2	8.00	402	0.38
Offsite Gen-Tie Connection (to Substation)	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Entrance Paving & Internal Access Finish Work	Off-Highway Trucks	9	8.00	402	0.38
Site Entrance Paving & Internal Access Finish Work	Pavers	2	8.00	130	0.42
Site Entrance Paving & Internal Access Finish Work	Rollers	1	8.00	102	0.38
Painting O&M Building	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clear and Grubb	5	22.00	20.00	12.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Access Roads, Contouring for Solar A	5	30.00	16.00	12.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Solar Array & Facilities Construction	9	144.00	32.00	12.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Gen-Tie Connection (to Substa	8	40.00	20.00	156.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Entrance Paving & Internal Access Fini	12	24.00	120.00	72.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Painting O&M Building	1	10.00	0.00	0.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Clear and Grubb - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0605	0.0000	1.0605	0.1145	0.0000	0.1145			0.0000			0.0000
Off-Road	2.2255	21.7115	14.0451	0.0465		0.8280	0.8280		0.7617	0.7617		4,497.4233	4,497.4233	1.4546		4,533.7873
Total	**2.2255**	**21.7115**	**14.0451**	**0.0465**	**1.0605**	**0.8280**	**1.8885**	**0.1145**	**0.7617**	**0.8763**		**4,497.4233**	**4,497.4233**	**1.4546**		**4,533.7873**

3.2 Clear and Grubb - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8200e-003	0.2578	0.0721	8.1000e-004	0.0191	7.4000e-004	0.0198	5.2200e-003	7.1000e-004	5.9300e-003		89.4636	89.4636	8.3200e-003		89.6716
Vendor	0.0562	1.8428	0.5233	4.8100e-003	0.1225	3.5200e-003	0.1260	0.0353	3.3700e-003	0.0386		518.3940	518.3940	0.0408		519.4127
Worker	0.2219	0.1501	1.4227	5.1600e-003	0.5852	3.6600e-003	0.5889	0.1552	3.3700e-003	0.1585		514.6831	514.6831	0.0132		515.0119
Total	**0.2859**	**2.2508**	**2.0181**	**0.0108**	**0.7267**	**7.9200e-003**	**0.7346**	**0.1956**	**7.4500e-003**	**0.2031**		**1,122.5407**	**1,122.5407**	**0.0622**		**1,124.0962**

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					1.0605	0.0000	1.0605	0.1145	0.0000	0.1145			0.0000			0.0000
Off-Road	0.6899	3.7472	21.6615	0.0465		0.1454	0.1454		0.1393	0.1393	0.0000	4,497.4233	4,497.4233	1.4546		4,533.7873
Total	**0.6899**	**3.7472**	**21.6615**	**0.0465**	**1.0605**	**0.1454**	**1.2059**	**0.1145**	**0.1393**	**0.2538**	**0.0000**	**4,497.4233**	**4,497.4233**	**1.4546**		**4,533.7873**

3.2 Clear and Grubb - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.8200e-003	0.2578	0.0721	8.1000e-004	0.0191	7.4000e-004	0.0198	5.2200e-003	7.1000e-004	5.9300e-003		89.4636	89.4636	8.3200e-003		89.6716
Vendor	0.0562	1.8428	0.5233	4.8100e-003	0.1225	3.5200e-003	0.1260	0.0353	3.3700e-003	0.0386		518.3940	518.3940	0.0408		519.4127
Worker	0.2219	0.1501	1.4227	5.1600e-003	0.5852	3.6600e-003	0.5889	0.1552	3.3700e-003	0.1585		514.6831	514.6831	0.0132		515.0119
Total	**0.2859**	**2.2508**	**2.0181**	**0.0108**	**0.7267**	**7.9200e-003**	**0.7346**	**0.1956**	**7.4500e-003**	**0.2031**		**1,122.5407**	**1,122.5407**	**0.0622**		**1,124.0962**

3.3 Access Roads, Contouring for Solar Arrays - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5919	0.0000	0.5919	0.0639	0.0000	0.0639			0.0000			0.0000
Off-Road	1.8917	17.2697	12.5361	0.0391		0.6890	0.6890		0.6338	0.6338		3,786.2366	3,786.2366	1.2246		3,816.8503
Total	**1.8917**	**17.2697**	**12.5361**	**0.0391**	**0.5919**	**0.6890**	**1.2809**	**0.0639**	**0.6338**	**0.6978**		**3,786.2366**	**3,786.2366**	**1.2246**		**3,816.8503**

3.3 Access Roads, Contouring for Solar Arrays - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0000e-003	0.0660	0.0184	2.1000e-004	4.8800e-003	1.9000e-004	5.0700e-003	1.3400e-003	1.8000e-004	1.5200e-003		22.8860	22.8860	2.1300e-003		22.9393
Vendor	0.0449	1.4743	0.4186	3.8500e-003	0.0980	2.8200e-003	0.1008	0.0282	2.7000e-003	0.0309		414.7152	414.7152	0.0326		415.5301
Worker	0.3026	0.2047	1.9400	7.0400e-003	0.7980	4.9900e-003	0.8030	0.2116	4.6000e-003	0.2162		701.8406	701.8406	0.0179		702.2889
Total	**0.3495**	**1.7450**	**2.3771**	**0.0111**	**0.9008**	**8.0000e-003**	**0.9088**	**0.2411**	**7.4800e-003**	**0.2486**		**1,139.4418**	**1,139.4418**	**0.0527**		**1,140.7583**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5919	0.0000	0.5919	0.0639	0.0000	0.0639			0.0000			0.0000
Off-Road	0.4935	2.7364	19.0207	0.0391		0.0637	0.0637		0.0637	0.0637	0.0000	3,786.2366	3,786.2366	1.2246		3,816.8503
Total	**0.4935**	**2.7364**	**19.0207**	**0.0391**	**0.5919**	**0.0637**	**0.6556**	**0.0639**	**0.0637**	**0.1276**	**0.0000**	**3,786.2366**	**3,786.2366**	**1.2246**		**3,816.8503**

3.3 Access Roads, Contouring for Solar Arrays - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0000e-003	0.0660	0.0184	2.1000e-004	4.8800e-003	1.9000e-004	5.0700e-003	1.3400e-003	1.8000e-004	1.5200e-003		22.8860	22.8860	2.1300e-003		22.9393
Vendor	0.0449	1.4743	0.4186	3.8500e-003	0.0980	2.8200e-003	0.1008	0.0282	2.7000e-003	0.0309		414.7152	414.7152	0.0326		415.5301
Worker	0.3026	0.2047	1.9400	7.0400e-003	0.7980	4.9900e-003	0.8030	0.2116	4.6000e-003	0.2162		701.8406	701.8406	0.0179		702.2889
Total	**0.3495**	**1.7450**	**2.3771**	**0.0111**	**0.9008**	**8.0000e-003**	**0.9088**	**0.2411**	**7.4800e-003**	**0.2486**		**1,139.4418**	**1,139.4418**	**0.0527**		**1,140.7583**

3.4 Solar Array & Facilities Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4414	24.2301	23.3150	0.0423		1.2024	1.2024		1.1297	1.1297		4,066.6641	4,066.6641	0.9714		4,090.9501
Total	**2.4414**	**24.2301**	**23.3150**	**0.0423**		**1.2024**	**1.2024**		**1.1297**	**1.1297**		**4,066.6641**	**4,066.6641**	**0.9714**		**4,090.9501**

3.4 Solar Array & Facilities Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.6000e-004	0.0217	6.0500e-003	7.0000e-005	1.6000e-003	6.0000e-005	1.6600e-003	4.4000e-004	6.0000e-005	5.0000e-004		7.5122	7.5122	7.0000e-004		7.5297
Vendor	0.0899	2.9485	0.8373	7.7000e-003	0.1959	5.6400e-003	0.2016	0.0564	5.3900e-003	0.0618		829.4304	829.4304	0.0652		831.0603
Worker	1.4523	0.9828	9.3121	0.0338	3.8304	0.0240	3.8543	1.0156	0.0221	1.0376		3,368.8349	3,368.8349	0.0861		3,370.9869
Total	**1.5429**	**3.9529**	**10.1555**	**0.0415**	**4.0279**	**0.0297**	**4.0576**	**1.0724**	**0.0275**	**1.0999**		**4,205.7775**	**4,205.7775**	**0.1520**		**4,209.5768**

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	0.5957	3.2445	26.7164	0.0423		0.1262	0.1262		0.1209	0.1209	0.0000	4,066.6641	4,066.6641	0.9714		4,090.9501
Total	**0.5957**	**3.2445**	**26.7164**	**0.0423**		**0.1262**	**0.1262**		**0.1209**	**0.1209**	**0.0000**	**4,066.6641**	**4,066.6641**	**0.9714**		**4,090.9501**

3.4 Solar Array & Facilities Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.6000e-004	0.0217	6.0500e-003	7.0000e-005	1.6000e-003	6.0000e-005	1.6600e-003	4.4000e-004	6.0000e-005	5.0000e-004		7.5122	7.5122	7.0000e-004		7.5297
Vendor	0.0899	2.9485	0.8373	7.7000e-003	0.1959	5.6400e-003	0.2016	0.0564	5.3900e-003	0.0618		829.4304	829.4304	0.0652		831.0603
Worker	1.4523	0.9828	9.3121	0.0338	3.8304	0.0240	3.8543	1.0156	0.0221	1.0376		3,368.8349	3,368.8349	0.0861		3,370.9869
Total	**1.5429**	**3.9529**	**10.1555**	**0.0415**	**4.0279**	**0.0297**	**4.0576**	**1.0724**	**0.0275**	**1.0999**		**4,205.7775**	**4,205.7775**	**0.1520**		**4,209.5768**

3.5 Offsite Gen-Tie Connection (to Substation) - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3594	21.8571	17.2855	0.0473		0.9594	0.9594		0.8826	0.8826		4,574.1708	4,574.1708	1.4794		4,611.1553
Total	**2.3594**	**21.8571**	**17.2855**	**0.0473**		**0.9594**	**0.9594**		**0.8826**	**0.8826**		**4,574.1708**	**4,574.1708**	**1.4794**		**4,611.1553**

3.5 Offsite Gen-Tie Connection (to Substation) - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0172	0.5672	0.1586	1.7900e-003	0.0419	1.6300e-003	0.0436	0.0115	1.5600e-003	0.0131		196.8199	196.8199	0.0183		197.2776
Vendor	0.0562	1.8428	0.5233	4.8100e-003	0.1225	3.5200e-003	0.1260	0.0353	3.3700e-003	0.0386		518.3940	518.3940	0.0408		519.4127
Worker	0.4034	0.2730	2.5867	9.3800e-003	1.0640	6.6500e-003	1.0706	0.2821	6.1300e-003	0.2882		935.7875	935.7875	0.0239		936.3852
Total	**0.4768**	**2.6830**	**3.2686**	**0.0160**	**1.2284**	**0.0118**	**1.2402**	**0.3289**	**0.0111**	**0.3399**		**1,651.0013**	**1,651.0013**	**0.0830**		**1,653.0755**

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	0.8322	5.5299	23.8522	0.0473		0.2473	0.2473		0.2329	0.2329	0.0000	4,574.1708	4,574.1708	1.4794		4,611.1553
Total	**0.8322**	**5.5299**	**23.8522**	**0.0473**		**0.2473**	**0.2473**		**0.2329**	**0.2329**	**0.0000**	**4,574.1708**	**4,574.1708**	**1.4794**		**4,611.1553**

3.5 Offsite Gen-Tie Connection (to Substation) - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0172	0.5672	0.1586	1.7900e-003	0.0419	1.6300e-003	0.0436	0.0115	1.5600e-003	0.0131		196.8199	196.8199	0.0183		197.2776
Vendor	0.0562	1.8428	0.5233	4.8100e-003	0.1225	3.5200e-003	0.1260	0.0353	3.3700e-003	0.0386		518.3940	518.3940	0.0408		519.4127
Worker	0.4034	0.2730	2.5867	9.3800e-003	1.0640	6.6500e-003	1.0706	0.2821	6.1300e-003	0.2882		935.7875	935.7875	0.0239		936.3852
Total	**0.4768**	**2.6830**	**3.2686**	**0.0160**	**1.2284**	**0.0118**	**1.2402**	**0.3289**	**0.0111**	**0.3399**		**1,651.0013**	**1,651.0013**	**0.0830**		**1,653.0755**

3.6 Site Entrance Paving & Internal Access Finish Work - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.3815	42.5217	38.3683	0.1317		1.6398	1.6398		1.5087	1.5087		12,745.3659	12,745.3659	4.1221		12,848.4186
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**5.3815**	**42.5217**	**38.3683**	**0.1317**		**1.6398**	**1.6398**		**1.5087**	**1.5087**		**12,745.3659**	**12,745.3659**	**4.1221**		**12,848.4186**

3.6 Site Entrance Paving & Internal Access Finish Work - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9400e-003	0.2618	0.0732	8.3000e-004	0.0194	7.5000e-004	0.0201	5.3000e-003	7.2000e-004	6.0200e-003		90.8399	90.8399	8.4500e-003		91.0512
Vendor	0.3370	11.0570	3.1398	0.0289	0.7348	0.0211	0.7559	0.2116	0.0202	0.2318		3,110.3639	3,110.3639	0.2445		3,116.4761
Worker	0.2421	0.1638	1.5520	5.6300e-003	0.6384	3.9900e-003	0.6424	0.1693	3.6800e-003	0.1729		561.4725	561.4725	0.0144		561.8311
Total	**0.5870**	**11.4826**	**4.7650**	**0.0353**	**1.3925**	**0.0259**	**1.4184**	**0.3861**	**0.0246**	**0.4107**		**3,762.6763**	**3,762.6763**	**0.2673**		**3,769.3584**

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	1.6115	6.9830	63.0011	0.1317		0.2149	0.2149		0.2149	0.2149	0.0000	12,745.3659	12,745.3659	4.1221		12,848.4186
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6115**	**6.9830**	**63.0011**	**0.1317**		**0.2149**	**0.2149**		**0.2149**	**0.2149**	**0.0000**	**12,745.3659**	**12,745.3659**	**4.1221**		**12,848.4186**

3.6 Site Entrance Paving & Internal Access Finish Work - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9400e-003	0.2618	0.0732	8.3000e-004	0.0194	7.5000e-004	0.0201	5.3000e-003	7.2000e-004	6.0200e-003		90.8399	90.8399	8.4500e-003		91.0512
Vendor	0.3370	11.0570	3.1398	0.0289	0.7348	0.0211	0.7559	0.2116	0.0202	0.2318		3,110.3639	3,110.3639	0.2445		3,116.4761
Worker	0.2421	0.1638	1.5520	5.6300e-003	0.6384	3.9900e-003	0.6424	0.1693	3.6800e-003	0.1729		561.4725	561.4725	0.0144		561.8311
Total	**0.5870**	**11.4826**	**4.7650**	**0.0353**	**1.3925**	**0.0259**	**1.4184**	**0.3861**	**0.0246**	**0.4107**		**3,762.6763**	**3,762.6763**	**0.2673**		**3,769.3584**

3.7 Painting O&M Building - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.5145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**12.7190**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Painting O&M Building - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1009	0.0683	0.6467	2.3500e-003	0.2660	1.6600e-003	0.2677	0.0705	1.5300e-003	0.0721		233.9469	233.9469	5.9800e-003		234.0963
Total	**0.1009**	**0.0683**	**0.6467**	**2.3500e-003**	**0.2660**	**1.6600e-003**	**0.2677**	**0.0705**	**1.5300e-003**	**0.0721**		**233.9469**	**233.9469**	**5.9800e-003**		**234.0963**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.5145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**12.5442**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Painting O&M Building - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1009	0.0683	0.6467	2.3500e-003	0.2660	1.6600e-003	0.2677	0.0705	1.5300e-003	0.0721		233.9469	233.9469	5.9800e-003		234.0963
Total	**0.1009**	**0.0683**	**0.6467**	**2.3500e-003**	**0.2660**	**1.6600e-003**	**0.2677**	**0.0705**	**1.5300e-003**	**0.0721**		**233.9469**	**233.9469**	**5.9800e-003**		**234.0963**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0291	0.1351	0.5203	2.1800e-003	0.2161	1.6200e-003	0.2177	0.0578	1.5100e-003	0.0593		221.3831	221.3831	0.0101		221.6348
Unmitigated	0.0291	0.1351	0.5203	2.1800e-003	0.2161	1.6200e-003	0.2177	0.0578	1.5100e-003	0.0593		221.3831	221.3831	0.0101		221.6348

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
User Defined Industrial	8.00	8.00	8.00	101,920	101,920
Total	8.00	8.00	8.00	101,920	101,920

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
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3
User Defined Industrial	35.00	6.60	6.60	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
User Defined Industrial	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401
NaturalGas Unmitigated	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401

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					
General Light Industry	171.025	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401
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		**1.8400e-003**	**0.0168**	**0.0141**	**1.0000e-004**		**1.2700e-003**	**1.2700e-003**		**1.2700e-003**	**1.2700e-003**		**20.1206**	**20.1206**	**3.9000e-004**	**3.7000e-004**	**20.2401**

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					
General Light Industry	0.171025	1.8400e-003	0.0168	0.0141	1.0000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003		20.1206	20.1206	3.9000e-004	3.7000e-004	20.2401
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		**1.8400e-003**	**0.0168**	**0.0141**	**1.0000e-004**		**1.2700e-003**	**1.2700e-003**		**1.2700e-003**	**1.2700e-003**		**20.1206**	**20.1206**	**3.9000e-004**	**3.7000e-004**	**20.2401**

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	0.1499	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003
Unmitigated	0.1499	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0343					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003
Total	**0.1499**	**1.0000e-005**	**6.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-003**	**1.4000e-003**	**0.0000**		**1.4900e-003**

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	0.0343					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1156					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-003	1.4000e-003	0.0000		1.4900e-003
Total	**0.1499**	**1.0000e-005**	**6.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-003**	**1.4000e-003**	**0.0000**		**1.4900e-003**

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

Rugged Solar (PV)

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	5.40	1000sqft	0.50	5,400.00	0
User Defined Industrial	1.00	User Defined Unit	391.00	1.00	0

1.2 Other Project Characteristics

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

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 392 acres disturbed for project

Construction Phase - Schedule Provided by Project Engineer

Off-road Equipment - Construction Equipment

Off-road Equipment - CE OHT used for water truck

Off-road Equipment - Construction Equipment Off Highway Truck used for water truck

Off-road Equipment - Off Highway truck in place of boom truck

Off-road Equipment -

Off-road Equipment - Off highway trucks inlcude dump trucks (6) Water Truck (2) and Chip Seal Truck

Off-road Equipment - Other Construction Equipment assumed as a pile driver

Trips and VMT - Trips provide by project applicant

Demolition -

Grading -

Architectural Coating -

Vehicle Trips - 8 trips per day assuming 35 mile trip distance

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Area Coating -

Energy Use - Electricity Consumption (O&M) Building, Conservativly included electrical consumption from tracking system from approved 2015 techncial study
See Table "Rugged Solar Farm Project Other Operational Electricy Usage" Page 67

Water And Wastewater - O&M would consume onsite well water at the rate of 1.41

Solid Waste -

Construction Off-road Equipment Mitigation - Tier 4 90%

Energy Mitigation - PV Watts Calculator: 225,264 PV modules. Each module would be 420W

Fleet Mix -

Stationary Sources - Emergency Generators and Fire Pumps -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	2,701.00	2,700.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	8,102.00	8,100.00
tblAreaCoating	Area_Nonresidential_Exterior	2701	2700
tblAreaCoating	Area_Nonresidential_Interior	8102	8100
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	15.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	240.00	11.00

tblConstructionPhase	NumDays	620.00	43.00
tblConstructionPhase	NumDays	6,200.00	131.00
tblConstructionPhase	NumDays	6,200.00	65.00
tblConstructionPhase	NumDays	440.00	65.00
tblConstructionPhase	NumDays	440.00	10.00
tblEnergyUse	NT24E	0.00	1,375,203.00
tblGrading	AcresOfGrading	21.50	24.00
tblLandUse	LandUseSquareFeet	0.00	1.00
tblLandUse	LotAcreage	0.12	0.50
tblLandUse	LotAcreage	0.00	391.00
tblOffRoadEquipment	HorsePower	158.00	40.00
tblOffRoadEquipment	HorsePower	80.00	102.00
tblOffRoadEquipment	HorsePower	97.00	131.00
tblOffRoadEquipment	HorsePower	97.00	131.00
tblOffRoadEquipment	HorsePower	212.00	215.00
tblOffRoadEquipment	HorsePower	212.00	215.00
tblOffRoadEquipment	HorsePower	80.00	100.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	156.00
tblTripsAndVMT	HaulingTripNumber	0.00	72.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	1.00	32.00
tblTripsAndVMT	VendorTripNumber	1.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	120.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripLength	16.80	35.00
tblTripsAndVMT	WorkerTripNumber	13.00	22.00
tblTripsAndVMT	WorkerTripNumber	13.00	30.00
tblTripsAndVMT	WorkerTripNumber	2.00	144.00
tblTripsAndVMT	WorkerTripNumber	2.00	40.00
tblTripsAndVMT	WorkerTripNumber	30.00	24.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblVehicleTrips	CW_TL	14.70	35.00
tblVehicleTrips	CW_TTP	0.00	100.00

tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	ST_TR	0.00	8.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	SU_TR	0.00	8.00
tblVehicleTrips	WD_TR	6.97	0.00
tblVehicleTrips	WD_TR	0.00	8.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToSupply	9,727.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	IndoorWaterUseRate	1,248,750.00	59,450.00
tblWater	OutdoorWaterUseRate	0.00	400,000.00

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					
2022	0.6561	4.9537	4.6838	0.0145	0.3836	0.1864	0.5699	0.1000	0.1731	0.2730	0.0000	1,293.8181	1,293.8181	0.2745	0.0000	1,300.6794
Maximum	**0.6561**	**4.9537**	**4.6838**	**0.0145**	**0.3836**	**0.1864**	**0.5699**	**0.1000**	**0.1731**	**0.2730**	**0.0000**	**1,293.8181**	**1,293.8181**	**0.2745**	**0.0000**	**1,300.6794**

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					
2022	0.3236	1.4758	6.1020	0.0145	0.3836	0.0288	0.4124	0.1000	0.0278	0.1277	0.0000	1,293.8171	1,293.8171	0.2745	0.0000	1,300.6784
Maximum	**0.3236**	**1.4758**	**6.1020**	**0.0145**	**0.3836**	**0.0288**	**0.4124**	**0.1000**	**0.0278**	**0.1277**	**0.0000**	**1,293.8171**	**1,293.8171**	**0.2745**	**0.0000**	**1,300.6784**

	ROG	NOx	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	**50.67**	**70.21**	**-30.28**	**0.00**	**0.00**	**84.53**	**27.64**	**0.00**	**83.96**	**53.22**	**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)
6	1-1-2022	3-31-2022	0.5992	0.1520
7	4-1-2022	6-30-2022	1.0345	0.2925
8	7-1-2022	9-30-2022	1.0459	0.2957
		Highest	1.0459	0.2957

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	0.0274	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.2000e-004
Energy	3.4000e-004	3.0600e-003	2.5700e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	467.4248	467.4248	0.0187	3.9300e-003	469.0633
Mobile	5.2400e-003	0.0245	0.0951	4.0000e-004	0.0384	2.9000e-004	0.0387	0.0103	2.7000e-004	0.0106	0.0000	36.8188	36.8188	1.6600e-003	0.0000	36.8603
Waste						0.0000	0.0000		0.0000	0.0000	1.3600	0.0000	1.3600	0.0804	0.0000	3.3694
Water						0.0000	0.0000		0.0000	0.0000	0.0189	0.2281	0.2470	1.9500e-003	5.0000e-005	0.3098
Total	**0.0329**	**0.0276**	**0.0978**	**4.2000e-004**	**0.0384**	**5.2000e-004**	**0.0389**	**0.0103**	**5.0000e-004**	**0.0108**	**1.3789**	**504.4718**	**505.8507**	**0.1027**	**3.9800e-003**	**509.6030**

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	0.0274	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.2000e-004
Energy	3.4000e-004	3.0600e-003	2.5700e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	-72,879.9713	-72,879.9713	-2.9335	-0.6069	-73,134.1615
Mobile	5.2400e-003	0.0245	0.0951	4.0000e-004	0.0384	2.9000e-004	0.0387	0.0103	2.7000e-004	0.0106	0.0000	36.8188	36.8188	1.6600e-003	0.0000	36.8603
Waste						0.0000	0.0000		0.0000	0.0000	1.3600	0.0000	1.3600	0.0804	0.0000	3.3694
Water						0.0000	0.0000		0.0000	0.0000	0.0189	0.2281	0.2470	1.9500e-003	5.0000e-005	0.3098
Total	**0.0329**	**0.0276**	**0.0978**	**4.2000e-004**	**0.0384**	**5.2000e-004**	**0.0389**	**0.0103**	**5.0000e-004**	**0.0108**	**1.3789**	**-72,842.9243**	**-72,841.5454**	**-2.8495**	**-0.6068**	**-73,093.6218**

	ROG	NOx	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**	**14,539.44**	**14,499.81**	**2,873.81**	**15,347.24**	**14,443.25**

3.0 Construction Detail

Construction Phase

Rugged Solar (PV) - San Diego County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Clear and Grubb	Site Preparation	1/16/2022	1/31/2022	5	11	
2	Access Roads, Contouring for Solar Arrays	Grading	2/1/2022	3/31/2022	5	43	
3	Solar Array & Facilities Construction	Building Construction	4/1/2022	9/30/2022	5	131	
4	Offsite Gen-Tie Connection (to Substation)	Building Construction	10/1/2022	12/31/2022	5	65	
5	Site Entrance Paving & Internal Access Finish Work	Paving	10/1/2022	12/30/2022	5	65	
6	Painting O&M Building	Architectural Coating	10/1/2022	10/14/2022	5	10	

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: 8,100; Non-Residential Outdoor: 2,700; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Rugged Solar (PV) - San Diego County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Clear and Grubb	Crawler Tractors	2	8.00	215	0.43
Clear and Grubb	Off-Highway Trucks	2	8.00	402	0.38
Clear and Grubb	Tractors/Loaders/Backhoes	1	8.00	131	0.37
Access Roads, Contouring for Solar Arrays	Crawler Tractors	1	8.00	215	0.43
Access Roads, Contouring for Solar Arrays	Excavators	1	8.00	40	0.38
Access Roads, Contouring for Solar Arrays	Off-Highway Trucks	2	8.00	402	0.38
Access Roads, Contouring for Solar Arrays	Rollers	1	8.00	100	0.38
Solar Array & Facilities Construction	Cranes	2	7.00	231	0.29
Solar Array & Facilities Construction	Forklifts	2	8.00	89	0.20
Solar Array & Facilities Construction	Generator Sets	2	8.00	84	0.74
Solar Array & Facilities Construction	Other Construction Equipment	2	8.00	172	0.42
Solar Array & Facilities Construction	Tractors/Loaders/Backhoes	1	7.00	131	0.37
Offsite Gen-Tie Connection (to Substation)	Cranes	2	8.00	231	0.29
Offsite Gen-Tie Connection (to Substation)	Forklifts	2	8.00	89	0.20
Offsite Gen-Tie Connection (to Substation)	Off-Highway Trucks	2	8.00	402	0.38
Offsite Gen-Tie Connection (to Substation)	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Entrance Paving & Internal Access Finish Work	Off-Highway Trucks	9	8.00	402	0.38
Site Entrance Paving & Internal Access Finish Work	Pavers	2	8.00	130	0.42
Site Entrance Paving & Internal Access Finish Work	Rollers	1	8.00	102	0.38
Painting O&M Building	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Clear and Grubb	5	22.00	20.00	12.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Access Roads, Contouring for Solar A	5	30.00	16.00	12.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Solar Array & Facilities Construction	9	144.00	32.00	12.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Offsite Gen-Tie Connection (to Substa	8	40.00	20.00	156.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Entrance Paving & Internal Access Fini	12	24.00	120.00	72.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Painting O&M Building	1	10.00	0.00	0.00	35.00	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 Clear and Grubb - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8300e-003	0.0000	5.8300e-003	6.3000e-004	0.0000	6.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0122	0.1194	0.0773	2.6000e-004		4.5500e-003	4.5500e-003		4.1900e-003	4.1900e-003	0.0000	22.4400	22.4400	7.2600e-003	0.0000	22.6214
Total	**0.0122**	**0.1194**	**0.0773**	**2.6000e-004**	**5.8300e-003**	**4.5500e-003**	**0.0104**	**6.3000e-004**	**4.1900e-003**	**4.8200e-003**	**0.0000**	**22.4400**	**22.4400**	**7.2600e-003**	**0.0000**	**22.6214**

3.2 Clear and Grubb - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4300e-003	3.8000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4510	0.4510	4.0000e-005	0.0000	0.4520
Vendor	3.0000e-004	0.0103	2.7200e-003	3.0000e-005	6.6000e-004	2.0000e-005	6.8000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	2.6300	2.6300	2.0000e-004	0.0000	2.6349
Worker	1.0600e-003	8.1000e-004	7.9300e-003	3.0000e-005	3.1400e-003	2.0000e-005	3.1600e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.5940	2.5940	7.0000e-005	0.0000	2.5957
Total	**1.4000e-003**	**0.0125**	**0.0110**	**6.0000e-005**	**3.9000e-003**	**4.0000e-005**	**3.9500e-003**	**1.0500e-003**	**4.0000e-005**	**1.0900e-003**	**0.0000**	**5.6750**	**5.6750**	**3.1000e-004**	**0.0000**	**5.6826**

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					5.8300e-003	0.0000	5.8300e-003	6.3000e-004	0.0000	6.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7900e-003	0.0206	0.1191	2.6000e-004		8.0000e-004	8.0000e-004		7.7000e-004	7.7000e-004	0.0000	22.4399	22.4399	7.2600e-003	0.0000	22.6214
Total	**3.7900e-003**	**0.0206**	**0.1191**	**2.6000e-004**	**5.8300e-003**	**8.0000e-004**	**6.6300e-003**	**6.3000e-004**	**7.7000e-004**	**1.4000e-003**	**0.0000**	**22.4399**	**22.4399**	**7.2600e-003**	**0.0000**	**22.6214**

3.2 Clear and Grubb - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4300e-003	3.8000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4510	0.4510	4.0000e-005	0.0000	0.4520
Vendor	3.0000e-004	0.0103	2.7200e-003	3.0000e-005	6.6000e-004	2.0000e-005	6.8000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	2.6300	2.6300	2.0000e-004	0.0000	2.6349
Worker	1.0600e-003	8.1000e-004	7.9300e-003	3.0000e-005	3.1400e-003	2.0000e-005	3.1600e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.5940	2.5940	7.0000e-005	0.0000	2.5957
Total	**1.4000e-003**	**0.0125**	**0.0110**	**6.0000e-005**	**3.9000e-003**	**4.0000e-005**	**3.9500e-003**	**1.0500e-003**	**4.0000e-005**	**1.0900e-003**	**0.0000**	**5.6750**	**5.6750**	**3.1000e-004**	**0.0000**	**5.6826**

3.3 Access Roads, Contouring for Solar Arrays - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0127	0.0000	0.0127	1.3700e-003	0.0000	1.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0407	0.3713	0.2695	8.4000e-004		0.0148	0.0148		0.0136	0.0136	0.0000	73.8486	73.8486	0.0239	0.0000	74.4457
Total	**0.0407**	**0.3713**	**0.2695**	**8.4000e-004**	**0.0127**	**0.0148**	**0.0275**	**1.3700e-003**	**0.0136**	**0.0150**	**0.0000**	**73.8486**	**73.8486**	**0.0239**	**0.0000**	**74.4457**

3.3 Access Roads, Contouring for Solar Arrays - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4300e-003	3.8000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4510	0.4510	4.0000e-005	0.0000	0.4520
Vendor	9.4000e-004	0.0321	8.5100e-003	8.0000e-005	2.0700e-003	6.0000e-005	2.1200e-003	6.0000e-004	6.0000e-005	6.5000e-004	0.0000	8.2248	8.2248	6.1000e-004	0.0000	8.2401
Worker	5.6400e-003	4.3300e-003	0.0423	1.5000e-004	0.0168	1.1000e-004	0.0169	4.4500e-003	1.0000e-004	4.5500e-003	0.0000	13.8277	13.8277	3.5000e-004	0.0000	13.8366
Total	**6.6200e-003**	**0.0378**	**0.0512**	**2.3000e-004**	**0.0189**	**1.7000e-004**	**0.0191**	**5.0800e-003**	**1.6000e-004**	**5.2300e-003**	**0.0000**	**22.5035**	**22.5035**	**1.0000e-003**	**0.0000**	**22.5287**

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					0.0127	0.0000	0.0127	1.3700e-003	0.0000	1.3700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0106	0.0588	0.4089	8.4000e-004		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	73.8485	73.8485	0.0239	0.0000	74.4456
Total	**0.0106**	**0.0588**	**0.4089**	**8.4000e-004**	**0.0127**	**1.3700e-003**	**0.0141**	**1.3700e-003**	**1.3700e-003**	**2.7400e-003**	**0.0000**	**73.8485**	**73.8485**	**0.0239**	**0.0000**	**74.4456**

3.3 Access Roads, Contouring for Solar Arrays - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4300e-003	3.8000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4510	0.4510	4.0000e-005	0.0000	0.4520
Vendor	9.4000e-004	0.0321	8.5100e-003	8.0000e-005	2.0700e-003	6.0000e-005	2.1200e-003	6.0000e-004	6.0000e-005	6.5000e-004	0.0000	8.2248	8.2248	6.1000e-004	0.0000	8.2401
Worker	5.6400e-003	4.3300e-003	0.0423	1.5000e-004	0.0168	1.1000e-004	0.0169	4.4500e-003	1.0000e-004	4.5500e-003	0.0000	13.8277	13.8277	3.5000e-004	0.0000	13.8366
Total	**6.6200e-003**	**0.0378**	**0.0512**	**2.3000e-004**	**0.0189**	**1.7000e-004**	**0.0191**	**5.0800e-003**	**1.6000e-004**	**5.2300e-003**	**0.0000**	**22.5035**	**22.5035**	**1.0000e-003**	**0.0000**	**22.5287**

3.4 Solar Array & Facilities Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1599	1.5871	1.5271	2.7700e-003		0.0788	0.0788		0.0740	0.0740	0.0000	241.6436	241.6436	0.0577	0.0000	243.0867
Total	**0.1599**	**1.5871**	**1.5271**	**2.7700e-003**		**0.0788**	**0.0788**		**0.0740**	**0.0740**	**0.0000**	**241.6436**	**241.6436**	**0.0577**	**0.0000**	**243.0867**

3.4 Solar Array & Facilities Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4300e-003	3.8000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4510	0.4510	4.0000e-005	0.0000	0.4520
Vendor	5.7000e-003	0.1955	0.0519	5.1000e-004	0.0126	3.6000e-004	0.0129	3.6300e-003	3.4000e-004	3.9800e-003	0.0000	50.1136	50.1136	3.7400e-003	0.0000	50.2072
Worker	0.0825	0.0634	0.6181	2.2300e-003	0.2449	1.5700e-003	0.2465	0.0651	1.4400e-003	0.0665	0.0000	202.2066	202.2066	5.1800e-003	0.0000	202.3361
Total	**0.0882**	**0.2603**	**0.6704**	**2.7400e-003**	**0.2576**	**1.9300e-003**	**0.2595**	**0.0687**	**1.7800e-003**	**0.0705**	**0.0000**	**252.7712**	**252.7712**	**8.9600e-003**	**0.0000**	**252.9953**

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	0.0390	0.2125	1.7499	2.7700e-003		8.2700e-003	8.2700e-003		7.9200e-003	7.9200e-003	0.0000	241.6433	241.6433	0.0577	0.0000	243.0864
Total	**0.0390**	**0.2125**	**1.7499**	**2.7700e-003**		**8.2700e-003**	**8.2700e-003**		**7.9200e-003**	**7.9200e-003**	**0.0000**	**241.6433**	**241.6433**	**0.0577**	**0.0000**	**243.0864**

3.4 Solar Array & Facilities Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.4300e-003	3.8000e-004	0.0000	1.0000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.4510	0.4510	4.0000e-005	0.0000	0.4520
Vendor	5.7000e-003	0.1955	0.0519	5.1000e-004	0.0126	3.6000e-004	0.0129	3.6300e-003	3.4000e-004	3.9800e-003	0.0000	50.1136	50.1136	3.7400e-003	0.0000	50.2072
Worker	0.0825	0.0634	0.6181	2.2300e-003	0.2449	1.5700e-003	0.2465	0.0651	1.4400e-003	0.0665	0.0000	202.2066	202.2066	5.1800e-003	0.0000	202.3361
Total	**0.0882**	**0.2603**	**0.6704**	**2.7400e-003**	**0.2576**	**1.9300e-003**	**0.2595**	**0.0687**	**1.7800e-003**	**0.0705**	**0.0000**	**252.7712**	**252.7712**	**8.9600e-003**	**0.0000**	**252.9953**

3.5 Offsite Gen-Tie Connection (to Substation) - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0767	0.7104	0.5618	1.5400e-003		0.0312	0.0312		0.0287	0.0287	0.0000	134.8626	134.8626	0.0436	0.0000	135.9530
Total	**0.0767**	**0.7104**	**0.5618**	**1.5400e-003**		**0.0312**	**0.0312**		**0.0287**	**0.0287**	**0.0000**	**134.8626**	**134.8626**	**0.0436**	**0.0000**	**135.9530**

3.5 Offsite Gen-Tie Connection (to Substation) - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.5000e-004	0.0186	4.9900e-003	6.0000e-005	1.3300e-003	5.0000e-005	1.3900e-003	3.7000e-004	5.0000e-005	4.2000e-004	0.0000	5.8627	5.8627	5.3000e-004	0.0000	5.8760
Vendor	1.7700e-003	0.0606	0.0161	1.6000e-004	3.9000e-003	1.1000e-004	4.0100e-003	1.1300e-003	1.1000e-004	1.2300e-003	0.0000	15.5410	15.5410	1.1600e-003	0.0000	15.5700
Worker	0.0114	8.7400e-003	0.0852	3.1000e-004	0.0338	2.2000e-004	0.0340	8.9700e-003	2.0000e-004	9.1700e-003	0.0000	27.8699	27.8699	7.1000e-004	0.0000	27.8877
Total	**0.0137**	**0.0880**	**0.1063**	**5.3000e-004**	**0.0390**	**3.8000e-004**	**0.0394**	**0.0105**	**3.6000e-004**	**0.0108**	**0.0000**	**49.2735**	**49.2735**	**2.4000e-003**	**0.0000**	**49.3337**

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	0.0271	0.1797	0.7752	1.5400e-003		8.0400e-003	8.0400e-003		7.5700e-003	7.5700e-003	0.0000	134.8624	134.8624	0.0436	0.0000	135.9529
Total	**0.0271**	**0.1797**	**0.7752**	**1.5400e-003**		**8.0400e-003**	**8.0400e-003**		**7.5700e-003**	**7.5700e-003**	**0.0000**	**134.8624**	**134.8624**	**0.0436**	**0.0000**	**135.9529**

3.5 Offsite Gen-Tie Connection (to Substation) - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.5000e-004	0.0186	4.9900e-003	6.0000e-005	1.3300e-003	5.0000e-005	1.3900e-003	3.7000e-004	5.0000e-005	4.2000e-004	0.0000	5.8627	5.8627	5.3000e-004	0.0000	5.8760
Vendor	1.7700e-003	0.0606	0.0161	1.6000e-004	3.9000e-003	1.1000e-004	4.0100e-003	1.1300e-003	1.1000e-004	1.2300e-003	0.0000	15.5410	15.5410	1.1600e-003	0.0000	15.5700
Worker	0.0114	8.7400e-003	0.0852	3.1000e-004	0.0338	2.2000e-004	0.0340	8.9700e-003	2.0000e-004	9.1700e-003	0.0000	27.8699	27.8699	7.1000e-004	0.0000	27.8877
Total	**0.0137**	**0.0880**	**0.1063**	**5.3000e-004**	**0.0390**	**3.8000e-004**	**0.0394**	**0.0105**	**3.6000e-004**	**0.0108**	**0.0000**	**49.2735**	**49.2735**	**2.4000e-003**	**0.0000**	**49.3337**

3.6 Site Entrance Paving & Internal Access Finish Work - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1749	1.3820	1.2470	4.2800e-003		0.0533	0.0533		0.0490	0.0490	0.0000	375.7781	375.7781	0.1215	0.0000	378.8164
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1749**	**1.3820**	**1.2470**	**4.2800e-003**		**0.0533**	**0.0533**		**0.0490**	**0.0490**	**0.0000**	**375.7781**	**375.7781**	**0.1215**	**0.0000**	**378.8164**

3.6 Site Entrance Paving & Internal Access Finish Work - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	8.6000e-003	2.3000e-003	3.0000e-005	6.2000e-004	2.0000e-005	6.4000e-004	1.7000e-004	2.0000e-005	1.9000e-004	0.0000	2.7059	2.7059	2.4000e-004	0.0000	2.7120
Vendor	0.0106	0.3637	0.0965	9.5000e-004	0.0234	6.7000e-004	0.0241	6.7600e-003	6.4000e-004	7.4000e-003	0.0000	93.2458	93.2458	6.9700e-003	0.0000	93.4199
Worker	6.8200e-003	5.2400e-003	0.0511	1.8000e-004	0.0203	1.3000e-004	0.0204	5.3800e-003	1.2000e-004	5.5000e-003	0.0000	16.7219	16.7219	4.3000e-004	0.0000	16.7326
Total	**0.0177**	**0.3776**	**0.1499**	**1.1600e-003**	**0.0443**	**8.2000e-004**	**0.0451**	**0.0123**	**7.8000e-004**	**0.0131**	**0.0000**	**112.6736**	**112.6736**	**7.6400e-003**	**0.0000**	**112.8646**

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	0.0524	0.2270	2.0475	4.2800e-003		6.9800e-003	6.9800e-003		6.9800e-003	6.9800e-003	0.0000	375.7776	375.7776	0.1215	0.0000	378.8160
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0524**	**0.2270**	**2.0475**	**4.2800e-003**		**6.9800e-003**	**6.9800e-003**		**6.9800e-003**	**6.9800e-003**	**0.0000**	**375.7776**	**375.7776**	**0.1215**	**0.0000**	**378.8160**

3.6 Site Entrance Paving & Internal Access Finish Work - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.5000e-004	8.6000e-003	2.3000e-003	3.0000e-005	6.2000e-004	2.0000e-005	6.4000e-004	1.7000e-004	2.0000e-005	1.9000e-004	0.0000	2.7059	2.7059	2.4000e-004	0.0000	2.7120
Vendor	0.0106	0.3637	0.0965	9.5000e-004	0.0234	6.7000e-004	0.0241	6.7600e-003	6.4000e-004	7.4000e-003	0.0000	93.2458	93.2458	6.9700e-003	0.0000	93.4199
Worker	6.8200e-003	5.2400e-003	0.0511	1.8000e-004	0.0203	1.3000e-004	0.0204	5.3800e-003	1.2000e-004	5.5000e-003	0.0000	16.7219	16.7219	4.3000e-004	0.0000	16.7326
Total	**0.0177**	**0.3776**	**0.1499**	**1.1600e-003**	**0.0443**	**8.2000e-004**	**0.0451**	**0.0123**	**7.8000e-004**	**0.0131**	**0.0000**	**112.6736**	**112.6736**	**7.6400e-003**	**0.0000**	**112.8646**

3.7 Painting O&M Building - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0626					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200e-003	7.0400e-003	9.0700e-003	1.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.0636**	**7.0400e-003**	**9.0700e-003**	**1.0000e-005**		**4.1000e-004**	**4.1000e-004**		**4.1000e-004**	**4.1000e-004**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.7 Painting O&M Building - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	3.4000e-004	3.2800e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0719	1.0719	3.0000e-005	0.0000	1.0726
Total	**4.4000e-004**	**3.4000e-004**	**3.2800e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0719**	**1.0719**	**3.0000e-005**	**0.0000**	**1.0726**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0626					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	6.4000e-004	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total	**0.0627**	**6.4000e-004**	**9.1600e-003**	**1.0000e-005**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.7 Painting O&M Building - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.4000e-004	3.4000e-004	3.2800e-003	1.0000e-005	1.3000e-003	1.0000e-005	1.3100e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.0719	1.0719	3.0000e-005	0.0000	1.0726
Total	**4.4000e-004**	**3.4000e-004**	**3.2800e-003**	**1.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3100e-003**	**3.4000e-004**	**1.0000e-005**	**3.5000e-004**	**0.0000**	**1.0719**	**1.0719**	**3.0000e-005**	**0.0000**	**1.0726**

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	5.2400e-003	0.0245	0.0951	4.0000e-004	0.0384	2.9000e-004	0.0387	0.0103	2.7000e-004	0.0106	0.0000	36.8188	36.8188	1.6600e-003	0.0000	36.8603
Unmitigated	5.2400e-003	0.0245	0.0951	4.0000e-004	0.0384	2.9000e-004	0.0387	0.0103	2.7000e-004	0.0106	0.0000	36.8188	36.8188	1.6600e-003	0.0000	36.8603

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
User Defined Industrial	8.00	8.00	8.00	101,920	101,920
Total	8.00	8.00	8.00	101,920	101,920

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
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3
User Defined Industrial	35.00	6.60	6.60	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
User Defined Industrial	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive 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	-72,883.3025	-72,883.3025	-2.9336	-0.6070	-73,137.5125
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	464.0936	464.0936	0.0187	3.8600e-003	465.7123
NaturalGas Mitigated	3.4000e-004	3.0600e-003	2.5700e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3312	3.3312	6.0000e-005	6.0000e-005	3.3510
NaturalGas Unmitigated	3.4000e-004	3.0600e-003	2.5700e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3312	3.3312	6.0000e-005	6.0000e-005	3.3510

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					
General Light Industry	62424	3.4000e-004	3.0600e-003	2.5700e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3312	3.3312	6.0000e-005	6.0000e-005	3.3510
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		**3.4000e-004**	**3.0600e-003**	**2.5700e-003**	**2.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**	**0.0000**	**3.3312**	**3.3312**	**6.0000e-005**	**6.0000e-005**	**3.3510**

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					
General Light Industry	62424	3.4000e-004	3.0600e-003	2.5700e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.3312	3.3312	6.0000e-005	6.0000e-005	3.3510
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		**3.4000e-004**	**3.0600e-003**	**2.5700e-003**	**2.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.3000e-004**	**2.3000e-004**	**0.0000**	**3.3312**	**3.3312**	**6.0000e-005**	**6.0000e-005**	**3.3510**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	44874	14.6652	5.9000e-004	1.2000e-004	14.7164
User Defined Industrial	1.3752e+006	449.4284	0.0181	3.7400e-003	450.9960
Total		**464.0936**	**0.0187**	**3.8600e-003**	**465.7123**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	-1.12173e+008	-36,659.0329	-1.4755	-0.3053	-36,786.8960
User Defined Industrial	-1.10842e+008	-36,224.2697	-1.4580	-0.3017	-36,350.6165
Total		**-72,883.3025**	**-2.9336**	**-0.6069**	**-73,137.5125**

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	0.0274	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.2000e-004
Unmitigated	0.0274	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.2000e-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	tons/yr										MT/yr					
Architectural Coating	6.2600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0211					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.2000e-004
Total	**0.0274**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0000**	**1.2000e-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	tons/yr										MT/yr					
Architectural Coating	6.2600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0211					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	6.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.1000e-004	1.1000e-004	0.0000	0.0000	1.2000e-004
Total	**0.0274**	**0.0000**	**6.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.1000e-004**	**1.1000e-004**	**0.0000**	**0.0000**	**1.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.2470	1.9500e-003	5.0000e-005	0.3098
Unmitigated	0.2470	1.9500e-003	5.0000e-005	0.3098

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.05945 / 0	0.0807	1.9400e-003	5.0000e-005	0.1430
User Defined Industrial	0 / 0.4	0.1663	1.0000e-005	0.0000	0.1669
Total		**0.2470**	**1.9500e-003**	**5.0000e-005**	**0.3098**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.05945 / 0	0.0807	1.9400e-003	5.0000e-005	0.1430
User Defined Industrial	0 / 0.4	0.1663	1.0000e-005	0.0000	0.1669
Total		**0.2470**	**1.9500e-003**	**5.0000e-005**	**0.3098**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.3600	0.0804	0.0000	3.3694
Unmitigated	1.3600	0.0804	0.0000	3.3694

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	6.7	1.3600	0.0804	0.0000	3.3694
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**1.3600**	**0.0804**	**0.0000**	**3.3694**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	6.7	1.3600	0.0804	0.0000	3.3694
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**1.3600**	**0.0804**	**0.0000**	**3.3694**

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 for PM_{10} Exhaust During Construction

```
1                    AERMOD PRIME - (DATED  19191)

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

 Run Began on  3/05/2022 at 13:03:00

** BREEZE AERMOD
** Trinity Consultants
** VERSION  10.0

CO STARTING
CO TITLEONE  Rugged Solar assumed PDF to include Tier 4
CO MODELOPT  DFAULT  CONC  NODRYDPLT  NOWETDPLT
CO RUNORNOT  RUN
CO AVERTIME  ANNUAL
CO POLLUTID  PM10
CO FINISHED

SO STARTING
SO ELEVUNIT  METERS
SO LOCATION  Y1PRK000  AREAPOLY  566657.5  3617747.1  0
** SRCDESCR  PA1
SO LOCATION  Y1PRK001  AREAPOLY  567439  3617097.4  0
** SRCDESCR  PA2
SO LOCATION  Y1PRK002  AREAPOLY  567884.6  3618060.7  0
** SRCDESCR  PA3
SO LOCATION  Y1PRK003  AREAPOLY  567636.4  3617440.1  0
** SRCDESCR  PA4
SO LOCATION  Y1PRK004  AREAPOLY  569449.7  3617507.1  0
** SRCDESCR  PA5
SO SRCPARAM  Y1PRK000  4.96E-10  3  29  1
SO SRCPARAM  Y1PRK001  4.96E-10  3  14  1
SO SRCPARAM  Y1PRK002  4.96E-10  3  13  1
SO SRCPARAM  Y1PRK003  4.96E-10  3  37  1
SO SRCPARAM  Y1PRK004  4.96E-10  3  18  1
SO AREAVERT  Y1PRK000  566657.5 3617747.1  566657.5 3617509.3  566708.7 3617509.3  566708.7 3617437.4
SO AREAVERT  Y1PRK000  566668.6 3617436.1  566656.1 3617416.7  566656.1 3617337.9  566947.8 3617343.4
SO AREAVERT  Y1PRK000  566949.2 3617415.3  566917.4 3617436.1  566902.2 3617485.8  566906.4 3617503.8
SO AREAVERT  Y1PRK000  566945.1 3617502.4  566990.7 3617469.2  567030.8 3617454  567041.8 3617349
SO AREAVERT  Y1PRK000  567175.9 3617357.3  567181.5 3617507.9  567029.4 3617514.9  567029.4 3617462.3
SO AREAVERT  Y1PRK000  566990.7 3617480.3  566958.9 3617505.2  566958.9 3617561.9  566928.5 3617596.4
SO AREAVERT  Y1PRK000  566899.4 3617595  566898.1 3617657.2  566859.4 3617707  566820.6 3617747.1
SO AREAVERT  Y1PRK000  566657.5 3617747.1
SO AREAVERT  Y1PRK001  567439 3617097.4  567452.3 3616107  568061 3616101.7  568058.3 3616067
SO AREAVERT  Y1PRK001  568199.8 3616069.6  568234.5 3616475.4  567842.1 3616520.8  567844.8 3616950.6
SO AREAVERT  Y1PRK001  567759.3 3616958.6  567719.3 3616974.6  567657.9 3616971.9  567652.6 3617078.7
SO AREAVERT  Y1PRK001  567636.5 3617094.7  567439 3617097.4
SO AREAVERT  Y1PRK002  567884.6 3618060.7  567897.3 3617751.7  568112.6 3617749.2  568110 3617855.5
SO AREAVERT  Y1PRK002  568140.4 3617837.8  568178.4 3617794.8  568249.3 3617807.4  568241.7 3617860.6
SO AREAVERT  Y1PRK002  568165.8 3617949.3  568143 3617967  568097.4 3617961.9  568094.8 3618060.7
SO AREAVERT  Y1PRK002  567884.6 3618060.7
SO AREAVERT  Y1PRK003  567636.4 3617440.1  567646.5 3617338.8  567856.7 3617331.2  567864.3 3617346.4
SO AREAVERT  Y1PRK003  568110 3617343.9  568105 3617308.4  568730.6 3617227.4  568735.7 3617255.2
SO AREAVERT  Y1PRK003  568745.8 3617265.4  568753.4 3617349  568793.9 3617343.9  568839.5 3617255.2
SO AREAVERT  Y1PRK003  568837 3617212.2  568994 3617189.4  568996.6 3617751.7  568905.4 3617751.7
SO AREAVERT  Y1PRK003  568913 3617774.5  568831.9 3617774.5  568831.9 3617744.1  568644.5 3617749.2
SO AREAVERT  Y1PRK003  568581.2 3617706.1  568578.6 3617690.9  568317.7 3617701  568322.8 3617723.8
SO AREAVERT  Y1PRK003  568211.3 3617718.8  568196.2 3617698.5  568117.6 3617721.3  568059.4 3617731.4
SO AREAVERT  Y1PRK003  567912.5 3617726.4  567823.8 3617678.2  567839 3617447.7  567796 3617442.7
SO AREAVERT  Y1PRK003  567785.8 3617414.8  567730.1 3617412.3  567730.1 3617437.6  567684.5 3617432.6
SO AREAVERT  Y1PRK003  567636.4 3617440.1
SO AREAVERT  Y1PRK004  569449.7 3617507.1  569445.8 3616720.2  569847.1 3616718.2  569849.1 3616732.1
SO AREAVERT  Y1PRK004  569861 3616751.8  569861 3616787.4  569855 3616803.3  569851.1 3616866.5
SO AREAVERT  Y1PRK004  569827.4 3616925.8  569825.4 3617024.7  569837.2 3617123.6  569791.8 3617127.5
SO AREAVERT  Y1PRK004  569787.8 3617285.7  569685 3617285.7  569685 3617422.1  569714.7 3617422.1
SO AREAVERT  Y1PRK004  569710.7 3617513.1  569449.7 3617507.1
SO SRCGROUP  ALL
SO FINISHED

RE STARTING
RE ELEVUNIT  METERS
RE DISCCART  566364.4  3617817.1  0  0
** SENSITIV
** RCPDESCR  R1
RE DISCCART  566418.1  3618110.6  0  0
** SENSITIV
** RCPDESCR  R2
RE DISCCART  569073.5  3618081.1  0  0
** SENSITIV
** RCPDESCR  R3
RE DISCCART  567354.1  3616602.2  0  0
** SENSITIV
** RCPDESCR  R4
RE DISCCART  566538.7  3617281.6  0  0
** SENSITIV
** RCPDESCR  R5
RE FINISHED

ME STARTING
ME SURFFILE  "C:\USERS\RYAN\ONEDRIVE\LDNONE~1\COUNTY~3\19-109~1\AERMOD\ECA_2012_V15181.SFC"
** SURFFILE  "C:\USERS\RYAN\ONEDRIVE\LDNONE~1\COUNTY~3\19-109~1\AERMOD\ECA_2012_V15181.SFC"
```

```
ME PROFFILE  "C:\USERS\RYAN\ONEDRIVE\LDNONE~1\COUNTY~3\19-109~1\AERMOD\ECA_2012_V15181.PFL"
** PROFFILE  "C:\USERS\RYAN\ONEDRIVE\LDNONE~1\COUNTY~3\19-109~1\AERMOD\ECA_2012_V15181.PFL"
ME SURFDATA  93107 2012
ME UAIRDATA  3190 2012
ME SITEDATA  00000003 2012
ME PROFBASE  0  METERS
ME FINISHED

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

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


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

** PROJECTIONWKT
PROJCS["UTM_6326_Zone11",GEOGCS["WGS_84",DATUM["World_Geodetic_System_1984",SPHEROID["WGS_1984",6378137,298.257223563],TOWGS84[0,0,0,0,0,0,0]],PRIMEM["G
reenwich",0],UNIT["Degree",0.0174532925199433]],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_19191_64.EXE
** AERMAPEXE  AERMAP_EPA_18081_64.EXE


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

 *** AERMOD - VERSION  19191 ***   ***  Rugged Solar assumed PDF to include Tier 4                          ***        03/05/22
 *** AERMET - VERSION  15181 ***   ***                                                                    ***       13:03:00
                                                                                                                   PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL

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

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

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

 **Model Uses RURAL Dispersion Only.

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

 **Other Options Specified:
        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:      5 Source(s);       1 Source Group(s); and       5 Receptor(s)

               with:       0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                and:       0 VOLUME source(s)
                and:       5 AREA type source(s)
```

```
              and:      0 LINE source(s)
              and:      0 RLINE/RLINEXT source(s)
              and:      0 OPENPIT source(s)
              and:      0 BUOYANT LINE source(s) with      0 line(s)
```

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

**The AERMET Input Meteorological Data Version Date: 15181

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

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

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

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

**Input Runstream File:          aermod.inp
**Output Print File:             aermod.out
```


*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	LOCATION OF AREA Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
Y1PRK000	0	0.49600E-09	566657.5	3617747.1	0.0	3.00	29	1.00	NO	
Y1PRK001	0	0.49600E-09	567439.0	3617097.4	0.0	3.00	14	1.00	NO	
Y1PRK002	0	0.49600E-09	567884.6	3618060.7	0.0	3.00	13	1.00	NO	
Y1PRK003	0	0.49600E-09	567636.4	3617440.1	0.0	3.00	37	1.00	NO	
Y1PRK004	0	0.49600E-09	569449.7	3617507.1	0.0	3.00	18	1.00	NO	

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	Y1PRK000 , Y1PRK001 , Y1PRK002 , Y1PRK003 , Y1PRK004 ,

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

*** 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

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

```
  Surface file:   C:\USERS\RYAN\ONEDRIVE\LDNONE~1\COUNTY~3\19-109~1\AERMOD\ECA_2012_V15181.SFC       Met Version:  15181
  Profile file:   C:\USERS\RYAN\ONEDRIVE\LDNONE~1\COUNTY~3\19-109~1\AERMOD\ECA_2012_V15181.PFL
```

Surface format: FREE
Profile format: FREE
Surface station no.: 93107 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	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.44	1.19	1.00	0.00	0.	10.0	280.9	10.0
12	01	01	1	02	-18.0	0.160	-9.000	-9.000	-999.	154.	20.4	0.09	1.19	1.00	2.86	58.	10.0	280.4	10.0
12	01	01	1	03	-23.7	0.210	-9.000	-9.000	-999.	231.	34.9	0.18	1.19	1.00	2.86	94.	10.0	279.2	10.0
12	01	01	1	04	-20.2	0.178	-9.000	-9.000	-999.	181.	25.1	0.12	1.19	1.00	2.86	83.	10.0	278.6	10.0
12	01	01	1	05	-20.2	0.178	-9.000	-9.000	-999.	181.	25.0	0.12	1.19	1.00	2.86	73.	10.0	278.1	10.0
12	01	01	1	06	-0.6	0.026	-9.000	-9.000	-999.	71.	2.8	0.34	1.19	1.00	0.44	102.	10.0	277.5	10.0
12	01	01	1	07	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.44	1.19	1.00	0.00	0.	10.0	277.5	10.0
12	01	01	1	08	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.44	1.19	0.49	0.00	0.	10.0	278.1	10.0
12	01	01	1	09	35.7	-9.000	-9.000	-9.000	37.	-999.	-99999.0	0.44	1.19	0.30	0.00	0.	10.0	282.5	10.0
12	01	01	1	10	89.2	0.124	0.645	0.011	108.	105.	-1.9	0.52	1.19	0.23	0.44	296.	10.0	286.4	10.0
12	01	01	1	11	126.8	0.130	0.992	0.006	276.	113.	-1.6	0.52	1.19	0.21	0.44	263.	10.0	291.4	10.0
12	01	01	1	12	146.2	0.129	1.275	0.005	507.	111.	-1.3	0.46	1.19	0.20	0.44	318.	10.0	296.4	10.0
12	01	01	1	13	145.4	0.133	1.451	0.005	751.	116.	-1.4	0.52	1.19	0.20	0.44	299.	10.0	299.8	10.0
12	01	01	1	14	124.3	0.199	1.556	0.005	1084.	213.	-5.7	0.52	1.19	0.21	0.89	256.	10.0	301.4	10.0
12	01	01	1	15	83.8	0.300	1.434	0.005	1258.	395.	-28.8	0.52	1.19	0.24	1.78	243.	10.0	301.9	10.0
12	01	01	1	16	27.5	0.273	1.002	0.005	1306.	343.	-66.2	0.52	1.19	0.33	1.78	282.	10.0	301.4	10.0
12	01	01	1	17	-0.6	0.030	-9.000	-9.000	-999.	189.	3.8	0.52	1.19	0.61	0.44	280.	10.0	298.1	10.0
12	01	01	1	18	-0.5	0.026	-9.000	-9.000	-999.	77.	2.9	0.34	1.19	1.00	0.44	94.	10.0	292.5	10.0
12	01	01	1	19	-0.6	0.028	-9.000	-9.000	-999.	16.	3.2	0.44	1.19	1.00	0.44	88.	10.0	290.4	10.0
12	01	01	1	20	-0.6	0.026	-9.000	-9.000	-999.	10.	2.9	0.34	1.19	1.00	0.44	107.	10.0	288.1	10.0
12	01	01	1	21	-0.7	0.030	-9.000	-9.000	-999.	12.	3.5	0.52	1.19	1.00	0.44	254.	10.0	285.9	10.0
12	01	01	1	22	-0.6	0.026	-9.000	-9.000	-999.	10.	2.8	0.34	1.19	1.00	0.44	103.	10.0	284.8	10.0
12	01	01	1	23	-0.6	0.027	-9.000	-9.000	-999.	11.	3.0	0.38	1.19	1.00	0.44	145.	10.0	283.1	10.0
12	01	01	1	24	-0.6	0.026	-9.000	-9.000	-999.	10.	2.8	0.34	1.19	1.00	0.44	91.	10.0	281.9	10.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	10.0	1	-999.	-99.00	280.9	-999.0	-99.00	-99.00

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

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): Y1PRK000 , Y1PRK001 , Y1PRK002 , Y1PRK003 , Y1PRK004 ,

*** 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
566364.40	3617817.10	0.00794	566418.10	3618110.60	0.00567
569073.50	3618081.10	0.00478	567354.10	3616602.20	0.01806
566538.70	3617281.60	0.00743			

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

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

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

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.01806	AT (567354.10, 3616602.20, 0.00, 0.00, 0.00)	SR	
	2ND HIGHEST VALUE IS	0.00794	AT (566364.40, 3617817.10, 0.00, 0.00, 0.00)	SR	
	3RD HIGHEST VALUE IS	0.00743	AT (566538.70, 3617281.60, 0.00, 0.00, 0.00)	SR	
	4TH HIGHEST VALUE IS	0.00567	AT (566418.10, 3618110.60, 0.00, 0.00, 0.00)	SR	
	5TH HIGHEST VALUE IS	0.00478	AT (569073.50, 3618081.10, 0.00, 0.00, 0.00)	SR	
	6TH HIGHEST VALUE IS	0.00000	AT (0.00, 0.00, 0.00, 0.00, 0.00)		
	7TH HIGHEST VALUE IS	0.00000	AT (0.00, 0.00, 0.00, 0.00, 0.00)		
	8TH HIGHEST VALUE IS	0.00000	AT (0.00, 0.00, 0.00, 0.00, 0.00)		
	9TH HIGHEST VALUE IS	0.00000	AT (0.00, 0.00, 0.00, 0.00, 0.00)		
	10TH HIGHEST VALUE IS	0.00000	AT (0.00, 0.00, 0.00, 0.00, 0.00)		

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

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL

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

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

A Total of   0 Fatal Error Message(s)
A Total of   4 Warning Message(s)
A Total of   537 Informational Message(s)

A Total of   8784 Hours Were Processed

A Total of   438 Calm Hours Identified

A Total of   99 Missing Hours Identified (1.13 Percent)

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

   ********   WARNING MESSAGES   ********
MX W403   6   PFLCNV: Turbulence data is being used w/o ADJ_U* option   SigA Data
MX W403   7   PFLCNV: Turbulence data is being used w/o ADJ_U* option   SigA Data
MX W403   8   PFLCNV: Turbulence data is being used w/o ADJ_U* option   SigA Data
MX W403   9   PFLCNV: Turbulence data is being used w/o ADJ_U* option   SigA Data

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

ATTACHMENT C

Health Risk Calculations (PM_{10} Exhaust)

Air Quality Health Risk Calculations (Worst-Case)
Rugged Solar PDF included

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	**0.0255**
	Construction Start	**1/16/2022**
	Construction Complete	**12/31/2022**
	Days	**349**
	Construction Emission per day (lb/day)	**0.146131805**
	Annual Duration (Days)	**365**
	Annualized Emission Rate (Grams/Second)	**0.000766177**
	Project Site Size (Acres)	**381.5**
	Project Site Size (meters^2)	**1543875.725**
	Length of Smalles Side (meters)	**1242.527957**
Used as an input to AERMOD	Emission Rate over Grading Area(g/s-m^2)	**4.96E-10**
From AERMOD	Concentration Annual (Ug/M^3)	**0.01806**

	Days	Days to years					
Duration	349	0.956164384					
Age (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70	
Cair (annual) - From F15	0.01806	0.01806	0.01806	0.01806	0.01806	0.01806	
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	0.00000626	0.00001890	0.00001493	0.00001292	0.00000581	0.00000503	
Construction Days	349	0.956164384					
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1	
Age Sensitivity Factor	10	10	3	3	1	1	
ED	0.25	0.956164384	0.956164384	0.956164384	0.956164384	0.956164384	
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	2.09002E-07	2.41358E-06	4.84477E-07	4.19205E-07	6.37065E-08	5.51489E-08	
Risk per million Exposed	0.209001672	2.41357951	0.484476916	0.419204765	0.063706516	0.055148924	
Cancer Risk Per Million 9-years	3.11						
Cancer Risk Per Million 30-years	3.11						
Cancer Risk Per Million 70-years	**3.10**						