

# **DRAFT AIR QUALITY TECHNICAL REPORT ESTRELLA SOLAR PROJECT**

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## Acronyms and Abbreviations

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$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AB	Assembly Bill
AC	alternating current
AVAQMD	Antelope Valley Air Quality Management District
BESS	battery energy storage system
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CAMX	California-Mexico Power Area
CAP	Climate Action Plan
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAP	Community Climate Action Plan
CEQA	California Environmental Quality Act
CH <sub>4</sub>	methane
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
County	County of Los Angeles
County Code	County Code of Ordinances
CY	cubic yards
DC	direct current
DPM	diesel particulate matter
eGrid	Emissions & Generation Resource Integrated Database
EKAPCD	Eastern Kern Air Pollution Control District
EMFAC2017	Emission Factor 2017
EO	Executive Order
gen-tie	generation-tie
GHG	greenhouse gas
GVWR	gross vehicle weight rating
GWP	global warming potential
H <sub>2</sub> S	hydrogen sulfide
HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
kV	kilovolt

LCFS	Low-Carbon Fuel Standard
LEV	low-emission vehicle
LOS	level of service
MDAB	Mojave Desert Air Basin
MTCO <sub>2e</sub>	metric tons of carbon dioxide equivalent
MW	megawatts
MWh	megawatt-hour
N <sub>2</sub> O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO <sub>2</sub>	nitrogen dioxide
NO <sub>x</sub>	nitrogen oxides
O <sub>3</sub>	ozone
OEHHA	Office of Environmental Health Hazard Assessment
Pb	lead
PFCs	perfluorinated carbons
PM	particulate matter
PM <sub>10</sub>	particles with an aerodynamic diameter of 10 micrometers or less
PM <sub>2.5</sub>	particles with an aerodynamic diameter of 2.5 micrometers or less
PRC	Public Resources Code
proposed project	Estrella Solar Project
PV	photovoltaic
PVC	polyvinyl chloride
ROG	reactive organic gases
ROW	rights-of-way
RPS	Renewable Energy Portfolio Standards
SAFE	Safer Affordable Fuel-Efficient
SB	Senate Bill
SCE	Southern California Edison
SF <sub>6</sub>	sulfur hexafluoride
SIL	Significant Impact Level
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO <sub>2</sub>	sulfur dioxide
solar facility	ground-mounted utility-scale solar energy facility
SO <sub>x</sub>	sulfur oxides
SR	State Route
TAC	toxic air contaminant



Tanner Act	Toxic Air Contaminant Identification and Control Act
USEPA	United States Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound

This report is provided to support the County of Los Angeles (County) environmental review process and supply information regarding potential effects of air quality and greenhouse gas (GHG) emissions associated with the proposed Estrella Solar Project (proposed project). The analysis in this report evaluates the potential for short- and long-term air quality and GHG impacts associated with construction and operation of the proposed project. The report gives a description of the environmental setting for the proposed project, including existing air quality and GHG conditions, as well as applicable laws and regulations, and documents the assumptions, methodologies, and findings used to evaluate the impacts. The report was prepared in accordance with the Antelope Valley Air Quality Management District (AVAQMD) *California Environmental Quality Act and Federal Conformity Guidelines* (2016).

## 1.1 Project Description

The project proposed by AES would occur on 148.8 acres of private land located in unincorporated Los Angeles County, California, approximately 12 miles northwest of the city of Lancaster. The project site consists of two parcels, Assessor Parcel Numbers 3262-006-002 and 3262-006-003, and is located at the southwestern corner of West Avenue A and 90<sup>th</sup> Street West. West Avenue A, on the north side of the site, forms a boundary between Los Angeles and Kern Counties.

The proposed project involves the construction of a ground-mounted utility-scale solar energy facility (solar facility) and optional battery energy storage system (BESS) pursuant to Sections 22.16.030.D and 22.140.510 of the County Code of Ordinances (County Code). The proposed project would employ photovoltaic (PV) modules that convert sunlight directly into electrical energy without the use of heat transfer fluid or cooling water. The proposed project would have a generating capacity of up to 21 megawatts (MW) of alternating current (AC) and up to 28 MW of energy storage capacity.

The proposed project would occupy approximately 145 acres of the 148.8-acre site, and the facility would generate, charge, store, and discharge renewable, emission-free electricity during the highest electricity-demand time periods. The proposed project would operate year-round, generating electric power during daylight hours and discharging stored electric power at night.

The major components of the proposed project are as follows:

- A solar field of north-south rows of PV panels, mounted on either fixed-tilt or single-axis tracking systems on steel support structures
- An electrical collection system with PV modules that would be electrically connected into strings, with each string funneled by underground electrical conduit to combiner boxes located throughout the solar field power blocks and cables from the combiner boxes consolidated again to feed the direct current (DC) electricity into inverters that convert the DC to AC

- Battery storage technology that uses telecommunication systems and real-time control software to charge and discharge the battery according to power delivery needs
- A switchgear area for the transformer equipment, control building foundation, and oil containment area
- A data collection system to remotely monitor the facility operation and/or remotely control critical components
- Civil infrastructure, such as paved driveways, internal 20-foot-wide access roads, security fencing, landscaping, and two 5,000-gallon water tanks
- Interconnection generation-tie (gen-tie) line installed underground to connect the proposed project to the SCE grid via one of three options

The proposed project would meet the increasing demand for electricity generated from clean, renewable technology. Recent legislation enacted in California recognizes the multiple benefits associated with the development of renewable energy resources, including diversification of energy portfolios, reductions in GHG emissions, and the creation of “green” jobs within California.

Additionally, the proposed project would assist California in the effort to meet the newly established Renewable Energy Portfolio Standards (RPS) by enabling the California grid to sustain requisite power capacity levels and manage power intermittency from renewable-generated facilities. Senate Bill (SB) 14 establishes RPS targets for California that state, “All retail sellers of electricity will serve 33 percent of their load with renewable energy by 2020.” Additionally, SB 350 requires the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030. State government agencies have been directed to take all appropriate actions to implement this target in all regulatory proceedings, including siting, permitting, and procurement for renewable energy power plants and transmission lines. Solar-generating facilities qualify as eligible renewable energy resources as defined by the California Public Resources Code (PRC) and would help the State meet the objective of increasing renewable energy generation. In addition, the proposed project would contribute much-needed competitive energy during peak power periods to the electrical grid in California.

The project planning objective is to minimize impacts on the environment and the local community by:

- Using disturbed land or land that has been previously degraded from prior use
- Using existing electrical distribution facilities, rights-of-way (ROW), roads, and other existing infrastructure, where possible, to minimize the need for new electrical support facilities
- Minimizing impacts on threatened or endangered species or their habitats, wetlands and waters of the United States, cultural resources, and sensitive land use
- Minimizing water use
- Reducing GHG emissions

### 1.1.1 Gen-Tie Description

Solar electricity generated by the proposed project would connect to the proposed gen-tie line that extends south for approximately 9 miles along public ROW and a few privately owned parcels and connects to the Big Sky North Substation, northeast of the intersection of 100<sup>th</sup> Street West and Avenue G-8, within the City of Lancaster. The proposed project would interconnect two potential gen-tie options to the existing Southern California Edison (SCE) transmission system. Under both gen-tie options, the proposed project would interconnect via an approximately 8 to 10-mile 34-kilovolt (kV) and/or 230-kV gen-tie lines originating at a DC collection system located at the project site.

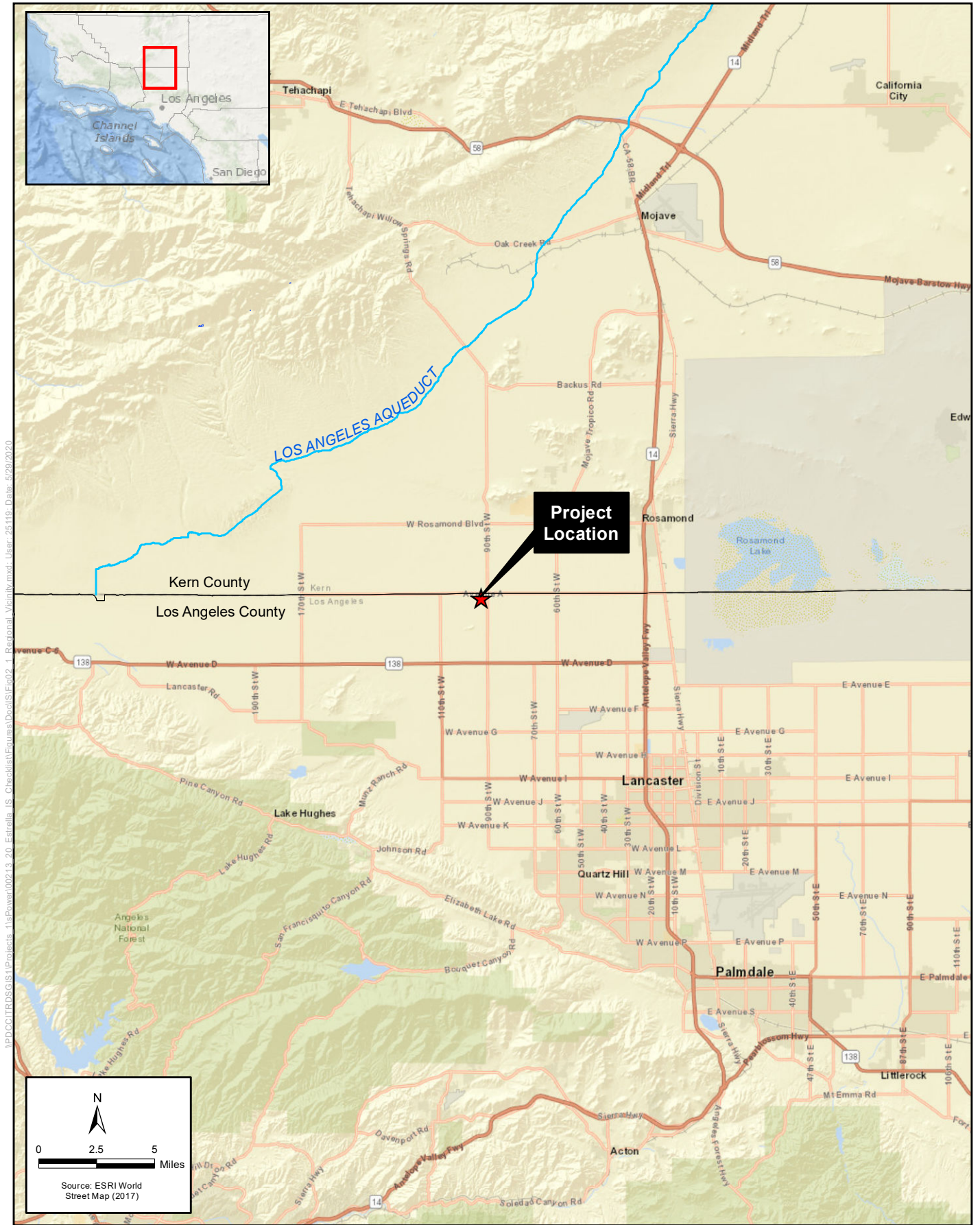
The first option, referred to as the 100<sup>th</sup> Street West Gen-Tie, would head south from the northeastern corner of the Estrella Solar Site at West Avenue A, along 90<sup>th</sup> Street West to Avenue A-8, and then west to 95<sup>th</sup> Street West, south to West Avenue B, and west to 100<sup>th</sup> Street West before heading south along 100<sup>th</sup> Street West for approximately 6 miles to interconnect with the Big Sky North Substation.

The second option, referred to as the 110<sup>th</sup> Street West Gen-Tie, would follow the same route as the 100<sup>th</sup> Street West Gen-Tie except the route along West Avenue B would continue west until 110<sup>th</sup> Street West. The route would then head south along 110<sup>th</sup> Street West for approximately 6 miles, and then east along Avenue G-12 to 100<sup>th</sup> Street West, interconnecting to the Big Sky North Substation.

## 1.2 Project Location

The project site is located in the northern portion of unincorporated Los Angeles County within the western portion of Antelope Valley, approximately 12 miles northwest of Lancaster, California (see Figure 1-1, Regional Vicinity, to follow). The project site is bounded by West Avenue A-8 on the south, West Avenue A on the north, 95<sup>th</sup> Street West on the west, and 90<sup>th</sup> Street West on the east (see Figure 1-2, Project Location, to follow). The proposed gen-tie line extends south for approximately 9 miles along public ROW and a few privately owned parcels, and connects to the Big Sky North substation, northeast of the intersection of 100<sup>th</sup> Street West and Avenue G-8, within the City of Lancaster. The areas around the project site and gen-tie routes include approved, under construction, and operating renewable solar farms, fallow agriculture, and rural residential neighborhoods. Elevations of the project site range from approximately 2,440 to 2,450 feet above mean sea level. Regional access to the project site is provided by the Antelope Valley Freeway (California State Route [SR] 14), exiting at Avenue A, and then proceeding west (see Figure 1-3, Local Vicinity, to follow).

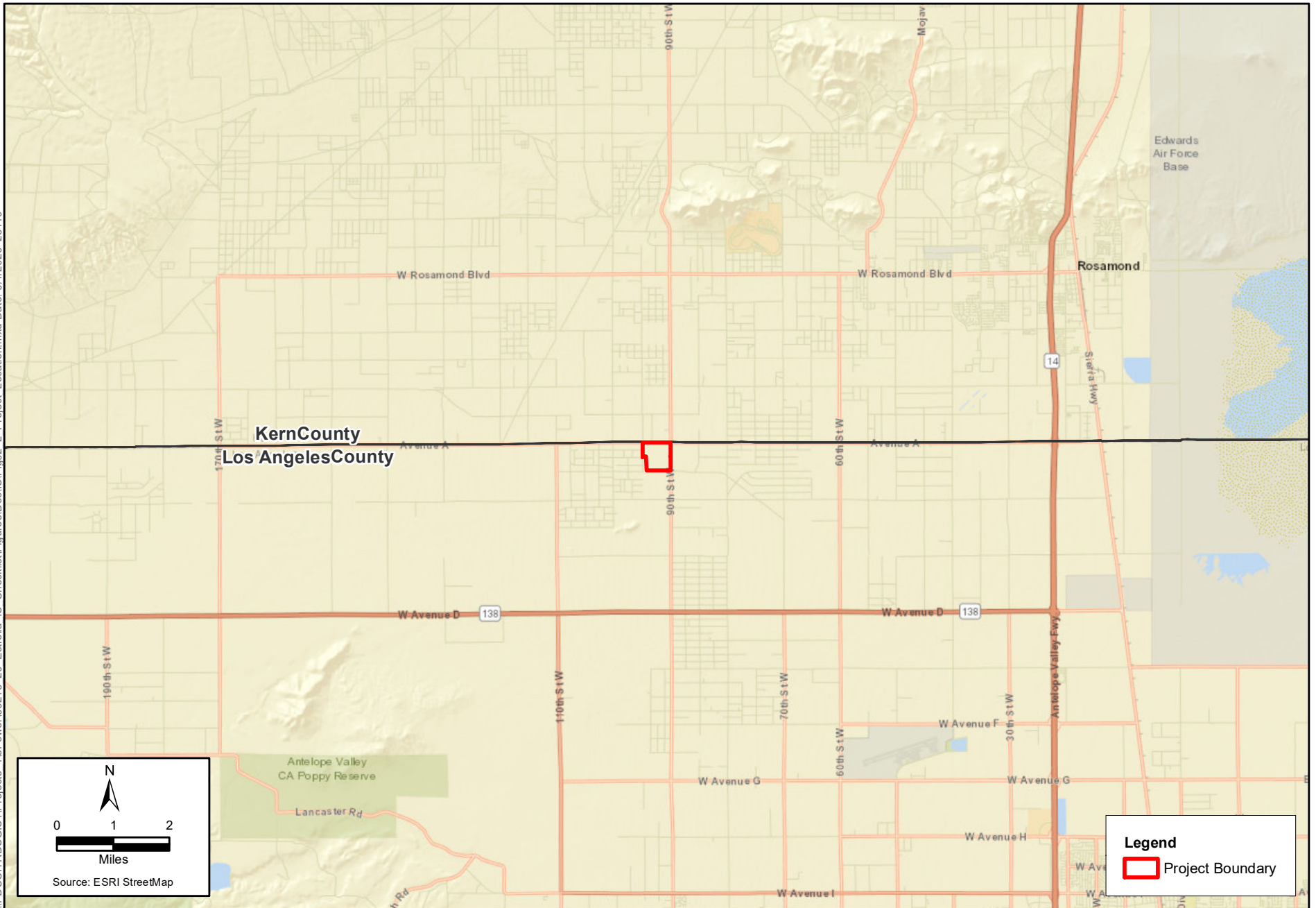
The project site is designated as RL10 (Rural Land 10) according to the Los Angeles County Antelope Valley Area Plan: Town & Country (LACDRP 2015a). The project site is zoned "A-2-2" (Heavy Agricultural – 2 Acre Minimum Required Lot Area) on the County Zoning Ordinance (LACDRP 2015a) as shown in Figure 1-4, Existing County Zoning and Land Use (to follow). Pursuant to the County Code, a ground-mounted utility-scale solar energy facility (solar facility) is an allowed use in the A-2 Zone requiring a conditional use permit (LACDRP 2015b).



**Figure 1-1**  
**Regional Vicinity**  
**Estrella Solar Project**

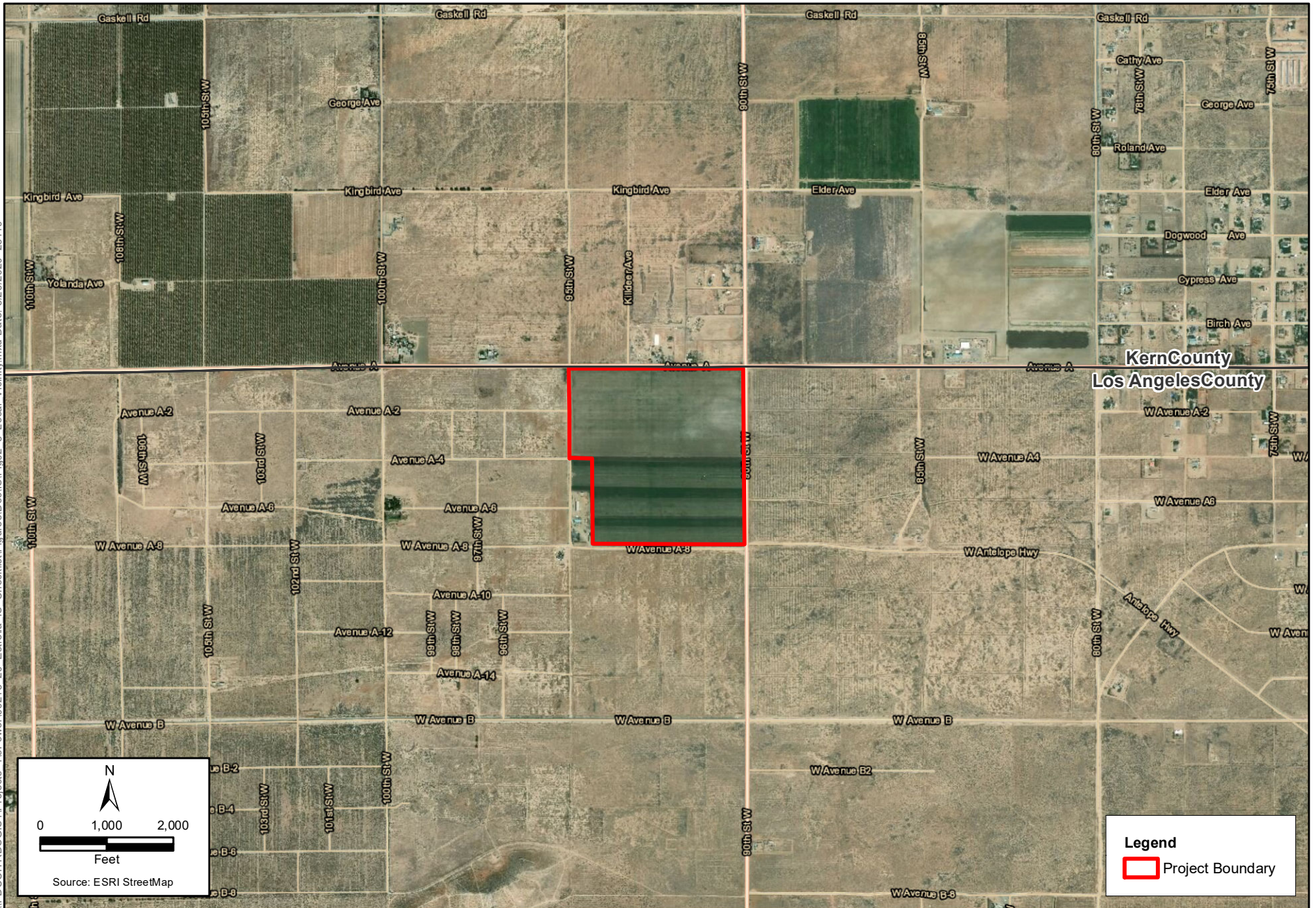


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**Figure 1-2**  
**Project Site**  
**Estrella Solar Project**

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**Figure 1-3**  
**Local Vicinity**  
**Estrella Solar Project**

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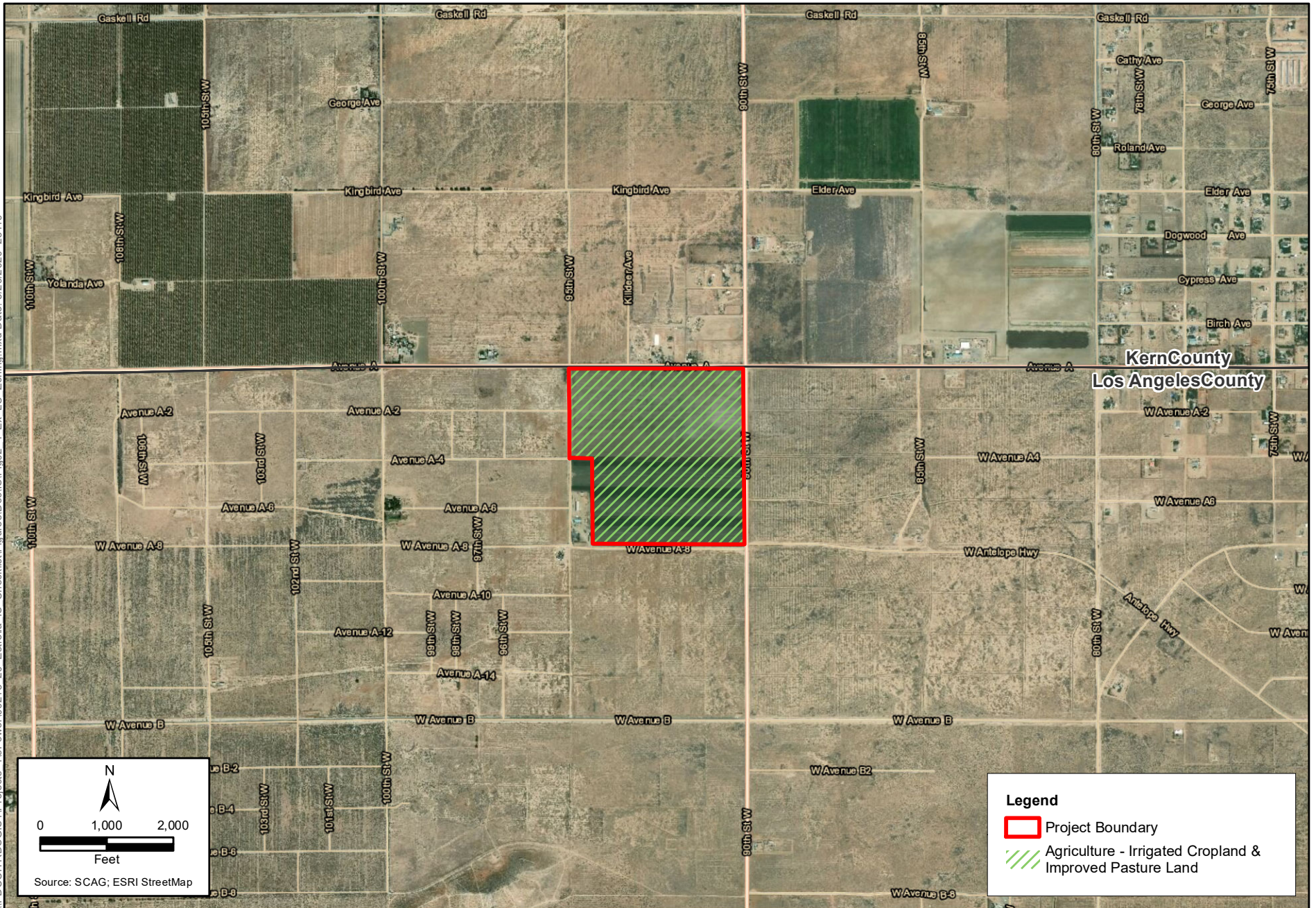


Figure 1-4  
Existing Land Use and Zoning  
Estrella Solar Project



## 1.3 Nearby Land Uses and Sensitive Receptors

Sensitive receptors are defined as locations where pollutant-sensitive members of the population may reside or where the presence of air pollutant emissions could adversely affect use of the land. Sensitive members of the population include those who may be more negatively affected by poor air quality than others, such as children, the elderly, or the infirm. AVAQMD identifies residences, schools, daycare centers, playgrounds, and medical facilities as sensitive receptor land uses (AVAQMD 2016).

The proposed project is in an area of relatively low population density. Land uses surrounding the project site consist of mainly open-space areas, light agricultural land, low-density single-family housing, and undeveloped grazing lands. A single-family residence with agricultural structures is located directly adjacent to the southwestern portion of the project site, and approximately three residences and an equestrian facility are located to the north of the project site, across West Avenue A. Single-family residences are also located approximately 0.1 mile, 0.4 mile, and 0.5 mile from the project site, southwest of the intersection of West Avenue A-8 and 95<sup>th</sup> Street West. Additional single-family residential properties are located 0.2 mile west from the northwestern corner of the site, 0.4 mile west from northwestern corner of the site, 0.5 mile west from the western site boundary, 0.5 mile east of the eastern site boundary; several properties are located to the northeast along 90<sup>th</sup> Street West, ranging from approximately 0.1 to 0.3 mile from the northeastern corner of the project site. Aside from those mentioned previously, there are no additional residences, schools, nursing homes, or other sensitive receptors within approximately 0.5 mile of the project site. There are scattered residential uses along potential truck-hauling routes along 90<sup>th</sup> Street West, 60<sup>th</sup> Street West, West Avenue A, and SR 138.

## 2.1 Existing Setting

### 2.1.1 Topography and Meteorology

Air quality is a function of both the rate and location of pollutant emissions under meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions like wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects air quality.

The proposed project is entirely within the Mojave Desert Air Basin (MDAB) and within the jurisdiction of AVAQMD. MDAB is an assemblage of mountain ranges interspersed with long, broad valleys that often contain dry lakes. Many of the lower mountains that dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in MDAB are out of the west and southwest. These prevailing winds are due to the proximity of MDAB to coastal and central regions and the blocking nature of the Sierra Nevada mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through MDAB, which is separated from the southern California coastal and central California valley regions by mountains (highest elevation is approximately 10,000 feet), the passes of which form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi Mountains, separated from the Sierra Nevada Mountains in the north by the Tehachapi Pass (3,800-foot elevation). The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 feet). The Mojave Desert is bordered in the southwest by the San Bernardino Mountains, separated from the San Gabriel Mountain range by the Cajon Pass (4,200 feet). A lesser channel lies between the San Bernardino Mountains and the Little San Bernardino Mountains (i.e., the Morongo Valley) (MDAQMD 2016).

During the summer, MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. MDAB is rarely influenced by cold air masses moving south from Canada and Alaska because these frontal systems are weak and diffuse on reaching the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. MDAB averages between 3 and 7 inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). MDAB is classified as a dry-hot desert climate, with portions classified as dry-very hot desert, indicating at least 3 months have maximum average temperatures over 100.4 degrees Fahrenheit (MDAQMD 2016). Most of MDAB is sparsely populated and produces very few human-made pollutants, although dust can become airborne under high wind conditions.

## 2.1.2 Criteria Air Pollutants

For the protection of public health and welfare, the federal Clean Air Act (CAA) requires that the United States Environmental Protection Agency (USEPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as *criteria pollutants*. Similarly, the California Clean Air Act (CCAA) requires the California Air Resources Board (CARB) to set standards and designate areas as either attainment or nonattainment based on whether California Ambient Air Quality Standards (CAAQS) have been achieved. NAAQS and CAAQS define the maximum amount of an air pollutant that can be present in ambient air without harming public health. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as 1 hour, 8 hours, 24 hours, or 1 year. The different averaging times and concentrations are meant to protect against different exposure effects. Standards established for the protection of human health are referred to as *primary standards*, whereas standards established for the prevention of environmental and property damage are called *secondary standards*. The CAA allows states to adopt additional or more health-protective standards. The air quality regulatory framework and ambient air quality standards are discussed in greater detail in Section 2.2, *Regulatory Framework*, of this report.

The following provides a summary discussion of the primary and secondary criteria air pollutants of key concern. In general, primary pollutants are directly emitted into the atmosphere, and secondary pollutants are formed by chemical reactions in the atmosphere.

### Ozone

Ozone ( $O_3$ ), which is the main ingredient in urban smog, is not emitted directly into the air, but is created by chemical reactions between hydrocarbons and nitrogen oxides ( $NO_x$ ), both byproducts of the internal combustion engine, in the presence of sunlight. Reactive organic gases (ROG) are defined by CARB and include all hydrocarbons except those exempted by CARB that contribute to smog formation, whereas volatile organic compounds (VOCs) are defined by USEPA and include all hydrocarbons except those exempted by USEPA. Generally speaking, ROG and VOCs are similar, but not identical; although the terms are used interchangeably, ROG is used for purposes of this analysis. There are no separate ambient air quality standards for ROG. Carcinogenic forms of ROG are toxic air contaminants (TACs), which are described below. An example is benzene.

ROG are compounds made up primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of ROG are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products, such as aerosols.

The two major forms of  $NO_x$  are nitric oxide (NO) and nitrogen dioxide ( $NO_2$ ). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure.  $NO_2$  is an irritating, reddish-brown gas formed by the combination of NO and oxygen. In addition to serving as an integral participant in  $O_3$  formation,  $NO_x$  also directly acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

$O_3$  poses a higher risk to those who already suffer from respiratory diseases (e.g., asthma), children, older adults, and people who are active outdoors. Exposure to  $O_3$  at certain concentrations can make

breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggregate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term O<sub>3</sub> exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest that long-term exposure to O<sub>3</sub> may increase the risk of respiratory-related deaths (USEPA 2019a). The concentration of O<sub>3</sub> at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of O<sub>3</sub> and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum O<sub>3</sub> concentration reaches 80 parts per billion (USEPA 2019b).

In addition to human health effect, O<sub>3</sub> has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O<sub>3</sub> can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

## Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, and toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is considered a local pollutant because it tends to accumulate in the air locally. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects for ambient CO (CARB 2019a).

## Particulate Matter

Particulate matter (PM) consists of finely divided solids or liquids, such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized: respirable coarse particles with an aerodynamic diameter of 10 micrometers or less, or PM<sub>10</sub>[Error! Bookmark not defined.](#), and respirable fine particles with an aerodynamic diameter of 2.5 micrometers or less, or PM<sub>2.5</sub>[Error! Bookmark not defined.](#) Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading. PM is considered both a local and a regional pollutant.

Particulate pollution can be transported over long distances and may adversely affect humans, especially people who are naturally sensitive or susceptible to breathing problems. Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease. Other symptoms of exposure may include nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Depending on composition, both PM<sub>10</sub> and PM<sub>2.5</sub> can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (USEPA 2019c).

## Sulfur Dioxide

Sulfur dioxide (SO<sub>2</sub>) is a colorless, irritating gas with a rotten egg smell primarily formed from the combustion of fossil fuels containing sulfur. SO<sub>2</sub> is considered a local pollutant because it tends to accumulate in the air locally. High concentrations of SO<sub>2</sub> can result in temporary breathing impairment for asthmatic children and adults who are active outdoors. Short-term exposure of asthmatic individuals to elevated SO<sub>2</sub> levels during moderate activity may result in breathing difficulties that can be accompanied by symptoms like wheezing, chest tightness, or shortness of breath. Other effects that have been associated with longer-term exposures to high concentrations of SO<sub>2</sub>, in conjunction with high levels of PM, include aggravation of existing cardiovascular disease, respiratory illness, and alterations in lung defenses. SO<sub>2</sub> also is a major precursor to PM<sub>2.5</sub>, which is a significant health concern and a main contributor to poor visibility (see also the discussion of health effects of PM, above).

## Lead

Lead (Pb) is a naturally existing metal that can be a constituent of air, water, and the biosphere. Pb is considered a local pollutant as it tends to accumulate in the air locally. This highly toxic metal, used for many years in everyday products, has been found to lead to a range of health effects, from behavioral problems and learning disabilities to seizures and death. Effects on children's nervous systems are one of the primary health risk concerns from Pb. When Pb is present in high concentrations, children can even suffer irreversible brain damage and death. Children 6 years old and under are most at risk because their bodies are growing quickly.

Since the 1980s, Pb has been phased out in gasoline, reduced in drinking water, reduced in industrial air pollution, and banned or limited in consumer products. Gasoline-powered automobile engines were a major source of airborne Pb through the use of leaded fuels; however, the use of leaded fuel has been mostly phased out. Since this has occurred, the ambient Pb levels have dropped dramatically. AVAQMD no longer monitors ambient levels of atmospheric Pb in MDAB.

## Other "Criteria" Pollutants

CARB has also established CAAQS for hydrogen sulfide (H<sub>2</sub>S), sulfates, vinyl chloride, and visibility-reducing particles. These pollutants are not addressed by federal standards. Below is a summary of these pollutants and a description of the pollutants' physical properties, health and other effects, sources, and the extent of the problems.

**Hydrogen sulfide** emissions often are associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. H<sub>2</sub>S in the atmosphere will likely oxidize into SO<sub>2</sub>, which can lead to acid rain. At low concentrations, H<sub>2</sub>S may cause irritation to the eyes, mucous membranes, and respiratory system, dizziness, and headaches. In high concentrations (800 parts per million can cause death), H<sub>2</sub>S is extremely hazardous, especially in enclosed spaces. The Occupational Safety and Health Administration has the primary responsibility for regulating workplace exposure to H<sub>2</sub>S.

**Sulfates** are another particulate product that results from the combustion of sulfur-containing fossil fuels; however, the majority of ambient sulfates is formed in the atmosphere. When SO<sub>2</sub> comes in contact with oxygen it precipitates out into sulfates. Data collected in MDAB have demonstrated that

levels of sulfates are significantly lower than the health standards. The health effects associated with SO<sub>2</sub> and sulfates more commonly known as sulfur oxides (SO<sub>x</sub>) include respiratory illnesses, decreased pulmonary disease resistance, and aggravation of cardiovascular diseases. When acidic pollutants and particulates are also present, SO<sub>2</sub> tends to have an even more toxic effect.

Increased PM derived from SO<sub>2</sub> emissions also contributes to impaired visibility. In addition to particulates, sulfur trioxide and sulfate ion are precursors to acid rain. SO<sub>x</sub> and NO<sub>x</sub> are the leading precursors to acid rain, which can lead to corrosion of human-made structures and cause acidification of waterbodies.

**Visibility-reducing particles** consist of PM generated from a variety of natural and manmade sources and vary greatly in shape, size, and chemical composition. Some haze-causing particles (e.g., windblown dust and soot) are directly emitted into the air, whereas others are formed in the air from the chemical transformation of gaseous pollutants (e.g., sulfates, nitrates, organic carbon particles), which are the major constituents of fine PM. These fine particles, caused largely by the combustion of fuel, can travel hundreds of miles and cause visibility impairment. California has been labeled unclassified for visibility—CARB has not established a method for measuring visibility with the precision and accuracy needed to designate areas attainment or nonattainment. The proposed project is not expected to have any adverse impacts on visibility in any Class I area.

**Vinyl chloride** is a colorless, sweet-smelling gas at ambient temperature. Landfills, publicly owned treatment works, and polyvinyl chloride (PVC) production are the major identified sources of vinyl chloride emissions in California. PVC can be fabricated into several products, such as pipes, pipe fittings, and plastics. In humans, epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of liver angiosarcoma, a rare cancer, and have suggested a relationship between exposure and lung and brain cancers.

### 2.1.3 Odors

Rules or regulations for the control of odors have not been established at the state or federal level. However, although AVAQMD does not have a specific rule or regulation to address odors, Rule 402, *Nuisance*, forbids the discharge of air contaminants that cause nuisance or annoyance to any considerable number of persons or to the public (AVAQMD 1976). Odors are typically only addressed when citizens complain to local government or AVAQMD.

### 2.1.4 Toxic Air Contaminants

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (Hot Spots Act), also known as Assembly Bill [AB] 2588). In the early 1980s, CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Act created California’s program to reduce exposure to air toxics. The Hot Spots Act supplements the Tanner Act by requiring a statewide air toxics inventory, notification to people exposed to a significant health risk, and facility plans that reduce these risks. CARB defines TACs as air pollutants that may cause or contribute to an increase in mortality or an increase in serious illness or that may pose a present or potential hazard to human health. CARB has formally identified over 200 substances and groups of

substances as TACs (CARB 2020e). Direct exposure to these pollutants has been shown to cause cancer, birth defects, damage to the brain and nervous system, and respiratory disorders.

Because no safe levels of TACs can be determined, there are no air quality standards for TACs. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. The requirements of the Hot Spots Act apply to facilities that use, produce, or emit toxic chemicals. Facilities that are subject to the toxic emission inventory requirements of the Hot Spots Act must prepare and submit toxic emission inventory plans and reports and periodically update those reports. In addition to TACs, asbestos and Valley Fever are pollutants of concern in the project area, as discussed below.

## Diesel Particulate Matter

Diesel engines emit a complex mixture of air pollutants, including gaseous and solid material. The solid material in diesel exhaust is known as diesel particulate matter (DPM). More than 90 percent of DPM is less than 1 micrometer in diameter (about 1/70 the diameter of a human hair), and thus is a subset of PM<sub>2.5</sub>. Most PM<sub>2.5</sub> derives from combustion, such as motor vehicle use of gasoline and diesel fuels, burning natural gas to generate electricity, and burning wood. Of the air pollutants that have ambient air quality standards, PM<sub>2.5</sub> is the size most associated with adverse health effects like cardiovascular and respiratory hospitalizations and premature death. As a California statewide average, DPM contributes about 8 percent of PM<sub>2.5</sub> in outdoor air, although DPM levels vary regionally due to the non-uniform distribution of sources throughout the state (CARB 2019b).

DPM is typically composed of carbon particles (i.e., soot, also called *black carbon*) and numerous organic compounds, including more than 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including VOCs and NO<sub>x</sub>. NO<sub>x</sub> emissions from diesel engines are important because they can undergo chemical reactions in the atmosphere leading to formation of PM<sub>2.5</sub> and O<sub>3</sub> (CARB 2019b).

In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects (CARB 2019b). It is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM. Based on 2012 estimates of statewide exposure, DPM is estimated to increase statewide cancer risk by 520 cancers per million residents exposed over a lifetime. Non-cancer health effects associated with exposure to DPM (based on 2014–2016 air quality data) include the following annually (values are estimated): 730 cardiopulmonary deaths, 160 cardiovascular and respiratory hospitalizations, and 370 emergency room visits for asthma (CARB 2019b).

## Asbestos

Ultramafic, serpentinized rock is closely associated with asbestos and is chemically composed of the following minerals:

- Antigorite
- Clinochrysotile
- Lizardite

- Orthrochrysotile
- Parachrsotile

Chrysotile minerals are more likely to form serpentinite asbestos; however, serpentinite is uncommon to sedimentary soil found in the project area. Asbestos occurs in certain geologic environments not common to the area. Based on the known geologic environment common to the project area, exposure to and health risks from naturally occurring asbestos are considered low.

Asbestos can only adversely affect humans in its fibrous form, and these fibers must be broken and dispersed into the air and then inhaled. During geological processes, the asbestos mineral can be crushed, causing it to become airborne. It also enters the air or water from the breakdown of natural deposits. Constant exposure to asbestos at high levels on a regular basis may cause cancer in humans. The two most common forms of cancer due to asbestos exposure are lung cancer and mesothelioma, a rare cancer of the lining that covers the lungs and stomach (USEPA 2018a).

## Valley Fever

Coccidioidomycosis, more commonly known as “Valley Fever,” is primarily a disease of the lungs caused by the spores of the *Coccidioides immitis* fungus. The spores are found in soils, become airborne when the soil is disturbed, and are subsequently inhaled into the lungs. After the fungal spores have settled in the lungs, they change into a multicellular structure called a *spherule*. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley Fever symptoms occur within 2 to 3 weeks of exposure. Approximately 60 percent of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Of those who are exposed and seek medical treatment, the most common symptoms include fatigue, cough, loss of appetite, rash, headache, and joint aches. In some cases, painful red bumps may develop. One important fact to mention is that these symptoms are not unique to Valley Fever and also may be caused by other illnesses. Identifying and confirming this disease requires specific laboratory tests, such as (1) microscopic identification of the fungal spherules in infected tissue, sputum, or body fluid sample; (2) growing a culture of *Coccidioides immitis* from a tissue specimen, sputum, or body fluid; (3) detection of antibodies (i.e., serological tests specifically for Valley Fever) against the fungus in blood serum or other body fluids; and (4) administering the Valley Fever Skin Test (called *coccidioidin* or *spherulin*), which indicates prior exposure to the fungus (Valley Fever Center for Excellence 2020).

Valley Fever is not contagious. Most of those who are infected will recover without treatment within 6 months and will have a lifelong immunity to the fungal spores. In severe cases, such as in patients with rapid and extensive primary illnesses, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used. Only 1 to 2 percent of those exposed who seek medical attention will develop a disease that disseminates to other parts of the body other than the lungs. Approximately 60 percent of Valley Fever cases are mild, and no medical treatment is sought. Table 2-1 presents the various infection classifications and normal diagnostic spread as noted in recent research conducted by the Valley Fever Center for Excellence.



**Table 2-1. Range of Valley Fever Cases**

Infection Classification	Percent of Total Diagnosed Cases
Unapparent infections	60 percent
Mild to moderate infections	30 percent
Infections resulting in complications	5–10 percent
Fatal infections	<1 percent

Source: Valley Fever Center for Excellence 2020.

The *Coccidioides immitis* fungal spores are often found in the soil around rodent burrows, Native American ruins, and burial grounds. The spores become airborne when the soil is disturbed by winds, construction, farming, and soil-disturbing activities. This type of fungus is endemic to the southwestern United States. The ecological factors that appear to be most conducive to the survival and replication of the fungal spores are high summer temperatures, mild winters, sparse rainfall, and alkaline, sandy soils.

## 2.1.5 Ambient Air Quality

Several monitoring stations in MDAB measure ambient air pollutant concentrations. The Lancaster-Division Street site is the closest station to the project site, approximately 13.5 miles to the southeast within Los Angeles County. This station monitors ambient concentrations of O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, CO, and NO<sub>2</sub>. The closest station to the project site that monitors ambient concentrations of SO<sub>2</sub> is the Victorville–Park Avenue site, approximately 59 miles southeast in San Bernardino County. Data from this station are used to supplement the ambient air quality summary for the project site, because Lancaster-Division Street does not monitor ambient SO<sub>2</sub>. Ambient monitoring data for the most recent years of available data (2017–2019) are summarized in Table 2-2.

**Table 2-2. Summary of Ambient Air Quality Monitoring Data**

Pollutant	2017	2018	2019
<i>1-Hour Ozone (O<sub>3</sub>)</i>			
Maximum Concentration (ppm)	0.109	0.125	0.096
<i>Number of Days Standard Exceeded</i>			
CAAQS 1-hour (>0.09 ppm)	10	5	1
<i>8-Hour Ozone (O<sub>3</sub>)</i>			
State Maximum Concentration (ppm)	0.087	0.105	0.082
National Maximum Concentration (ppm)	0.087	0.104	0.081
National 4 <sup>th</sup> Highest Concentration (ppm)	0.084	0.087	0.076
<i>Number of Days Standard Exceeded</i>			
CAAQS 8-hour (>0.070 ppm)	43	49	14
NAAQS 8-hour (>0.070 ppm)	43	48	13
<i>Carbon Monoxide (CO)</i>			
Maximum Concentration 8-hour Period (ppm)	0.9	1.0	0.9
<i>Number of Days Standard Exceeded</i>			
NAAQS 8-hour (≥9 ppm)	0	0	0
CAAQS 8-hour (≥9 ppm)	0	0	0

Pollutant	2017	2018	2019
<i>Nitrogen Dioxide (NO<sub>2</sub>)</i>			
Maximum 1-hour Concentration (ppm)	0.047	0.048	0.050
Annual Average Concentration (ppm)	*	0.008	0.008
<i>Number of Days Standard Exceeded</i>			
CAAQS 1-Hour (>0.18 ppm)	0	0	0
NAAQS 1-Hour (>0.100 ppm)	0	0	0
<i>Respirable Particulate Matter (PM<sub>10</sub>)</i>			
State Maximum 24-hour Concentration	*	*	*
National Maximum 24-hour Concentration	82.4	89.3	165.1
State Annual Average Concentration (CAAQS=20 µg/m <sup>3</sup> )	*	*	*
<i>Number of Days Standard Exceeded</i>			
CAAQS 24-hour (>50 µg/m <sup>3</sup> )	*	*	*
NAAQS 24-hour (>150 µg/m <sup>3</sup> ) – Estimated Days	0.0	0.0	2.1
<i>Fine Particulate Matter (PM<sub>2.5</sub>)</i>			
National Maximum 24-hour Concentration (µg/m <sup>3</sup> )	26.6	40.4	13.6
24-hour Standard 98 <sup>th</sup> Percentile (µg/m <sup>3</sup> )	15.7	16.4	11.6
National Annual Average Concentration (NAAQS=12 µg/m <sup>3</sup> )	7.2	7.2	6.1
State Annual Average Concentration (CAAQS=12 µg/m <sup>3</sup> )	7.3	7.2	6.1
<i>Number of Days Standard Exceeded</i>			
NAAQS 24-Hour (>35 µg/m <sup>3</sup> )	0	1	0
<i>Sulfur Dioxide (SO<sub>2</sub>)</i>			
Maximum 1-hour Concentration (ppb)	28.3	9.9	4.3
Annual Average Concentration (ppb)	0.73	1.12	1.74
<i>Number of Days Standard Exceeded</i>			
NAAQS 1-Hour (>75 ppb)	0	0	0

Sources: CARB 2020d; USEPA 2020a. Data compiled by ICF.

Note: As exceedance does not necessarily equal a violation.

CAAQS=California Ambient Air Quality Standards, NAAQS=National Ambient Air Quality Standards; ppb=parts per billion; ppm=parts per million; µg/m<sup>3</sup>=micrograms per cubic meter; \*=insufficient data.

The CAA requires USEPA to designate areas within the country as either attainment or nonattainment for each criteria pollutant based on whether NAAQS have been achieved. Similarly, the CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether CAAQS have been achieved. If a pollutant concentration is lower than the state or federal standard, the area is classified as being in attainment for that pollutant. If a pollutant violates the standard, the area is considered a nonattainment area. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated unclassified. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous 3 calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment. The attainment status of AVAQMD is summarized in Table 2-3. The CAAQS and NAAQS represent concentration limits of criteria air pollutants needed to adequately protect human health and the environment.

**Table 2-3. Federal and State Attainment Status for AVAQMD**

Criteria Pollutant	Federal Designation <sup>1</sup>	State Designation
Ozone (O <sub>3</sub> ) (8-hour)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Unclassified/Attainment	Attainment
Respirable Particulate Matter (PM <sub>10</sub> )	Unclassified	Nonattainment
Fine Particulate Matter (PM <sub>2.5</sub> )	Unclassified/Attainment	Unclassified
Nitrogen Dioxide (NO <sub>2</sub> )	Unclassified/Attainment	Attainment
Sulfur Dioxide (SO <sub>2</sub> )	Unclassified/Attainment	Attainment
Lead (Pb)	Unclassified/Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassified
Vinyl Chloride	(No federal standard)	Unclassified
Visibility	(No federal standard)	Unclassified

Sources CARB 2020f; AVAQMD 2017

<sup>1</sup> At the time of designation, if the available data do not support a designation of attainment or nonattainment, the area is designated as unclassified.

## 2.2 Regulatory Framework

### 2.2.1 Federal

#### Federal Clean Air Act

The CAA was first enacted in 1963 and has been amended numerous times in subsequent years (1967, 1970, 1977, and 1990). The CAA establishes NAAQS and specifies future dates for achieving compliance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met. Because the project site is within AVAQMD, it is in an area designated as nonattainment for certain pollutants regulated under the CAA.

The 1990 amendments to the CAA identify specific emission-reduction goals for areas not meeting NAAQS. These amendments require both a demonstration of reasonable progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. The sections of the CAA that would most substantially affect the development of the proposed project include Title I (Nonattainment Provisions) and Title II (Mobile-Source Provisions).

Title I provisions were established with the goal of attaining NAAQS for criteria pollutants. Table 2-4 shows NAAQS currently in effect for each criteria pollutant. NAAQS were amended in July 1997 to include an 8-hour standard for O<sub>3</sub> and adopt a standard for PM<sub>2.5</sub>. The 8-hour O<sub>3</sub> NAAQS was further amended in October 2015.

**Table 2-4. Federal and State Ambient Air Quality Standards**

Criteria Pollutant	Average Time	California Standards	National Standards <sup>1</sup>	
			Primary	Secondary
Ozone (O <sub>3</sub> )	1-hour	0.09 ppm	None <sup>2</sup>	None <sup>2</sup>
	8-hour	0.070 ppm	0.070 ppm	0.070 ppm
Particulate Matter (PM <sub>10</sub> )	24-hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
	Annual mean	20 µg/m <sup>3</sup>	None	None
Fine Particulate Matter (PM <sub>2.5</sub> )	24-hour	None	35 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>
	Annual mean	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>	15 µg/m <sup>3</sup>
Carbon Monoxide (CO)	8-hour	9.0 ppm	9 ppm	None
	1-hour	20 ppm	35 ppm	None
Nitrogen Dioxide (NO <sub>2</sub> )	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm
	1-hour	0.18 ppm	0.100 ppm	None
Sulfur Dioxide <sup>3</sup> (SO <sub>2</sub> )	Annual mean	None	0.030 ppm	None
	24-hour	0.04 ppm	0.014 ppm	None
	3-hour	None	None	0.5 ppm
	1-hour	0.25 ppm	0.075 ppm	None
Lead (Pb)	30-day Average	1.5 µg/m <sup>3</sup>	None	None
	Calendar quarter	None	1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>
	3-month average	None	0.15 µg/m <sup>3</sup>	0.15 µg/m <sup>3</sup>
Sulfates	24-hour	25 µg/m <sup>3</sup>	None	None
Visibility-reducing Particles	8-hour	- <sup>4</sup>	None	None
Hydrogen Sulfide (H <sub>2</sub> S)	1-hour	0.03 ppm	None	None
Vinyl Chloride	24-hour	0.01 ppm	None	None

Source: CARB 2016

<sup>1</sup> National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.

<sup>2</sup> The federal 1-hour standard of 12 parts per hundred million was in effect from 1979 through June 15, 2005. The revoked standard is referenced because it was employed for such a long period and is a benchmark for SIPs.

<sup>3</sup> The annual and 24-hour NAAQS for SO<sub>2</sub> only apply for 1 year after designation of the new 1-hour standard to those areas that were previously in nonattainment for 24-hour and annual NAAQS.

<sup>4</sup> CAAQS for visibility-reducing particles is defined by an extinction coefficient of 0.23 per kilometer—visibility of 10 miles or more due to particles when relative humidity is less than 70 percent (CARB 2021).

CAAQS=California Ambient Air Quality Standards; NAAQS=National Ambient Air Quality Standards; ppm=parts per million; µg/m<sup>3</sup>=micrograms per cubic meter

## Emission Standards for Non-road Diesel Engines

To reduce emissions from non-road diesel equipment, USEPA established a series of increasingly strict emission standards for new non-road diesel engines. Tier 1 standards were phased in on newly manufactured equipment from 1996 through 2000 (i.e., year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in on newly manufactured equipment from 2001 through 2006. Tier 3 standards were phased in on newly manufactured equipment from 2006 through 2008. Tier 4 standards, which require advanced emission-control technology, were phased in from 2008 through 2015.

## Emission Standards for Heavy-duty Vehicles

USEPA has established a series of increasingly strict emission standards for new heavy-duty bus and truck engines. Emissions from heavy-duty trucks are managed by regulations and emission limits implemented at the federal, state, and local levels. In December 2000, USEPA signed the Heavy-Duty Highway Rule, which reduces emissions from on-road, heavy-duty diesel trucks by establishing a series of increasingly strict emission standards for new engines. Manufacturers were required to produce new diesel vehicles that meet PM and NO<sub>x</sub> emission standards beginning with model year 2007, with the phase-in period being between 2007 and 2010. The phase-in was based on a percentage-of-sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010. Requirements apply to engines installed in all vehicles with a gross vehicle weight rating (GVWR) above 14,000 pounds and to some engines installed in vehicles with a GVWR between 8,500 and 14,000 pounds (USEPA 2019d).

## Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy (CAFE) Standards were first enacted in 1975 to improve the average fuel economy of cars and light-duty trucks. However, on August 2, 2018, the National Highway Traffic Safety Administration (NHTSA) and USEPA proposed to amend the fuel efficiency standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026 by maintaining the current model year 2020 standards through 2026 (Safer Affordable Fuel-Efficient [SAFE] Vehicles Rule). On September 19, 2019, USEPA and NHTSA issued a final action on the One National Program Rule, which is considered Part One of the SAFE Vehicles Rule and a precursor to the proposed fuel efficiency standards. The One National Program Rule enables USEPA/NHTSA to provide nationwide uniform fuel economy and GHG vehicle standards, specifically by (1) clarifying that federal law preempts state and local tailpipe GHG standards; (2) affirming NHTSA's statutory authority to set nationally applicable fuel economy standards; and (3) withdrawing California's CAA preemption waiver to set state-specific standards.

USEPA and NHTSA published their decisions to withdraw California's waiver and finalize regulatory text related to the preemption on September 27, 2019 (84 *Federal Register* 51310). California, 22 other states, the District of Columbia, and two cities filed suit against Part One of the SAFE Vehicles Rule on September 20, 2019 (*California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826, U.S. District Court for the District of Columbia). On October 28, 2019, the Union of Concerned Scientists, Environmental Defense Fund, and other groups filed a protective petition for review after the federal government sought to transfer the suit to the D.C. Circuit (*Union of Concerned Scientists v. National Highway Traffic Safety Administration*). Oral arguments for the petition are expected to be heard in early 2021. The lawsuit filed by California and others is stayed pending resolution of the petition.

USEPA and NHTSA published final rules to amend and establish national CO<sub>2</sub> and fuel economy standards on April 30, 2020 (Part Two of the SAFE Vehicles Rule) (85 *Federal Register* 24174). The revised rule changes the national fuel economy standards for light-duty vehicles from 46.7 miles per gallon to 40.4 miles per gallon in future years. California, 22 other states, and the District of Columbia filed a petition for review of the final rule on May 27, 2020. The fate of the SAFE Vehicles Rule remains uncertain in the face of pending legal deliberations.

On January 20, 2021, President Biden released Executive Order (EO) No. 13990, which, in part, calls for agency review of Part One of the SAFE Vehicles Rule by April 2021 and Part Two by July 2021. The order states that agencies will consider whether to propose, suspend, revise, or rescind these rules. The fates of the proposed rules are uncertain, given the pending court deliberations and executive order.

## 2.2.2 State

### California Clean Air Act

The CCAA, signed into law in 1988, requires all areas of the state to achieve and maintain CAAQS by the earliest practical date. CAAQS incorporate additional standards for most of the criteria pollutants and set standards for other pollutants recognized by the state. In general, California standards are more health protective than the corresponding NAAQS. California has also set standards for sulfates, H<sub>2</sub>S, vinyl chloride, and visibility-reducing particles. CAAQS currently in effect for each criteria pollutant are shown in Table 2-4.

CARB and local air districts bear responsibility for achieving California's air quality standards, achieved through district-level air quality management plans incorporated into the SIP. In California, USEPA has delegated authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and establish traffic control measures.

### Mobile Source Regulations

Mobile-source emissions represent a significant source of criteria pollutant and TAC emissions for the state. CARB has established various regulations to address exhaust emissions standards for both on-road and off-road vehicles.

#### Low-Emission Vehicle Program Regulation

On-road vehicles include, but are not limited to, light-duty automobiles, light-duty to heavy-duty trucks, and buses. In 1990, CARB adopted the first low-emission vehicle (LEV) regulations, which required car manufacturers to produce cleaner light-duty and medium-duty vehicles with stricter emissions controls for model years 1994 to 2003. The three primary elements of the first LEV regulations were (1) tiers of exhaust emission standards for increasingly more stringent categories of low-emission vehicles; (2) a mechanism requiring each auto manufacturer to phase in a progressively cleaner mix of vehicles from year to year with the option of credit banking and trading; and (3) a requirement that a specified percentage of passenger cars and light-duty trucks be

zero-emission vehicles with no exhaust or evaporative emissions (CARB 2020a). The most recent version is LEV III, adopted in 2012 as part of the Advanced Clean Cars program. LEV III focuses on increasing the stringency of emissions standards for criteria pollutants and GHG emissions for passenger vehicles through the 2025 model year (CARB 2020b).

## **Air Toxic Control Measures**

CARB developed multiple Air Toxic Control Measures to address specific mobile- and stationary-source categories that can have an impact on the public health of communities. The measures focused on reducing public exposure to DPM and TACs from mobile sources, such as commercial trucks, buses, solid waste collection vehicles, and cargo-handling equipment at ports. The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (CCR Title 13 § 2485) required heavy-duty trucks with a GVWR greater than 10,000 pounds to not idle the primary engine for more than 5 minutes at any given time or operate an auxiliary power system for more than 5 minutes within 100 feet of a restricted area (CARB 2005).

## **Statewide Truck and Bus Regulation**

CARB also focused its efforts to reduce DPM, NO<sub>x</sub>, and other criteria pollutants from diesel-fueled vehicles by adopting the Truck and Bus Regulation in 2008. This regulation applied to any diesel-fueled, dual fuel, or alternative diesel-fueled vehicle that would travel on public highways; yard trucks with on-road engines; yard trucks with off-road engines used for agricultural operations; school buses; and vehicles with a GVWR greater than 14,000 pounds. The purpose of the regulation is to require that nearly all trucks and buses registered in the state have a 2010 or newer model engine year by 2023. Compliance schedules have been established for lighter vehicles (14,000–26,000 GVWR) and heavier vehicles (26,001+ GVWR) (CARB 2020c). Since January 1, 2020, only vehicles that meet the requirements of the Truck and Bus Regulation are allowed to register with the California Department of Motor Vehicles.

## **California Drayage Truck Regulation**

CARB adopted the drayage truck regulation in December 2007 to modernize the Class 8 drayage truck fleet (i.e., trucks with a GVWR greater than 33,000 pounds) in use at California's ports. Emergency vehicles and yard trucks are exempt from this regulation. The regulatory objective is to be achieved in two phases.

1. By December 31, 2009, pre-1994 model year engines were to be retired or replaced with 1994 and newer model year engines. In addition, all drayage trucks with 1994 to 2003 model year engines were required to achieve an 85 percent PM emission reduction through the use of an CARB-approved Level 3 verified diesel emission control strategy.
2. By December 31, 2013, all trucks operating at California ports must have complied with the 2007 and newer on-road heavy-duty engine standards.

In December 2010, CARB amended the regulation to include Class 7 drayage trucks with a GVWR between 26,000 and 33,001 pounds. CARB further expanded the definition of drayage trucks to include dray-offs, those non-compliant trucks that may not directly come to the ports to pick up or drop off cargo, but that engage in moving cargo destined to or originating from port facilities and to or from near-port facilities or railyards (CARB 2013).

## Carl Moyer Memorial Air Quality Standards Attainment Program

The Carl Moyer Memorial Air Quality Standards Attainment Program is a voluntary program that offers grants to owners of heavy-duty vehicles and equipment. The program is a partnership between CARB and the local air districts throughout the state to reduce air pollution emissions from heavy-duty engines. Locally, the air districts administer the program.

## Toxic Air Contaminants Regulations

California regulates TACs primarily through the Tanner Act (AB 1807) and the Hot Spots Act (AB 2588). The Tanner Act (AB 1807) created California's program to reduce exposure to air toxics. The Hot Spots Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks. The California Office of Environmental Health Hazard Assessment (OEHHA) is required to develop guidelines for health risk assessments under the Air Toxics Hot Spots Program. These guidelines provide the scientific basis for the values used to assess the risk of emissions exposure from facilities and new sources (OEHHA 2015).

In August 1998, CARB identified particulate emissions from diesel-fueled engines as TACs. In September 2000, CARB approved a comprehensive diesel risk-reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles. As an ongoing process, CARB reviews air contaminants and identifies those classified as TACs. CARB also continues to establish new programs and regulations for the control of TACs, including DPM, as appropriate.

### 2.2.3 Regional

#### Antelope Valley Air Quality Management District

The proposed project is within an area of Los Angeles County that is under the jurisdiction of AVAQMD, which enforces regulations and administers permits governing stationary sources. The proposed project is required to comply with all applicable AVAQMD rules and regulations, including, but not limited to, the following:

- **AVAQMD Rule 402 – Nuisance.** Forbids the discharge of such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any such persons or the public; or that cause, or have a natural tendency to cause, injury or damage to business or property.
- **AVAQMD Rule 403 – Fugitive Dust.** Restricts fugitive dust from construction/demolition and other activities. Specifies numerous restrictions to operators of construction/demolition for all projects greater than a half-acre in size (e.g., periodic watering, covering loaded haul vehicles, stabilize graded surfaces, cleanup project dust/debris on paved surfaces, reduce nonessential earth-moving), and requires a Dust Control Plan for any nonresidential projects disturbing more than 5 acres per day.
- **AVAQMD Rule 404 – Particulate Matter Concentration.** Prohibits the discharge into the atmosphere of PM from any source, except liquid sulfur compounds, in excess of the concentration at standard conditions.



- **AVAQMD Rule 1108 – Cutback Asphalt.** Sets forth VOC content limits for cutback asphalt.
- **AVAQMD Rule 1113 – Architectural Coatings.** Limits the VOC content of architectural coatings used in AVAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use in AVAQMD must comply with the current VOC standards.
- **AVAQMD Rule 1300 – New Source Review.** Sets forth requirements for the preconstruction review of all new or modified facilities to ensure that the construction or modification of facilities subject to this regulation does not interfere with the attainment and maintenance of ambient air quality standards.

In 2017, AVAQMD adopted its *Federal 75 ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Area)*, which updates the previous 2008 *Federal 8-hour Ozone Attainment Plan* adopted in 2008. The 2016 plan indicates that the portion of the AVAQMD designated as federal 80-hour O<sub>3</sub> nonattainment area will be in attainment of the 75 ppb O<sub>3</sub> NAAQS by July 2027. The 2016 plan does not propose additional control measures to reduce O<sub>3</sub> levels, although adoption of all applicable federal reasonably available control technology has been committed to by AVAQMD. This includes rule adoption for the following areas:

- Motor vehicle and mobile equipment coating operations
- Organic liquid loading
- Solvent cleaning operations
- Emissions from stationary, non-road, and portable internal combustion engines

## Los Angeles County General Plan

Adopted in 2015, the *Los Angeles County General Plan's* Air Quality Element summarizes air quality issues and outlines goals and policies that will improve air quality in the unincorporated county. This includes protection from exposure to harmful air pollutants and reduction of air pollution and mobile-source emissions through coordinated transportation and air quality planning. Relevant policies are as follows (County of Los Angeles 2015a):

- **Policy AQ 1.1:** Minimize health risks to people from industrial toxic or hazardous air pollutant emission with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.
- **Policy AQ 1.2:** Encourage the use of low or no volatile organic compound emitting materials.
- **Policy AQ 1.3:** Reduce particulate inorganic and biological emission from construction, grading, excavation, and demolition to the maximum extent feasible.

## 2.3 Impacts and Mitigation Measures

### 2.3.1 Thresholds of Significance

Appendix G of the California Environmental Quality Act (CEQA) Guidelines indicates the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the significance determinations. AVAQMD has developed guidelines to assist with preparation of the air quality assessments in CEQA documents (2016). The guidelines include items taken from previous versions of Appendix G of the State CEQA Guidelines. Because Appendix G was updated in 2018, resulting in minor changes to the checklist items, the analysis herein is based on the updated State CEQA Guidelines, which state that a project would have a significant impact on air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

### Supplemental Thresholds

#### Regional Thresholds

As previously indicated, the State CEQA Guidelines state that the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the significance determination of whether a project would violate or impede attainment of air quality standards. As shown in Table 2-3, AVAQMD is in nonattainment status for the O<sub>3</sub> NAAQS, O<sub>3</sub> CAAQS, and PM<sub>10</sub> CAAQS.

AVAQMD guidance (2016) states that project impacts are significant if the project generates total emissions (direct or indirect) in excess of the thresholds outlined in Table 2-5 **Error! Reference source not found.**

**Table 2-5. AVAQMD Significant Emissions Thresholds**

Criteria Pollutant	Annual Threshold (tons)	Daily Threshold (pounds)
Volatile Organic Compounds (VOC) <sup>1</sup>	25	137
Respirable Particulate Matter (PM <sub>10</sub> )	15	82
Fine Particulate Matter (PM <sub>2.5</sub> )	12	65
Carbon Monoxide (CO)	100	548
Nitrogen Oxides (NO <sub>x</sub> )	25	137
Sulfur Oxides (SO <sub>x</sub> )	25	137
Lead (Pb)	0.6	3
Hydrogen Sulfide (H <sub>2</sub> S)	10	54

Source: AVAQMD 2016.

<sup>1</sup> The terms VOC and ROG are used interchangeably. ROG is generally used by CARB, and VOC is generally used by USEPA.

CARB=California Air Resources Board; ROG=reactive organic gases; USEPA=U.S. Environmental Protection Agency; VOC=volatile organic compounds

AVAQMD guidance recommends that projects within the district analyze direct impacts from short-term construction and long-term operations, including project activity and trips generated by the project. The guidelines also recommend analysis of indirect impacts (i.e., those that would not occur without the project), and cumulative impacts. According to the AVAQMD guidance (2016), the daily thresholds presented in **Error! Reference source not found.** are provided so that “a multi-phased project (such as a project with a construction phase and a separate operational phase) with phases shorter than 1 year can be compared to the daily value.” Based on discussions with AVAQMD staff, it is recommended that, for instance, a project with a construction period that exceeds 1 year should assess impacts using only the annual significance thresholds (i.e., not both daily and annual thresholds) (De Salvo pers. comm.). Given that the proposed project’s construction period would be less than 1 year, the daily thresholds from AVAQMD are used to evaluate the project’s construction emissions. Because the proposed project’s operational phase would not be shorter than 1 year, the annual thresholds from AVAQMD are used to assess the project’s operational emissions.

### **Health-based Thresholds for Project-generated Pollutants of Human Health Concern**

The California Supreme Court’s decision in *Sierra Club v. County of Fresno* (6 Cal. 5<sup>th</sup> 502) (hereafter referred to as the Friant Ranch Decision) reviewed the long-term, regional air quality analysis contained in the environmental impact report for the proposed Community Plan Update and Friant Ranch Specific Plan. The Friant Ranch Specific Plan project is a 942-acre master-plan development in unincorporated Fresno County within the San Joaquin Valley Air Basin, which is currently in nonattainment under the NAAQS and CAAQS for O<sub>3</sub> and PM<sub>2.5</sub>. The Court found that the environmental impact report’s air quality analysis was inadequate because it failed to provide enough detail “for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time.” The Court’s decision clarifies that environmental documents must attempt to connect a project’s air quality impacts on specific health effects or explain why it is not technically feasible to perform such an analysis.

As discussed in Section 2.1, *Existing Setting*, all criteria pollutants that would be generated by the proposed project are associated with some form of health risk (e.g., asthma, lower respiratory problems). Criteria pollutants can be classified as either regional or localized pollutants. Regional pollutants can be transported over long distances and affect ambient air quality far from the emission source. Localized pollutants affect ambient air quality near the emissions source. O<sub>3</sub> is considered a regional criteria pollutant, whereas CO, NO<sub>2</sub>, SO<sub>2</sub>, and Pb are localized pollutants. PM can be both a local and a regional pollutant, depending on its composition. The primary criteria pollutants of concern generated by the proposed project are O<sub>3</sub> precursors (i.e., ROG and NO<sub>x</sub>), CO, SO<sub>x</sub>, and PM (including DPM) because AVAQMD has developed numerical thresholds for these pollutants.

## Regional Project-generated Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the proposed project (O<sub>3</sub> precursors and PM) are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [e.g., age, gender]). For these reasons, O<sub>3</sub> precursors (ROG and NO<sub>x</sub>) contribute to the formation of ground-borne O<sub>3</sub> on a regional scale. Emissions of ROG and NO<sub>x</sub> generated in one area may not equate to a specific O<sub>3</sub> concentration in that same area. Similarly, some types of particulate pollutant may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased O<sub>3</sub> or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. Although there are models capable of quantifying O<sub>3</sub> and secondary PM formation and associated health effects, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating project-generated criteria pollutants to the locations where specific health effects could occur or the resultant number of additional days of nonattainment is not possible with any degree of accuracy.

Technical limitations of existing models to correlate project-level regional emissions to specific health consequences are recognized by air quality management districts throughout the state, including the San Joaquin Valley Air Pollution Control District (SJVAPCD) and SCAQMD, which provided amici curiae briefs for the Friant Ranch legal proceedings.<sup>1</sup> In its brief, SJVAPCD acknowledges that although health risk assessments for localized air toxics, such as DPM, are commonly prepared, “it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.” SJVAPCD further notes that emissions solely from the Friant Ranch Specific Plan project (which equate to less than one-tenth of 1 percent of the total NO<sub>x</sub> and VOC in the valley) are not likely to yield valid information and that any such information should not be “accurate when applied at the local level.” SCAQMD (2015) presents similar information in its brief, stating that “it takes a large amount of additional precursor emissions to cause a modeled increase in ambient O<sub>3</sub> levels.”<sup>2</sup>)

As previously discussed, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment designations under NAAQS and CAAQS, which are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. Although recognizing that air quality is cumulative problem, air districts typically consider impacts from projects that generate criteria pollutant and O<sub>3</sub> precursor emissions below these thresholds to be minor in nature and not adversely affect air quality such that NAAQS or CAAQS would be exceeded. Emissions generated by the proposed project could increase photochemical reactions and the formation of tropospheric O<sub>3</sub> and secondary PM,

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<sup>1</sup> The amici curiae briefs for Friant Ranch are available at: <https://www.courts.ca.gov/41312.htm>.

<sup>2</sup> For example, SCAQMD’s analysis of its 2012 Air Quality Attainment Plan showed that modeled NO<sub>x</sub> and ROG reductions of 432 and 187 tons per day, respectively, only reduced O<sub>3</sub> levels by 9 parts per billion. Analysis of SCAQMD’s Rule 1315 showed that emissions of NO<sub>x</sub> and ROG of 6,620 and 89,180 pounds per day, respectively, contributed to 20 premature deaths per year and 89,947 school absence (SCAQMD 2015).

which, at certain concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with O<sub>3</sub> and particulate pollution, the effects are a result of cumulative and regional emissions. Therefore, the proposed project's incremental contribution cannot be traced to specific health outcomes on a regional scale and a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis. Refer to Impact AQ-2 for a discussion of project-generated emissions.

### **Localized Project-generated Criteria Pollutants (PM and CO) and Air Toxics (DPM)**

Localized pollutants generated by a project are deposited and potentially affect populations near the emission source. Because these pollutants dissipate with distance, emissions from individual projects can result in direct and material health impacts on adjacent sensitive receptors. Models and thresholds are readily available to quantify these potential health effects and evaluate their significance. Locally adopted thresholds and analysis procedures for the localized pollutants of concern associated with the project area (i.e., PM<sub>10</sub>/PM<sub>2.5</sub>, DPM, CO, and naturally occurring asbestos) are identified below.

#### **Diesel Particulate Matter**

AVAQMD has established significance thresholds for projects exposing sensitive receptors to substantial pollutant concentrations, including those emitting carcinogenic and non-carcinogenic pollutants. A project would result in a significant impact if it exceeded the following thresholds:

1. A cancer risk greater than 10 in 1 million
2. A Hazard Index (non-cancerous) greater than or equal to 1

#### **Localized PM<sub>10</sub> and PM<sub>2.5</sub>**

The project site is located adjacent to the Los Angeles–Kern County boundary. Some of the potentially exposed receptors are located in Kern County. The Kern County Planning Department requires projects to estimate the maximum 24-hour average concentration of PM<sub>10</sub> and PM<sub>2.5</sub> at the project boundary and compare concentrations to the appropriate NAAQS, CAAQS, Kern County CEQA thresholds, and/or the applicable threshold from Eastern Kern Air Pollution Control District (EKAPCD) or SJVAPCD. Although the project site is located within Los Angeles County, the analysis of the maximum 24-hour average concentration of PM<sub>10</sub> and PM<sub>2.5</sub> along the project site boundary was conducted in accordance with Kern County Planning Department requirements in recognition of the nearby sensitive receptors located directly north of the project site, across West Avenue A, in Kern County. Additionally, for the purpose of this analysis, the maximum 24-hour average concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> are also analyzed at these nearby sensitive receptors in Kern County. The Kern County Planning Department has not adopted a threshold for areas that exceed the CAAQS or NAAQS. However, the SJVAPCD recommends USEPA Significant Impact Level (SIL) values for areas that exceed NAAQS or CAAQS (SJVAPCD 2019). SIL values are amounts USEPA considers to be a significant contribution in an area that exceeds air quality standards without the project. USEPA SIL values used in the analysis are as follows:

- An incremental increase in 24-hour PM<sub>10</sub> of 5 micrograms per cubic meter (µg/m<sup>3</sup>), or
- An incremental increase in 24-hour PM<sub>2.5</sub> of 1.2 µg/m<sup>3</sup>.

### **Carbon Monoxide Hot-spots**

Heavy traffic congestion can contribute to high levels of CO. Individuals exposed to these CO “hot-spots” may have a greater likelihood of developing adverse health effects (as described in Section 2.1, *Existing Setting*). AVAQMD follows the SCAQMD criteria for identifying CO hot spots and recommends a CO hot spot analysis for projects that:

- Cause the level of service (LOS) at any affected intersection to deteriorate from C to D, or
- Increase the volume-to-capacity ratio of any intersections rated D or worse by 2 percent or more.

Projects that do not generate CO concentrations in excess of health-based CAAQS or NAAQS would not contribute a significant level of CO such that localized air quality and human health would be substantially degraded.

### **Naturally Occurring Asbestos**

There are no quantitative thresholds related to receptor exposure to asbestos. However, AVAQMD Rule 1000 (National Emission Standards for Hazardous Air Pollutants) requires all projects to comply with the provisions of Title 40, Chapter I, Part 61 Code of Federal Regulations, which includes Subpart M – National Emissions Standard for Asbestos.

## **2.3.2 Methodology**

Air pollutant emissions would occur from both construction and operation of the new solar facility at the project site. The proposed project’s construction activities would generate temporary air pollutant emissions from the use of off-road construction equipment, and construction-related vehicle trips from workers, vendors, and haul trucks traveling to and from the project site. Once the project is constructed, air pollutant emissions from the proposed project would be minimal from solar panel cleaning events. These events would include use of pressure washers and vehicle trips from workers and water trucks. The change in air pollutant emissions generated by the proposed project relative to baseline conditions has been estimated and compared with the applicable air quality thresholds of significance recommended by AVAQMD.

### **Short-term Construction-generated Emissions**

Construction of the proposed project would generate emissions of ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> that could result in air quality effects during the construction period. Emissions would originate from off-road equipment exhaust, employee and haul truck vehicles, fugitive dust from site grading and earth movement, and re-entrained road dust from vehicle travel.

Emissions were estimated using a combination of emission factors and methodologies from the California Emissions Estimator Model (CalEEMod), version 2016.3.2 (Trinity Consultants 2017); CARB’s Emission Factor 2017 (EMFAC2017) model (CARB 2017a); USEPA’s AP-42: Compilation of Air Pollutant Emission Factors (USEPA 2006); and project-specific construction data (e.g., schedule, equipment, truck volumes) provided by the project applicant. See Attachment A for a complete list of construction assumptions, including equipment, and vehicles. Details regarding the methods and activity assumptions by source type are provided below.

- **Off-road Equipment:** Off-road equipment would be required for several construction activities including, trenching, grading, and solar panel array construction. Emission factors for off-road construction equipment (e.g., loaders, graders, bulldozers) were obtained from the CalEEMod (version 2016.3.2) User's Guide appendix, which provides values per unit of activity (in grams per horsepower-hour) by calendar year (Trinity Consultants 2017). Criteria pollutants were estimated by multiplying the CalEEMod emission factors by the equipment inventory and activity assumptions (e.g., horsepower, hours of use per day) provided by the project applicant.
- **On-road Worker Travel:** Worker trips were estimated using the CalEEMod default of 1.25 workers per piece of off-road equipment and a trip length of 10.8 miles. Worker trips would generate exhaust and fugitive dust emissions. Exhaust emission factors for employee commute vehicles were based on aggregated-speed emission rates for EMFAC2017's light-duty automobile and light-duty truck vehicle categories. The analysis includes CARB's criteria pollutant adjustment factors for gasoline light-duty vehicles to account for the SAFE Vehicle Rule (CARB 2019c).

Fugitive dust (i.e., PM<sub>10</sub> and PM<sub>2.5</sub>) emissions would be generated by vehicle brake wear and tire wear, as well as dust from paved roads. Fugitive dust emissions from tire wear and brake wear were estimated using emission factors from EMFAC2017. Fugitive dust from paved roads was estimated using emission factors from USEPA's *AP-42: Compilation of Air Emission Factors*, Section 13.2.1, *Paved Roads* (USEPA 2011).

- **On-road Truck Travel:** On-road trucks (e.g., pickup trucks, flatbed trucks, water trucks) would be required for material deliveries to the project site, material and equipment hauling within the project site, and dust control. On-road trucks would generate exhaust and fugitive dust emissions. Exhaust emission factors for trucks were based on aggregated-speed emission rates for EMFAC2017's T7 Single Construction vehicle category. Fugitive dust (i.e., PM<sub>10</sub> and PM<sub>2.5</sub>) emissions would be generated by vehicle brake wear and tire wear, as well as on-road dust from paved roads. Fugitive dust emissions from tire wear and brake wear were estimated using emission factors from EMFAC2017. Fugitive dust from paved roads was estimated using emission factors from USEPA's *AP-42: Compilation of Air Emission Factors*, Section 13.2.1, *Paved Roads* (USEPA 2011).

Approximately 43 trucks per day would be required for project component (e.g., PV solar panels, support structures, electrical interconnection equipment) delivery over the course of the construction period. Per the project applicant, all solar panels and equipment are stored at AES facilities approximately 6.2 miles south of the project site.

- **Off-road Truck Travel:** Trucks traveling within the project site would generate exhaust and fugitive dust emissions. Exhaust, tire wear, and brake wear emission factors were based on EMFAC2017's T7 Single Construction category and a vehicle speed of 5 miles per hour. Fugitive dust emissions from truck travel on unpaved surfaces were estimated using USEPA's *AP-42: Compilation of Air Pollutant Emission Factors*, Section 13.2.2, *Unpaved Roads*, guidance for publicly accessible unpaved roads (USEPA 2006). Emissions were estimated using the emission factors for trucks traveling at 5 miles per hour and daily truck usage provided by the applicant.
- **Site Grading and Earth Movement:** Fugitive dust emissions from earth-movement (e.g., site grading, bulldozing, wind erosion) were quantified using emission factors from CalEEMod. Per the project applicant, earthwork from grading, basins, and road over-excavation would total 35,775 cubic yards (CY) and would be balanced onsite. Excavation of the retention basin would

require the export of 8,700 CY of material. Assuming 16-CY capacity trucks, export of this material would require 544 total haul trips.

Project construction is assumed to last approximately 11 months, beginning October 2021. Table 2-6 **Error! Reference source not found.** outlines the duration of each activity during construction of the proposed project. The off-road equipment and associated construction activities are summarized in Table 2-7. All pieces of equipment were assumed to operate for 8 hours per day.

**Table 2-6. Duration of Construction Activities**

Phase	Work Days
Site Preparation & Grading	60
PV/BESS/Gen-Tie Installation	180

Source: Attachment A

BESS=battery energy storage system; gen-tie=generation tie; PV=photovoltaic

**Table 2-7. Off-Road Equipment Required During Project Construction**

Phase	Equipment Type	Number of Pieces	Horsepower
Site Preparation & Grading	Scrapers	1	367
	Excavators	1	158
	Graders	1	187
	Rubber Tired Dozers	3	247
	Skid Steer Loaders	3	65
	Bore/Drill Rigs	2	221
	Other Construction Equipment	1	172
	Forklifts	5	89
	Generator Sets	2	84
	Tractors/Loaders/Backhoes	5	97
PV/BESS/Gen-Tie Installation	Scrapers	1	367
	Excavators	1	158
	Graders	1	187
	Rubber Tired Dozers	3	247
	Skid Steer Loaders	3	65
	Bore/Drill Rigs	2	221
	Other Construction Equipment	1	172
	Forklifts	5	89
	Generator Sets	2	84
	Tractors/Loaders/Backhoes	5	97

Source: see Attachment A.

BESS=battery energy storage system; gen-tie=generation tie; PV=photovoltaic

## Localized Construction-Generated PM and DPM Concentrations

### Dispersion Modeling

Construction activities have the potential to cause adverse health impacts and impacts on ambient air quality. Thus, a detailed dispersion modeling analysis was conducted to determine whether



project construction would produce localized air quality impacts near the project area. USEPA's AERMOD atmospheric dispersion model was used to simulate physical conditions and predict pollutant concentrations near the construction work areas.

AERMOD is USEPA's recommended air dispersion model for near-field modeling from vented and non-vented sources. The model uses hourly meteorological observations and emission rates to determine hourly average concentrations from which other averaging periods (e.g., 24-hour, annual averages) are determined. The detailed information on the methodology and data used to conduct the air dispersion modeling is summarized below.

### **Inputs and Modeling**

AERMOD (version 19191) was used to conduct the modeling analysis. All calculation inputs are identical between the simulations used in the DPM health risk assessment (discussed separately below) and for ambient air quality, except the analysis of DPM includes only exhaust-related sources, whereas the PM<sub>10</sub> and PM<sub>2.5</sub> analysis includes both exhaust- and dust-related sources. The modeling used terrain height information in the analysis. Given the rural nature of the project area, AERMOD's rural dispersion option was used in the analysis.

### **Meteorological Data**

AERMOD requires meteorological data as input into the model. These data are typically processed using AERMET and AERSURFACE, preprocessors to AERMOD. AERMET requires surface meteorological data, upper air meteorological data, and surface parameter data (supplied from AERSURFACE). CARB has meteorological datasets developed for use in air quality modeling. The dataset used in this analysis was based on data derived from the General William J. Fox Airfield Airport (34.741, -118.212) for the January 1, 2009, to January 2, 2014 period.

### **Receptors**

Receptors were modeled using a network of discrete receptors at both existing residential locations and along the fence line (i.e., project boundary and closest location for public access to ambient air). To represent the ambient air boundary, receptors were placed along the fence line boundary at 10-meter increments. In addition, receptors were placed at observed residential locations nearest to the project site.

### **Source Parameters**

Onsite construction emissions from off-road equipment and onsite truck travel were characterized as polygon area sources that outlined the footprint of the project site. A release height of 5.0 meters represented exhaust emissions and a release height of zero meters represented onsite fugitive dust emissions (SCAQMD 2008). On-road travel emissions from haul and vendor trucks and worker vehicles were characterized as line volume sources with release heights of 0.9 meters for fugitive dust emissions and 3.4 meters for exhaust emissions. Emissions from off-road equipment were assumed to be generated throughout the construction footprint. Emissions from offsite trucks were modeled along Avenue A, the primary haul route adjacent to the project site.

The modeling of emissions from construction activities was based on the proposed project's daily construction hours and workdays per week (i.e., 8 hours per day, 5 days per week). To account for

plume rise associated with mechanically generated air turbulence from construction emissions sources for the AERMOD run, the initial vertical dimensions of the polygon area source was modeled at 1.4 meters for exhaust and 1.0 meters for fugitive dust; for the line volume sources, it was modeled at 3.16 meters for exhaust and 0.8 meters for fugitive dust.

Because construction equipment is expected to operate for 8 hours per day, only daytime meteorology was assumed. Construction was assumed to occur between 7 a.m. and 3 p.m., 5 days per week.

## Health Risk

The approach to estimating cancer risk from long-term inhalation exposure to carcinogens requires calculating a range of potential doses and multiplying by cancer potency factors in units of inverse dose to obtain a range of cancer risks. For cancer risk, the risk for each age group is calculated using the appropriate breathing rates, age sensitivity factors, exposure duration, and cancer risks calculated for individual age groups are summed to estimate cancer risk based on assumed exposure durations. The California OEHHA recommends a 30-year exposure duration (i.e., residency time) for residential locations (OEHHA 2015). Note that PM<sub>10</sub> exhaust emissions are used as a surrogate for DPM based on guidance from the OEHHA.

The health risk factors used in this assessment are presented in Table 2-8. For each receptor, the modeled annual concentration from AERMOD was multiplied by the calculated dose (inhalation pathway only) factor and by one million to obtain the cancer risk, in chances per million. Construction is anticipated to last approximately 11 months. Thus, the construction risk assessment assumes exposure begins at third trimester, runs for 0.25 percent (3 months) of a year, and the remaining 0.68 percent of a year (approximately 8 months) is assumed to occur in the 0 – <2 age bin. Fraction of time at home is set a 1.0 to be conservative.

**Table 2-8. Key Age-specific Factors Used in Health Risk Assessment**

Factor	3 <sup>rd</sup> Trimester	0 – <2 Years
<i>Dose Inhalation</i>		
Breathing Rates, Residential <sup>1</sup>	361	1,090
<i>Cancer Risk</i>		
Inhalation Cancer Potency Factor	1.1	1.1
Age Sensitivity Factors <sup>2</sup>	10	10
Exposure Duration (years)	0.25	0.68
Fraction of Time at Home	1.0	1.0

<sup>1</sup> Based on Point Estimates of Residential Daily Breathing Rates, Table 5.6 in OEHHA 2015, 95<sup>th</sup> percentile for 3<sup>rd</sup> trimester and 0 – <2 bins.

<sup>2</sup> Based on Table 8.3 in OEHHA 2015.

## Long-term Operational Emissions

Operation of the proposed project would generate emissions of ROG, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> that could result in air quality effects during the operational period. Permanent onsite personnel would not be required during operation, as there would be minimal maintenance required. The PV panels would require up to two panel cleaning events per year. Emissions would result from off-road equipment exhaust from pressure washers and on-road vehicle trip generation for water

trucks and employee trips. Water truck trips to the site are not anticipated to exceed 10 visits annually, for a maximum total of 20 truck trips.

- **Off-road Equipment:** Pressure washers would be required for periodic panel washing at the project site during normal operations. Per the project applicant, it was assumed that panel washing would occur up to two times per year and would require three pressure washers. Emission factors for the use of the pressure washers were obtained from the CalEEMod User's Guide appendix, which provides value per unit of activity (in grams per horsepower-hour) by calendar year (Trinity Consultants 2017). The CalEEMod default horsepower and load factors were used to estimate criteria air pollutant generation.
- **On-road Truck Travel:** On-road trucks (e.g., water trucks) would be required for hauling of water for panel washing. Water trucks would generate exhaust and fugitive dust emissions. Exhaust emission factors for water trucks were based on aggregated-speed emission rates for EMFAC2017's T7 Single Construction vehicle category. Fugitive dust (i.e., PM<sub>10</sub> and PM<sub>2.5</sub>) emissions would be generated by vehicle brake wear and tire wear, as well as on-road dust from paved roads. Fugitive dust emissions from tire wear and brake wear were estimated using emission factors from EMFAC2017. Fugitive dust from paved roads were estimated using emission factors from USEPA's *AP-42: Compilation of Air Emission Factors*, Section 13.2.1, *Paved Roads* (USEPA 2011). Based on local water truck services, the nearest location is approximately 20 miles from the project site; therefore, the analysis assumed a one-way trip length of 20 miles.
- **Off-road Truck Travel:** Similar to construction, water trucks traveling within the project site during operations would generate exhaust and fugitive dust emissions. Exhaust, tire wear, and brake wear emission factors were based on EMFAC2017's T7 Single Construction category and a vehicle speed of 5 miles per hour. Fugitive dust emissions from truck travel on unpaved surfaces were estimated using USEPA's *AP-42: Compilation of Air Pollutant Emission Factors*, Section 13.2.2, *Unpaved Roads*, guidance for publicly accessible unpaved roads (USEPA 2006). Emissions were estimated using the emission factors for trucks traveling at 5 miles per hour and daily truck usage provided by the applicant.

### 2.3.3 Project Impacts

#### Impact AQ-1: Would the proposed project conflict with or obstruct implementation of the applicable air quality plan?

AVAQMD is required, pursuant to the NAAQS and CAAQS, to reduce emissions of criteria pollutants for which the district is in nonattainment (i.e., O<sub>3</sub> and PM<sub>10</sub>). The most recent AVAQMD air quality attainment plan is the 2016 *Federal 75 ppb Ozone Attainment Plan* that was adopted in March 2017, which updates the previous 2008 *AVAQMD Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Nonattainment Area)*. In general, a project would not interfere with the applicable air quality plan if it were consistent with growth assumptions used to form the plan and the project implements were all reasonably available and feasible air quality control measures from the applicable air quality plan or planning document referenced or used in the plan. A project would conflict with or obstruct implementation of the applicable air quality plan if the project is inconsistent with the underlying land use designation and zoning of the local applicable plan (e.g., general plan). In this case, a conflict would occur if a project were to introduce growth that is either unplanned for or not mitigated by the applicable air quality plan. Air quality impacts are

controlled locally through policies and provisions of AVAQMD, the *Los Angeles County General Plan*, and the Los Angeles County Code of Building Regulations. Per AVAQMD, a project would be deemed to not exceed this threshold if it is consistent with the existing land use plan. Furthermore, according to AVAQMD, even if a project is inconsistent with the existing land use plan, if it does not increase dwelling unit density or vehicle trips and vehicle miles traveled (VMT), it would be considered to not conflict with or obstruct implementation of the applicable air quality plan (AVAQMD 2016).

The *Los Angeles County General Plan* and *Antelope Valley Area Plan* are the governing land use documents for physical development at the project site. According to the County Zoning Ordinance, the project site is zoned A-2, Heavy Agricultural. As described in Section 1.1, *Project Description*, the proposed project is a 21-MW ground-mounted, utility-scale solar energy facility occupying 145 acres. Pursuant to the County Code, a ground-mounted, utility-scale solar energy facility is a use in the A-2 Zone requiring a conditional use permit (County of Los Angeles 2019). As discussed in the project description, the project applicant would obtain a conditional use permit prior to implementation of the proposed project.

Implementation of the proposed project would require short-term construction that would result in worker, vendor, and haul trips to the project site. Construction is expected to last approximately 11 months, and the number of trips would vary throughout the construction period. These vehicle trips would cease with the completion of construction. Once the project is operational, vehicle trips would occur for the approximately two solar panel cleaning events per year, which would result in a maximum of 10 trips annually. Construction and operational activities are therefore not expected to result in a significant increase in vehicle trips or VMT. Additionally, as a solar facility, the proposed project would not result in an increase in population. The proposed project would also comply with AVAQMD rules and air quality control measures including Rule 402 (Nuisance), Rule 403 (Fugitive Dust), Rule 404 (Particulate Matter Concentration), and Rule 1300 (New Source Review).

After certification of the conditional use permit, the proposed project would be an allowed use on the project site. Additionally, the proposed project would not result in an increase in population or a permanent substantial increase in vehicle trips or VMT in the project area. Therefore, the proposed project is considered to be consistent with the growth assumptions used to form the 2016 *Federal 75 ppb Ozone Attainment Plan*. As such, the proposed project would not conflict with or obstruct the implementation of the applicable air quality plan. Impacts would be less than significant and no mitigation is required.

### **Impact AQ-2: Would the proposed project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard?**

As a result of past and present projects, AVAQMD is currently in nonattainment for O<sub>3</sub> under NAAQS and for O<sub>3</sub> and PM<sub>10</sub> under CAAQS. Construction and operation of the proposed project have the potential to result in net increases in O<sub>3</sub> precursors (i.e., ROG and NO<sub>x</sub>) and PM<sub>10</sub> that could exceed thresholds established to attain state and federal standards. The construction- and operations-related air quality impacts are discussed below.

## Short-term Construction Emissions

Table 2-9 summarizes the total daily project-related construction emissions that would occur within AVAQMD. As the proposed project's construction period would be less than a year, the daily thresholds from AVAQMD are used to evaluate the proposed project's construction emissions. The proposed project is required to comply with AVAQMD Rule 403, Fugitive Dust, as a standard condition, which requires implementation of a Dust Control Plan.

As shown in Table 2-10, the proposed project's total daily construction emissions would not exceed AVAQMD's significance thresholds, including those for pollutants for which the district is in nonattainment (i.e., O<sub>3</sub> precursors and PM<sub>10</sub>). Accordingly, impacts related to emissions of criteria pollutants during construction of the proposed project would be less than significant, and mitigation would not be required.

**Table 2-9. Daily Construction Criteria Pollutant Emissions in AVAQMD**

Construction Phase	Daily Criteria Pollutant Emissions (pounds per day)					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Site Preparation & Grading	9.17	100.45	67.86	0.16	29.03	9.99
PV/BESS/Gen-Tie Installation	8.98	95.71	66.92	0.15	26.75	9.64
<b>Maximum Daily Emissions</b>	<b>9.17</b>	<b>100.45</b>	<b>67.86</b>	<b>0.16</b>	<b>29.03</b>	<b>9.99</b>
AVAQMD Thresholds	137	137	548	137	82	65
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Modeling output provided in Attachment A.

Note: Total may not add exactly due to rounding.

AVAQMD=Antelope Valley Air Quality Management District; BESS=battery energy storage system; CO=carbon monoxide; Gen-Tie=generation tie; NO<sub>x</sub>=nitrogen oxides; PM<sub>10</sub>=particulate matter less than 10 microns in diameter; PM<sub>2.5</sub>=particulate matter less than 2.5 microns in diameter; PV=photovoltaic; ROG=reactive organic gases; SO<sub>x</sub>=sulfur oxides

## Long-term Operational Emissions

Once the proposed project is operational, emissions associated with the proposed project would be related to periodic panel washing, which would require water truck trips and use of pressure washers. Because the proposed project's operational phase would not be shorter than 1 year, the annual thresholds from AVAQMD are used to assess the proposed project's operational emissions, in accordance with AVAQMD's guidance. Table 2-10 summarizes total annual project-related operational criteria pollutant emissions.

**Table 2-10. Annual Operational Criteria Pollutant Emissions**

Operations	Annual Criteria Pollutant Emissions (tons per year)					
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Panel Washing (2 events)	<0.01	0.02	<0.01	<0.01	0.08	<0.01
AVAQMD Thresholds	25	25	100	25	15	12
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: Modeling output provided in Attachment A.

AVAQMD=Antelope Valley Air Quality Management District; CO=carbon monoxide; NO<sub>x</sub>=nitrogen oxides; PM<sub>10</sub>=particulate matter less than 10 microns in diameter; PM<sub>2.5</sub>=particulate matter less

than 2.5 microns in diameter; ROG=reactive organic gases; SO<sub>x</sub>=sulfur oxidesAs shown in Table 2-10, operation of the proposed project would not generate annual emissions in excess of AVAQMD's significance thresholds, including those for pollutants for which the district is in nonattainment (i.e., O<sub>3</sub> precursors and PM<sub>10</sub>). Accordingly, impacts related to emissions of criteria pollutants during operation of the proposed project would be less than significant and mitigation would not be required.

### **Decommissioning Activities**

At the end of the life cycle of the proposed project (approximately 35 years), AES would decommission and remove the system and its components. The proposed project site could then be converted to other uses in accordance with applicable land use regulations in effect at that time. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and would be in accordance with all applicable federal, state, and County of Los Angeles regulations. A collection and recycling program would be executed to dispose of the site materials.

The proposed project's decommissioning activities were evaluated qualitatively, as the extent of the activities and equipment amounts for decommissioning are unknown at this time. It is anticipated that decommissioning activities would be less intensive than that of project construction. Similar to construction activities, decommissioning activities would be required to implement the same fugitive dust controls. Because emissions generated from decommissioning activities are expected to be less than project construction emissions, and project construction would result in emissions below all AVAQMD thresholds, decommissioning activities would also result in emissions that would be below AVAQMD thresholds.

### **Impact AQ-3: Would the proposed project expose sensitive receptors to substantial pollutant concentrations?**

Sensitive receptors are people who are considered to be more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emissions sources, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress and other air quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, with associated greater exposure to ambient air quality. Recreational uses are also considered sensitive to greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system.

#### **Diesel Particulate Matter**

As discussed previously, DPM is classified as a carcinogenic TAC by CARB and is the primary pollutant of concern with regard to health risks to sensitive receptors during proposed project construction. The operation of diesel-powered construction equipment and heavy-duty trucks could potentially expose nearby sensitive receptors to DPM concentrations. Health risks related to DPM are assessed quantitatively based on anticipated project emissions and proximity to sensitive

receptors, which include several residential dwellings located at various distances from the project site boundary (See Section 1.3, *Nearby Land Uses and Sensitive Receptors*).

Table 2-11 shows the cancer risk and non-cancer hazard index at the maximum affected residence. As shown in Table 2-11, implementation of the proposed project would not result in increased cancer risk or hazard index in excess of thresholds.

**Table 2-11. Estimated Health Risk during Construction**

Location	Cancer Risk (cases per million)	Chronic Hazard Index
Maximum Incremental Risk at Existing Receptors	3.6	0.01
Thresholds	10.0	1.00

Source: ICF Emissions Modeling (Attachment A).

Once operational, the proposed project would have minimal emissions related to panel cleaning events. There would be up to two events per year, and emissions would be generated from workers and water trucks traveling to and from the site, as well as from the use of diesel-powered pressure washers. These emissions would occur only twice per year. Therefore, operation of the proposed project would not expose sensitive receptors to substantial concentrations of DPM, and impacts would be less than significant.

### Localized Particulate Matter Concentrations

Project construction activities would generate exhaust and fugitive dust PM emissions. PM<sub>10</sub> and PM<sub>2.5</sub> exhaust emissions would be generated by off-road equipment, onsite truck travel, and on-road vehicle travel, including workers, vendors, and haul trucks traveling to and from the project site. PM<sub>10</sub> and PM<sub>2.5</sub> fugitive dust emissions would result from onsite soil disturbance activities, such as grading, bulldozing, and onsite truck travel, and on-road vehicle travel generating brake wear, tire wear, and road dust emissions from worker, vendor, and haul trucks. Emissions of PM could result in increased concentrations that could have an adverse impact on localized air quality. Similar to the health risk assessment, dispersion modeling using AERMOD was conducted to estimate the maximum 24-hour average concentrations of PM<sub>10</sub> and PM<sub>2.5</sub> during construction. The localized analysis evaluated the maximum concentrations located at the project fenceline and residential receptor.

As shown in Table 2-12, the proposed construction activity at and near the project site would not cause an exceedance of the appropriate PM<sub>10</sub> and PM<sub>2.5</sub> SILs at the any receptor along the project boundary or offsite residential receptors. Therefore, impacts would be less than significant.

**Table 2-12. Estimated Particulate Matter Concentrations during Construction**

Location	24-hour PM <sub>10</sub>	24-hour PM <sub>2.5</sub>
Maximum at Existing Receptors	0.80 µg/m <sup>3</sup>	0.60 µg/m <sup>3</sup>
Maximum at Project Fenceline	1.44 µg/m <sup>3</sup>	1.04 µg/m <sup>3</sup>
USEPA SIL	5 µg/m <sup>3</sup>	1.2 µg/m <sup>3</sup>

Source: ICF Emissions Modeling (Attachment A).

PM<sub>10</sub>=particulate matter 10 microns or less in diameter; PM<sub>2.5</sub>=particulate matter 2.5 microns or less in diameter  
SIL=significant impact level; µg/m<sup>3</sup>=grams per meter cubed; USEPA=U.S. Environmental Protection Agency

## Naturally Occurring Asbestos

Asbestos is commonly found in ultramafic rock, which occurs throughout California, especially in the foothills of the Sierra Nevada range, the Klamath Mountains, and Coastal Ranges. According to the California Department of Conservation, the proposed project site is not in an area likely to contain ultramafic rock or naturally occurring asbestos (California Department of Conservation 2000). For this reason, the proposed project would not have impacts related to exposure to asbestos during construction.

## Valley Fever

Valley Fever is a disease affecting the lungs that is caused by spores of the *Coccidioides immitis* fungus. These spores are found in soils and become airborne and inhaled during disturbance of contaminated soils. Construction activities would result in ground disturbance that could potentially expose onsite construction workers and nearby receptors to airborne spores. Therefore, the risk of exposure and contraction of Valley Fever as a result of the proposed project would be increased from the existing conditions. **MM-AQ-1** is required to ensure that construction workers take the proper precautions to avoid Valley Fever exposure. Implementation of the control measures in **MM-AQ-1** during construction would reduce the impact related to Valley Fever, and impacts would be less than significant with mitigation.

## Mitigation Measures

**MM-AQ-1: Minimize Exposure to Potential Valley Fever-Containing Dust.** To minimize personnel and public exposure to potential Valley Fever-containing dust on- and offsite, the following control measures will be implemented during project construction.

- Equipment, vehicles, and other items will be thoroughly cleaned of dust before they are moved offsite to other work locations.
- Wherever possible, grading and trenching work will be phased so that earth-moving equipment is working well ahead or downwind of workers on the ground.
- The area immediately behind grading or trenching equipment will be sprayed with water before ground workers move into the area.
- In the event that a water truck runs out of water before dust is sufficiently dampened, ground workers being exposed to dust will leave the area until a truck can resume water spraying.
- All heavy-duty earth-moving vehicles will be closed-cab and equipped with a High-Efficiency Particulate-filtered air system.
- Workers will receive training to recognize the symptoms of Valley Fever and will be instructed to promptly report suspected symptoms of work-related Valley Fever to a supervisor.
- A Valley Fever informational handout will be provided to all onsite construction personnel. The handout will, at a minimum, provide information regarding the symptoms, health effects, preventative measures, and treatment.



- Onsite personnel will be trained on the proper use of personal protective equipment, including respiratory equipment. National Institute for Occupational Safety and Health–approved respirators will be provided to onsite personal, on request.

#### **Impact AQ-4: Would the proposed project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?**

The proposed project involves the construction and operation of a solar facility within Los Angeles County. Project-related odor emissions would be minimal and would not affect a substantial number of people. During construction activities, emissions from construction equipment may be evident in the immediate area on a temporary basis. Material deliveries and hauling heavy-duty truck trips could occasionally produce odors from diesel exhaust. These odors would not affect a substantial number of people because construction would be temporary, and construction-generated emissions dissipate rapidly with increasing distance from the source. Standard operation of the solar facility would not produce objectionable odors, and there would be no permanent impacts. Impacts related to the creation of other emissions (e.g., odors) affecting a substantial number of people would be considered minor and less than significant.

### **2.3.4 Cumulative Impacts**

Cumulative impacts can result from individually minor, but collectively significant, projects taking place over a period of time. The region of analysis for cumulative effects on air quality is the entire MDAB. MDAB experiences chronic exceedances of state and federal ambient air quality standards as a consequence of past and present projects and is subject to continued nonattainment status by reasonably foreseeable future projects. These nonattainment conditions within the region are considered cumulatively significant. According to AVAQMD, cumulative impacts are similar to direct and indirect impacts of the proposed project. AVAQMD thresholds have been established to ensure attainment of NAAQS and CAAQS and, according to AVAQMD, the thresholds shown in **Error! Reference source not found.** are used to determine both project-level impacts and a “cumulatively considerable” net increase in criteria pollutants.

As discussed previously, the proposed project would not conflict with or obstruct the implementation of the applicable air quality plan. Furthermore, Table 2-9 and Table 2-10 show that the proposed project’s construction and operational emissions would be below AVAQMD regional thresholds and would not result in substantial pollutant concentrations at nearby sensitive receptors. The proposed project would comply with applicable AVAQMD rules and regulations, including Rule 403 (Fugitive Dust), Rule 1108 (Cutback Asphalt), and Rule 1113 (Architectural Coatings) during construction and with all other adopted emission control measures. Per AVAQMD rules and mandates and the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, implementation of all feasible mitigation measures, and compliance with adopted emission control measures) would also be imposed on all current and reasonably foreseeable projects in the region. As such, cumulative construction impacts with respect to criteria pollutant emissions would be less than significant. Following construction, project operations would result in minimal criteria pollutant emissions that would be far below AVAQMD thresholds. Therefore, the project’s long-term contribution to cumulative air quality impacts would be less than cumulatively considerable.

## **3.1 Existing Setting**

### **3.1.1 Global Climate Change**

The phenomenon known as the *greenhouse effect* keeps the atmosphere near Earth's surface warm enough for the successful habitation of humans and other life forms. GHGs include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), perfluorinated carbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>), and hydrofluorocarbons (HFCs), in addition to water vapor. These six gases are also identified as GHGs in Section 15364.5 of the State CEQA Guidelines.

Sunlight in the form of infrared, visible, and ultraviolet light passes through the atmosphere. Some of the sunlight striking the earth is absorbed and converted to heat, which warms the surface. The surface emits infrared radiation to the atmosphere, where some of it is absorbed by GHGs and re-emitted toward the surface. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and amplifying the warming of the earth (National Park Service 2020).

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels enhance the greenhouse effect, which contributes to global warming of the earth's lower atmosphere. This warming induces large-scale changes in ocean circulation patterns, precipitation patterns, global ice cover, biological distributions, and other changes to the earth's system that are collectively referred to as *climate change*.

GHGs are global pollutants, unlike criteria air pollutants and TACs. Criteria air pollutants and TACs occur locally or regionally, and local concentrations respond to locally implemented control measures. However, the long atmospheric lifetimes of GHGs allow them to be transported great distances from sources and become well mixed, unlike criteria air pollutants, which typically exhibit strong concentration gradients away from point sources. GHGs and global climate change represent cumulative impacts; that is, GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change.

### **3.1.2 Principal Greenhouse Gases**

The GHGs listed by the Intergovernmental Panel on Climate Change (IPCC) (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, and SF<sub>6</sub>) (2014) are discussed in this section in order of abundance in the atmosphere, and the principal characteristics surrounding these pollutants are discussed below. California law and the State CEQA Guidelines contain a similar definition of GHGs (Health and Safety Code Section 38505(g); 14 California Code of Regulations 15364.5). Water vapor, the most abundant GHG, is not included in this list because its natural concentrations and fluctuations far outweigh its anthropogenic (human-made) sources. Consequently, the primary GHGs of concern associated with the proposed project are CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O. Note that HFCs, PFCs, and SF<sub>6</sub> are not discussed because

those gases would be insignificant or are primarily generated by processes that are not anticipated as part of the proposed project.

- **Carbon Dioxide (CO<sub>2</sub>)** enters the atmosphere through the burning of fossil fuels (e.g., oil, natural gas, coal), solid waste, trees and wood products, respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). CO<sub>2</sub> is also removed from the atmosphere (or “sequestered”) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH<sub>4</sub>)** is emitted during the production and transport of coal, natural gas, and oil. CH<sub>4</sub> also results from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- **Nitrous Oxide (N<sub>2</sub>O)** is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method to compare GHG emissions is the global warming potential (GWP) methodology defined in the IPCC reference documents. IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of carbon dioxide equivalent (CO<sub>2</sub>e), which compares the gas in question to that of the same mass of CO<sub>2</sub> (which has a GWP of 1 by definition). The GWP values used in this report are based on the IPCC Fourth Assessment Report and United Nations Framework Convention on Climate Change reporting guidelines and are defined in Table 3-1 (IPCC 2007). The Fourth Assessment Report GWP values are consistent with those used in CARB’s 2018 California GHG inventory and *California’s 2017 Climate Change Scoping Plan* (CARB 2017b, 2020g).

**Table 3-1. Lifetimes, GWPs, and Abundances of Significant GHGs**

Gas	GWP (100 years)	Lifetime (years) <sup>1</sup>	Atmospheric Abundance
CO <sub>2</sub>	1	50–200	400 ppm
CH <sub>4</sub>	25	9–15	1,834 ppb
N <sub>2</sub> O	298	121	328 ppb
SF <sub>6</sub>	22,800	3,200	7.8 ppt

Sources: CARB 2020h; IPCC 2007

<sup>1</sup> Defined as the half-life of the gas.

CO<sub>2</sub>=carbon dioxide; CH<sub>4</sub>=methane; GHG=greenhouse gas; GWP=global warming potential; N<sub>2</sub>O=nitrous oxides; ppm=parts per million; ppb=parts per billion; ppt=parts per trillion; SF<sub>6</sub>=sulfur hexafluoride

### 3.1.3 Greenhouse Gas Inventories

A GHG inventory is a quantification of all GHG emissions and sinks<sup>3</sup> within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (e.g., for global and national entities) or on a small scale (e.g., for a particular building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

Table 3-2 outlines the most recent global, national, statewide, and local GHG inventories to help contextualize the magnitude of potential project-related emissions.

<sup>3</sup>A *GHG sink* is a process, activity, or mechanism that removes a GHG from the atmosphere.

**Table 3-2. Global, National, State, and Local GHG Emissions Inventories**

<b>Emissions Inventory</b>	<b>CO<sub>2</sub>e (metric tons)</b>
2010 IPCC Global GHG Emissions Inventory	52,000,000,000
2018 USEPA National GHG Emissions Inventory	6,676,600,000
2018 CARB State GHG Emissions Inventory	425,300,000
2015 County of Los Angeles GHG Emissions Inventory	9,604,339

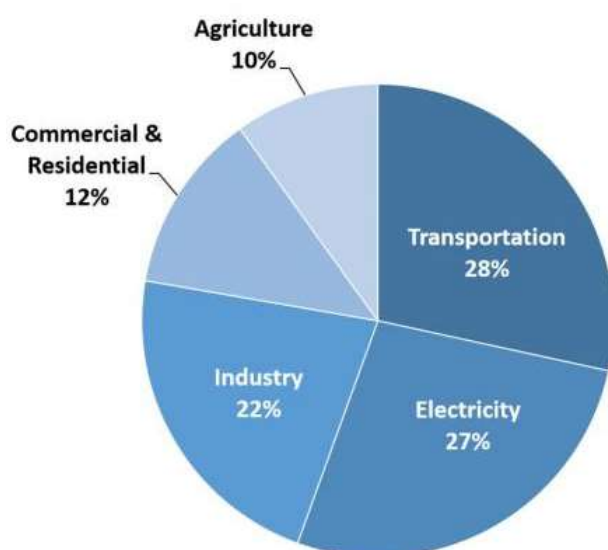
Sources: IPCC 2014; USEPA 2020b; CARB 2020g; County of Los Angeles 2020

CARB=California Air Resources Board; CO<sub>2</sub>e=carbon dioxide equivalent; GHG=greenhouse gas;

IPCC=Intergovernmental Panel on Climate Change; USEPA=U.S. Environmental Protection Agency

### 3.1.4 Sources of GHG Emissions

At a national level, the largest source of GHG emissions from human activity is burning fossil fuels for electricity, heat, and transportation. The primary sources of GHG emissions in the United States in 2018 are summarized on Figure 3-1.<sup>4</sup> Transportation and electricity production accounted for 28 and 27 percent of U.S. GHG emissions in 2018, respectively. Approximately 90 percent of fuel used in transportation in the United States is petroleum based, whereas approximately 63 percent of electricity is generated from burning fossil fuels. Transportation and Electricity are followed by Industry, Commercial and Residential, Agriculture, and Land Use and Forestry sources (USEPA 2020b).

**Figure 3-1. Total U.S. Greenhouse Gas Emissions by Source in 2018**

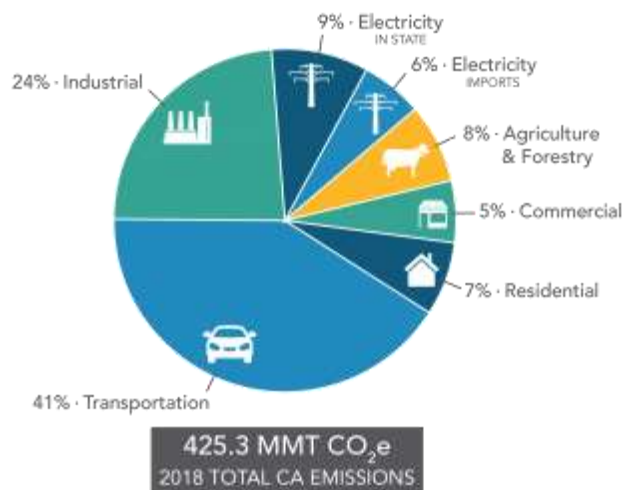
Source: USEPA 2020b.

In 2018, GHG emissions within California totaled 425.3 million metric tons of carbon dioxide equivalent (MTCO<sub>2</sub>e). Within California, the transportation sector is the largest contributor, accounting for approximately 41 percent of total statewide GHG emissions. The industrial sector is

<sup>4</sup> The 2018 GHG inventory is the most recent inventory available at the time this technical report was produced; see <https://www.arb.ca.gov/cc/inventory/data/data.htm>.

the second-largest contributor to California GHG emissions, with 24 percent. The 2018 Statewide GHG emissions inventory is depicted on Figure 3-2.<sup>5</sup>

**Figure 3-2. Total California Greenhouse Gas Emissions by Economic Sector in 2018**



Source: CARB 2020g

As depicted on Figure 3-2, in-state electricity production accounts for roughly 9 percent of the state's overall GHG emissions inventory. The mix of renewable technologies related to electricity production within California is composed of wind, solar PV, solar thermal, hydroelectric, geothermal, and biomass. As of 2018, California was ranked first in the nation as producer of electricity from solar, geothermal, and biomass resources. Solar PV and solar thermal installations specifically provided approximately 19 percent of the state's net electricity generation (USEIA 2020).

## 3.2 Regulatory Framework

### 3.2.1 Federal

There is currently no federal overarching law specifically related to the reduction of GHG emissions. Under the Obama Administration, USEPA had been developing regulations under the CAA pursuant to USEPA's authority.<sup>6</sup> There have also been settlement agreements between USEPA, several states, and nongovernmental organizations to address GHG emissions from electric generating units and refineries, as well as USEPA's issuance of an Endangerment Finding and a Cause or Contribute Finding. USEPA has also adopted a Mandatory Reporting Rule and Clean Power Plan. Under the Clean Power Plan, USEPA issued regulations to control CO<sub>2</sub> emissions from new and existing coal-fired power plants. However, on February 9, 2016, the Supreme Court issued a stay of these

<sup>5</sup> The 2018 GHG inventory is the most recent inventory available at the time this technical report was produced; see <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>.

<sup>6</sup> In *Coalition for Responsible Regulation, Inc., et al. v. EPA*, the United States Court of Appeals upheld USEPA's authority to regulate GHG emissions under the CAA.

regulations pending litigation. Former USEPA Administrator Scott Pruitt signed a measure to repeal the Clean Power Plan in October 2017. Therefore, no federal regulations specifically related to GHG emissions have been factored into the proposed project's impact analysis.

## Fuel Economy Standards

Standards have been adopted at the federal level to increase the fuel economy of cars and light trucks. In 2012, NHTSA established its final passenger car and light-truck CAFE Standards for model years 2017–2021, which, in model year 2021, will require, on average, a combined fleet-wide fuel economy standard of 40.3–41.0 miles per gallon. The SAFE Vehicles Rule is under way, which will amend existing CAFE and tailpipe CO<sub>2</sub> standards for passenger cars and light trucks and establish new standards, covering model years 2021 through 2026.

On August 9, 2011, USEPA and NHTSA announced a new national program to reduce GHG emissions and improve fuel economy for new medium- and heavy-duty engines and vehicles sold in the United States. USEPA and NHTSA finalized a joint rule (Phase 1) that established a national program, consisting of new standards for engines in model years 2014 through 2018, to reduce CO<sub>2</sub> emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of vehicles built for the 2014 to 2018 model years. USEPA and NHTSA adopted the Phase 2 standards in August 2016, which will reduce CO<sub>2</sub> emissions associated with model years 2018 and beyond, reducing fuel consumption and GHG emissions from tractor-trailers by as much as 24 percent once fully implemented for certain truck types (NHTSA 2020).

### 3.2.2 State

California has adopted statewide legislation addressing various aspects of climate change, GHG mitigation, and energy efficiency. Much of this establishes a broad framework for the state's long-term GHG and energy reduction goals and climate change adaptation program. The former and current governors of California have also issued several EOs related to the state's evolving climate change policy. Summaries of key policies, EOs, regulations, and legislation at the state level that are relevant to the proposed project are provided below in chronological order.

#### **Assembly Bill 1493—Pavley Rules (2002, amendments 2009)/Advanced Clean Cars (2011)**

Known as Pavley I, AB 1493 provided the nation's first GHG standards for automobiles. AB 1493 required CARB to adopt vehicle standards that will lower GHG emissions from new light-duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as *Pavley II* and now referred to as the *Advanced Clean Cars* measure) was adopted for vehicle model years 2017–2025 in 2012. Together, the two standards are expected to increase average fuel economy to roughly 54.5 miles per gallon in 2025.

#### **Senate Bills 1078/107/X 1-2—Renewables Portfolio Standard and Renewable Energy Resources Act (2002, 2006, 2011)**

SBs 1078 and 107, California's RPS, obligated investor-owned utilities, energy service providers, and Community Choice Aggregations to procure an additional 1 percent of retail sales per year from

eligible renewable sources until 20 percent is reached by 2010. The California Public Utilities Commission and California Energy Commission are jointly responsible for implementing the program. SB X 1-2, called the California Renewable Energy Resources Act, obligates all California electricity providers to obtain at least 33 percent of their energy from renewable resources by 2020. SB 350 increased the RPS to 50 percent for 2030, and SB 100 increased the RPS to 100 percent by 2045.

### **Executive Order S-03-05 (2005)**

EO S-03-05 was signed in 2005 and serves to set GHG emissions reduction targets for California. The goal of this EO is to reduce California's GHG emissions to (1) 2000 levels by 2010; (2) 1990 levels by 2020; and (3) 80 percent below 1990 levels by 2050.

### **Assembly Bill 32—California Global Warming Solutions Act (2006)**

AB 32 codified the state's GHG emissions target by requiring California's global warming emissions to be reduced to 1990 levels by 2020. Since being adopted, CARB, the California Energy Commission, the California Public Utilities Commission, and the California Building Standards Commission have been developing regulations that will help the state meet the goals of AB 32 and EO S-03-05. The scoping plan for AB 32 identifies specific measures to reduce GHG emissions to 1990 levels by 2020 and requires CARB and other state agencies to develop and enforce regulations and other initiatives to reduce GHG emissions. The AB 32 *Climate Change Scoping Plan*, first adopted in 2008, comprises the state's roadmap for meeting AB 32's reduction target. Specifically, the scoping plan articulates a key role for local governments by recommending that they establish GHG emissions reduction goals for both their municipal operations and the community that are consistent with those of the state (i.e., approximately 15 percent below current levels) (CARB 2008).

CARB re-evaluated its emissions forecast in light of the economic downturn since 2008 and updated the projected 2020 emissions to 545 MTCO<sub>2e</sub>. Two reduction measures (Pavley I and RPS [12–20 percent]) that were not previously included in the 2008 scoping plan baseline were incorporated into the updated baseline, further reducing the 2020 statewide emissions projection to 507 million MTCO<sub>2e</sub>. The updated forecast of 507 million MTCO<sub>2e</sub> is referred to as the AB 32 2020 baseline. An estimated reduction of 80 million MTCO<sub>2e</sub> is necessary to lower statewide emissions to the AB 32 target of 427 million MTCO<sub>2e</sub> by 2020 (CARB 2014).

CARB approved the *First Update to the Climate Change Scoping Plan* on May 22, 2014 (CARB 2014). The first update includes both a 2020 element and a post-2020 element. The 2020 element focuses on the state, regional, and local initiatives that are being implemented now to help the state meet the 2020 goal.

### **Executive Order S-01-07—Low-carbon Fuel Standard (2007)**

EO S-01-07, the Low-carbon Fuel Standard (LCFS), mandates (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, with a reduction in the carbon content of fuel by a quarter of a percent starting in 2011; and (2) that an LCFS for transportation fuels be established in California. The EO initiates a research and regulatory process at CARB. Note that the majority of the emissions benefits due to the LCFS come from the production cycle (i.e., upstream emissions) of the fuel rather than the combustion cycle

(i.e., tailpipe). As a result, LCFS-related reductions are not included in this analysis of combustion-related emissions of CO<sub>2</sub>.

### **Tractor-trailer Greenhouse Gas Regulation (2013)**

CARB approved the Tractor-trailer Greenhouse Gas Regulation to reduce GHG emissions by requiring the use of aerodynamic tractors and trailers with low-rolling-resistance tires. The regulation applies to certain Class 8 tractors manufactured for use in California and is paralleled with USEPA and NHTSA heavy-duty truck standards. This regulation could reduce fuel consumption and GHG emissions from new heavy-duty trucks between 4 and 5 percent per year between 2014 and 2018 (USEPA 2015).

### **Senate Bill 350 (2015)**

SB 350 (De León, also known as the “Clean Energy and Pollution Reduction Act of 2015”) was approved by the California legislature in September 2015 and signed by Governor Brown in October 2015. Its key provisions are to require the following by 2030: (1) an RPS of 50 percent; and (2) a doubling of efficiency for existing buildings.

### **Senate Bill 32, California Global Warming Solutions Act of 2006: Emissions Limit, and Assembly Bill 197, State Air Resources Board, Greenhouse Gases, Regulations (2016)**

SB 32 (Pavley) requires CARB to ensure that statewide GHG emissions are reduced to at least 40 percent below the 1990 level by 2030, consistent with the target set forth in EO B-30-15. The bill specifies that SB 32 will become operative only if AB 197 (Garcia) is enacted and becomes effective on or before January 1, 2017. AB 197 creates requirements to form the Joint Legislative Committee on Climate Change Policies; requires CARB to prioritize direct emission reductions from stationary sources, mobile sources, and other sources and consider social costs when adopting regulations to reduce GHG emissions beyond the 2020 statewide limit; requires CARB to prepare reports on sources of GHGs, criteria air pollutants, and TACs; establishes 6-year terms for voting members of CARB; and adds two legislators as non-voting members of CARB. Both bills were signed by Governor Brown in September 2016.

In December 2017, CARB approved *California’s 2017 Climate Change Scoping Plan*, which builds on the programs set in place as part of the previous Scoping Plan that was drafted to meet the 2020 reduction targets per AB 32. *California’s 2017 Climate Change Scoping Plan* proposes meeting the 2030 goal by accelerating the focus on zero and near-zero technologies for moving freight; continued investment in renewables; greater use of low-carbon fuels, including electricity and hydrogen; stronger efforts to reduce emissions of short-lived climate pollutants (e.g., CH<sub>4</sub>, black carbon, fluorinated gases); further efforts to create walkable communities with expanded mass transit and other alternatives to traveling by car; continuing the cap-and-trade program; and ensuring that natural lands become carbon sinks to provide additional emissions reductions and flexibility in meeting the target. *California’s 2017 Climate Change Scoping Plan* also recommends that local governments aim to achieve community-wide efficiency of 6 MTCO<sub>2e</sub> per capita by 2030 and 2 MTCO<sub>2e</sub> per capita by 2050 to be used in local climate action planning. These efficiency targets would replace the “15 percent from 2008 levels by 2020” approach recommended in the initial Scoping Plan.



## Senate Bill 100 (2018)

SB 100 (De León, also known as the California Renewables Portfolio Standard Program: emissions of greenhouse gases) was approved by the California legislature and signed by Governor Brown in September 2018. The bill increases RPS in 2030 from 50 percent to 60 percent and establishes a goal of 100 percent zero-carbon electricity resources by 2045.

## Executive Order B-55-18 (2018)

EO B-55-18 was approved by the California legislature and signed by Governor Brown in September 2018. The order establishes a statewide policy to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter.

## Advanced Clean Trucks (2020)

The Advanced Clean Trucks regulation was approved on June 25, 2020, and aims to achieve long-term air quality, climate, and public health goals through the transition from conventional combustion to zero emission, and near-zero emission technologies. The regulation includes a zero-emissions vehicle sales requirement for manufacturers and a one-time reporting requirement for large entities and fleets. The one-time reporting requirement applies to entities that operate or dispatch vehicles with a manufacturer's GVWR greater than 8,500 pounds, medium-duty vehicles like vans, and heavier vehicles of all configurations and fuel types. The regulation does not apply to cars or light-duty pickups.

### 3.2.3 Regional

#### Los Angeles County General Plan

Adopted in 2015, the Los Angeles County General Plan's Air Quality Element outlines goals and policies that would also reduce GHG emissions and address the impacts of climate change. Policies relevant to the proposed project include:

**Policy AQ 3.2:** Reduce energy consumption in County operations by 20 percent by 2015.

**Policy AQ 3.5:** Encourage energy conservation in new development and municipal operations.

#### Los Angeles County Climate Action Plan

As noted, CARB encourages local governments to adopt a reduction goal for municipal operations emissions and move toward establishing similar goals for community emissions that parallel the state's commitment to reduction GHG emissions (CARB 2008).

The *Unincorporated Los Angeles County Community Climate Action Plan 2020* (CCAP), adopted in 2015, supplements the County's general plan and describes the County's plan to reduce the impacts of climate change by reducing GHG emissions from community activities in the unincorporated areas of Los Angeles County by at least 11 percent below 2010 levels by 2020 (County of Los Angeles 2015b). Local community actions include green building and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting (County of Los Angeles 2015b).

The existing CCAP expires in 2020 and will be replaced by the *Los Angeles County Climate Action Plan (CAP)* (County of Los Angeles 2020). The County's CAP provides a community-wide emissions inventory for 2015 and sets new reduction targets to address statewide GHG goals beyond 2020. The CAP includes a target for carbon neutrality by 2045, as well as interim emission reduction targets including 25 percent below 2015 levels by 2025 and 50 percent below 2015 levels by 2035. The CAP contains 17 strategies related to climate leadership; transportation; stationary energy; waste; industrial processes and product use; and agriculture, forestry, and other land use. The County CAP was released for public review in March 2020, but has not yet been adopted.

## 3.3 Impacts and Mitigation Measures

### 3.3.1 Thresholds of Significance

The State CEQA Guidelines state that a project would have a significant impact on GHGs if it would:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The State CEQA Guidelines do not indicate what amount of GHG emissions would constitute a significant impact on the environment. Instead, they authorize the lead agency to consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence (State CEQA Guidelines §§ 15064.4(a) and 15064.7(c)). The State CEQA Guidelines provide the lead agency discretion whether to quantify GHG emissions resulting from a project and/or rely on a qualitative analysis or performance-based standards, focusing specifically on the following factors (State CEQA Guidelines §§ 15064.4(b)):

- The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting
- Whether the project GHG emissions exceed a threshold of significance that the lead agency determines applies to the project
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. The lead agency must include substantial evidence linking statewide goals, strategies, and plans to the project's findings.

AVAQMD has specified significance thresholds in its *California Environmental Quality Act and Federal Conformity Guidelines* to determine GHG emissions of projects within district boundaries (AVAQMD 2016). AVAQMD uses these thresholds to determine the level of significance for GHG emissions associated with a project's construction and operational emissions. These thresholds are 100,000 tons of CO<sub>2e</sub> annually and 548,000 pounds daily. As discussed in Section 2.3.1, *Thresholds of Significance*, given that the proposed project's construction period would be less than a year, the daily GHG threshold from AVAQMD is used to evaluate the proposed project's construction

emissions. Because the proposed project's operational phase would not be shorter than 1 year, the annual GHG threshold is used in this analysis to assess the project's emissions from long-term operations.

### 3.3.2 Methodology

Project-related activities would result in short-term and long-term generation of GHG emissions during construction and operation. Once operational, the proposed project would contribute to a long-term reduction of GHG emissions by providing renewable electricity to California customers. The GHGs that were quantitatively estimated for the project include CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O.

In general, GHG emissions from the proposed project were quantified using the same methods described for estimating criteria pollutants. Emissions of CO<sub>2</sub>e were calculated using the GWP of each of these pollutants as found in CARB's 2018 California GHG inventory, which is consistent with the IPCC Fourth Assessment Report (CARB 2020g; IPCC 2007).

GHG emissions from the project related to construction and operational activities were calculated as follows.

#### Short-term Construction-generated Emissions

- Off-road Equipment:** Off-road equipment would be required for several construction activities, including demolition, grading, and solar panel array construction. Emission factors for off-road construction equipment (e.g., loaders, graders, bulldozers) were obtained from the CalEEMod (version 2016.3.2) User's Guide appendix, which provides values per unit of activity (in grams per horsepower-hour) by calendar year (Trinity Consultants 2017). GHGs were estimated by multiplying the CalEEMod emission factors by the equipment inventory and activity assumptions (e.g., horsepower, hours of use per day) provided by the project applicant.
- On-road Worker Travel:** Worker trips were estimated using the CalEEMod default of 1.25 workers per piece of off-road equipment and a trip length of 10.8 miles. Exhaust emission factors for employee commute vehicles were based on aggregated-speed emission rates for EMFAC2017's light-duty automobile and light-duty truck vehicle categories. The analysis includes CARB's GHG adjustment factors for gasoline light-duty vehicles to account for the SAFE Vehicle Rule (CARB 2019c).
- On-road Truck Travel:** On-road trucks (e.g., pickup trucks, flatbed trucks, water trucks) would be required for material deliveries to the project site, material and equipment hauling within the project site, and dust control. Exhaust emission factors for trucks were based on aggregated-speed emission rates for EMFAC2017's T7 Single Construction vehicle category.

Approximately 43 trucks per day would be required for project component (e.g., PV solar panels, support structures, electrical interconnection equipment) delivery over the course of the construction period. Per the project applicant, all solar panels and equipment are stored at AES facilities approximately 6.2 miles south of the Estrella project site.

- Off-road Truck Travel:** Trucks traveling within the project site would generate GHG emissions. Emissions were estimated using the emission factors for EMFAC2017's T7 Single Construction vehicle category traveling at 5 miles per hour and daily truck usage provided by the applicant.

- **Electricity Consumption:** GHG emissions generated by electricity related to water demand during construction were quantified using anticipated water consumption (acre-feet), CalEEMod electricity demand factors, and emission factors from SCE (2020). Per the project applicant, construction would require one water truck per day for the duration of the construction period. Water trucks were assumed to have 4,000-gallon capacity.

As stated previously, proposed project construction is assumed to last approximately 11 months, beginning October 2021. Table 2-6 **Error! Reference source not found.** outlines the duration of each activity during construction of the proposed project. The off-road equipment and associated construction activities are summarized in Table 2-7 in Section 2.3.2, *Methodology*.

## Long-term Operational Emissions

As mentioned previously, during operation of the solar facility, there would be minimal maintenance required, with the PV panels only requiring up to two panel cleaning events per year. Emissions would result from off-road equipment exhaust from pressure washers and on-road vehicle trip generation for water trucks and employee trips. Water truck trips to the site are not anticipated to exceed 10 visits annually, for a maximum total of 20 truck trips. Combustion exhaust was estimated using the same method for criteria air pollutants including CARB's EMFAC2017 model. Emission factors for the use of pressure washers were obtained from the CalEEMod User's Guide appendix. Exhaust emissions from on-road vehicles were estimated using the EMFAC2017 emissions model and activity data (i.e., miles traveled per day) provided by the project applicant.

The GHG emissions generated from project operation would be displaced due to the renewable solar energy produced at the site. Emissions displacement was estimated using USEPA's Emissions & Generation Resource Integrated Database (eGrid) and information on California's RPS goals. Please refer to Attachment A for a complete list of operational assumptions.

- **Off-road Equipment:** Pressure washers would be required for periodic panel washing at the project site during normal operations. Per the project applicant, it was assumed that panel washing would occur up to two times per year and would require the use of three pressure washers. Emission factors for the use of the pressure washers were obtained from the CalEEMod User's Guide appendix, which provides value per unit of activity (in grams per horsepower-hour) by calendar year (Trinity Consultants 2017). The CalEEMod default horsepower and load factors were used to estimate GHG emissions.
- **On-road Truck Travel:** On-road trucks (e.g., water trucks) would be required for delivery of water for panel washing. Emission factors for water trucks are based on aggregated-speed emission rates for EMFAC2017's T7 Single Construction vehicle categories. Based on local water truck services, the nearest location is approximately 20 miles from the project site; therefore, the analysis assumed a one-way trip length of 20 miles.
- **Off-road Truck Travel:** Similar to construction, water trucks traveling within the project site during operations would generate GHG emissions. Emissions were estimated using the emission factors for EMFAC2017's T7 Single Construction vehicle category traveling at 5 miles per hour and daily truck usage provided by the applicant.
- **Energy Generation:** The proposed solar facility would generate renewable energy with no associated GHG emissions. Therefore, operation of the project would result in displaced GHG

emissions due to the gradual switch from non-renewable GHG-generating energy to renewable energy.

Energy displacement and the subsequent emissions displacement from the proposed solar facility were calculated using USEPA eGrid future-year emission factors (USEPA 2018b), USEPA's 2018 energy mix for the California–Mexico Power Area (CAMX), and total electricity generation per year provided by the project applicant. The regional CAMX eGrid values were used to estimate energy generation within the region. CAMX energy mix and emission factors were extrapolated out to future years based on RPS goals for the state (33 percent renewable by 2020, 60 percent renewable by 2030, and 100 percent carbon-free by 2045), starting with a 2020 emission factor of 461.75 pounds of CO<sub>2</sub>e per megawatt-hour (MWh). The emission factor for opening year 2022 was estimated to be approximately 409 pounds of CO<sub>2</sub>e per MWh. Total annual electricity generation was assumed to be 64,480 MWh per year, except for opening year 2022, which was assumed to generate 25 percent of total annual electricity given that construction would not be completed until September.

### 3.3.3 Project Impacts

#### Impact GHG-1: Would the proposed project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

##### Short-term Construction

Construction of the proposed project would result in temporary generation of GHG emissions related to off-road equipment use, on-road vehicle operations, and electricity due to water use. Table 3-3 shows GHG emissions related to construction of the proposed project. As shown, the maximum daily GHG emissions from project construction would be 16,174 pounds of CO<sub>2</sub>e, which would not exceed AVAQMD's threshold of 548,000 pounds of CO<sub>2</sub>e daily.

Additionally, for the purpose of assessing the proposed project's annual operational GHG emissions, the total construction emissions generated over the 11-month construction period are amortized over the anticipated 35-year life of the project and the resulting annual construction emissions are added to the project's annual operational emissions. As such, the total (i.e., over the entire construction period) and amortized GHG emissions are also presented in Table 3-3. As shown, the annual GHG emissions from project construction would be approximately 1,818 tons of CO<sub>2</sub>e. When amortized over the 35-year life of the project, approximately 52 tons of CO<sub>2</sub>e emissions would occur annually. These emissions were added to operational emissions for comparison to AVAQMD's GHG threshold.

**Table 3-3. Estimated Short-term Construction-related GHG Emissions**

Construction Phase	Total GHG Emissions per Phase <sup>1</sup>	
	Annual (Tons of CO <sub>2</sub> e)	Daily (Pounds of CO <sub>2</sub> e)
Site Preparation & Grading	485	16,174
PV/BESS/Gen-Tie Installation	1,330	14,776
<b>Summary of Construction Emissions<sup>2</sup></b>	<b>1,818</b>	<b>16,174</b>
Amortized (35-Year Project Life)	52	N/A

Source: Modeling details included in Attachment A.

<sup>1</sup> Totals may not add up due to rounding.

<sup>2</sup> Annual summary presented as total emissions; daily summary presented as maximum daily emissions  
 BESS=battery energy storage system; CO<sub>2</sub>e=carbon dioxide equivalent; gen-tie=generation tie; GHG=greenhouse gas;  
 N/A=not applicable; PV=photovoltaic

## Long-term Operation

Once operational, the proposed project would result in GHG emissions from resource consumption associated with periodic off-road equipment use for panel washing, on-road vehicle operations, and electricity due to water use, while providing renewable energy generation that would offset electricity produced by the statewide grid and support statewide clean energy goals. The total emissions impact of the project would be the net difference between its operational emissions and the emissions displaced from its generation of renewable energy.

Per the project applicant, the 21-MW facility is expected to generate approximately 64,480 MWh per year. This renewable energy generated by the proposed project would displace GHG emissions that would be otherwise generated in the electrical grid by non-renewable resources. Because additional renewable resources will be integrated into the statewide electrical grid as a result of the RPS, the annual displaced emissions achieved by the project would decline as a function of time (i.e., reductions per MWh would reduce as the grid gets cleaner, meaning the emissions that are displaced would reduce over time). Lifetime GHG reductions were quantified assuming a 35-year design life for the panels and linear integration of additional renewables into the statewide grid, up to 100 percent by 2045, pursuant to SB 100. The net effect on operational emissions on both an annual (i.e., opening year) basis and over the project's 35-year lifetime is presented in Table 3-4 and Table 3-5, respectively. Overall operation of the proposed project is estimated to displace 3,393 tons of CO<sub>2</sub>e of emissions annually and a total of 118,759 tons of CO<sub>2</sub>e of emissions over the 35-year project life. Please refer to Attachment A for further detail on energy displacement calculations, including emission factors (i.e., pounds of CO<sub>2</sub>e per MWh).

As shown in Table 3-4, periodic panel washing during operations would generate 5 tons of CO<sub>2</sub>e per year. Together with amortized construction, the total annual GHG emissions would be approximately 57 tons of CO<sub>2</sub>e. The renewable energy generated by the project would offset about 3,393 tons of CO<sub>2</sub>e per year of grid-supplied electricity, resulting in an annual net GHG reduction of approximately 3,336 tons CO<sub>2</sub>e during the first year of operation.

**Table 3-4. Estimated Annual Greenhouse Gas Emissions from Project Operation (tons of CO<sub>2</sub>e per year)**

Source	Annual GHG Emissions (tons CO <sub>2</sub> e per year)
<b>Total Annual Operational Emissions<sup>1</sup></b>	5
Amortized Construction	52
<b>Total Annual Project Emissions<sup>1</sup></b>	<b>57</b>
<i>Displaced grid energy<sup>2</sup></i>	3,393
<b>Net emissions</b>	<b>-3,336</b>
AVAQMD Thresholds	100,000
Exceed Threshold?	No

Source: Modeling details included in Attachment A.

<sup>1</sup> Totals may not add up due to rounding.

<sup>2</sup> Annual average tons CO<sub>2</sub>e that would be displaced annually, over the 35-year project life.

AVAQMD=Antelope Valley Air Quality Management District; CO<sub>2</sub>e=carbon dioxide equivalents; GHG=greenhouse gas

As shown in Table 3-5, over the 35-year lifetime of the project, emissions (i.e., the sum of construction and operational emissions) would total approximately 2,010 tons of CO<sub>2</sub>e. The renewable energy generated during the 35 years of project operation would offset an estimated 118,759 tons of CO<sub>2</sub>e of grid-supplied electricity. These displaced emissions would result in a total net GHG reduction of approximately 116,749 tons of CO<sub>2</sub>e over the project life.

**Table 3-5. Estimated Total Greenhouse Gas Emissions from Project Lifetime Operation (tons of CO<sub>2</sub>e)**

Source	GHG Emissions (total tons CO <sub>2</sub> e over Project Lifetime) <sup>2</sup>
Total Operational Emissions <sup>1</sup>	192
Total Construction Emissions	1,818
<b>Total Project Emissions</b>	<b>2,010</b>
Total Displaced Grid Energy <sup>3</sup>	118,759
<b>Net Emissions</b>	<b>-116,749</b>

Source: Modeling details included in Attachment A.

<sup>1</sup> Total operational emissions are based on opening year operational GHG emissions (Table 3-4) multiplied by 35.

<sup>2</sup> Totals may not add up due to rounding.

<sup>3</sup> Total tons of CO<sub>2</sub>e that would be displaced over the 35-year project life.

Given that the proposed project would result in a net decrease of CO<sub>2</sub>e emissions, impacts related to the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment would be considered less than significant.

### Decommissioning Activities

At the end of the life cycle of the project (approximately 35 years), AES would decommission and remove the system and its components. The proposed project site could then be converted to other uses in accordance with applicable land use regulations in effect at that time. All decommissioning and restoration activities would adhere to the requirements of the appropriate governing authorities and would be in accordance with all applicable federal, state, and County of Los Angeles regulations. A collection and recycling program would be executed to dispose of the site materials.

The proposed project's decommissioning activities were evaluated qualitatively as the extent of the activities and equipment amounts for decommissioning are unknown at this time. It is anticipated that decommissioning activities would be less intensive than that of project construction. As shown in Table 3-4, the proposed project would result in a net reduction of GHG emissions. Even if decommissioning emissions were equivalent to GHG emissions from construction, the proposed project's GHG emissions would remain below the AVAQMD thresholds.

### Impact GHG-2: Would the proposed project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

AB 32 and SB 32 established statewide goals to reduce GHG emissions to 1990 levels by 2020 and 40 percent below 1990 levels by 2030, respectively. CARB adopted the AB 32 Scoping Plan as a framework for achieving AB 32 goals. *California's 2017 Climate Change Scoping Plan* outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions.

*California's 2017 Climate Change Scoping Plan* includes implementation of the RPS as an individual measure. The RPS promotes multiple objectives, including diversifying the electricity supply. Increasing the renewable energy supply toward 100 percent zero-carbon by 2045 is designed to accelerate the transformation of the electricity sector, including investment in the transmission infrastructure and system changes to allow integration of large quantities of intermittent wind and solar generation. The proposed project would add renewable solar-generated energy to the electricity supply and result in an emissions benefit.

As described in Section 3.2.3, *Regional*, the County adopted the CCAP in 2015 to reduce community GHG emissions (County of Los Angeles 2015b). The County's CCAP is a roadmap that outlines the County's path to achieve its 2020 GHG reduction goal of 11 percent below 2010 GHG emissions levels. The CCAP's GHG reduction measures feature 26 local actions grouped into five strategy areas: green building and energy; land use and transportation; water conservation and wastewater; waste reduction, reuse, and recycling; and land conservation and tree planting. Although the CCAP will be expired by the time the proposed project is constructed and operational (2023), many of the measures in the existing CCAP will continue to be implemented and result in emission benefits well beyond the 2020 timeframe. The 2020 Los Angeles County CAP has been drafted and will serve as a replacement to the 2015 CCAP. The CAP proposes 17 strategies to address new targets including carbon neutrality by 2045 and 50 percent below 2015 emission levels by 2035. The CAP's proposed measures are included in this consistency analysis ahead of the plan's expected adoption.

The consistency of the proposed project with the applicable measures in the County's 2015 CCAP and Draft 2020 CAP are analyzed in Table 3-6 and Table 3-7, respectively. As shown, the proposed project would be inconsistent with two measures in the 2015 CCAP and one measure in the 2020 CAP prior to mitigation. However, after implementation of **MM-GHG-1**, which limits idling time of construction equipment and requires the project applicant prioritize use of electric off-road equipment, the proposed project would be consistent with the County's current CCAP and Draft 2020 CAP. Accordingly, after implementation of mitigation, impacts related to conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs would be less than significant.

**Table 3-6. Consistency of the Proposed Project with Applicable 2015 CCAP Measures**

Local Actions	Proposed Project Consistency
<i>Green Building and Energy</i>	
<b>BE-4 (Alternative Renewable Energy Programs):</b> Implement pilot projects for currently feasible wind, geothermal, and other forms of alternative renewable energy.	<b>Consistent.</b> The proposed project is the construction and operation of a utility-scale, solar-generating facility with a 21-MW capacity. Once operational, the facility will generate up to 64,480 MWh per year.
<i>Land Use and Transportation</i>	
<b>LUT-9 (Idling Reduction Goal):</b> Encourage idling limits of 3 minutes for heavy-duty construction equipment, as feasible within manufacturer's specifications.	<b>Consistent after Mitigation. MM-GHG-1</b> requires all commercial vehicles and heavy-duty construction equipment used during project construction to limit idling time to 3 minutes.



Local Actions	Proposed Project Consistency
<b>LUT-12 (Electrify Construction and Landscaping Equipment):</b> Utilize electric equipment wherever feasible for construction projects. Reduce the use of gas-powered landscaping equipment.	<b>Consistent after Mitigation. MM-GHG-1</b> requires the project applicant search for and prioritize the use of electric construction equipment where feasible.
<i>Water Conservation and Wastewater</i>	
<b>WAW-1 (Per Capita Water Use Reduction Goal):</b> Meet the State established per capita water use reduction goal, as identified by SB X7-7 (The Water Conservation Act of 2009) for 2020.	<b>Consistent.</b> Water use during implementation of the proposed project would be minimal and limited to dust suppression during construction and a maximum of two panel washing events per year during operations. The project applicant will prioritize the use of recycled water where feasible during construction and operation of the proposed project. Recycled or non-potable water would be provided by either the local water wholesaler, Antelope Valley – East Kern Water Agency (AVEK) or retailer Los Angeles County Waterworks District No. 40 (LACWD40).
<b>WAW-2 (Recycled Water Use, Water Supply Improvement Programs, and Storm Water Runoff):</b> Promote the use of wastewater and gray water to be used for agricultural, industrial, and irrigation purposes. Manage stormwater, reduce potential treatment, and protect local groundwater supplies.	<b>Consistent.</b> Water use during implementation of the proposed project would be minimal and limited to dust suppression during construction and a maximum of two panel washing events per year during operations. The project applicant will prioritize the use of recycled water where feasible during construction and operation of the proposed project. Recycled or non-potable water would be provided by either the AVEK or LACWD40.

Source: County of Los Angeles 2015b  
 MW=megawatts; MWh=megawatt hours

**Table 3-7. Consistency of the Proposed Project with Applicable Draft 2020 CAP Measures**

Local Actions	Proposed Project Consistency
<i>Transportation</i>	
<b>T28:</b> Partner with SCAQMD and AVAQMD to encourage the use of zero-emission and near-zero-emission construction, agriculture, and manufacturing equipment.	<b>Consistent after Mitigation. MM-GHG-1</b> requires the project applicant search for and prioritize the use of electric construction equipment where feasible.
<i>Stationary Energy</i>	
<b>SE9:</b> Promote the use of recycled water and gray water to be used for agricultural and industrial purposes.	<b>Consistent.</b> Water use during implementation of the proposed project would be minimal and would be limited to dust suppression during construction and a maximum of two panel washing events per year during operations. The project applicant will prioritize the use of recycled water where feasible during construction and operation of the proposed project. Recycled or non-potable water would be provided by either the AVEK or LACWD40.

Local Actions	Proposed Project Consistency
<b>SE17:</b> Use County's role in the Clean Power Alliance to encourage 100% renewable energy resource mix by 2025.	<b>Consistent.</b> The proposed project is the construction and operation of a utility-scale, solar-generating facility with a 21-MW capacity. Once operational, the facility will generate up to 64,480 MWh per year.

Source: County of Los Angeles 2020

AVAQMD=Antelope Valley Air Quality Management District; AVEK=East Kern Water Agency; LACWD40=Los Angeles County Waterworks District No. 40; MW=megawatts; MWh=megawatt hours; SCAQMD=South Coast Air Quality Management District

## Mitigation Measures

**MM-GHG-1: Implement Diesel Emission-Reduction Measures During Construction.** To control emissions during construction, the project proponent/operator and/or its contractor(s) will implement the following measures during construction of the proposed project, subject to verification by the County:

1. Electric equipment will be used to the extent feasible in lieu of diesel or gasoline-powered equipment.
2. If procurement of electric equipment is not feasible, off-road equipment engines over 50 horsepower will be equipped with EPA Tier 4 or Tier 4 Interim (i), unless Tier 4/4i construction equipment is not available within 50 miles of the project site.
3. If procurement of Tier 4/4i equipment is not feasible, off-road equipment engines over 50 horsepower will be equipped with EPA Tier 3, unless Tier 3 construction equipment is not within 50 miles of the project site.
4. The project proponent/operator and/or its leading contractor will submit a letter of attestation to the County prior to commencement of construction activities stating that electric, Tier 4/4i, or Tier 3 equipment will be used or that those technologies are not available.
5. Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, will be turned off when not in use. Maximum idling time will be reduced to less than 3 minutes.

### 3.3.4 Cumulative Impacts

According to the California Air Pollution Control Officers Association, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective" (CAPCOA 2008). Due to the complex physical, chemical, and atmospheric mechanisms involved in global climate change, there is no basis for concluding that a single project's increase in annual GHG emissions would cause a measurable change in global GHG emissions necessary to influence global climate change. Section 15064.4(b) of the State CEQA Guidelines states that,

in determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions.

As shown in Table 3-4, the project's GHG emissions would be below AVAQMD's project-specific threshold, and even result in a net reduction of GHG emissions. Therefore, the project's long-term contribution to cumulative GHG impacts would be less than cumulatively considerable.

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## 4.2 Personal Communications

- De Salvio, Alan. Antelope Valley Air Quality Management District. August 21, 2018—email correspondence with Terrance Wong, ICF.



Attachment A

**Air Quality and Greenhouse Gases Modeling Files**

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## A-1: Construction Emissions

**Regional Emissions Summary**

Emissions by Phase				Daily Emissions (lb/day)						Daily Emissions (lb/day)			
Phase Name	Start Date	End Date	# of Workdays	ROG	NOX	CO	SOX	PM10 Total	PM2.5 Total	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	CO2e
Site Prep and Grading	10/1/21	12/24/21	60	9.17	100.45	67.86	0.16	29.03	9.99	15,892.46	3.48	0.57	16,173.80
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	8.98	95.71	66.92	0.15	26.75	9.64	14,557.65	3.47	0.36	14,776.24
<b>Max Daily Emissions</b>				9.17	100.45	67.86	0.16	29.03	9.99				16,173.80
AVAQMD Thresholds <sup>1</sup>				137	137	548	137	82	65				548,000
<b>Exceeds Threshold</b>				No	No	No	No	No	No				No

1) Air quality impacts evaluated using daily thresholds since project has a duration less than 1 year.

Emissions by Phase				Annual Emissions (tons)									
Phase Name	Start Date	End Date	# of Workdays	ROG	NOX	CO	SOX	PM10 Total	PM2.5 Total	CO2	CH4	N2O	CO2e
Site Prep and Grading	10/1/21	12/24/21	60	0.28	3.01	2.04	0.00	0.87	0.30	476.77	0.10	0.02	485
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	0.81	8.61	6.02	0.01	2.41	0.87	1,310.19	0.31	0.03	1,330
<b>Total Annual Emissions</b>				<b>1.08</b>	<b>11.63</b>	<b>8.06</b>	<b>0.02</b>	<b>3.28</b>	<b>1.17</b>	<b>1,786.96</b>	<b>0.42</b>	<b>0.05</b>	<b>1,818</b>
AVAQMD Thresholds <sup>1</sup>				25	25	100	25	15	12				100,000
<b>Exceeds Threshold</b>				No	No	No	No	No	No				No

35-year amortization

**Offroad Equipment**

Phase Name	Start	End	# of Workdays	First Year of		Equipment Type	# of			
				CSTN	EF Year		Equipment	hours/day	HP	LF
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Scrapers	1	8	367	0.48
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Excavators	1	8	158	0.38
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Graders	1	8	187	0.41
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Rubber Tired Dozers	3	8	247	0.4
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Skid Steer Loaders	3	8	65	0.37
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Bore/Drill Rigs	2	8	221	0.5
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Other Construction Equipment	1	8	172	0.42
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Forklifts	5	8	89	0.2
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Generator Sets	1	8	84	0.74
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Tractors/Loaders/Backhoes	5	8	97	0.37
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	2021	Generator Sets	1	8	84	0.74
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Scrapers	1	8	367	0.48
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Excavators	1	8	158	0.38
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Graders	1	8	187	0.41
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Rubber Tired Dozers	3	8	247	0.4
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Skid Steer Loaders	3	8	65	0.37
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Bore/Drill Rigs	2	8	221	0.5
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Other Construction Equipment	1	8	172	0.42
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Forklifts	5	8	89	0.2
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Generator Sets	1	8	84	0.74
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Tractors/Loaders/Backhoes	5	8	97	0.37
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	2021	Generator Sets	1	8	84	0.74

<b>Offroad Equipment</b>	<b>Emission Factor (g/bhp-hr)</b>												
<b>Phase Name</b>	<b>ROG</b>	<b>NOX</b>	<b>CO</b>	<b>SOX</b>	<b>PM10 Fugitive</b>	<b>PM10 Exhaust</b>	<b>PM10 Total</b>	<b>PM2.5 Fugitive</b>	<b>PM2.5 Exhaust</b>	<b>PM2.5 Total</b>	<b>CO2</b>	<b>CH4</b>	<b>N2O</b>
Site Prep and Grading	0.30	3.44	2.25	0.01	0.00	0.13	0.13	0.00	0.12	0.12	472.46	0.15	0.00
Site Prep and Grading	0.22	2.03	3.09	0.01	0.00	0.10	0.10	0.00	0.09	0.09	472.36	0.15	0.00
Site Prep and Grading	0.34	4.38	1.31	0.01	0.00	0.14	0.14	0.00	0.13	0.13	474.54	0.15	0.00
Site Prep and Grading	0.60	6.30	2.32	0.01	0.00	0.31	0.31	0.00	0.28	0.28	474.80	0.15	0.00
Site Prep and Grading	0.18	2.37	3.28	0.01	0.00	0.10	0.10	0.00	0.09	0.09	471.98	0.15	0.00
Site Prep and Grading	0.13	1.55	1.06	0.01	0.00	0.05	0.05	0.00	0.04	0.04	467.99	0.15	0.00
Site Prep and Grading	0.33	3.44	3.18	0.01	0.00	0.18	0.18	0.00	0.17	0.17	469.76	0.15	0.00
Site Prep and Grading	0.41	3.76	3.72	0.01	0.00	0.27	0.27	0.00	0.25	0.25	471.53	0.15	0.00
Site Prep and Grading	0.33	2.89	3.36	0.01	0.00	0.15	0.15	0.00	0.15	0.15	568.30	0.03	0.00
Site Prep and Grading	0.30	3.00	3.57	0.01	0.00	0.18	0.18	0.00	0.16	0.16	475.36	0.15	0.00
Site Prep and Grading	0.33	2.89	3.36	0.01	0.00	0.15	0.15	0.00	0.15	0.15	568.30	0.03	0.00
PV/BESS/Gen-Tie Installation	0.30	3.44	2.25	0.01	0.00	0.13	0.13	0.00	0.12	0.12	472.46	0.15	0.00
PV/BESS/Gen-Tie Installation	0.22	2.03	3.09	0.01	0.00	0.10	0.10	0.00	0.09	0.09	472.36	0.15	0.00
PV/BESS/Gen-Tie Installation	0.34	4.38	1.31	0.01	0.00	0.14	0.14	0.00	0.13	0.13	474.54	0.15	0.00
PV/BESS/Gen-Tie Installation	0.60	6.30	2.32	0.01	0.00	0.31	0.31	0.00	0.28	0.28	474.80	0.15	0.00
PV/BESS/Gen-Tie Installation	0.18	2.37	3.28	0.01	0.00	0.10	0.10	0.00	0.09	0.09	471.98	0.15	0.00
PV/BESS/Gen-Tie Installation	0.13	1.55	1.06	0.01	0.00	0.05	0.05	0.00	0.04	0.04	467.99	0.15	0.00
PV/BESS/Gen-Tie Installation	0.33	3.44	3.18	0.01	0.00	0.18	0.18	0.00	0.17	0.17	469.76	0.15	0.00
PV/BESS/Gen-Tie Installation	0.41	3.76	3.72	0.01	0.00	0.27	0.27	0.00	0.25	0.25	471.53	0.15	0.00
PV/BESS/Gen-Tie Installation	0.33	2.89	3.36	0.01	0.00	0.15	0.15	0.00	0.15	0.15	568.30	0.03	0.00
PV/BESS/Gen-Tie Installation	0.30	3.00	3.57	0.01	0.00	0.18	0.18	0.00	0.16	0.16	475.36	0.15	0.00
PV/BESS/Gen-Tie Installation	0.33	2.89	3.36	0.01	0.00	0.15	0.15	0.00	0.15	0.15	568.30	0.03	0.00

Offroad Equipment	Emissions (lb/day)													Total MT			
	Phase Name	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2	CH4	N2O
Site Prep and Grading	0.93	10.70	7.00	0.02	0.00	0.42	0.42	0.00	0.38	0.38	1467.92	0.48	0.00	39.95	0.01	0.00	40.27
Site Prep and Grading	0.23	2.15	3.27	0.01	0.00	0.10	0.10	0.00	0.10	0.10	500.19	0.16	0.00	13.61	0.00	0.00	13.72
Site Prep and Grading	0.45	5.92	1.77	0.01	0.00	0.19	0.19	0.00	0.17	0.17	641.69	0.21	0.00	17.46	0.01	0.00	17.60
Site Prep and Grading	3.14	32.91	12.11	0.03	0.00	1.60	1.60	0.00	1.47	1.47	2482.07	0.81	0.00	67.55	0.02	0.00	68.10
Site Prep and Grading	0.23	3.01	4.17	0.01	0.00	0.12	0.12	0.00	0.11	0.11	600.60	0.19	0.00	16.35	0.01	0.00	16.48
Site Prep and Grading	0.51	6.05	4.15	0.02	0.00	0.18	0.18	0.00	0.17	0.17	1824.13	0.59	0.00	49.64	0.02	0.00	50.05
Site Prep and Grading	0.42	4.38	4.06	0.01	0.00	0.23	0.23	0.00	0.21	0.21	598.53	0.19	0.00	16.29	0.01	0.00	16.42
Site Prep and Grading	0.65	5.90	5.84	0.01	0.00	0.42	0.42	0.00	0.38	0.38	740.16	0.24	0.00	20.14	0.01	0.00	20.31
Site Prep and Grading	0.36	3.17	3.68	0.01	0.00	0.17	0.17	0.00	0.17	0.17	623.04	0.03	0.00	16.96	0.00	0.00	16.98
Site Prep and Grading	0.94	9.48	11.30	0.02	0.00	0.56	0.56	0.00	0.51	0.51	1504.51	0.49	0.00	40.95	0.01	0.00	41.28
Site Prep and Grading	0.36	3.17	3.68	0.01	0.00	0.17	0.17	0.00	0.17	0.17	623.04	0.03	0.00	16.96	0.00	0.00	16.98
PV/BESS/Gen-Tie Installation	0.93	10.70	7.00	0.02	0.00	0.42	0.42	0.00	0.38	0.38	1467.92	0.48	0.00	119.85	0.04	0.00	120.82
PV/BESS/Gen-Tie Installation	0.23	2.15	3.27	0.01	0.00	0.10	0.10	0.00	0.10	0.10	500.19	0.16	0.00	40.84	0.01	0.00	41.17
PV/BESS/Gen-Tie Installation	0.45	5.92	1.77	0.01	0.00	0.19	0.19	0.00	0.17	0.17	641.69	0.21	0.00	52.39	0.02	0.00	52.81
PV/BESS/Gen-Tie Installation	3.14	32.91	12.11	0.03	0.00	1.60	1.60	0.00	1.47	1.47	2482.07	0.81	0.00	202.65	0.07	0.00	204.30
PV/BESS/Gen-Tie Installation	0.23	3.01	4.17	0.01	0.00	0.12	0.12	0.00	0.11	0.11	600.60	0.19	0.00	49.04	0.02	0.00	49.43
PV/BESS/Gen-Tie Installation	0.51	6.05	4.15	0.02	0.00	0.18	0.18	0.00	0.17	0.17	1824.13	0.59	0.00	148.93	0.05	0.00	150.14
PV/BESS/Gen-Tie Installation	0.42	4.38	4.06	0.01	0.00	0.23	0.23	0.00	0.21	0.21	598.53	0.19	0.00	48.87	0.02	0.00	49.26
PV/BESS/Gen-Tie Installation	0.65	5.90	5.84	0.01	0.00	0.42	0.42	0.00	0.38	0.38	740.16	0.24	0.00	60.43	0.02	0.00	60.92
PV/BESS/Gen-Tie Installation	0.36	3.17	3.68	0.01	0.00	0.17	0.17	0.00	0.17	0.17	623.04	0.03	0.00	50.87	0.00	0.00	50.93
PV/BESS/Gen-Tie Installation	0.94	9.48	11.30	0.02	0.00	0.56	0.56	0.00	0.51	0.51	1504.51	0.49	0.00	122.84	0.04	0.00	123.83
PV/BESS/Gen-Tie Installation	0.36	3.17	3.68	0.01	0.00	0.17	0.17	0.00	0.17	0.17	623.04	0.03	0.00	50.87	0.00	0.00	50.93

**Truck Loading Fugitive Dust Emissions**

Phase Name	Start Date	End Date	Total Days	Year	Total CY	Tons/CY	Throughput (tons)	Truck Loading EF (lb/ton throughput)						Emissions (lb/day) <sup>1</sup>					
								PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total
Site Prep and Grading	10/1/21	12/24/21	60	2021	80,250	1.2642	101,449.3	8.93E-05		8.93E-05	1.35E-05		1.35E-05	0.06		0.06	0.01		0.01
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021		1.2642	0.0	8.93E-05		8.93E-05	1.35E-05		1.35E-05	0.00		0.00	0.00		0.00

1) Includes dust control measure of watering exposed areas

**Bulldozing Fugitive Dust Emissions**

Phase Name	Start	End	# of Workdays	First Year of CSTN	Equipment Type	# of Equipment	hours/day	Emission Factor (lb/hr)						
								PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Scrapers	1	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Excavators	1	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Graders	1	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Rubber Tired Dozers	3	8	0.75		0.75	0.41			0.41
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Skid Steer Loaders	3	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Bore/Drill Rigs	2	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Other Construction Equipment	1	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Forklifts	5	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Generator Sets	1	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Tractors/Loaders/Backhoes	5	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Generator Sets	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Scrapers	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Excavators	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Graders	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Rubber Tired Dozers	3	8	0.75		0.75	0.41			0.41
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Skid Steer Loaders	3	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Bore/Drill Rigs	2	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Other Construction Equipment	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Forklifts	5	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Generator Sets	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Tractors/Loaders/Backhoes	5	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Generator Sets	1	8	0.00		0.00	0.00			0.00

1) Includes dust control measure of watering exposed areas



**Bulldozing Fugitive Dust Emissions**

Phase Name	Start	End	# of Workdays	First Year of CSTN	Equipment Type	# of Equipment	hours/day	Emissions (lb/day) <sup>1</sup>						
								PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Scrapers	1	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Excavators	1	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Graders	1	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Rubber Tired Dozers	3	8	7.05		7.05	3.87			3.87
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Skid Steer Loaders	3	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Bore/Drill Rigs	2	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Other Construction Equipment	1	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Forklifts	5	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Generator Sets	1	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Tractors/Loaders/Backhoes	5	8	0.00		0.00	0.00			0.00
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Generator Sets	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Scrapers	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Excavators	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Graders	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Rubber Tired Dozers	3	8	7.05		7.05	3.87			3.87
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Skid Steer Loaders	3	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Bore/Drill Rigs	2	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Other Construction Equipment	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Forklifts	5	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Generator Sets	1	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Tractors/Loaders/Backhoes	5	8	0.00		0.00	0.00			0.00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Generator Sets	1	8	0.00		0.00	0.00			0.00

1) Includes dust control measure of watering exposed areas

Grading Fugitive Dust Emissions

Phase Name	Start	End	# of Workdays	First Year of CSTN	Equipment Type	Equipment						Emission Factor (lb/VMT)					
						# of Equipment	Usage (hours/day)	Acres per 8-hr day	Scaling Factor	Acres per day	Daily VMT	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Scrapers	1	8	1	8	1.000	0.6875	1.543		1.543	0.167		0.167
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Excavators	1	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Graders	1	8	0.5	8	0.500	0.344	1.543		1.543	0.167		0.167
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Rubber Tired Dozers	3	8	0.5	8	1.500	1.031	1.543		1.543	0.167		0.167
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Skid Steer Loaders	3	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Bore/Drill Rigs	2	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Other Construction Equipment	1	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Forklifts	5	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Generator Sets	1	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Tractors/Loaders/Backhoes	5	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Generator Sets	1	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Scrapers	1	8	1	8	1.000	0.688	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Excavators	1	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Graders	1	8	0.5	8	0.500	0.344	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Rubber Tired Dozers	3	8	0.5	8	1.500	1.031	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Skid Steer Loaders	3	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Bore/Drill Rigs	2	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Other Construction Equipment	1	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Forklifts	5	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Generator Sets	1	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Tractors/Loaders/Backhoes	5	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Generator Sets	1	8	0	8	0.000	0.000	1.543		1.543	0.167		0.167

1) Includes dust control measure of watering exposed areas

Grading Fugitive Dust Emissions

													Emissions (lb/day) <sup>1</sup>				
Phase Name	Start	End	# of Workdays	First Year of CSTN	Equipment Type	Equipment						PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total
						# of Equipment	Usage (hours/day)	Acres per 8-hr day	Scaling Factor	Acres per day	Daily VMT						
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Scrapers	1	8	1	8	1.000	0.6875	0.414		0.414	0.045	0.045	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Excavators	1	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Graders	1	8	0.5	8	0.500	0.344	0.207		0.207	0.022	0.022	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Rubber Tired Dozers	3	8	0.5	8	1.500	1.031	0.620		0.620	0.067	0.067	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Skid Steer Loaders	3	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Bore/Drill Rigs	2	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Other Construction Equipment	1	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Forklifts	5	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Generator Sets	1	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Tractors/Loaders/Backhoes	5	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	Generator Sets	1	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Scrapers	1	8	1	8	1.000	0.688	0.414		0.414	0.045	0.045	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Excavators	1	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Graders	1	8	0.5	8	0.500	0.344	0.207		0.207	0.022	0.022	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Rubber Tired Dozers	3	8	0.5	8	1.500	1.031	0.620		0.620	0.067	0.067	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Skid Steer Loaders	3	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Bore/Drill Rigs	2	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Other Construction Equipment	1	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Forklifts	5	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Generator Sets	1	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Tractors/Loaders/Backhoes	5	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	Generator Sets	1	8	0	8	0.000	0.000	0.000		0.000	0.000	0.000	

1) Includes dust control measure of watering exposed areas

**Worker Offsite Travel**

							Running Exhaust Emission Factor (g/mile)												
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Worker Trips/day (In/Out)	Trip Length (mi)	ROG	NOX	CO	SOX	PM10			PM2.5			CO2	CH4	N2O
											Fugitive	Exhaust	Total	Fugitive	Exhaust	Total			
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	68	16.8	0.029	0.111	1.334	0.003	0.345	0.002	0.347	0.091	0.002	0.093	319.965	0.007	0.009
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	68	16.8	0.029	0.111	1.334	0.003	0.345	0.002	0.347	0.091	0.002	0.093	319.965	0.007	0.009

1) Accounts for all exhaust and evaporative processes

**Worker Offsite Travel**

							Non-Running Emission Factors (g/trip) <sup>1</sup>												
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Worker Trips/day (In/Out)	Trip Length (mi)	ROG	NOX	CO	SOX	PM10			PM2.5			CO2	CH4	N2O
											Fugitive	Exhaust	Total	Fugitive	Exhaust	Total			
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	68	16.8	1.307	0.293	2.672	0.001	0.000	0.002	0.002	0.000	0.002	0.002	65.049	0.080	0.033
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	68	16.8	1.307	0.293	2.672	0.001	0.000	0.002	0.002	0.000	0.002	0.002	65.049	0.080	0.033

1) Accounts for all exhaust and evaporative processes

**Worker Offsite Travel**

							Emissions (lb/day)												Total MT				
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Worker Trips/day (In/Out)	Trip Length (mi)	ROG	NOX	CO	SOX	PM10			PM2.5			CO2	CH4	N2O	CO2	CH4	N2O	CO2e
											Fugitive	Exhaust	Total	Fugitive	Exhaust	Total							
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	68	16.8	0.27	0.32	3.76	0.01	0.87	0.01	0.87	0.23	0.01	0.24	815.61	0.03	0.03	22.20	0.00	0.00	22.44
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	68	16.8	0.27	0.32	3.76	0.01	0.87	0.01	0.87	0.23	0.01	0.24	815.61	0.03	0.03	66.59	0.00	0.00	67.31

1) Accounts for all exhaust and evaporative processes

**HD Work Trucks Onsite Travel (Water Trucks)**

									Running Exhaust Emission Factor (g/mile)												
Phase Name	Start Date	End Date	Total Days	Year	Trucks per day	Speed (mph)	Hour/day	Daily VMT	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
Site Prep and Grading	10/1/21	12/24/21	60	2021	1	5	4	20	1.70	15.68	3.72	0.03	235.99	0.21	236.20	23.48	0.20	23.68	3631.99	0.08	0.57
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	1	5	4	20	1.70	15.68	3.72	0.03	235.99	0.21	236.20	23.48	0.20	23.68	3631.99	0.08	0.57

1) Accounts for all exhaust and evaporative processes

2) Includes dust control measure of watering exposed areas

**HD Work Trucks Onsite Travel (Water Trucks)**

									Non-Running Emission Factors (g/trip) <sup>1</sup>												
Phase Name	Start Date	End Date	Total Days	Year	Trucks per day	Speed (mph)	Hour/day	Daily VMT	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
Site Prep and Grading	10/1/21	12/24/21	60	2021	1	5	4	20	0.35	8.53	4.43	0.01	0.00	0.01	0.01	0.00	0.01	0.01	866.58	0.02	0.14
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	1	5	4	20	0.35	8.53	4.43	0.01	0.00	0.01	0.01	0.00	0.01	0.01	866.58	0.02	0.14

1) Accounts for all exhaust and evaporative processes

2) Includes dust control measure of watering exposed areas



**HD Work Trucks Onsite Travel (Water Trucks)**

									Emissions (lb/day)											Total MT					
Phase Name	Start Date	End Date	Total Days	Year	Trucks per day	Speed (mph)	Hour/day	Daily VMT	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2	CH4	N2O	CO2e
Site Prep and Grading	10/1/21	12/24/21	60	2021	1	5	4	20	0.08	0.73	0.18	0.00	4.06	0.01	4.07	0.40	0.01	0.41	163.97	0.00	0.03	4.46	0.00	0.00	4.67
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	1	5	4	20	0.08	0.73	0.18	0.00	4.06	0.01	4.07	0.40	0.01	0.41	163.97	0.00	0.03	13.39	0.00	0.00	14.02

1) Accounts for all exhaust and evaporative processes

2) Includes dust control measure of watering exposed areas

**HD Work Trucks Offsite Travel**

							Running Exhaust Emission Factor (g/mile)												
Phase Name	Start Date	End Date	Total Days	Year	One-Way Truck Trips/day	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
							Site Prep and Grading	10/1/21	12/24/21	60	2021	2	6.60	0.164	4.685	0.632	0.014	0.398	0.083
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	2	6.60	0.164	4.685	0.632	0.014	0.398	0.083	0.481	0.109	0.080	0.189	1492.002	0.008	0.235

1) Accounts for all exhaust and evaporative processes

**HD Work Trucks Offsite Travel**

							Non-Running Emission Factors (g/trip) <sup>1</sup>												
Phase Name	Start Date	End Date	Total Days	Year	One-Way Truck Trips/day	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
							Site Prep and Grading	10/1/21	12/24/21	60	2021	2	6.60	0.349	8.532	4.433	0.008	0.000	0.007
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	2	6.60	0.349	8.532	4.433	0.008	0.000	0.007	0.007	0.000	0.007	0.007	866.584	0.016	0.136

1) Accounts for all exhaust and evaporative processes

**HD Work Trucks Offsite Travel**

							Emissions (lb/day)													Total MT			
Phase Name	Start Date	End Date	Total Days	Year	One-Way Truck Trips/day	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2	CH4	N2O	CO2e
							Site Prep and Grading	10/1/21	12/24/21	60	2021	2	6.60	0.01	0.17	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.01
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	2	6.60	0.01	0.17	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.01	47.24	0.00	0.01	3.86	0.00	0.00	4.04

1) Accounts for all exhaust and evaporative processes

**Vendor Onsite Travel**

Phase Name	Start Date	End Date	Total Days	Year	# of One-way Vendor Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	Running Exhaust Emission Factor (g/mile)												
							ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
Site Prep and Grading	10/1/21	12/24/21	60	2021	86	0.50	1.673	12.785	3.311	0.029	236.008	0.210	236.218	23.494	0.201	23.694	3030.917	0.078	0.476
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	86	0.50	1.673	12.785	3.311	0.029	236.008	0.210	236.218	23.494	0.201	23.694	3030.917	0.078	0.476

- 1) Accounts for all exhaust and evaporative processes
- 2) Includes dust control measure of watering exposed areas

**Vendor Onsite Travel**

							Non-Running Emission Factors (g/trip) <sup>1</sup>												
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Vendor Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
							Site Prep and Grading	10/1/21	12/24/21	60	2021	86	0.50	0.179	5.195	2.310	0.004	0.000	0.005
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	86	0.50	0.179	5.195	2.310	0.004	0.000	0.005	0.005	0.000	0.005	0.005	462.113	0.008	0.073

- 1) Accounts for all exhaust and evaporative processes
- 2) Includes dust control measure of watering exposed areas

**Vendor Onsite Travel**

Phase Name	Start Date	End Date	Total Days	Year	# of One-way Vendor Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	Emissions (lb/day)													Total MT			
							ROG	NOX	CO	SOX	PM10 Fugitive <sup>2</sup>	PM10 Exhaust	PM10 Total	PM2.5 Fugitive <sup>2</sup>	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2	CH4	N2O	CO2e
							Site Prep and Grading	10/1/21	12/24/21	60	2021	86	0.50	0.19	2.20	0.75	0.00	8.73	0.02	8.75	0.87	0.02	0.89
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	86	0.50	0.19	2.20	0.75	0.00	8.73	0.02	8.75	0.87	0.02	0.89	374.94	0.01	0.06	30.61	0.00	0.00	32.07

- 1) Accounts for all exhaust and evaporative processes
- 2) Includes dust control measure of watering exposed areas

**Vendor Offsite Travel**

							Running Exhaust Emission Factor (g/mile)												
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Vendor Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
Site Prep and Grading	10/1/21	12/24/21	60	2021	86	6.20	0.165	3.797	0.603	0.012	0.420	0.090	0.510	0.121	0.086	0.207	1244.055	0.008	0.196
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	86	6.20	0.165	3.797	0.603	0.012	0.420	0.090	0.510	0.121	0.086	0.207	1244.055	0.008	0.196

1) Accounts for all exhaust and evaporative processes



**Vendor Offsite Travel**

							Non-Running Emission Factors (g/trip) <sup>1</sup>												
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Vendor Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
Site Prep and Grading	10/1/21	12/24/21	60	2021	86	6.20	0.179	5.195	2.310	0.004	0.000	0.005	0.005	0.000	0.005	0.005	462.113	0.008	0.073
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	86	6.20	0.179	5.195	2.310	0.004	0.000	0.005	0.005	0.000	0.005	0.005	462.113	0.008	0.073

1) Accounts for all exhaust and evaporative processes

Vendor Offsite Travel

							Emissions (lb/day)													Total MT			
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Vendor Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2	CH4	N2O	CO2e
Site Prep and Grading	10/1/21	12/24/21	60	2021	86	6.20	0.23	5.45	1.15	0.01	0.49	0.11	0.60	0.14	0.10	0.24	1550.02	0.01	0.24	42.18	0.00	0.01	44.17
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	86	6.20	0.23	5.45	1.15	0.01	0.49	0.11	0.60	0.14	0.10	0.24	1550.02	0.01	0.24	126.55	0.00	0.02	132.50

1) Accounts for all exhaust and evaporative processes

**Haul Onsite Travel**

							Running Exhaust Emission Factor (g/mile)												
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Haul Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
							Site Prep and Grading	10/1/21	12/24/21	60	2021	18	0.50	1.697	15.678	3.720	0.034	235.986	0.211
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	0	0.50	1.697	15.678	3.720	0.034	235.986	0.211	236.197	23.482	0.202	23.684	3631.987	0.079	0.571

- 1) Accounts for all exhaust and evaporative processes
- 2) Includes dust control measure of watering exposed areas

**Haul Onsite Travel**

							Non-Running Emission Factors (g/trip) <sup>1</sup>												
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Haul Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
Site Prep and Grading	10/1/21	12/24/21	60	2021	18	0.50	0.349	8.532	4.433	0.008	0.000	0.007	0.007	0.000	0.007	0.007	866.584	0.016	0.136
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	0	0.50	0.349	8.532	4.433	0.008	0.000	0.007	0.007	0.000	0.007	0.007	866.584	0.016	0.136

- 1) Accounts for all exhaust and evaporative processes
- 2) Includes dust control measure of watering exposed areas

Haul Onsite Travel							Emissions (lb/day)													Total MT				
							ROG	NOX	CO	SOX	PM10 Fugitive <sup>2</sup>	PM10 Exhaust	PM10 Total	PM2.5 Fugitive <sup>2</sup>	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2	CH4	N2O	CO2e	
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Haul Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>																		
Site Prep and Grading	10/1/21	12/24/21	60	2021	18	0.50	0.05	0.65	0.25	0.00	1.84	0.00	1.84	0.18	0.00	0.19	107.24	0.00	0.02	2.92	0.00	0.00	3.06	
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	0	0.50	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	0.00	

- 1) Accounts for all exhaust and evaporative processes
- 2) Includes dust control measure of watering exposed areas

Haul Offsite Travel

							Running Exhaust Emission Factor (g/mile)												
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Haul Trips/day (In/Out)	Trip Length (mi)	ROG	NOX	CO	SOX	PM10			PM2.5			CO2	CH4	N2O
											Fugitive	Exhaust	Total	Fugitive	Exhaust	Total			
Site Prep and Grading	10/1/21	12/24/21	60	2021	18	20	0.164	4.685	0.632	0.014	0.398	0.083	0.481	0.109	0.080	0.189	1492.002	0.008	0.235
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	0	20	0.164	4.685	0.632	0.014	0.398	0.083	0.481	0.109	0.080	0.189	1492.002	0.008	0.235

1) Accounts for all exhaust and evaporative processes

Haul Offsite Travel

							Non-Running Emission Factors (g/trip) <sup>1</sup>												
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Haul Trips/day (In/Out)	Trip Length (mi)	ROG	NOX	CO	SOX	PM10			PM2.5			CO2	CH4	N2O
											Fugitive	Exhaust	Total	Fugitive	Exhaust	Total			
Site Prep and Grading	10/1/21	12/24/21	60	2021	18	20	0.349	8.532	4.433	0.008	0.000	0.007	0.007	0.000	0.007	0.007	866.584	0.016	0.136
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	0	20	0.349	8.532	4.433	0.008	0.000	0.007	0.007	0.000	0.007	0.007	866.584	0.016	0.136

1) Accounts for all exhaust and evaporative processes

**Haul Offsite Travel**

							Emissions (lb/day)											Total MT					
Phase Name	Start Date	End Date	Total Days	Year	# of One-way Haul Trips/day (In/Out)	Trip Length (mi)	ROG	NOX	CO	SOX	PM10			PM2.5			CO2	CH4	N2O	CO2	CH4	N2O	CO2e
											Fugitive	Exhaust	Total	Fugitive	Exhaust	Total							
Site Prep and Grading	10/1/21	12/24/21	60	2021	18	20	0.14	4.09	0.68	0.01	0.32	0.07	0.38	0.09	0.06	0.15	1227.57	0.01	0.19	33.41	0.00	0.01	34.98
PV/BESS/Gen-Tie Installation	12/27/21	9/5/22	180	2021	0	20	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	0.00

1) Accounts for all exhaust and evaporative processes



**GHG Emissions from Water Consumption**

Location Type	Name	kWh/million gallons (Mgal)				Total Water Use
		Supply Water	Treat Water	Distribute Water	Wastewater Treatment <sup>1</sup>	
Air District	AVAQMD	9,727.00	111.00	1,272.00		11,110.00

Parameter	Value
Water Trucks per day	1.00
Water Truck Capacity (gallons) <sup>2</sup>	4,000.00
<b>Daily Water Consumption (gallons)</b>	<b>4,000.00</b>
Daily Water Consumption (Mgal)	0.004
Daily Electricity Consumption (kWh)	44.44
Daily Electricity Consumption (MWh)	0.04
SCE CO <sub>2</sub> e Intensity Factor (lb/MWh) <sup>3</sup>	534
<b>Daily GHG Emissions (lbs)</b>	<b>23.73</b>
<b>Daily GHG Emissions (ton)</b>	<b>0.01</b>
# of Workdays	240.00
<b>Annual GHG Emissions (lbs)</b>	<b>5,695.43</b>
<b>Annual GHG Emissions (ton)</b>	<b>2.85</b>

1) Water will be used for dust control and would not travel into wastewater system.

2) Water truck capacity

<https://www.loadkingmfg.com/water-trucks/4000-gallon-water-truck/>

3) SCE Intensity Factor

<https://www.edison.com/content/dam/eix/documents/sustainability/eix-2019-sustainability-report.pdf>

**Project Name:** AES Estrella Solar Project

**Project Size:** 152 acres

-Construction Days per week 5

-Construction equipment based on client approved information

-Onsite Travel Speed (mph): 5

**-Watering 3x per day**

-Dust control reduction efficiency 61%

**Construction Schedule<sup>1</sup>**

Phase Name	Start Date	End Date	# of Workdays (5 days/wk)	# of Worker Trips/day (In/Out) <sup>2</sup>	# of Vendor Trips/day (In/Out) <sup>3</sup>	Total # of Haul Truck Trips (In/Out) <sup>4</sup>	# of Haul Truck Trips/day (In/Out)	Offsite Trip Length (mi)				Onsite Trip Length (mi)	Vehicle Category		
								Worker <sup>1</sup>	Vendor <sup>1</sup>	Water <sup>1</sup>	Haul	ONSITE (Vendor & Haul)	Worker	Vendor	Haul
Site Prep and Grading	10/1/2021	12/24/2021	60	68	86	1088	18	16.8	6.2	6.6	20	0.50	LD_Mix	HDT_Mix	HHDT
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	68	86	0	0	16.8	6.2	6.6	20	0.50	LD_Mix	HDT_Mix	HHDT

LD\_Mix LDA, LDT1, LDT2  
HDT\_Mix T6 Instate Small/T7 Single Construction  
HHDT T7 Single Construction

1) Estrella Data Needs

2) # of workers estimated based on CalEEMod methodology, 1.25 workers per piece of equipment.

3) # of vendor trips per day based on information provided by client. Assumed worst-case, 75 total round trips that included workers and vendors. Daily workers would result in 34 round trips, therefore, the number of vendor round trips is 41 (75-34) and is doubled to 82 to represent total one-way trips to and from the project site. Additionally, the two "Off-Highway Trucks" trucks identified in the Equipment Fleet are being treated as Vendor Trucks, therefore 4 one-way truck trips are added to the Total Vendor trucks, therefore the total daily one-way trucks trips for vendors is 86.

4) Conservatively assuming the 8,700 CY of excavation material would be exported offsite.

5) Data needs states that there will be a construction trailer onsite, but would be powered by a generator which is captured in the "Offroad Emissions".

## A-2: Operational Emissions

**Emissions Summary**

AQ	Emissions (tons/year)										
	Phase Name	ROG	NOX	CO	SOX	PM10 Total	PM2.5 Total	CO2	CH4	N2O	CO2e
	Solar Panel Cleaning Event #1	0.0004	0.01	0.0028	0.00002	0.04	0.0042	2.16	0.00003	0.00029	2.74
	Solar Panel Cleaning Event #2	0.0004	0.01	0.0028	0.00002	0.04	0.0042	2.16	0.00003	0.00029	2.74
	<b>Total Operational Emissions</b>	<b>0.0008</b>	<b>0.02</b>	<b>0.0056</b>	<b>0.00004</b>	<b>0.08</b>	<b>0.0083</b>	<b>4.32</b>	<b>0.00006</b>	<b>0.00059</b>	<b>5.49</b>
	AVAQMD Thresholds	25	25	100	25	15	12				
	<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>				

**GHG**

Source Category	Annual Tons CO <sub>2</sub> e	Project Lifetime Emissions (tons CO <sub>2</sub> e)	Project Lifetime (years)
			35
Operations	5	192	
Construction (amortized over 35 years)	52	1,818	
<b>Total Project Emissions</b>	<b>57</b>	<b>2,010</b>	
Annual Grid Displacement	3,393	118,759	
<b>Net Emissions</b>	<b>-3,336</b>	<b>-116,749</b>	
AVAQMD Thresholds	100,000		
<b>Exceeds Threshold?</b>	<b>No</b>		

Offroad Equipment

												Emission Factor (g/bhp-hr)											
Phase Name	Start	End	# of Days per Cleaning Event	First Year of CSTN	EF Year	Equipment Type	# of Equipment	hours per day	HP	LF													
											ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
Solar Panel Cleaning Event #1	3/1/2023	3/7/2023	5	2023	2023	Pressure Washers	3	8	13	0.3	0.62	4.35	3.51	0.01	0.00	0.19	0.19	0.00	0.19	0.19	568.30	0.06	0.00
Solar Panel Cleaning Event #2	9/1/2023	9/7/2023	5	2023	2023	Pressure Washers	3	8	13	0.3	0.62	4.35	3.51	0.01	0.00	0.19	0.19	0.00	0.19	0.19	568.30	0.06	0.00

Offroad Equipment

												Emissions (lb/day)											
Phase Name	Start	End	# of Days per Cleaning Event	First Year of CSTN	EF Year	Equipment Type	# of Equipment	hours per day	HP	LF	ROG	NOX	CO	SOX	PM10	PM10	PM10	PM2.5	PM2.5	PM2.5	CO2	CH4	N2O
															Fugitive	Exhaust	Total	Fugitive	Exhaust	Total			
Solar Panel Cleaning Event #1	3/1/2023	3/7/2023	5	2023	2023	Pressure Washers	3	8	13	0.3	0.13	0.90	0.72	0.00	0.00	0.04	0.04	0.00	0.04	0.04	117.26	0.01	0.00
Solar Panel Cleaning Event #2	9/1/2023	9/7/2023	5	2023	2023	Pressure Washers	3	8	13	0.3	0.13	0.90	0.72	0.00	0.00	0.04	0.04	0.00	0.04	0.04	117.26	0.01	0.00

Offroad Equipment

												Emissions (tons/year)													
Phase Name	Start	End	# of Days per Cleaning Event	First Year of CSTN	EF Year	Equipment Type	# of Equipment	hours per day	HP	LF	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2e	
Solar Panel Cleaning Event #1	3/1/2023	3/7/2023	5	2023	2023	Pressure Washers	3	8	13	0.3	0.0003	0.0022	0.0018	0.0000	0.0000	0.0001	0.0001	0.0000	0.0001	0.0001	0.0001	0.2932	0.0000	0.0000	0.2939
Solar Panel Cleaning Event #2	9/1/2023	9/7/2023	5	2023	2023	Pressure Washers	3	8	13	0.3	0.0003	0.0022	0.0018	0.0000	0.0000	0.0001	0.0001	0.0000	0.0001	0.0001	0.0001	0.2932	0.0000	0.0000	0.2939

**Water Trucks Onsite Travel**

									Running Exhaust Emission Factor (g/mile)												
Phase Name	Start Date	End Date	# of Days/Cleaning Event	Year	Trucks/day	Speed (mph)	Hours per day	Daily VMT	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
Solar Panel Cleaning Event #1	3/1/23	3/7/23	5	2023	2	5	8	80	0.16	10.70	1.78	0.03	236.00	0.02	236.02	23.48	0.02	23.50	3499.16	0.01	0.55
Solar Panel Cleaning Event #2	9/1/23	9/7/23	5	2023	2	5	8	80	0.16	10.70	1.78	0.03	236.00	0.02	236.02	23.48	0.02	23.50	3499.16	0.01	0.55

- 1) Accounts for all exhaust and evaporative processes
- 2) Includes dust control measure of watering 3x per day (61% reduction)



**Water Trucks Onsite Travel**

									Non-Running Emission Factors (g/trip) <sup>1</sup>												
Phase Name	Start Date	End Date	# of Days/Cleaning Event	Year	Trucks/day	Speed (mph)	Hours per day	Daily VMT	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
Solar Panel Cleaning Event #1	3/1/23	3/7/23	5	2023	2	5	8	80	0.35	8.63	5.13	0.01	0.00	0.00	0.00	0.00	0.00	0.00	882.85	0.02	0.14
Solar Panel Cleaning Event #2	9/1/23	9/7/23	5	2023	2	5	8	80	0.35	8.63	5.13	0.01	0.00	0.00	0.00	0.00	0.00	0.00	882.85	0.02	0.14

1) Accounts for all exhaust and evaporative processes  
 2) Includes dust control measure of watering 3x per day (61% reduction)

**Water Trucks Onsite Travel**

									Emissions (lb/day)												
Phase Name	Start Date	End Date	# of Days/Cleaning Event		Trucks/day	Speed (mph)	Hours per day	Daily VMT	ROG	NOX	CO	SOX	PM10	PM10	PM10	PM2.5	PM2.5	PM2.5	CO2	CH4	N2O
			Fugitive <sup>2</sup>	Exhaust									Total	Fugitive <sup>2</sup>	Exhaust	Total					
Solar Panel Cleaning Event #1	3/1/23	3/7/23	5	2023	2	5	8	80	0.03	1.96	0.36	0.01	16.23	0.00	16.24	1.62	0.00	1.62	624.89	0.00	0.10
Solar Panel Cleaning Event #2	9/1/23	9/7/23	5	2023	2	5	8	80	0.03	1.96	0.36	0.01	16.23	0.00	16.24	1.62	0.00	1.62	624.89	0.00	0.10

- 1) Accounts for all exhaust and evaporative processes
- 2) Includes dust control measure of watering 3x per day (61% reduction)

**Water Trucks Onsite Travel**

										Emissions (tons/year)													
Phase Name	Start Date	End Date	# of Days/Cleaning Event	Year	Trucks/day	Speed (mph)	Hours per day	Daily VMT		ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2e
Solar Panel Cleaning Event #1	3/1/23	3/7/23	5	2023	2	5	8	80		7.92E-05	4.91E-03	8.99E-04	1.48E-05	4.06E-02	8.60E-06	4.06E-02	4.04E-03	8.23E-06	4.05E-03	1.56E+00	3.68E-06	2.46E-04	1.64E+00
Solar Panel Cleaning Event #2	9/1/23	9/7/23	5	2023	2	5	8	80		7.92E-05	4.91E-03	8.99E-04	1.48E-05	4.06E-02	8.60E-06	4.06E-02	4.04E-03	8.23E-06	4.05E-03	1.56E+00	3.68E-06	2.46E-04	1.64E+00

- 1) Accounts for all exhaust and evaporative processes
- 2) Includes dust control measure of watering 3x per day (61% reduction)

**Water Trucks Offsite Travel**

							Running Exhaust Emission Factor (g/mile)												
Phase Name	Start Date	End Date	# of Days per Cleaning Event	Year	# of One-way Vendor Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
							Solar Panel Cleaning Event #1	3/1/23	3/7/23	5	2023	2	20	0.019	2.137	0.174	0.013	0.398	0.014
Solar Panel Cleaning Event #2	9/1/23	9/7/23	5	2023	2	20	0.019	2.137	0.174	0.013	0.398	0.014	0.411	0.109	0.013	0.122	1345.227	0.001	0.211

1) Accounts for all exhaust and evaporative processes

Water Trucks Offsite Travel

							Non-Running Emission Factors (g/trip) <sup>1</sup>												
Phase Name	Start Date	End Date	# of Days per Cleaning Event	Year	# of One-way Vendor Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
							Solar Panel Cleaning Event #1	3/1/23	3/7/23	5	2023	2	20	0.349	8.631	5.133	0.008	0.000	0.002
Solar Panel Cleaning Event #2	9/1/23	9/7/23	5	2023	2	20	0.349	8.631	5.133	0.008	0.000	0.002	0.002	0.000	0.002	0.002	882.847	0.016	0.139

1) Accounts for all exhaust and evaporative processes

**Water Trucks Offsite Travel**

							Emissions (lb/day)												
Phase Name	Start Date	End Date	# of Days per Cleaning Event	Year	# of One-way Vendor Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O
							Solar Panel Cleaning Event #1	3/1/23	3/7/23	5	2023	2	20	0.00	0.23	0.04	0.00	0.04	0.00
Solar Panel Cleaning Event #2	9/1/23	9/7/23	5	2023	2	20	0.00	0.23	0.04	0.00	0.04	0.00	0.04	0.01	0.00	0.01	122.51	0.00	0.02

1) Accounts for all exhaust and evaporative processes

Water Trucks Offsite Travel

							Emissions (tons/year)													
Phase Name	Start Date	End Date	# of Days per Cleaning Event	Year	# of One-way Vendor Trips/day (In/Out)	Trip Length (mi) <sup>1</sup>	ROG	NOX	CO	SOX	PM10 Fugitive	PM10 Exhaust	PM10 Total	PM2.5 Fugitive	PM2.5 Exhaust	PM2.5 Total	CO2	CH4	N2O	CO2e
							Solar Panel Cleaning Event #1	3/1/23	3/7/23	5	2023	2	20	8.10E-06	5.66E-04	9.49E-05	2.89E-06	8.77E-05	3.00E-06	9.07E-05
Solar Panel Cleaning Event #2	9/1/23	9/7/23	5	2023	2	20	8.10E-06	5.66E-04	9.49E-05	2.89E-06	8.77E-05	3.00E-06	9.07E-05	2.40E-05	2.87E-06	2.69E-05	3.06E-01	3.76E-07	4.81E-05	3.21E-01

1) Accounts for all exhaust and evaporative processes

**GHG Emissions from Water Consumption**

Location Type	Name	Water and Wastewater Electricity Intensity (kWh/Mgal) <sup>1</sup>				Total Water Use
		Supply Water	Treat Water	Distribute Water	Wastewater Treatment <sup>2</sup>	
Air District	Antelope Valley APCD	9,727.00	111.00	1,272.00		<b>11,110.00</b>

**WATER CONSUMPTION**

Parameter	Value
Annual Water Consumption (acre-feet) <sup>4</sup>	1.02
feet/acre conversion factor	43,560
Annual Water Consumption (ft <sup>3</sup> )	44,431
gallons/ ft <sup>3</sup> conversion factor	7.48
<b>Annual Water consumption (gallons)</b>	<b>332,368.48</b>
Annual Water Consumption (Mgal)	0.33
Annual Electricity Consumption (kWh)	3692.61
Annual Electricity Consumption (MWh)	3.69
SoCal Edison CO <sub>2</sub> e Factor (lb/MWh) <sup>3</sup>	534
<b>Annual GHG Emissions (tons of CO<sub>2</sub>e)</b>	<b>0.99</b>
<b>Annual GHG Emissions (MTCO<sub>2</sub>e)</b>	<b>0.89</b>
<b>Emission per Cleaning Event (tons of CO<sub>2</sub>e)</b>	<b>0.49</b>

Notes:

- 1 CalEEMod User's Guide, Appendix D, Table 9.2
- 2 Wastewater treatment not included since water for panel washing will not return to sewer system.
- 3 SCE Sustainability Report  
<https://www.edison.com/content/dam/eix/documents/sustainability/eix-2019-sustainability-report.pdf>
- 4 Data needs responses



**Energy**

**Displacement** Annual Generating Capacity (MWh/year): 64,480

Year	EF - CO <sub>2</sub> e lbs/MWh	MWh generated	tons of CO <sub>2</sub> e displaced
2020	461.75		
2021	435.17		
2022	408.59	16,120	3,293
2023	382.01	64,480	12,316
2024	355.44	64,480	11,459
2025	328.86	64,480	10,602
2026	302.28	64,480	9,745
2027	275.70	64,480	8,888
2028	249.12	64,480	8,032
2029	222.54	64,480	7,175
2030	195.96	64,480	6,318
2031	182.89	64,480	5,897
2032	169.83	64,480	5,475
2033	156.77	64,480	5,054
2034	143.70	64,480	4,633
2035	130.64	64,480	4,212
2036	117.58	64,480	3,791
2037	104.51	64,480	3,369
2038	91.45	64,480	2,948
2039	78.38	64,480	2,527
2040	65.32	64,480	2,106
2041	52.26	64,480	1,685
2042	39.19	64,480	1,264
2043	26.13	64,480	842
2044	13.06	64,480	421
2045	0	64,480	0
2046	0	64,480	0
2047	0	64,480	0
2048	0	64,480	0
2049	0	64,480	0
2050	0	64,480	0
2051	0	64,480	0
2052	0	64,480	0
2053	0	64,480	0
2054	0	64,480	0
2055	0	64,480	0
2056	0	64,480	0
<b>35</b>		<b>Total 2,192,320</b>	<b>118,759</b>

tons displaced, opening year 12,316  
 tons displaced per year, on average 3,393

\*Year 2022 accounts for partial year of generation since construction would not be completed until March 2022

## A-3: Construction Health Risk Assessment

**HRA Summary**

Receptor Type	Cancer Risk	Chronic HI
Resident	3.55	0.01
BAAQMD Threshold	10	1.0
<b>Exceeds Threshold?</b>	<b>No</b>	<b>No</b>

**PM10/PM2.5 Analysis**

Receptor Type	24-hr PM <sub>10</sub> (ug/m <sup>3</sup> )	24-hr PM <sub>2.5</sub> (ug/m <sup>3</sup> )
Existing Residential	0.80	0.60
Fenceline	1.44	1.04
EPA Significant Impact Level	5	1.2
<b>Exceeds SIL?</b>	<b>No</b>	<b>No</b>

Cancer Risk

Days per Age Bin	3rd Tri	0<2	0<2 Total Days	0<2 Duration (years)
Start Date:	10/1/2021	1/1/2022		
End Date:	12/31/2021	9/5/2022		
<b>Total Workdays</b>	<b>66</b>	<b>176</b>	247	0.68

DPM Emissions

<b>Offroad Heavy Duty Equipment</b>					<b>DPM</b>		<b>Days per Age Group</b>		<b>Weighted Annual Emission Rate (g/s)</b>	
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Exhaust DPM (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>	<b>3rd Tri</b>	<b>0&lt;2</b>	<b>3rd Tri</b>	<b>0&lt;2</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	4.19	0.066	60	0	6.00E-02	0.00E+00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	4.19	0.066	5	175	5.00E-03	6.56E-02

<b>Vendor/Haul Trucks</b>					<b>DPM</b>		<b>Days per Age Group</b>		<b>Weighted Annual Emission Rate (g/s)</b>	
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Exhaust DPM (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>	<b>3rd Tri</b>	<b>0&lt;2</b>	<b>3rd Tri</b>	<b>0&lt;2</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	9.12E-03	1.44E-04	60	0	1.31E-04	0.00E+00
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	8.04E-03	1.27E-04	5	175	9.60E-06	1.26E-04

Chronic Risk

Days per Age Bin	Year 1
Start Date:	10/1/2021
End Date:	9/5/2022
<b>Total Workdays</b>	<b>242</b>

DPM Emissions

<b>Offroad Heavy Duty Equipment</b>					<b>DPM</b>		<b>Days per CSTN Year</b>	<b>Weighted Annual Emission Rate (g/s)</b>
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Exhaust PM2.5 (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>	<b>Year 1</b>	<b>Year 1</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	4.19	0.066	60	1.64E-02
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	4.19	0.066	180	4.91E-02

<b>Vendor/Haul Trucks</b>					<b>DPM</b>		<b>Days per CSTN Year</b>	<b>Weighted Annual Emission Rate (g/s)</b>
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Exhaust PM2.5 (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>	<b>Year 1</b>	<b>Year 1</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	9.12E-03	1.44E-04	60	3.56E-05
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	8.04E-03	1.27E-04	180	9.42E-05

Haul Source Length (m)	Haul Source Length (mi)
2810	1.75

**DPM EMISSIONS (PM10)**

**VENDOR TRUCKS**

Phase Name	Start	End	Workdays	Year	Speed (MPH)	Trips per day	Trip Length (mi)	Exhaust EF (g/mi)	Exhaust Emissions (lb/day)
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	20	86	1.75	2.43E-02	8.04E-03
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	20	86	1.75	2.43E-02	8.04E-03

Haul Source Length (m)	Haul Source Length (mi)
2810	1.75

**DPM EMISSIONS (PM10)**

**HAUL TRUCKS**

Phase Name	Start	End	Workdays	Year	Speed (MPH)	Trips per day	Trip Length (mi)	Exhaust EF (g/mi)	Exhaust Emissions (lb/day)	Total DPM Emissions (lb/day)
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	20	18	1.75	1.54E-02	1.08E-03	9.12E-03
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	20	0	1.75	1.54E-02	0.00E+00	8.04E-03

**PM10 Emissions**

<b>Offroad Heavy Duty Equipment</b>					<b>PM10</b>	
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Exhaust PM10 (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	4.19	0.066
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	4.19	0.066

<b>Onsite Dust<sup>1</sup></b>					<b>PM10</b>	
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Fugitive PM10 (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	8.35E+00	1.31E-01
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	8.29E+00	1.31E-01

<b>Worker/Vendor/Haul Trucks Exhaust</b>					<b>PM10</b>	
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Exhaust PM10 (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	1.01E-02	1.60E-04
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	9.06E-03	1.43E-04

<b>Worker/Vendor/Haul Truck Dust</b>					<b>PM10</b>	
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Fugitive PM10 (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	2.34E-01	3.69E-03
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	2.08E-01	3.27E-03

## Notes:

1 Onsite dust emissions include emissions from soil disturbing activities such as grading, bulldozing, and truck loading and travel.



Haul Source Length (m)	Haul Source Length (mi)
2810	1.75

**PM10 EMISSIONS**

**VENDOR TRUCKS**

Phase Name	Start	End	Workdays	Year	Speed (MPH)	Trips per day	Trip Length (mi)	Exhaust EF (g/mi)	Dust EF (g/mi)	Exhaust Emissions (lb/day)	Dust Emissions (lb/day)
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	20	86	1.75	2.43E-02	3.75E-01	8.04E-03	1.24E-01
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	20	86	1.75	2.43E-02	3.75E-01	8.04E-03	1.24E-01

Haul Source Length (m)	Haul Source Length (mi)
2810	1.75

**PM10 EMISSIONS**

**HAUL TRUCKS**

Phase Name	Start	End	Workdays	Year	Speed (MPH)	HAUL TRUCKS					
						Trips per day	Trip Length (mi)	Exhaust EF (g/mi)	Dust EF (g/mi)	Exhaust Emissions (lb/day)	Dust Emissions (lb/day)
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	20	18	1.75	1.54E-02	3.77E-01	1.08E-03	2.63E-02
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	20	0	1.75	1.54E-02	3.77E-01	0.00E+00	0.00E+00

<b>Haul Source Length (m)</b>	<b>Haul Source Length (mi)</b>
2810	1.75

**PM10 EMISSIONS**

					<b>WORKER VEHICLES (for PM10 Analysis Only)</b>						<b>PM10 EMISSIONS</b>		
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Year</b>	<b>Speed (MPH)</b>	<b>Trips per day</b>	<b>Trip Length (mi)</b>	<b>Exhaust EF (g/mi)</b>	<b>Dust EF (g/mi)</b>	<b>Exhaust Emissions (lb/day)</b>	<b>Dust Emissions (lb/day)</b>	<b>Total Exhaust Emissions (lb/day)</b>	<b>Total Dust Emissions (lb/day)</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	20	68	1.75	3.87E-03	3.20E-01	1.01E-03	8.39E-02	1.01E-02	2.34E-01
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	20	68	1.75	3.87E-03	3.20E-01	1.01E-03	8.39E-02	9.06E-03	2.08E-01

**PM2.5 Emissions**

<b>Offroad Heavy Duty Equipment</b>					<b>PM2.5</b>	
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Exhaust PM2.5 (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	3.88E+00	6.11E-02
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	3.87E+00	6.10E-02

<b>Onsite Dust<sup>1</sup></b>					<b>PM2.5</b>	
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Fugitive PM2.5 (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	5.47E+00	8.62E-02
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	5.28E+00	8.31E-02

<b>Worker/Vendor/Haul Truck Exhaust</b>					<b>PM2.5</b>	
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Exhaust PM2.5 (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	9.66E-03	1.52E-04
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	8.63E-03	1.36E-04

<b>Worker/Vendor/Haul Truck Dust</b>					<b>PM2.5</b>	
<b>Phase Name</b>	<b>Start</b>	<b>End</b>	<b>Workdays</b>	<b>Daily Usage (hours/day)</b>	<b>Daily Fugitive PM2.5 (lb/day)</b>	<b>Daily Emission Rate (g/s)</b>
Site Prep and Grading	10/1/2021	12/24/2021	60	8	6.00E-02	9.45E-04
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	8	5.32E-02	8.37E-04

## Notes:

1 Onsite dust emissions include emissions from soil disturbing activities such as grading, bulldozing, and truck loading and travel.

Haul Source Length (m)	Haul Source Length (mi)
2810	1.75

**PM2.5 EMISSIONS**

**VENDOR TRUCKS**

Phase Name	Start	End	Workdays	Year	Speed (MPH)	Vendor Trucks					
						Trips per day	Trip Length (mi)	Exhaust EF (g/mi)	Dust EF (g/mi)	Exhaust Emissions (lb/day)	Dust Emissions (lb/day)
Site Prep and Grading	10/1/2021	12/24/2021	60	2021	20	86	1.75	2.32E-02	9.74E-02	7.70E-03	3.22E-02
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	180	2021	20	86	1.75	2.32E-02	9.74E-02	7.70E-03	3.22E-02

Haul Source Length (m)	Haul Source Length (mi)
2810	1.75

**PM2.5 EMISSIONS**

**HAUL TRUCKS**

Phase Name	Start	End	Trips per day	Trip Length (mi)	Exhaust EF (g/mi)	Dust EF (g/mi)	Exhaust Emissions (lb/day)	Dust Emissions (lb/day)
Site Prep and Grading	10/1/2021	12/24/2021	18	1.75	1.48E-02	9.74E-02	1.03E-03	6.80E-03
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	0	1.75	1.48E-02	9.74E-02	0.00E+00	0.00E+00

			Haul Source Length (m)	Haul Source Length (mi)	WORKER VEHICLES					PM2.5 EMISSIONS	
PM2.5 EMISSIONS			2810	1.75							
Phase Name	Start	End	Trips per day	Trip Length (mi)	Exhaust EF (g/mi)	Dust EF (g/mi)	Exhaust Emissions (lb/day)	Dust Emissions (lb/day)	Total Exhaust Emissions (lb/day)	Total Dust Emissions (lb/day)	
Site Prep and Grading	10/1/2021	12/24/2021	68	1.75	3.56E-03	8.00E-02	9.31E-04	2.09E-02	9.66E-03	6.00E-02	
PV/BESS/Gen-Tie Installation	12/27/2021	9/5/2022	68	1.75	3.56E-03	8.00E-02	9.31E-04	2.09E-02	8.63E-03	5.32E-02	

## Unitized Emission Rates for DPM

Averaging Time: Period				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s	
XY	X	Y	Group	OFFROAD	HAUL_EX
381185.513853853.69	381185.51	3853853.69	FENCEPRI	0.16	1.06
381185.513853302.3	381185.51	3853302.30	FENCEPRI	0.41	0.03
381280.93853302.3	381280.90	3853302.30	FENCEPRI	0.63	0.03
381281.463853039.66	381281.46	3853039.66	FENCEPRI	0.36	0.02
381970.163853032.08	381970.16	3853032.08	FENCEPRI	0.29	0.02
381972.893853843.53	381972.89	3853843.53	FENCEPRI	0.59	1.98
381185.513853843.84	381185.51	3853843.84	FENCEINT	0.19	1.09
381185.513853834	381185.51	3853834.00	FENCEINT	0.23	0.79
381185.513853824.15	381185.51	3853824.15	FENCEINT	0.27	0.61
381185.513853814.3	381185.51	3853814.30	FENCEINT	0.30	0.49
381185.513853804.46	381185.51	3853804.46	FENCEINT	0.32	0.41
381185.513853794.61	381185.51	3853794.61	FENCEINT	0.34	0.34
381185.513853784.77	381185.51	3853784.77	FENCEINT	0.36	0.30
381185.513853774.92	381185.51	3853774.92	FENCEINT	0.38	0.26
381185.513853765.07	381185.51	3853765.07	FENCEINT	0.39	0.23
381185.513853755.23	381185.51	3853755.23	FENCEINT	0.40	0.21
381185.513853745.38	381185.51	3853745.38	FENCEINT	0.41	0.19
381185.513853735.54	381185.51	3853735.54	FENCEINT	0.42	0.17
381185.513853725.69	381185.51	3853725.69	FENCEINT	0.42	0.16
381185.513853715.84	381185.51	3853715.84	FENCEINT	0.43	0.14
381185.513853706	381185.51	3853706.00	FENCEINT	0.44	0.13
381185.513853696.15	381185.51	3853696.15	FENCEINT	0.44	0.12
381185.513853686.3	381185.51	3853686.30	FENCEINT	0.45	0.12
381185.513853676.46	381185.51	3853676.46	FENCEINT	0.45	0.11
381185.513853666.61	381185.51	3853666.61	FENCEINT	0.45	0.10
381185.513853656.76	381185.51	3853656.76	FENCEINT	0.46	0.10
381185.513853646.92	381185.51	3853646.92	FENCEINT	0.46	0.09
381185.513853637.07	381185.51	3853637.07	FENCEINT	0.47	0.09
381185.513853627.23	381185.51	3853627.23	FENCEINT	0.47	0.08
381185.513853617.38	381185.51	3853617.38	FENCEINT	0.47	0.08
381185.513853607.53	381185.51	3853607.53	FENCEINT	0.47	0.08
381185.513853597.69	381185.51	3853597.69	FENCEINT	0.48	0.07
381185.513853587.84	381185.51	3853587.84	FENCEINT	0.48	0.07
381185.513853578	381185.51	3853578.00	FENCEINT	0.48	0.07
381185.513853568.15	381185.51	3853568.15	FENCEINT	0.48	0.06
381185.513853558.3	381185.51	3853558.30	FENCEINT	0.49	0.06
381185.513853548.46	381185.51	3853548.46	FENCEINT	0.49	0.06
381185.513853538.61	381185.51	3853538.61	FENCEINT	0.49	0.06
381185.513853528.76	381185.51	3853528.76	FENCEINT	0.49	0.05
381185.513853518.92	381185.51	3853518.92	FENCEINT	0.49	0.05
381185.513853509.07	381185.51	3853509.07	FENCEINT	0.49	0.05
381185.513853499.22	381185.51	3853499.22	FENCEINT	0.49	0.05
381185.513853489.38	381185.51	3853489.38	FENCEINT	0.49	0.05
381185.513853479.53	381185.51	3853479.53	FENCEINT	0.49	0.05



## Unitized Emission Rates for DPM

Averaging Time: Period				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s	
XY	X	Y	Group	OFFROAD	HAUL_EX
381185.513853469.69	381185.51	3853469.69	FENCEINT	0.49	0.04
381185.513853459.84	381185.51	3853459.84	FENCEINT	0.49	0.04
381185.513853449.99	381185.51	3853449.99	FENCEINT	0.49	0.04
381185.513853440.15	381185.51	3853440.15	FENCEINT	0.49	0.04
381185.513853430.3	381185.51	3853430.30	FENCEINT	0.49	0.04
381185.513853420.46	381185.51	3853420.46	FENCEINT	0.49	0.04
381185.513853410.61	381185.51	3853410.61	FENCEINT	0.49	0.04
381185.513853400.76	381185.51	3853400.76	FENCEINT	0.49	0.04
381185.513853390.92	381185.51	3853390.92	FENCEINT	0.49	0.04
381185.513853381.07	381185.51	3853381.07	FENCEINT	0.49	0.03
381185.513853371.22	381185.51	3853371.22	FENCEINT	0.49	0.03
381185.513853361.38	381185.51	3853361.38	FENCEINT	0.48	0.03
381185.513853351.53	381185.51	3853351.53	FENCEINT	0.48	0.03
381185.513853341.68	381185.51	3853341.68	FENCEINT	0.47	0.03
381185.513853331.84	381185.51	3853331.84	FENCEINT	0.47	0.03
381185.513853321.99	381185.51	3853321.99	FENCEINT	0.45	0.03
381185.513853312.15	381185.51	3853312.15	FENCEINT	0.44	0.03
381195.053853302.3	381195.05	3853302.30	FENCEINT	0.43	0.03
381204.593853302.3	381204.59	3853302.30	FENCEINT	0.44	0.03
381214.133853302.3	381214.13	3853302.30	FENCEINT	0.47	0.03
381223.673853302.3	381223.67	3853302.30	FENCEINT	0.49	0.03
381233.213853302.3	381233.21	3853302.30	FENCEINT	0.51	0.03
381242.743853302.3	381242.74	3853302.30	FENCEINT	0.54	0.03
381252.283853302.3	381252.28	3853302.30	FENCEINT	0.56	0.03
381261.823853302.3	381261.82	3853302.30	FENCEINT	0.59	0.03
381271.363853302.3	381271.36	3853302.30	FENCEINT	0.61	0.03
381280.923853292.57	381280.92	3853292.57	FENCEINT	0.59	0.03
381280.943853282.85	381280.94	3853282.85	FENCEINT	0.57	0.03
381280.963853273.12	381280.96	3853273.12	FENCEINT	0.55	0.03
381280.983853263.39	381280.98	3853263.39	FENCEINT	0.54	0.03
381281.3853253.66	381281.00	3853253.66	FENCEINT	0.53	0.03
381281.023853243.94	381281.02	3853243.94	FENCEINT	0.52	0.03
381281.053853234.21	381281.05	3853234.21	FENCEINT	0.52	0.03
381281.073853224.48	381281.07	3853224.48	FENCEINT	0.51	0.03
381281.093853214.75	381281.09	3853214.75	FENCEINT	0.51	0.03
381281.113853205.03	381281.11	3853205.03	FENCEINT	0.50	0.02
381281.133853195.3	381281.13	3853195.30	FENCEINT	0.50	0.02
381281.153853185.57	381281.15	3853185.57	FENCEINT	0.50	0.02
381281.173853175.84	381281.17	3853175.84	FENCEINT	0.50	0.02
381281.193853166.12	381281.19	3853166.12	FENCEINT	0.49	0.02
381281.213853156.39	381281.21	3853156.39	FENCEINT	0.49	0.02
381281.233853146.66	381281.23	3853146.66	FENCEINT	0.49	0.02
381281.253853136.93	381281.25	3853136.93	FENCEINT	0.48	0.02
381281.273853127.21	381281.27	3853127.21	FENCEINT	0.48	0.02

## Unitized Emission Rates for DPM

Averaging Time: Period				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s	
XY	X	Y	Group	OFFROAD	HAUL_EX
381281.293853117.48	381281.29	3853117.48	FENCEINT	0.47	0.02
381281.313853107.75	381281.31	3853107.75	FENCEINT	0.47	0.02
381281.343853098.02	381281.34	3853098.02	FENCEINT	0.46	0.02
381281.363853088.3	381281.36	3853088.30	FENCEINT	0.45	0.02
381281.383853078.57	381281.38	3853078.57	FENCEINT	0.44	0.02
381281.43853068.84	381281.40	3853068.84	FENCEINT	0.43	0.02
381281.423853059.11	381281.42	3853059.11	FENCEINT	0.42	0.02
381281.443853049.39	381281.44	3853049.39	FENCEINT	0.39	0.02
381291.443853039.55	381291.44	3853039.55	FENCEINT	0.37	0.02
381301.423853039.44	381301.42	3853039.44	FENCEINT	0.39	0.02
381311.43853039.33	381311.40	3853039.33	FENCEINT	0.40	0.02
381321.383853039.22	381321.38	3853039.22	FENCEINT	0.42	0.02
381331.373853039.11	381331.37	3853039.11	FENCEINT	0.44	0.02
381341.353853039	381341.35	3853039.00	FENCEINT	0.45	0.02
381351.333853038.89	381351.33	3853038.89	FENCEINT	0.46	0.02
381361.313853038.78	381361.31	3853038.78	FENCEINT	0.47	0.02
381371.293853038.67	381371.29	3853038.67	FENCEINT	0.48	0.02
381381.273853038.56	381381.27	3853038.56	FENCEINT	0.49	0.02
381391.253853038.45	381391.25	3853038.45	FENCEINT	0.50	0.02
381401.233853038.34	381401.23	3853038.34	FENCEINT	0.51	0.02
381411.223853038.23	381411.22	3853038.23	FENCEINT	0.51	0.02
381421.23853038.12	381421.20	3853038.12	FENCEINT	0.52	0.02
381431.183853038.01	381431.18	3853038.01	FENCEINT	0.52	0.02
381441.163853037.9	381441.16	3853037.90	FENCEINT	0.53	0.02
381451.143853037.79	381451.14	3853037.79	FENCEINT	0.53	0.02
381461.123853037.68	381461.12	3853037.68	FENCEINT	0.53	0.02
381471.13853037.57	381471.10	3853037.57	FENCEINT	0.54	0.02
381481.083853037.46	381481.08	3853037.46	FENCEINT	0.54	0.02
381491.063853037.35	381491.06	3853037.35	FENCEINT	0.54	0.02
381501.053853037.24	381501.05	3853037.24	FENCEINT	0.54	0.02
381511.033853037.13	381511.03	3853037.13	FENCEINT	0.55	0.02
381521.013853037.02	381521.01	3853037.02	FENCEINT	0.55	0.02
381530.993853036.91	381530.99	3853036.91	FENCEINT	0.55	0.02
381540.973853036.8	381540.97	3853036.80	FENCEINT	0.55	0.02
381550.953853036.69	381550.95	3853036.69	FENCEINT	0.55	0.02
381560.933853036.58	381560.93	3853036.58	FENCEINT	0.55	0.02
381570.913853036.47	381570.91	3853036.47	FENCEINT	0.55	0.02
381580.893853036.36	381580.89	3853036.36	FENCEINT	0.55	0.02
381590.883853036.25	381590.88	3853036.25	FENCEINT	0.55	0.02
381600.863853036.14	381600.86	3853036.14	FENCEINT	0.55	0.02
381610.843853036.03	381610.84	3853036.03	FENCEINT	0.55	0.02
381620.823853035.92	381620.82	3853035.92	FENCEINT	0.55	0.02
381630.83853035.82	381630.80	3853035.82	FENCEINT	0.54	0.02
381640.783853035.71	381640.78	3853035.71	FENCEINT	0.54	0.02

## Unitized Emission Rates for DPM

Averaging Time: Period				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s	
XY	X	Y	Group	OFFROAD	HAUL_EX
381650.763853035.6	381650.76	3853035.60	FENCEINT	0.54	0.02
381660.743853035.49	381660.74	3853035.49	FENCEINT	0.54	0.02
381670.733853035.38	381670.73	3853035.38	FENCEINT	0.54	0.02
381680.713853035.27	381680.71	3853035.27	FENCEINT	0.54	0.02
381690.693853035.16	381690.69	3853035.16	FENCEINT	0.54	0.02
381700.673853035.05	381700.67	3853035.05	FENCEINT	0.54	0.02
381710.653853034.94	381710.65	3853034.94	FENCEINT	0.53	0.02
381720.633853034.83	381720.63	3853034.83	FENCEINT	0.53	0.02
381730.613853034.72	381730.61	3853034.72	FENCEINT	0.53	0.02
381740.593853034.61	381740.59	3853034.61	FENCEINT	0.53	0.02
381750.573853034.5	381750.57	3853034.50	FENCEINT	0.52	0.02
381760.563853034.39	381760.56	3853034.39	FENCEINT	0.52	0.02
381770.543853034.28	381770.54	3853034.28	FENCEINT	0.51	0.02
381780.523853034.17	381780.52	3853034.17	FENCEINT	0.51	0.02
381790.53853034.06	381790.50	3853034.06	FENCEINT	0.51	0.02
381800.483853033.95	381800.48	3853033.95	FENCEINT	0.50	0.02
381810.463853033.84	381810.46	3853033.84	FENCEINT	0.50	0.02
381820.443853033.73	381820.44	3853033.73	FENCEINT	0.49	0.02
381830.423853033.62	381830.42	3853033.62	FENCEINT	0.48	0.02
381840.43853033.51	381840.40	3853033.51	FENCEINT	0.48	0.02
381850.393853033.4	381850.39	3853033.40	FENCEINT	0.47	0.02
381860.373853033.29	381860.37	3853033.29	FENCEINT	0.46	0.02
381870.353853033.18	381870.35	3853033.18	FENCEINT	0.45	0.02
381880.333853033.07	381880.33	3853033.07	FENCEINT	0.44	0.02
381890.313853032.96	381890.31	3853032.96	FENCEINT	0.43	0.02
381900.293853032.85	381900.29	3853032.85	FENCEINT	0.42	0.02
381910.273853032.74	381910.27	3853032.74	FENCEINT	0.40	0.02
381920.253853032.63	381920.25	3853032.63	FENCEINT	0.38	0.02
381930.243853032.52	381930.24	3853032.52	FENCEINT	0.36	0.02
381940.223853032.41	381940.22	3853032.41	FENCEINT	0.34	0.02
381950.23853032.3	381950.20	3853032.30	FENCEINT	0.32	0.02
381960.183853032.19	381960.18	3853032.19	FENCEINT	0.30	0.02
381970.193853041.98	381970.19	3853041.98	FENCEINT	0.34	0.02
381970.233853051.87	381970.23	3853051.87	FENCEINT	0.40	0.02
381970.263853061.77	381970.26	3853061.77	FENCEINT	0.45	0.02
381970.293853071.66	381970.29	3853071.66	FENCEINT	0.50	0.02
381970.333853081.56	381970.33	3853081.56	FENCEINT	0.53	0.02
381970.363853091.45	381970.36	3853091.45	FENCEINT	0.56	0.02
381970.393853101.35	381970.39	3853101.35	FENCEINT	0.59	0.02
381970.433853111.25	381970.43	3853111.25	FENCEINT	0.61	0.02
381970.463853121.14	381970.46	3853121.14	FENCEINT	0.63	0.03
381970.493853131.04	381970.49	3853131.04	FENCEINT	0.65	0.03
381970.533853140.93	381970.53	3853140.93	FENCEINT	0.66	0.03
381970.563853150.83	381970.56	3853150.83	FENCEINT	0.68	0.03

## Unitized Emission Rates for DPM

Averaging Time: Period				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s	
XY	X	Y	Group	OFFROAD	HAUL_EX
381970.593853160.72	381970.59	3853160.72	FENCEINT	0.69	0.03
381970.633853170.62	381970.63	3853170.62	FENCEINT	0.70	0.03
381970.663853180.52	381970.66	3853180.52	FENCEINT	0.71	0.03
381970.693853190.41	381970.69	3853190.41	FENCEINT	0.72	0.03
381970.733853200.31	381970.73	3853200.31	FENCEINT	0.73	0.03
381970.763853210.2	381970.76	3853210.20	FENCEINT	0.74	0.03
381970.793853220.1	381970.79	3853220.10	FENCEINT	0.74	0.03
381970.833853229.99	381970.83	3853229.99	FENCEINT	0.75	0.03
381970.863853239.89	381970.86	3853239.89	FENCEINT	0.76	0.03
381970.893853249.79	381970.89	3853249.79	FENCEINT	0.76	0.03
381970.933853259.68	381970.93	3853259.68	FENCEINT	0.77	0.04
381970.963853269.58	381970.96	3853269.58	FENCEINT	0.78	0.04
381970.993853279.47	381970.99	3853279.47	FENCEINT	0.78	0.04
381971.033853289.37	381971.03	3853289.37	FENCEINT	0.79	0.04
381971.063853299.26	381971.06	3853299.26	FENCEINT	0.79	0.04
381971.093853309.16	381971.09	3853309.16	FENCEINT	0.79	0.04
381971.133853319.06	381971.13	3853319.06	FENCEINT	0.80	0.04
381971.163853328.95	381971.16	3853328.95	FENCEINT	0.80	0.04
381971.193853338.85	381971.19	3853338.85	FENCEINT	0.81	0.04
381971.233853348.74	381971.23	3853348.74	FENCEINT	0.81	0.04
381971.263853358.64	381971.26	3853358.64	FENCEINT	0.81	0.05
381971.293853368.53	381971.29	3853368.53	FENCEINT	0.81	0.05
381971.333853378.43	381971.33	3853378.43	FENCEINT	0.82	0.05
381971.363853388.33	381971.36	3853388.33	FENCEINT	0.82	0.05
381971.393853398.22	381971.39	3853398.22	FENCEINT	0.82	0.05
381971.433853408.12	381971.43	3853408.12	FENCEINT	0.83	0.05
381971.463853418.01	381971.46	3853418.01	FENCEINT	0.83	0.06
381971.493853427.91	381971.49	3853427.91	FENCEINT	0.83	0.06
381971.533853437.8	381971.53	3853437.80	FENCEINT	0.83	0.06
381971.563853447.7	381971.56	3853447.70	FENCEINT	0.83	0.06
381971.593853457.6	381971.59	3853457.60	FENCEINT	0.83	0.06
381971.623853467.49	381971.62	3853467.49	FENCEINT	0.83	0.07
381971.663853477.39	381971.66	3853477.39	FENCEINT	0.83	0.07
381971.693853487.28	381971.69	3853487.28	FENCEINT	0.83	0.07
381971.723853497.18	381971.72	3853497.18	FENCEINT	0.83	0.08
381971.763853507.08	381971.76	3853507.08	FENCEINT	0.83	0.08
381971.793853516.97	381971.79	3853516.97	FENCEINT	0.83	0.08
381971.823853526.87	381971.82	3853526.87	FENCEINT	0.83	0.09
381971.863853536.76	381971.86	3853536.76	FENCEINT	0.83	0.09
381971.893853546.66	381971.89	3853546.66	FENCEINT	0.83	0.09
381971.923853556.55	381971.92	3853556.55	FENCEINT	0.83	0.10
381971.963853566.45	381971.96	3853566.45	FENCEINT	0.83	0.10
381971.993853576.35	381971.99	3853576.35	FENCEINT	0.83	0.11
381972.023853586.24	381972.02	3853586.24	FENCEINT	0.83	0.11

## Unitized Emission Rates for DPM

Averaging Time: Period				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s	
XY	X	Y	Group	OFFROAD	HAUL_EX
381972.063853596.14	381972.06	3853596.14	FENCEINT	0.83	0.12
381972.093853606.03	381972.09	3853606.03	FENCEINT	0.83	0.13
381972.123853615.93	381972.12	3853615.93	FENCEINT	0.83	0.13
381972.163853625.82	381972.16	3853625.82	FENCEINT	0.83	0.14
381972.193853635.72	381972.19	3853635.72	FENCEINT	0.83	0.15
381972.223853645.62	381972.22	3853645.62	FENCEINT	0.82	0.16
381972.263853655.51	381972.26	3853655.51	FENCEINT	0.82	0.17
381972.293853665.41	381972.29	3853665.41	FENCEINT	0.82	0.18
381972.323853675.3	381972.32	3853675.30	FENCEINT	0.82	0.20
381972.363853685.2	381972.36	3853685.20	FENCEINT	0.81	0.21
381972.393853695.09	381972.39	3853695.09	FENCEINT	0.81	0.23
381972.423853704.99	381972.42	3853704.99	FENCEINT	0.81	0.25
381972.463853714.89	381972.46	3853714.89	FENCEINT	0.80	0.27
381972.493853724.78	381972.49	3853724.78	FENCEINT	0.80	0.30
381972.523853734.68	381972.52	3853734.68	FENCEINT	0.79	0.33
381972.563853744.57	381972.56	3853744.57	FENCEINT	0.78	0.37
381972.593853754.47	381972.59	3853754.47	FENCEINT	0.78	0.41
381972.623853764.36	381972.62	3853764.36	FENCEINT	0.77	0.46
381972.663853774.26	381972.66	3853774.26	FENCEINT	0.76	0.53
381972.693853784.16	381972.69	3853784.16	FENCEINT	0.75	0.62
381972.723853794.05	381972.72	3853794.05	FENCEINT	0.73	0.73
381972.763853803.95	381972.76	3853803.95	FENCEINT	0.71	0.89
381972.793853813.84	381972.79	3853813.84	FENCEINT	0.69	1.11
381972.823853823.74	381972.82	3853823.74	FENCEINT	0.67	1.44
381972.863853833.63	381972.86	3853833.63	FENCEINT	0.63	1.99
381962.923853843.66	381962.92	3853843.66	FENCEINT	0.60	1.95
381952.963853843.79	381952.96	3853843.79	FENCEINT	0.61	1.96
381942.993853843.92	381942.99	3853843.92	FENCEINT	0.62	2.44
381933.023853844.04	381933.02	3853844.04	FENCEINT	0.63	1.96
381923.063853844.17	381923.06	3853844.17	FENCEINT	0.64	1.95
381913.093853844.3	381913.09	3853844.30	FENCEINT	0.64	2.44
381903.123853844.43	381903.12	3853844.43	FENCEINT	0.65	1.97
381893.163853844.56	381893.16	3853844.56	FENCEINT	0.65	1.95
381883.193853844.69	381883.19	3853844.69	FENCEINT	0.65	1.96
381873.223853844.82	381873.22	3853844.82	FENCEINT	0.66	2.44
381863.253853844.94	381863.25	3853844.94	FENCEINT	0.66	1.95
381853.293853845.07	381853.29	3853845.07	FENCEINT	0.66	1.95
381843.323853845.2	381843.32	3853845.20	FENCEINT	0.66	2.44
381833.353853845.33	381833.35	3853845.33	FENCEINT	0.67	1.97
381823.393853845.46	381823.39	3853845.46	FENCEINT	0.67	1.94
381813.423853845.59	381813.42	3853845.59	FENCEINT	0.67	1.96
381803.453853845.72	381803.45	3853845.72	FENCEINT	0.67	2.43
381793.493853845.84	381793.49	3853845.84	FENCEINT	0.67	1.94
381783.523853845.97	381783.52	3853845.97	FENCEINT	0.67	1.94

## Unitized Emission Rates for DPM

Averaging Time: Period				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s	
XY	X	Y	Group	OFFROAD	HAUL_EX
381773.553853846.1	381773.55	3853846.10	FENCEINT	0.67	2.43
381763.593853846.23	381763.59	3853846.23	FENCEINT	0.67	1.96
381753.623853846.36	381753.62	3853846.36	FENCEINT	0.67	1.93
381743.653853846.49	381743.65	3853846.49	FENCEINT	0.67	1.95
381733.693853846.62	381733.69	3853846.62	FENCEINT	0.67	2.42
381723.723853846.75	381723.72	3853846.75	FENCEINT	0.66	1.94
381713.753853846.87	381713.75	3853846.87	FENCEINT	0.66	1.93
381703.793853847	381703.79	3853847.00	FENCEINT	0.66	2.42
381693.823853847.13	381693.82	3853847.13	FENCEINT	0.66	1.95
381683.853853847.26	381683.85	3853847.26	FENCEINT	0.66	1.93
381673.883853847.39	381673.88	3853847.39	FENCEINT	0.66	1.94
381663.923853847.52	381663.92	3853847.52	FENCEINT	0.66	2.41
381653.953853847.65	381653.95	3853847.65	FENCEINT	0.66	1.93
381643.983853847.77	381643.98	3853847.77	FENCEINT	0.65	1.93
381634.023853847.9	381634.02	3853847.90	FENCEINT	0.65	2.41
381624.053853848.03	381624.05	3853848.03	FENCEINT	0.65	1.94
381614.083853848.16	381614.08	3853848.16	FENCEINT	0.65	1.92
381604.123853848.29	381604.12	3853848.29	FENCEINT	0.64	1.94
381594.153853848.42	381594.15	3853848.42	FENCEINT	0.64	2.41
381584.183853848.55	381584.18	3853848.55	FENCEINT	0.64	1.92
381574.223853848.67	381574.22	3853848.67	FENCEINT	0.63	1.92
381564.253853848.8	381564.25	3853848.80	FENCEINT	0.63	2.40
381554.283853848.93	381554.28	3853848.93	FENCEINT	0.63	1.92
381544.323853849.06	381544.32	3853849.06	FENCEINT	0.63	1.91
381534.353853849.19	381534.35	3853849.19	FENCEINT	0.62	1.93
381524.383853849.32	381524.38	3853849.32	FENCEINT	0.62	2.39
381514.423853849.45	381514.42	3853849.45	FENCEINT	0.61	1.90
381504.453853849.57	381504.45	3853849.57	FENCEINT	0.61	1.90
381494.483853849.7	381494.48	3853849.70	FENCEINT	0.61	2.38
381484.523853849.83	381484.52	3853849.83	FENCEINT	0.60	1.90
381474.553853849.96	381474.55	3853849.96	FENCEINT	0.60	1.89
381464.583853850.09	381464.58	3853850.09	FENCEINT	0.59	2.38
381454.613853850.22	381454.61	3853850.22	FENCEINT	0.59	2.37
381444.653853850.35	381444.65	3853850.35	FENCEINT	0.58	1.88
381434.683853850.47	381434.68	3853850.47	FENCEINT	0.58	1.88
381424.713853850.6	381424.71	3853850.60	FENCEINT	0.57	2.35
381414.753853850.73	381414.75	3853850.73	FENCEINT	0.56	1.87
381404.783853850.86	381404.78	3853850.86	FENCEINT	0.56	1.86
381394.813853850.99	381394.81	3853850.99	FENCEINT	0.55	2.35
381384.853853851.12	381384.85	3853851.12	FENCEINT	0.54	1.88
381374.883853851.25	381374.88	3853851.25	FENCEINT	0.53	1.84
381364.913853851.38	381364.91	3853851.38	FENCEINT	0.52	1.84
381354.953853851.5	381354.95	3853851.50	FENCEINT	0.52	2.31
381344.983853851.63	381344.98	3853851.63	FENCEINT	0.51	1.82

## Unitized Emission Rates for DPM

Averaging Time: Period				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s	
XY	X	Y	Group	OFFROAD	HAUL_EX
381335.013853851.76	381335.01	3853851.76	FENCEINT	0.50	1.80
381325.053853851.89	381325.05	3853851.89	FENCEINT	0.48	2.28
381315.083853852.02	381315.08	3853852.02	FENCEINT	0.47	1.80
381305.113853852.15	381305.11	3853852.15	FENCEINT	0.46	1.76
381295.153853852.28	381295.15	3853852.28	FENCEINT	0.44	1.75
381285.183853852.4	381285.18	3853852.40	FENCEINT	0.43	2.20
381275.213853852.53	381275.21	3853852.53	FENCEINT	0.41	1.70
381265.243853852.66	381265.24	3853852.66	FENCEINT	0.39	1.66
381255.283853852.79	381255.28	3853852.79	FENCEINT	0.37	2.11
381245.313853852.92	381245.31	3853852.92	FENCEINT	0.34	1.60
381235.343853853.05	381235.34	3853853.05	FENCEINT	0.31	1.51
381225.383853853.18	381225.38	3853853.18	FENCEINT	0.28	1.44
381215.413853853.3	381215.41	3853853.30	FENCEINT	0.24	1.80
381205.443853853.43	381205.44	3853853.43	FENCEINT	0.20	1.16
381195.483853853.56	381195.48	3853853.56	FENCEINT	0.17	0.92
381207.283853216.51	381207.28	3853216.51	RESIDENT	0.29	0.02
381206.463853158.25	381206.46	3853158.25	RESIDENT	0.27	0.02
381133.443853006.47	381133.44	3853006.47	RESIDENT	0.13	0.02
381572.573853899.35	381572.57	3853899.35	RESIDENT	0.32	1.11
381635.293853878.64	381635.29	3853878.64	RESIDENT	0.43	1.97
381724.423853880.35	381724.42	3853880.35	RESIDENT	0.43	1.80
381769.333854066.93	381769.33	3854066.93	RESIDENT	0.11	0.17
380838.73853925.28	380838.70	3853925.28	RESIDENT	0.02	0.03
380776.713853911.67	380776.71	3853911.67	RESIDENT	0.02	0.02
381905.063854191.95	381905.06	3854191.95	RESIDENT	0.07	0.09
381897.523854254.79	381897.52	3854254.79	RESIDENT	0.06	0.07
381770.173854255.62	381770.17	3854255.62	RESIDENT	0.05	0.06
381846.773853931.2	381846.77	3853931.20	RESIDENT	0.27	0.61
382759.033853899.12	382759.03	3853899.12	RESIDENT	0.07	0.86
382948.913853890.37	382948.91	3853890.37	RESIDENT	0.05	0.97
382818.213853903.75	382818.21	3853903.75	RESIDENT	0.06	0.79
382658.823853065.93	382658.82	3853065.93	RESIDENT	0.06	0.02
382705.843853071.63	382705.84	3853071.63	RESIDENT	0.05	0.02
382739.323853070.2	382739.32	3853070.20	RESIDENT	0.05	0.02
382765.673853062.36	382765.67	3853062.36	RESIDENT	0.05	0.02
380838.253852648.62	380838.25	3852648.62	RESIDENT	0.03	0.01
380596.713852456.08	380596.71	3852456.08	RESIDENT	0.02	0.01
380344.573853233.38	380344.57	3853233.38	RESIDENT	0.03	0.01
380414.583853989.01	380414.58	3853989.01	RESIDENT	0.01	0.01
380454.013853958.13	380454.01	3853958.13	RESIDENT	0.01	0.01

## Unitized Emission Rates for PM10/PM2.5

Averaging Time: 24-hr				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s			
XY	X	Y	Group	OFFROAD	ON_DUST	HAUL_EX	HAUL_DST
381185.513853853.69	381185.51	3853853.69	FENCEPRI	4.36	5.81	11.04	17.83
381185.513853302.3	381185.51	3853302.30	FENCEPRI	4.91	6.40	0.81	0.82
381280.93853302.3	381280.90	3853302.30	FENCEPRI	5.32	8.15	0.80	0.81
381281.463853039.66	381281.46	3853039.66	FENCEPRI	4.07	5.77	0.54	0.52
381970.163853032.08	381970.16	3853032.08	FENCEPRI	4.55	6.39	0.50	0.49
381972.893853843.53	381972.89	3853843.53	FENCEPRI	4.42	5.94	10.55	15.66
381185.513853843.84	381185.51	3853843.84	FENCEINT	4.40	5.91	8.64	12.06
381185.513853834	381185.51	3853834.00	FENCEINT	4.39	5.96	6.62	8.16
381185.513853824.15	381185.51	3853824.15	FENCEINT	4.38	5.99	5.42	6.37
381185.513853814.3	381185.51	3853814.30	FENCEINT	4.37	6.16	4.62	5.29
381185.513853804.46	381185.51	3853804.46	FENCEINT	4.36	6.35	4.03	4.55
381185.513853794.61	381185.51	3853794.61	FENCEINT	4.35	6.52	3.59	4.01
381185.513853784.77	381185.51	3853784.77	FENCEINT	4.34	6.63	3.24	3.59
381185.513853774.92	381185.51	3853774.92	FENCEINT	4.33	6.74	2.95	3.26
381185.513853765.07	381185.51	3853765.07	FENCEINT	4.32	6.84	2.72	2.99
381185.513853755.23	381185.51	3853755.23	FENCEINT	4.31	6.93	2.53	2.76
381185.513853745.38	381185.51	3853745.38	FENCEINT	4.29	7.01	2.36	2.56
381185.513853735.54	381185.51	3853735.54	FENCEINT	4.31	7.08	2.22	2.39
381185.513853725.69	381185.51	3853725.69	FENCEINT	4.38	7.13	2.10	2.25
381185.513853715.84	381185.51	3853715.84	FENCEINT	4.43	7.19	1.99	2.12
381185.513853706	381185.51	3853706.00	FENCEINT	4.48	7.24	1.89	2.01
381185.513853696.15	381185.51	3853696.15	FENCEINT	4.52	7.29	1.80	1.91
381185.513853686.3	381185.51	3853686.30	FENCEINT	4.56	7.34	1.73	1.82
381185.513853676.46	381185.51	3853676.46	FENCEINT	4.60	7.37	1.66	1.74
381185.513853666.61	381185.51	3853666.61	FENCEINT	4.64	7.41	1.59	1.67
381185.513853656.76	381185.51	3853656.76	FENCEINT	4.67	7.45	1.54	1.61
381185.513853646.92	381185.51	3853646.92	FENCEINT	4.70	7.49	1.48	1.55
381185.513853637.07	381185.51	3853637.07	FENCEINT	4.75	7.52	1.43	1.49
381185.513853627.23	381185.51	3853627.23	FENCEINT	4.78	7.56	1.38	1.44
381185.513853617.38	381185.51	3853617.38	FENCEINT	4.82	7.59	1.34	1.39
381185.513853607.53	381185.51	3853607.53	FENCEINT	4.88	7.62	1.30	1.35
381185.513853597.69	381185.51	3853597.69	FENCEINT	4.93	7.68	1.26	1.31
381185.513853587.84	381185.51	3853587.84	FENCEINT	5.01	7.74	1.22	1.26
381185.513853578	381185.51	3853578.00	FENCEINT	5.06	7.80	1.18	1.23
381185.513853568.15	381185.51	3853568.15	FENCEINT	5.09	7.86	1.17	1.19
381185.513853558.3	381185.51	3853558.30	FENCEINT	5.13	7.90	1.16	1.15
381185.513853548.46	381185.51	3853548.46	FENCEINT	5.18	7.96	1.15	1.12
381185.513853538.61	381185.51	3853538.61	FENCEINT	5.22	8.00	1.15	1.08
381185.513853528.76	381185.51	3853528.76	FENCEINT	5.26	8.03	1.14	1.06
381185.513853518.92	381185.51	3853518.92	FENCEINT	5.30	8.07	1.13	1.05
381185.513853509.07	381185.51	3853509.07	FENCEINT	5.34	8.10	1.13	1.04
381185.513853499.22	381185.51	3853499.22	FENCEINT	5.35	8.11	1.12	1.03
381185.513853489.38	381185.51	3853489.38	FENCEINT	5.38	8.13	1.11	1.02
381185.513853479.53	381185.51	3853479.53	FENCEINT	5.39	8.13	1.09	1.01



## Unitized Emission Rates for PM10/PM2.5

Averaging Time: 24-hr

XY	X	Y	Group	AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s			
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST
381185.513853469.69	381185.51	3853469.69	FENCEINT	5.42	8.13	1.08	1.00
381185.513853459.84	381185.51	3853459.84	FENCEINT	5.44	8.13	1.06	0.99
381185.513853449.99	381185.51	3853449.99	FENCEINT	5.46	8.14	1.04	0.98
381185.513853440.15	381185.51	3853440.15	FENCEINT	5.47	8.15	1.03	0.97
381185.513853430.3	381185.51	3853430.30	FENCEINT	5.49	8.16	1.01	0.95
381185.513853420.46	381185.51	3853420.46	FENCEINT	5.50	8.16	0.99	0.94
381185.513853410.61	381185.51	3853410.61	FENCEINT	5.52	8.14	0.98	0.93
381185.513853400.76	381185.51	3853400.76	FENCEINT	5.54	8.11	0.96	0.92
381185.513853390.92	381185.51	3853390.92	FENCEINT	5.54	8.10	0.95	0.91
381185.513853381.07	381185.51	3853381.07	FENCEINT	5.55	8.11	0.93	0.90
381185.513853371.22	381185.51	3853371.22	FENCEINT	5.52	8.16	0.92	0.89
381185.513853361.38	381185.51	3853361.38	FENCEINT	5.52	8.11	0.90	0.88
381185.513853351.53	381185.51	3853351.53	FENCEINT	5.48	8.09	0.89	0.87
381185.513853341.68	381185.51	3853341.68	FENCEINT	5.46	8.03	0.87	0.86
381185.513853331.84	381185.51	3853331.84	FENCEINT	5.39	7.96	0.86	0.85
381185.513853321.99	381185.51	3853321.99	FENCEINT	5.29	7.83	0.84	0.84
381185.513853312.15	381185.51	3853312.15	FENCEINT	5.15	7.55	0.83	0.83
381195.053853302.3	381195.05	3853302.30	FENCEINT	4.93	6.42	0.81	0.82
381204.593853302.3	381204.59	3853302.30	FENCEINT	4.96	6.47	0.81	0.81
381214.133853302.3	381214.13	3853302.30	FENCEINT	4.98	6.52	0.81	0.81
381223.673853302.3	381223.67	3853302.30	FENCEINT	5.03	6.58	0.81	0.81
381233.213853302.3	381233.21	3853302.30	FENCEINT	5.08	6.66	0.81	0.81
381242.743853302.3	381242.74	3853302.30	FENCEINT	5.14	6.75	0.80	0.81
381252.283853302.3	381252.28	3853302.30	FENCEINT	5.22	6.87	0.80	0.81
381261.823853302.3	381261.82	3853302.30	FENCEINT	5.29	7.04	0.80	0.81
381271.363853302.3	381271.36	3853302.30	FENCEINT	5.33	7.34	0.80	0.81
381280.923853292.57	381280.92	3853292.57	FENCEINT	5.33	8.14	0.78	0.79
381280.943853282.85	381280.94	3853282.85	FENCEINT	5.33	8.13	0.76	0.78
381280.963853273.12	381280.96	3853273.12	FENCEINT	5.32	8.11	0.75	0.77
381280.983853263.39	381280.98	3853263.39	FENCEINT	5.31	8.09	0.73	0.75
3812813853253.66	381281.00	3853253.66	FENCEINT	5.31	8.07	0.71	0.74
381281.023853243.94	381281.02	3853243.94	FENCEINT	5.30	8.05	0.69	0.72
381281.053853234.21	381281.05	3853234.21	FENCEINT	5.29	8.03	0.68	0.70
381281.073853224.48	381281.07	3853224.48	FENCEINT	5.28	8.01	0.66	0.68
381281.093853214.75	381281.09	3853214.75	FENCEINT	5.27	7.99	0.64	0.67
381281.113853205.03	381281.11	3853205.03	FENCEINT	5.26	7.96	0.63	0.65
381281.133853195.3	381281.13	3853195.30	FENCEINT	5.25	7.95	0.63	0.63
381281.153853185.57	381281.15	3853185.57	FENCEINT	5.23	7.93	0.62	0.60
381281.173853175.84	381281.17	3853175.84	FENCEINT	5.21	7.91	0.61	0.58
381281.193853166.12	381281.19	3853166.12	FENCEINT	5.20	7.89	0.61	0.57
381281.213853156.39	381281.21	3853156.39	FENCEINT	5.18	7.86	0.60	0.56
381281.233853146.66	381281.23	3853146.66	FENCEINT	5.15	7.83	0.60	0.56
381281.253853136.93	381281.25	3853136.93	FENCEINT	5.12	7.81	0.59	0.55
381281.273853127.21	381281.27	3853127.21	FENCEINT	5.09	7.77	0.59	0.55

## Unitized Emission Rates for PM10/PM2.5

Averaging Time: 24-hr				AERMOD Concentrations ( $\mu\text{g}/\text{m}^3$ ) @ 1 g/s			
XY	X	Y	Group	OFFROAD	ON_DUST	HAUL_EX	HAUL_DST
381281.293853117.48	381281.29	3853117.48	FENCEINT	5.05	7.72	0.58	0.55
381281.313853107.75	381281.31	3853107.75	FENCEINT	5.01	7.65	0.58	0.54
381281.343853098.02	381281.34	3853098.02	FENCEINT	4.96	7.59	0.57	0.54
381281.363853088.3	381281.36	3853088.30	FENCEINT	4.86	7.51	0.57	0.54
381281.383853078.57	381281.38	3853078.57	FENCEINT	4.78	7.41	0.56	0.53
381281.43853068.84	381281.40	3853068.84	FENCEINT	4.67	7.27	0.56	0.53
381281.423853059.11	381281.42	3853059.11	FENCEINT	4.54	7.06	0.55	0.53
381281.443853049.39	381281.44	3853049.39	FENCEINT	4.35	6.73	0.55	0.52
381291.443853039.55	381291.44	3853039.55	FENCEINT	4.04	5.77	0.54	0.52
381301.423853039.44	381301.42	3853039.44	FENCEINT	4.02	5.77	0.54	0.52
381311.43853039.33	381311.40	3853039.33	FENCEINT	3.99	5.76	0.54	0.52
381321.383853039.22	381321.38	3853039.22	FENCEINT	3.96	5.91	0.54	0.52
381331.373853039.11	381331.37	3853039.11	FENCEINT	3.93	6.16	0.54	0.52
381341.353853039	381341.35	3853039.00	FENCEINT	3.90	6.37	0.54	0.52
381351.333853038.89	381351.33	3853038.89	FENCEINT	3.96	6.54	0.54	0.52
381361.313853038.78	381361.31	3853038.78	FENCEINT	4.06	6.69	0.54	0.52
381371.293853038.67	381371.29	3853038.67	FENCEINT	4.14	6.80	0.54	0.52
381381.273853038.56	381381.27	3853038.56	FENCEINT	4.21	6.89	0.54	0.52
381391.253853038.45	381391.25	3853038.45	FENCEINT	4.28	6.97	0.54	0.52
381401.233853038.34	381401.23	3853038.34	FENCEINT	4.33	7.03	0.55	0.52
381411.223853038.23	381411.22	3853038.23	FENCEINT	4.37	7.07	0.55	0.52
381421.23853038.12	381421.20	3853038.12	FENCEINT	4.41	7.10	0.55	0.52
381431.183853038.01	381431.18	3853038.01	FENCEINT	4.44	7.14	0.55	0.52
381441.163853037.9	381441.16	3853037.90	FENCEINT	4.47	7.17	0.55	0.52
381451.143853037.79	381451.14	3853037.79	FENCEINT	4.49	7.20	0.55	0.52
381461.123853037.68	381461.12	3853037.68	FENCEINT	4.51	7.21	0.55	0.52
381471.13853037.57	381471.10	3853037.57	FENCEINT	4.52	7.22	0.55	0.52
381481.083853037.46	381481.08	3853037.46	FENCEINT	4.54	7.22	0.55	0.52
381491.063853037.35	381491.06	3853037.35	FENCEINT	4.54	7.23	0.55	0.52
381501.053853037.24	381501.05	3853037.24	FENCEINT	4.55	7.23	0.55	0.52
381511.033853037.13	381511.03	3853037.13	FENCEINT	4.55	7.22	0.55	0.52
381521.013853037.02	381521.01	3853037.02	FENCEINT	4.55	7.21	0.55	0.52
381530.993853036.91	381530.99	3853036.91	FENCEINT	4.54	7.20	0.55	0.52
381540.973853036.8	381540.97	3853036.80	FENCEINT	4.53	7.19	0.55	0.52
381550.953853036.69	381550.95	3853036.69	FENCEINT	4.52	7.16	0.55	0.52
381560.933853036.58	381560.93	3853036.58	FENCEINT	4.51	7.14	0.54	0.52
381570.913853036.47	381570.91	3853036.47	FENCEINT	4.49	7.11	0.54	0.52
381580.893853036.36	381580.89	3853036.36	FENCEINT	4.48	7.08	0.54	0.52
381590.883853036.25	381590.88	3853036.25	FENCEINT	4.47	7.05	0.54	0.52
381600.863853036.14	381600.86	3853036.14	FENCEINT	4.45	7.01	0.54	0.52
381610.843853036.03	381610.84	3853036.03	FENCEINT	4.43	6.97	0.54	0.52
381620.823853035.92	381620.82	3853035.92	FENCEINT	4.41	6.93	0.54	0.51
381630.83853035.82	381630.80	3853035.82	FENCEINT	4.40	6.91	0.54	0.51
381640.783853035.71	381640.78	3853035.71	FENCEINT	4.38	6.88	0.54	0.51

## Unitized Emission Rates for PM10/PM2.5

Averaging Time: 24-hr

XY	X	Y	Group	AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s			
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST
381650.763853035.6	381650.76	3853035.60	FENCEINT	4.36	6.84	0.54	0.51
381660.743853035.49	381660.74	3853035.49	FENCEINT	4.36	6.80	0.54	0.51
381670.733853035.38	381670.73	3853035.38	FENCEINT	4.36	6.76	0.54	0.51
381680.713853035.27	381680.71	3853035.27	FENCEINT	4.32	6.73	0.54	0.51
381690.693853035.16	381690.69	3853035.16	FENCEINT	4.27	6.74	0.54	0.51
381700.673853035.05	381700.67	3853035.05	FENCEINT	4.28	6.76	0.54	0.51
381710.653853034.94	381710.65	3853034.94	FENCEINT	4.30	6.78	0.54	0.51
381720.633853034.83	381720.63	3853034.83	FENCEINT	4.31	6.78	0.54	0.51
381730.613853034.72	381730.61	3853034.72	FENCEINT	4.32	6.79	0.54	0.51
381740.593853034.61	381740.59	3853034.61	FENCEINT	4.34	6.82	0.54	0.51
381750.573853034.5	381750.57	3853034.50	FENCEINT	4.34	6.81	0.53	0.51
381760.563853034.39	381760.56	3853034.39	FENCEINT	4.35	6.82	0.53	0.51
381770.543853034.28	381770.54	3853034.28	FENCEINT	4.36	6.84	0.53	0.51
381780.523853034.17	381780.52	3853034.17	FENCEINT	4.37	6.85	0.53	0.51
381790.53853034.06	381790.50	3853034.06	FENCEINT	4.38	6.86	0.53	0.51
381800.483853033.95	381800.48	3853033.95	FENCEINT	4.39	6.86	0.53	0.51
381810.463853033.84	381810.46	3853033.84	FENCEINT	4.41	6.86	0.53	0.51
381820.443853033.73	381820.44	3853033.73	FENCEINT	4.42	6.86	0.53	0.51
381830.423853033.62	381830.42	3853033.62	FENCEINT	4.42	6.86	0.53	0.51
381840.43853033.51	381840.40	3853033.51	FENCEINT	4.43	6.87	0.52	0.50
381850.393853033.4	381850.39	3853033.40	FENCEINT	4.42	6.86	0.52	0.50
381860.373853033.29	381860.37	3853033.29	FENCEINT	4.42	6.85	0.52	0.50
381870.353853033.18	381870.35	3853033.18	FENCEINT	4.41	6.84	0.52	0.50
381880.333853033.07	381880.33	3853033.07	FENCEINT	4.41	6.84	0.52	0.50
381890.313853032.96	381890.31	3853032.96	FENCEINT	4.40	6.83	0.52	0.50
381900.293853032.85	381900.29	3853032.85	FENCEINT	4.42	6.81	0.51	0.50
381910.273853032.74	381910.27	3853032.74	FENCEINT	4.44	6.79	0.51	0.50
381920.253853032.63	381920.25	3853032.63	FENCEINT	4.46	6.77	0.51	0.50
381930.243853032.52	381930.24	3853032.52	FENCEINT	4.48	6.73	0.51	0.49
381940.223853032.41	381940.22	3853032.41	FENCEINT	4.49	6.69	0.51	0.49
381950.23853032.3	381950.20	3853032.30	FENCEINT	4.51	6.62	0.50	0.49
381960.183853032.19	381960.18	3853032.19	FENCEINT	4.53	6.52	0.50	0.49
381970.193853041.98	381970.19	3853041.98	FENCEINT	4.64	6.78	0.51	0.50
381970.233853051.87	381970.23	3853051.87	FENCEINT	4.68	6.87	0.52	0.50
381970.263853061.77	381970.26	3853061.77	FENCEINT	4.70	6.90	0.53	0.51
381970.293853071.66	381970.29	3853071.66	FENCEINT	4.70	6.92	0.54	0.52
381970.333853081.56	381970.33	3853081.56	FENCEINT	4.70	6.91	0.55	0.52
381970.363853091.45	381970.36	3853091.45	FENCEINT	4.70	6.91	0.56	0.53
381970.393853101.35	381970.39	3853101.35	FENCEINT	4.69	6.94	0.56	0.53
381970.433853111.25	381970.43	3853111.25	FENCEINT	4.68	7.05	0.57	0.54
381970.463853121.14	381970.46	3853121.14	FENCEINT	4.67	7.14	0.58	0.54
381970.493853131.04	381970.49	3853131.04	FENCEINT	4.66	7.21	0.59	0.55
381970.533853140.93	381970.53	3853140.93	FENCEINT	4.64	7.27	0.60	0.55
381970.563853150.83	381970.56	3853150.83	FENCEINT	4.62	7.33	0.61	0.56

## Unitized Emission Rates for PM10/PM2.5

Averaging Time: 24-hr				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s			
XY	X	Y	Group	OFFROAD	ON_DUST	HAUL_EX	HAUL_DST
381970.593853160.72	381970.59	3853160.72	FENCEINT	4.60	7.36	0.62	0.56
381970.633853170.62	381970.63	3853170.62	FENCEINT	4.58	7.40	0.62	0.57
381970.663853180.52	381970.66	3853180.52	FENCEINT	4.62	7.43	0.63	0.58
381970.693853190.41	381970.69	3853190.41	FENCEINT	4.66	7.47	0.64	0.58
381970.733853200.31	381970.73	3853200.31	FENCEINT	4.69	7.49	0.65	0.59
381970.763853210.2	381970.76	3853210.20	FENCEINT	4.72	7.51	0.65	0.59
381970.793853220.1	381970.79	3853220.10	FENCEINT	4.75	7.53	0.66	0.60
381970.833853229.99	381970.83	3853229.99	FENCEINT	4.78	7.55	0.67	0.60
381970.863853239.89	381970.86	3853239.89	FENCEINT	4.80	7.56	0.67	0.61
381970.893853249.79	381970.89	3853249.79	FENCEINT	4.82	7.57	0.67	0.61
381970.933853259.68	381970.93	3853259.68	FENCEINT	4.84	7.58	0.67	0.62
381970.963853269.58	381970.96	3853269.58	FENCEINT	4.86	7.59	0.67	0.62
381970.993853279.47	381970.99	3853279.47	FENCEINT	4.90	7.60	0.68	0.63
381971.033853289.37	381971.03	3853289.37	FENCEINT	4.92	7.60	0.68	0.63
381971.063853299.26	381971.06	3853299.26	FENCEINT	4.93	7.61	0.68	0.64
381971.093853309.16	381971.09	3853309.16	FENCEINT	4.94	7.61	0.68	0.64
381971.133853319.06	381971.13	3853319.06	FENCEINT	4.96	7.62	0.69	0.65
381971.163853328.95	381971.16	3853328.95	FENCEINT	4.97	7.63	0.69	0.66
381971.193853338.85	381971.19	3853338.85	FENCEINT	4.99	7.64	0.70	0.67
381971.233853348.74	381971.23	3853348.74	FENCEINT	5.00	7.65	0.70	0.69
381971.263853358.64	381971.26	3853358.64	FENCEINT	5.00	7.64	0.73	0.72
381971.293853368.53	381971.29	3853368.53	FENCEINT	5.00	7.62	0.76	0.74
381971.333853378.43	381971.33	3853378.43	FENCEINT	5.02	7.62	0.79	0.77
381971.363853388.33	381971.36	3853388.33	FENCEINT	5.03	7.63	0.82	0.80
381971.393853398.22	381971.39	3853398.22	FENCEINT	5.04	7.63	0.85	0.83
381971.433853408.12	381971.43	3853408.12	FENCEINT	5.04	7.63	0.87	0.85
381971.463853418.01	381971.46	3853418.01	FENCEINT	5.05	7.63	0.90	0.88
381971.493853427.91	381971.49	3853427.91	FENCEINT	5.07	7.62	0.93	0.90
381971.533853437.8	381971.53	3853437.80	FENCEINT	5.07	7.61	0.95	0.92
381971.563853447.7	381971.56	3853447.70	FENCEINT	5.05	7.60	0.97	0.94
381971.593853457.6	381971.59	3853457.60	FENCEINT	5.03	7.59	0.99	0.96
381971.623853467.49	381971.62	3853467.49	FENCEINT	5.03	7.59	1.01	0.98
381971.663853477.39	381971.66	3853477.39	FENCEINT	5.05	7.58	1.02	0.99
381971.693853487.28	381971.69	3853487.28	FENCEINT	5.03	7.57	1.04	1.01
381971.723853497.18	381971.72	3853497.18	FENCEINT	5.03	7.57	1.06	1.03
381971.763853507.08	381971.76	3853507.08	FENCEINT	5.02	7.55	1.07	1.05
381971.793853516.97	381971.79	3853516.97	FENCEINT	4.99	7.54	1.08	1.06
381971.823853526.87	381971.82	3853526.87	FENCEINT	4.98	7.53	1.09	1.08
381971.863853536.76	381971.86	3853536.76	FENCEINT	4.98	7.52	1.11	1.11
381971.893853546.66	381971.89	3853546.66	FENCEINT	4.97	7.51	1.13	1.13
381971.923853556.55	381971.92	3853556.55	FENCEINT	4.95	7.50	1.15	1.16
381971.963853566.45	381971.96	3853566.45	FENCEINT	4.94	7.48	1.17	1.18
381971.993853576.35	381971.99	3853576.35	FENCEINT	4.93	7.47	1.20	1.22
381972.023853586.24	381972.02	3853586.24	FENCEINT	4.91	7.45	1.22	1.25

## Unitized Emission Rates for PM10/PM2.5

Averaging Time: 24-hr

XY	X	Y	Group	AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s			
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST
381972.063853596.14	381972.06	3853596.14	FENCEINT	4.87	7.42	1.26	1.28
381972.093853606.03	381972.09	3853606.03	FENCEINT	4.85	7.40	1.29	1.32
381972.123853615.93	381972.12	3853615.93	FENCEINT	4.82	7.37	1.32	1.38
381972.163853625.82	381972.16	3853625.82	FENCEINT	4.81	7.33	1.36	1.46
381972.193853635.72	381972.19	3853635.72	FENCEINT	4.79	7.30	1.44	1.53
381972.223853645.62	381972.22	3853645.62	FENCEINT	4.76	7.26	1.52	1.61
381972.263853655.51	381972.26	3853655.51	FENCEINT	4.74	7.21	1.60	1.70
381972.293853665.41	381972.29	3853665.41	FENCEINT	4.70	7.16	1.69	1.79
381972.323853675.3	381972.32	3853675.30	FENCEINT	4.66	7.10	1.79	1.88
381972.363853685.2	381972.36	3853685.20	FENCEINT	4.61	7.04	1.90	1.99
381972.393853695.09	381972.39	3853695.09	FENCEINT	4.56	6.98	2.01	2.11
381972.423853704.99	381972.42	3853704.99	FENCEINT	4.53	6.91	2.15	2.24
381972.463853714.89	381972.46	3853714.89	FENCEINT	4.51	6.83	2.29	2.39
381972.493853724.78	381972.49	3853724.78	FENCEINT	4.50	6.75	2.46	2.56
381972.523853734.68	381972.52	3853734.68	FENCEINT	4.48	6.66	2.64	2.76
381972.563853744.57	381972.56	3853744.57	FENCEINT	4.45	6.57	2.86	2.99
381972.593853754.47	381972.59	3853754.47	FENCEINT	4.43	6.56	3.11	3.27
381972.623853764.36	381972.62	3853764.36	FENCEINT	4.44	6.54	3.41	3.60
381972.663853774.26	381972.66	3853774.26	FENCEINT	4.45	6.50	3.78	4.01
381972.693853784.16	381972.69	3853784.16	FENCEINT	4.45	6.46	4.23	4.53
381972.723853794.05	381972.72	3853794.05	FENCEINT	4.46	6.40	4.81	5.21
381972.763853803.95	381972.76	3853803.95	FENCEINT	4.47	6.32	5.56	6.14
381972.793853813.84	381972.79	3853813.84	FENCEINT	4.47	6.21	6.59	7.52
381972.823853823.74	381972.82	3853823.74	FENCEINT	4.48	6.13	8.05	9.87
381972.863853833.63	381972.86	3853833.63	FENCEINT	4.48	6.13	10.27	14.82
381962.923853843.66	381962.92	3853843.66	FENCEINT	4.53	6.23	10.67	15.75
381952.963853843.79	381952.96	3853843.79	FENCEINT	4.53	6.23	10.91	17.06
381942.993853843.92	381942.99	3853843.92	FENCEINT	4.52	6.21	12.09	19.45
381933.023853844.04	381933.02	3853844.04	FENCEINT	4.50	6.20	10.58	15.62
381923.063853844.17	381923.06	3853844.17	FENCEINT	4.49	6.17	10.70	16.23
381913.093853844.3	381913.09	3853844.30	FENCEINT	4.47	6.14	11.99	19.21
381903.123853844.43	381903.12	3853844.43	FENCEINT	4.46	6.12	10.49	15.58
381893.163853844.56	381893.16	3853844.56	FENCEINT	4.44	6.10	10.60	15.67
381883.193853844.69	381883.19	3853844.69	FENCEINT	4.42	6.08	10.94	17.17
381873.223853844.82	381873.22	3853844.82	FENCEINT	4.40	6.05	12.01	19.49
381863.253853844.94	381863.25	3853844.94	FENCEINT	4.37	6.03	10.50	15.53
381853.293853845.07	381853.29	3853845.07	FENCEINT	4.36	6.02	10.64	16.32
381843.323853845.2	381843.32	3853845.20	FENCEINT	4.33	5.99	11.91	19.12
381833.353853845.33	381833.35	3853845.33	FENCEINT	4.31	5.96	10.42	15.47
381823.393853845.46	381823.39	3853845.46	FENCEINT	4.29	5.94	10.52	15.59
381813.423853845.59	381813.42	3853845.59	FENCEINT	4.26	5.91	10.98	17.28
381803.453853845.72	381803.45	3853845.72	FENCEINT	4.23	5.88	11.92	19.59
381793.493853845.84	381793.49	3853845.84	FENCEINT	4.21	5.86	10.41	15.42
381783.523853845.97	381783.52	3853845.97	FENCEINT	4.19	5.85	10.68	16.41

## Unitized Emission Rates for PM10/PM2.5

Averaging Time: 24-hr				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s			
XY	X	Y	Group	OFFROAD	ON_DUST	HAUL_EX	HAUL_DST
381773.553853846.1	381773.55	3853846.10	FENCEINT	4.17	5.84	11.81	19.02
381763.593853846.23	381763.59	3853846.23	FENCEINT	4.15	5.85	10.31	15.35
381753.623853846.36	381753.62	3853846.36	FENCEINT	4.11	5.87	10.42	15.62
381743.653853846.49	381743.65	3853846.49	FENCEINT	4.08	5.89	11.01	17.37
381733.693853846.62	381733.69	3853846.62	FENCEINT	4.05	5.90	11.82	19.70
381723.723853846.75	381723.72	3853846.75	FENCEINT	4.03	5.91	10.31	15.31
381713.753853846.87	381713.75	3853846.87	FENCEINT	4.00	5.93	10.72	16.50
381703.793853847	381703.79	3853847.00	FENCEINT	3.97	5.94	11.70	18.90
381693.823853847.13	381693.82	3853847.13	FENCEINT	3.97	5.94	10.21	15.20
381683.853853847.26	381683.85	3853847.26	FENCEINT	3.97	5.95	10.42	15.70
381673.883853847.39	381673.88	3853847.39	FENCEINT	3.97	5.94	11.04	17.48
381663.923853847.52	381663.92	3853847.52	FENCEINT	3.98	5.94	11.76	19.82
381653.953853847.65	381653.95	3853847.65	FENCEINT	3.98	5.95	10.20	15.16
381643.983853847.77	381643.98	3853847.77	FENCEINT	3.99	5.96	10.75	16.60
381634.023853847.9	381634.02	3853847.90	FENCEINT	4.01	5.96	11.60	18.85
381624.053853848.03	381624.05	3853848.03	FENCEINT	4.01	5.95	10.09	15.04
381614.083853848.16	381614.08	3853848.16	FENCEINT	4.00	5.95	10.45	15.80
381604.123853848.29	381604.12	3853848.29	FENCEINT	3.98	5.95	11.08	17.58
381594.153853848.42	381594.15	3853848.42	FENCEINT	3.98	5.95	11.79	19.91
381584.183853848.55	381584.18	3853848.55	FENCEINT	3.97	5.94	10.16	15.05
381574.223853848.67	381574.22	3853848.67	FENCEINT	3.96	5.93	10.78	16.70
381564.253853848.8	381564.25	3853848.80	FENCEINT	3.96	5.93	11.52	18.95
381554.283853848.93	381554.28	3853848.93	FENCEINT	3.95	5.93	9.92	14.81
381544.323853849.06	381544.32	3853849.06	FENCEINT	3.94	5.92	10.49	15.89
381534.353853849.19	381534.35	3853849.19	FENCEINT	3.92	5.91	11.11	17.69
381524.383853849.32	381524.38	3853849.32	FENCEINT	3.93	5.90	11.81	20.02
381514.423853849.45	381514.42	3853849.45	FENCEINT	3.92	5.90	10.19	15.13
381504.453853849.57	381504.45	3853849.57	FENCEINT	3.90	5.93	10.81	16.79
381494.483853849.7	381494.48	3853849.70	FENCEINT	3.90	5.95	11.55	19.05
381484.523853849.83	381484.52	3853849.83	FENCEINT	3.91	5.96	9.89	14.49
381474.553853849.96	381474.55	3853849.96	FENCEINT	3.93	5.98	10.51	15.97
381464.583853850.09	381464.58	3853850.09	FENCEINT	3.94	6.00	11.28	18.16
381454.613853850.22	381454.61	3853850.22	FENCEINT	3.95	6.01	11.83	20.12
381444.653853850.35	381444.65	3853850.35	FENCEINT	3.97	6.04	10.22	15.21
381434.683853850.47	381434.68	3853850.47	FENCEINT	3.98	6.06	10.84	16.88
381424.713853850.6	381424.71	3853850.60	FENCEINT	3.99	6.07	11.57	19.15
381414.753853850.73	381414.75	3853850.73	FENCEINT	4.00	6.09	9.92	14.51
381404.783853850.86	381404.78	3853850.86	FENCEINT	4.01	6.11	10.54	16.05
381394.813853850.99	381394.81	3853850.99	FENCEINT	4.02	6.13	11.30	18.24
381384.853853851.12	381384.85	3853851.12	FENCEINT	4.03	6.15	9.63	13.93
381374.883853851.25	381374.88	3853851.25	FENCEINT	4.06	6.17	10.24	15.28
381364.913853851.38	381364.91	3853851.38	FENCEINT	4.08	6.18	10.86	16.97
381354.953853851.5	381354.95	3853851.50	FENCEINT	4.10	6.20	11.58	19.23
381344.983853851.63	381344.98	3853851.63	FENCEINT	4.12	6.22	9.94	14.56

## Unitized Emission Rates for PM10/PM2.5

Averaging Time: 24-hr				AERMOD Concentrations (ug/m <sup>3</sup> ) @ 1 g/s			
XY	X	Y	Group	OFFROAD	ON_DUST	HAUL_EX	HAUL_DST
381335.013853851.76	381335.01	3853851.76	FENCEINT	4.15	6.25	10.56	16.11
381325.053853851.89	381325.05	3853851.89	FENCEINT	4.17	6.26	11.31	18.31
381315.083853852.02	381315.08	3853852.02	FENCEINT	4.20	6.28	9.64	13.91
381305.113853852.15	381305.11	3853852.15	FENCEINT	4.22	6.30	10.25	15.33
381295.153853852.28	381295.15	3853852.28	FENCEINT	4.24	6.31	10.87	17.03
381285.183853852.4	381285.18	3853852.40	FENCEINT	4.26	6.33	11.59	19.29
381275.213853852.53	381275.21	3853852.53	FENCEINT	4.27	6.35	9.94	14.60
381265.243853852.66	381265.24	3853852.66	FENCEINT	4.29	6.36	10.56	16.15
381255.283853852.79	381255.28	3853852.79	FENCEINT	4.30	6.37	11.30	18.35
381245.313853852.92	381245.31	3853852.92	FENCEINT	4.32	6.38	9.62	13.91
381235.343853853.05	381235.34	3853853.05	FENCEINT	4.33	6.39	10.22	15.32
381225.383853853.18	381225.38	3853853.18	FENCEINT	4.34	6.39	10.82	17.01
381215.413853853.3	381215.41	3853853.30	FENCEINT	4.32	6.38	11.51	19.23
381205.443853853.43	381205.44	3853853.43	FENCEINT	4.33	6.35	9.83	14.46
381195.483853853.56	381195.48	3853853.56	FENCEINT	4.35	6.29	10.40	15.91
381207.283853216.51	381207.28	3853216.51	RESIDENT	3.99	4.11	0.66	0.69
381206.463853158.25	381206.46	3853158.25	RESIDENT	3.87	3.99	0.60	0.58
381133.443853006.47	381133.44	3853006.47	RESIDENT	2.59	2.66	0.53	0.50
381572.573853899.35	381572.57	3853899.35	RESIDENT	3.06	3.40	5.38	5.75
381635.293853878.64	381635.29	3853878.64	RESIDENT	3.24	3.78	9.40	11.47
381724.423853880.35	381724.42	3853880.35	RESIDENT	3.14	3.57	8.72	10.15
381769.333854066.93	381769.33	3854066.93	RESIDENT	1.63	1.85	1.35	1.39
380838.73853925.28	380838.70	3853925.28	RESIDENT	1.74	1.83	1.63	2.18
380776.713853911.67	380776.71	3853911.67	RESIDENT	1.59	1.62	1.51	2.05
381905.063854191.95	381905.06	3854191.95	RESIDENT	1.25	1.34	0.94	0.96
381897.523854254.79	381897.52	3854254.79	RESIDENT	1.13	1.20	0.81	0.83
381770.173854255.62	381770.17	3854255.62	RESIDENT	1.17	1.32	0.81	0.83
381846.773853931.2	381846.77	3853931.20	RESIDENT	2.47	2.61	3.17	3.42
382759.033853899.12	382759.03	3853899.12	RESIDENT	1.25	1.32	4.62	4.74
382948.913853890.37	382948.91	3853890.37	RESIDENT	1.12	1.16	5.21	5.42
382818.213853903.75	382818.21	3853903.75	RESIDENT	1.21	1.27	4.24	4.32
382658.823853065.93	382658.82	3853065.93	RESIDENT	1.34	1.45	0.46	0.46
382705.843853071.63	382705.84	3853071.63	RESIDENT	1.25	1.32	0.46	0.46
382739.323853070.2	382739.32	3853070.20	RESIDENT	1.22	1.25	0.46	0.46
382765.673853062.36	382765.67	3853062.36	RESIDENT	1.20	1.23	0.46	0.46
380838.253852648.62	380838.25	3852648.62	RESIDENT	1.20	1.37	0.40	0.40
380596.713852456.08	380596.71	3852456.08	RESIDENT	0.98	1.10	0.35	0.36
380344.573853233.38	380344.57	3853233.38	RESIDENT	1.26	1.30	0.71	0.70
380414.583853989.01	380414.58	3853989.01	RESIDENT	1.17	1.22	1.08	1.40
380454.013853958.13	380454.01	3853958.13	RESIDENT	1.20	1.25	1.15	1.50

RESIDENTIAL DOSE

				3rd Tri		0<2		3rd Tri		0<2	
				Project Concentrations (µg/m <sup>3</sup> )		Project Concentrations (µg/m <sup>3</sup> )		Dose (mg/kg-day)		Dose (mg/kg-day)	
XY	X	Y	Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX
381185.513853853.69	381186	3853854	FENCEPRI	1.01E-02	1.49E-04	1.02E-02	1.34E-04	3.51E-06	5.14E-08	1.07E-05	1.40E-07
381185.513853302.3	381186	3853302	FENCEPRI	2.68E-02	4.08E-06	2.70E-02	3.66E-06	9.28E-06	1.41E-09	2.82E-05	3.83E-09
381280.93853302.3	381281	3853302	FENCEPRI	4.10E-02	4.25E-06	4.14E-02	3.82E-06	1.42E-05	1.47E-09	4.33E-05	3.99E-09
381281.463853039.66	381281	3853040	FENCEPRI	2.37E-02	2.56E-06	2.39E-02	2.30E-06	8.19E-06	8.88E-10	2.49E-05	2.41E-09
381970.163853032.08	381970	3853032	FENCEPRI	1.89E-02	2.93E-06	1.90E-02	2.63E-06	6.53E-06	1.01E-09	1.99E-05	2.75E-09
381972.893853843.53	381973	3853844	FENCEPRI	3.83E-02	2.78E-04	3.86E-02	2.50E-04	1.33E-05	9.61E-08	4.04E-05	2.61E-07
381185.513853843.84	381186	3853844	FENCEINT	1.25E-02	1.53E-04	1.26E-02	1.37E-04	4.34E-06	5.29E-08	1.32E-05	1.44E-07
381185.513853834	381186	3853834	FENCEINT	1.53E-02	1.11E-04	1.54E-02	1.00E-04	5.28E-06	3.86E-08	1.61E-05	1.05E-07
381185.513853824.15	381186	3853824	FENCEINT	1.76E-02	8.60E-05	1.78E-02	7.72E-05	6.11E-06	2.98E-08	1.86E-05	8.07E-08
381185.513853814.3	381186	3853814	FENCEINT	1.95E-02	6.89E-05	1.97E-02	6.19E-05	6.77E-06	2.39E-08	2.06E-05	6.47E-08
381185.513853804.46	381186	3853804	FENCEINT	2.11E-02	5.70E-05	2.13E-02	5.12E-05	7.31E-06	1.97E-08	2.23E-05	5.35E-08
381185.513853794.61	381186	3853795	FENCEINT	2.24E-02	4.83E-05	2.26E-02	4.34E-05	7.75E-06	1.67E-08	2.36E-05	4.53E-08
381185.513853784.77	381186	3853785	FENCEINT	2.35E-02	4.16E-05	2.37E-02	3.74E-05	8.13E-06	1.44E-08	2.48E-05	3.91E-08
381185.513853774.92	381186	3853775	FENCEINT	2.44E-02	3.65E-05	2.46E-02	3.28E-05	8.45E-06	1.26E-08	2.57E-05	3.42E-08
381185.513853765.07	381186	3853765	FENCEINT	2.52E-02	3.23E-05	2.54E-02	2.91E-05	8.72E-06	1.12E-08	2.66E-05	3.04E-08
381185.513853755.23	381186	3853755	FENCEINT	2.59E-02	2.90E-05	2.61E-02	2.60E-05	8.96E-06	1.00E-08	2.73E-05	2.72E-08
381185.513853745.38	381186	3853745	FENCEINT	2.65E-02	2.62E-05	2.67E-02	2.35E-05	9.17E-06	9.07E-09	2.79E-05	2.46E-08
381185.513853735.54	381186	3853736	FENCEINT	2.70E-02	2.39E-05	2.72E-02	2.15E-05	9.35E-06	8.27E-09	2.85E-05	2.24E-08
381185.513853725.69	381186	3853726	FENCEINT	2.75E-02	2.19E-05	2.77E-02	1.97E-05	9.51E-06	7.59E-09	2.90E-05	2.06E-08
381185.513853715.84	381186	3853716	FENCEINT	2.79E-02	2.02E-05	2.82E-02	1.82E-05	9.67E-06	7.00E-09	2.94E-05	1.90E-08
381185.513853706	381186	3853706	FENCEINT	2.83E-02	1.87E-05	2.86E-02	1.68E-05	9.81E-06	6.49E-09	2.99E-05	1.76E-08
381185.513853696.15	381186	3853696	FENCEINT	2.87E-02	1.74E-05	2.89E-02	1.57E-05	9.93E-06	6.04E-09	3.02E-05	1.64E-08
381185.513853686.3	381186	3853686	FENCEINT	2.90E-02	1.63E-05	2.93E-02	1.47E-05	1.00E-05	5.65E-09	3.06E-05	1.53E-08
381185.513853676.46	381186	3853676	FENCEINT	2.93E-02	1.53E-05	2.96E-02	1.37E-05	1.01E-05	5.30E-09	3.09E-05	1.44E-08
381185.513853666.61	381186	3853667	FENCEINT	2.96E-02	1.44E-05	2.98E-02	1.29E-05	1.02E-05	4.98E-09	3.12E-05	1.35E-08
381185.513853656.76	381186	3853657	FENCEINT	2.98E-02	1.36E-05	3.01E-02	1.22E-05	1.03E-05	4.70E-09	3.14E-05	1.28E-08
381185.513853646.92	381186	3853647	FENCEINT	3.01E-02	1.29E-05	3.03E-02	1.15E-05	1.04E-05	4.45E-09	3.17E-05	1.21E-08
381185.513853637.07	381186	3853637	FENCEINT	3.03E-02	1.22E-05	3.05E-02	1.10E-05	1.05E-05	4.22E-09	3.19E-05	1.15E-08
381185.513853627.23	381186	3853627	FENCEINT	3.05E-02	1.16E-05	3.08E-02	1.04E-05	1.06E-05	4.01E-09	3.22E-05	1.09E-08
381185.513853617.38	381186	3853617	FENCEINT	3.07E-02	1.10E-05	3.10E-02	9.92E-06	1.06E-05	3.82E-09	3.24E-05	1.04E-08
381185.513853607.53	381186	3853608	FENCEINT	3.09E-02	1.05E-05	3.11E-02	9.47E-06	1.07E-05	3.65E-09	3.26E-05	9.89E-09
381185.513853597.69	381186	3853598	FENCEINT	3.10E-02	1.01E-05	3.13E-02	9.05E-06	1.07E-05	3.49E-09	3.27E-05	9.46E-09
381185.513853587.84	381186	3853588	FENCEINT	3.12E-02	9.64E-06	3.15E-02	8.66E-06	1.08E-05	3.34E-09	3.29E-05	9.05E-09
381185.513853578	381186	3853578	FENCEINT	3.13E-02	9.24E-06	3.16E-02	8.30E-06	1.09E-05	3.20E-09	3.30E-05	8.68E-09
381185.513853568.15	381186	3853568	FENCEINT	3.15E-02	8.88E-06	3.18E-02	7.98E-06	1.09E-05	3.07E-09	3.32E-05	8.34E-09
381185.513853558.3	381186	3853558	FENCEINT	3.16E-02	8.53E-06	3.19E-02	7.67E-06	1.09E-05	2.95E-09	3.33E-05	8.01E-09
381185.513853548.46	381186	3853548	FENCEINT	3.17E-02	8.22E-06	3.20E-02	7.38E-06	1.10E-05	2.84E-09	3.35E-05	7.71E-09
381185.513853538.61	381186	3853539	FENCEINT	3.18E-02	7.91E-06	3.21E-02	7.11E-06	1.10E-05	2.74E-09	3.36E-05	7.43E-09
381185.513853528.76	381186	3853529	FENCEINT	3.19E-02	7.63E-06	3.22E-02	6.86E-06	1.10E-05	2.64E-09	3.36E-05	7.17E-09
381185.513853518.92	381186	3853519	FENCEINT	3.20E-02	7.37E-06	3.22E-02	6.62E-06	1.11E-05	2.55E-09	3.37E-05	6.92E-09
381185.513853509.07	381186	3853509	FENCEINT	3.20E-02	7.12E-06	3.23E-02	6.40E-06	1.11E-05	2.46E-09	3.37E-05	6.69E-09
381185.513853499.22	381186	3853499	FENCEINT	3.20E-02	6.88E-06	3.23E-02	6.19E-06	1.11E-05	2.38E-09	3.38E-05	6.47E-09
381185.513853489.38	381186	3853489	FENCEINT	3.21E-02	6.66E-06	3.23E-02	5.99E-06	1.11E-05	2.31E-09	3.38E-05	6.26E-09
381185.513853479.53	381186	3853480	FENCEINT	3.21E-02	6.46E-06	3.24E-02	5.80E-06	1.11E-05	2.23E-09	3.38E-05	6.06E-09
381185.513853469.69	381186	3853470	FENCEINT	3.21E-02	6.26E-06	3.24E-02	5.62E-06	1.11E-05	2.17E-09	3.38E-05	5.88E-09



RESIDENTIAL DOSE

				3rd Tri		0<2		3rd Tri		0<2	
				Project Concentrations (µg/m <sup>3</sup> )		Project Concentrations (µg/m <sup>3</sup> )		Dose (mg/kg-day)		Dose (mg/kg-day)	
XY	X	Y	Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX
381185.513853459.84	381186	3853460	FENCEINT	3.21E-02	6.07E-06	3.24E-02	5.46E-06	1.11E-05	2.10E-09	3.38E-05	5.70E-09
381185.513853449.99	381186	3853450	FENCEINT	3.21E-02	5.90E-06	3.24E-02	5.30E-06	1.11E-05	2.04E-09	3.39E-05	5.54E-09
381185.513853440.15	381186	3853440	FENCEINT	3.21E-02	5.74E-06	3.24E-02	5.15E-06	1.11E-05	1.99E-09	3.39E-05	5.39E-09
381185.513853430.3	381186	3853430	FENCEINT	3.21E-02	5.58E-06	3.24E-02	5.01E-06	1.11E-05	1.93E-09	3.39E-05	5.24E-09
381185.513853420.46	381186	3853420	FENCEINT	3.21E-02	5.43E-06	3.24E-02	4.88E-06	1.11E-05	1.88E-09	3.38E-05	5.10E-09
381185.513853410.61	381186	3853411	FENCEINT	3.21E-02	5.28E-06	3.23E-02	4.75E-06	1.11E-05	1.83E-09	3.38E-05	4.96E-09
381185.513853400.76	381186	3853401	FENCEINT	3.20E-02	5.15E-06	3.23E-02	4.62E-06	1.11E-05	1.78E-09	3.37E-05	4.83E-09
381185.513853390.92	381186	3853391	FENCEINT	3.19E-02	5.02E-06	3.22E-02	4.51E-06	1.10E-05	1.74E-09	3.36E-05	4.71E-09
381185.513853381.07	381186	3853381	FENCEINT	3.18E-02	4.90E-06	3.21E-02	4.40E-06	1.10E-05	1.69E-09	3.35E-05	4.60E-09
381185.513853371.22	381186	3853371	FENCEINT	3.17E-02	4.78E-06	3.20E-02	4.30E-06	1.10E-05	1.66E-09	3.34E-05	4.49E-09
381185.513853361.38	381186	3853361	FENCEINT	3.15E-02	4.67E-06	3.17E-02	4.19E-06	1.09E-05	1.62E-09	3.32E-05	4.38E-09
381185.513853351.53	381186	3853352	FENCEINT	3.12E-02	4.56E-06	3.15E-02	4.10E-06	1.08E-05	1.58E-09	3.29E-05	4.28E-09
381185.513853341.68	381186	3853342	FENCEINT	3.08E-02	4.45E-06	3.11E-02	4.00E-06	1.07E-05	1.54E-09	3.25E-05	4.18E-09
381185.513853331.84	381186	3853332	FENCEINT	3.03E-02	4.35E-06	3.06E-02	3.91E-06	1.05E-05	1.51E-09	3.19E-05	4.09E-09
381185.513853321.99	381186	3853322	FENCEINT	2.95E-02	4.26E-06	2.98E-02	3.83E-06	1.02E-05	1.47E-09	3.11E-05	4.00E-09
381185.513853312.15	381186	3853312	FENCEINT	2.84E-02	4.17E-06	2.87E-02	3.74E-06	9.84E-06	1.44E-09	3.00E-05	3.91E-09
381195.053853302.3	381195	3853302	FENCEINT	2.77E-02	4.09E-06	2.79E-02	3.68E-06	9.57E-06	1.42E-09	2.92E-05	3.84E-09
381204.593853302.3	381205	3853302	FENCEINT	2.88E-02	4.11E-06	2.90E-02	3.69E-06	9.97E-06	1.42E-09	3.04E-05	3.86E-09
381214.133853302.3	381214	3853302	FENCEINT	3.03E-02	4.13E-06	3.05E-02	3.71E-06	1.05E-05	1.43E-09	3.19E-05	3.88E-09
381223.673853302.3	381224	3853302	FENCEINT	3.18E-02	4.15E-06	3.21E-02	3.73E-06	1.10E-05	1.44E-09	3.35E-05	3.89E-09
381233.213853302.3	381233	3853302	FENCEINT	3.34E-02	4.16E-06	3.37E-02	3.74E-06	1.16E-05	1.44E-09	3.52E-05	3.91E-09
381242.743853302.3	381243	3853302	FENCEINT	3.49E-02	4.18E-06	3.53E-02	3.76E-06	1.21E-05	1.45E-09	3.68E-05	3.93E-09
381252.283853302.3	381252	3853302	FENCEINT	3.66E-02	4.20E-06	3.69E-02	3.77E-06	1.27E-05	1.45E-09	3.85E-05	3.94E-09
381261.823853302.3	381262	3853302	FENCEINT	3.82E-02	4.22E-06	3.85E-02	3.79E-06	1.32E-05	1.46E-09	4.03E-05	3.96E-09
381271.363853302.3	381271	3853302	FENCEINT	3.97E-02	4.23E-06	4.01E-02	3.80E-06	1.38E-05	1.46E-09	4.19E-05	3.97E-09
381280.923853292.57	381281	3853293	FENCEINT	3.87E-02	4.16E-06	3.90E-02	3.74E-06	1.34E-05	1.44E-09	4.08E-05	3.90E-09
381280.943853282.85	381281	3853283	FENCEINT	3.70E-02	4.07E-06	3.73E-02	3.65E-06	1.28E-05	1.41E-09	3.90E-05	3.82E-09
381280.963853273.12	381281	3853273	FENCEINT	3.58E-02	3.98E-06	3.61E-02	3.58E-06	1.24E-05	1.38E-09	3.77E-05	3.74E-09
381280.983853263.39	381281	3853263	FENCEINT	3.50E-02	3.90E-06	3.53E-02	3.50E-06	1.21E-05	1.35E-09	3.69E-05	3.66E-09
3812813853253.66	381281	3853254	FENCEINT	3.44E-02	3.82E-06	3.47E-02	3.43E-06	1.19E-05	1.32E-09	3.62E-05	3.58E-09
381281.023853243.94	381281	3853244	FENCEINT	3.39E-02	3.74E-06	3.42E-02	3.36E-06	1.17E-05	1.29E-09	3.58E-05	3.51E-09
381281.053853234.21	381281	3853234	FENCEINT	3.36E-02	3.66E-06	3.39E-02	3.29E-06	1.16E-05	1.27E-09	3.54E-05	3.44E-09
381281.073853224.48	381281	3853224	FENCEINT	3.33E-02	3.59E-06	3.36E-02	3.23E-06	1.15E-05	1.24E-09	3.51E-05	3.37E-09
381281.093853214.75	381281	3853215	FENCEINT	3.30E-02	3.52E-06	3.33E-02	3.16E-06	1.14E-05	1.22E-09	3.48E-05	3.31E-09
381281.113853205.03	381281	3853205	FENCEINT	3.28E-02	3.45E-06	3.31E-02	3.10E-06	1.14E-05	1.20E-09	3.46E-05	3.24E-09
381281.133853195.3	381281	3853195	FENCEINT	3.26E-02	3.39E-06	3.29E-02	3.04E-06	1.13E-05	1.17E-09	3.44E-05	3.18E-09
381281.153853185.57	381281	3853186	FENCEINT	3.25E-02	3.32E-06	3.27E-02	2.99E-06	1.12E-05	1.15E-09	3.42E-05	3.12E-09
381281.173853175.84	381281	3853176	FENCEINT	3.23E-02	3.26E-06	3.25E-02	2.93E-06	1.12E-05	1.13E-09	3.40E-05	3.06E-09
381281.193853166.12	381281	3853166	FENCEINT	3.21E-02	3.20E-06	3.24E-02	2.88E-06	1.11E-05	1.11E-09	3.38E-05	3.01E-09
381281.213853156.39	381281	3853156	FENCEINT	3.19E-02	3.15E-06	3.21E-02	2.83E-06	1.10E-05	1.09E-09	3.36E-05	2.95E-09
381281.233853146.66	381281	3853147	FENCEINT	3.17E-02	3.09E-06	3.19E-02	2.78E-06	1.10E-05	1.07E-09	3.34E-05	2.90E-09
381281.253853136.93	381281	3853137	FENCEINT	3.14E-02	3.04E-06	3.17E-02	2.73E-06	1.09E-05	1.05E-09	3.31E-05	2.85E-09
381281.273853127.21	381281	3853127	FENCEINT	3.12E-02	2.98E-06	3.14E-02	2.68E-06	1.08E-05	1.03E-09	3.29E-05	2.80E-09
381281.293853117.48	381281	3853117	FENCEINT	3.09E-02	2.93E-06	3.11E-02	2.63E-06	1.07E-05	1.01E-09	3.25E-05	2.75E-09
381281.313853107.75	381281	3853108	FENCEINT	3.05E-02	2.88E-06	3.07E-02	2.59E-06	1.06E-05	9.97E-10	3.21E-05	2.70E-09

RESIDENTIAL DOSE

				3rd Tri		0<2		3rd Tri		0<2	
				Project Concentrations (µg/m <sup>3</sup> )		Project Concentrations (µg/m <sup>3</sup> )		Dose (mg/kg-day)		Dose (mg/kg-day)	
XY	X	Y	Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX
381281.343853098.02	381281	3853098	FENCEINT	3.01E-02	2.83E-06	3.03E-02	2.54E-06	1.04E-05	9.80E-10	3.17E-05	2.66E-09
381281.363853088.3	381281	3853088	FENCEINT	2.96E-02	2.78E-06	2.98E-02	2.50E-06	1.02E-05	9.64E-10	3.12E-05	2.62E-09
381281.383853078.57	381281	3853079	FENCEINT	2.89E-02	2.74E-06	2.92E-02	2.46E-06	1.00E-05	9.48E-10	3.05E-05	2.57E-09
381281.43853068.84	381281	3853069	FENCEINT	2.81E-02	2.69E-06	2.84E-02	2.42E-06	9.73E-06	9.32E-10	2.96E-05	2.53E-09
381281.423853059.11	381281	3853059	FENCEINT	2.70E-02	2.65E-06	2.73E-02	2.38E-06	9.36E-06	9.17E-10	2.85E-05	2.49E-09
381281.443853049.39	381281	3853049	FENCEINT	2.56E-02	2.61E-06	2.58E-02	2.34E-06	8.86E-06	9.02E-10	2.70E-05	2.45E-09
381291.443853039.55	381291	3853040	FENCEINT	2.43E-02	2.57E-06	2.45E-02	2.31E-06	8.40E-06	8.90E-10	2.56E-05	2.41E-09
381301.423853039.44	381301	3853039	FENCEINT	2.51E-02	2.58E-06	2.53E-02	2.31E-06	8.70E-06	8.92E-10	2.65E-05	2.42E-09
381311.43853039.33	381311	3853039	FENCEINT	2.62E-02	2.58E-06	2.65E-02	2.32E-06	9.08E-06	8.94E-10	2.77E-05	2.42E-09
381321.383853039.22	381321	3853039	FENCEINT	2.74E-02	2.59E-06	2.76E-02	2.32E-06	9.47E-06	8.96E-10	2.88E-05	2.43E-09
381331.373853039.11	381331	3853039	FENCEINT	2.84E-02	2.59E-06	2.86E-02	2.33E-06	9.82E-06	8.98E-10	2.99E-05	2.43E-09
381341.353853039	381341	3853039	FENCEINT	2.93E-02	2.60E-06	2.95E-02	2.33E-06	1.01E-05	8.99E-10	3.08E-05	2.44E-09
381351.333853038.89	381351	3853039	FENCEINT	3.00E-02	2.60E-06	3.03E-02	2.34E-06	1.04E-05	9.01E-10	3.17E-05	2.44E-09
381361.313853038.78	381361	3853039	FENCEINT	3.08E-02	2.61E-06	3.10E-02	2.34E-06	1.06E-05	9.03E-10	3.24E-05	2.45E-09
381371.293853038.67	381371	3853039	FENCEINT	3.14E-02	2.61E-06	3.16E-02	2.35E-06	1.09E-05	9.04E-10	3.31E-05	2.45E-09
381381.273853038.56	381381	3853039	FENCEINT	3.19E-02	2.62E-06	3.22E-02	2.35E-06	1.10E-05	9.06E-10	3.36E-05	2.46E-09
381391.253853038.45	381391	3853038	FENCEINT	3.24E-02	2.62E-06	3.27E-02	2.36E-06	1.12E-05	9.08E-10	3.42E-05	2.46E-09
381401.233853038.34	381401	3853038	FENCEINT	3.29E-02	2.63E-06	3.32E-02	2.36E-06	1.14E-05	9.10E-10	3.47E-05	2.47E-09
381411.223853038.23	381411	3853038	FENCEINT	3.33E-02	2.63E-06	3.36E-02	2.37E-06	1.15E-05	9.12E-10	3.51E-05	2.47E-09
381421.23853038.12	381421	3853038	FENCEINT	3.36E-02	2.64E-06	3.39E-02	2.37E-06	1.16E-05	9.14E-10	3.54E-05	2.48E-09
381431.183853038.01	381431	3853038	FENCEINT	3.39E-02	2.64E-06	3.42E-02	2.38E-06	1.17E-05	9.15E-10	3.57E-05	2.48E-09
381441.163853037.9	381441	3853038	FENCEINT	3.42E-02	2.65E-06	3.45E-02	2.38E-06	1.18E-05	9.17E-10	3.60E-05	2.49E-09
381451.143853037.79	381451	3853038	FENCEINT	3.44E-02	2.66E-06	3.47E-02	2.39E-06	1.19E-05	9.19E-10	3.63E-05	2.49E-09
381461.123853037.68	381461	3853038	FENCEINT	3.47E-02	2.66E-06	3.50E-02	2.39E-06	1.20E-05	9.21E-10	3.65E-05	2.50E-09
381471.13853037.57	381471	3853038	FENCEINT	3.49E-02	2.67E-06	3.52E-02	2.40E-06	1.21E-05	9.23E-10	3.68E-05	2.50E-09
381481.083853037.46	381481	3853037	FENCEINT	3.51E-02	2.67E-06	3.54E-02	2.40E-06	1.21E-05	9.25E-10	3.70E-05	2.51E-09
381491.063853037.35	381491	3853037	FENCEINT	3.53E-02	2.68E-06	3.56E-02	2.41E-06	1.22E-05	9.27E-10	3.72E-05	2.52E-09
381501.053853037.24	381501	3853037	FENCEINT	3.54E-02	2.68E-06	3.57E-02	2.41E-06	1.23E-05	9.29E-10	3.73E-05	2.52E-09
381511.033853037.13	381511	3853037	FENCEINT	3.55E-02	2.69E-06	3.58E-02	2.42E-06	1.23E-05	9.31E-10	3.74E-05	2.53E-09
381521.013853037.02	381521	3853037	FENCEINT	3.56E-02	2.70E-06	3.59E-02	2.42E-06	1.23E-05	9.33E-10	3.75E-05	2.53E-09
381530.993853036.91	381531	3853037	FENCEINT	3.56E-02	2.70E-06	3.59E-02	2.43E-06	1.23E-05	9.35E-10	3.76E-05	2.54E-09
381540.973853036.8	381541	3853037	FENCEINT	3.57E-02	2.71E-06	3.60E-02	2.43E-06	1.23E-05	9.37E-10	3.76E-05	2.54E-09
381550.953853036.69	381551	3853037	FENCEINT	3.57E-02	2.71E-06	3.60E-02	2.44E-06	1.23E-05	9.39E-10	3.76E-05	2.55E-09
381560.933853036.58	381561	3853037	FENCEINT	3.56E-02	2.72E-06	3.60E-02	2.44E-06	1.23E-05	9.41E-10	3.76E-05	2.55E-09
381570.913853036.47	381571	3853036	FENCEINT	3.56E-02	2.72E-06	3.59E-02	2.45E-06	1.23E-05	9.43E-10	3.76E-05	2.56E-09
381580.893853036.36	381581	3853036	FENCEINT	3.56E-02	2.73E-06	3.59E-02	2.45E-06	1.23E-05	9.45E-10	3.76E-05	2.56E-09
381590.883853036.25	381591	3853036	FENCEINT	3.56E-02	2.73E-06	3.59E-02	2.46E-06	1.23E-05	9.47E-10	3.75E-05	2.57E-09
381600.863853036.14	381601	3853036	FENCEINT	3.56E-02	2.74E-06	3.59E-02	2.46E-06	1.23E-05	9.48E-10	3.75E-05	2.57E-09
381610.843853036.03	381611	3853036	FENCEINT	3.55E-02	2.75E-06	3.58E-02	2.47E-06	1.23E-05	9.50E-10	3.74E-05	2.58E-09
381620.823853035.92	381621	3853036	FENCEINT	3.54E-02	2.75E-06	3.57E-02	2.47E-06	1.23E-05	9.52E-10	3.74E-05	2.58E-09
381630.83853035.82	381631	3853036	FENCEINT	3.54E-02	2.76E-06	3.57E-02	2.48E-06	1.23E-05	9.54E-10	3.73E-05	2.59E-09
381640.783853035.71	381641	3853036	FENCEINT	3.54E-02	2.76E-06	3.57E-02	2.48E-06	1.22E-05	9.56E-10	3.73E-05	2.59E-09
381650.763853035.6	381651	3853036	FENCEINT	3.53E-02	2.77E-06	3.56E-02	2.49E-06	1.22E-05	9.58E-10	3.72E-05	2.60E-09
381660.743853035.49	381661	3853035	FENCEINT	3.52E-02	2.77E-06	3.55E-02	2.49E-06	1.22E-05	9.60E-10	3.71E-05	2.60E-09
381670.733853035.38	381671	3853035	FENCEINT	3.51E-02	2.78E-06	3.54E-02	2.50E-06	1.22E-05	9.62E-10	3.70E-05	2.61E-09

RESIDENTIAL DOSE

				3rd Tri		0<2		3rd Tri		0<2	
				Project Concentrations (µg/m <sup>3</sup> )		Project Concentrations (µg/m <sup>3</sup> )		Dose (mg/kg-day)		Dose (mg/kg-day)	
XY	X	Y	Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX
381680.713853035.27	381681	3853035	FENCEINT	3.50E-02	2.78E-06	3.53E-02	2.50E-06	1.21E-05	9.64E-10	3.69E-05	2.62E-09
381690.693853035.16	381691	3853035	FENCEINT	3.50E-02	2.79E-06	3.53E-02	2.51E-06	1.21E-05	9.65E-10	3.69E-05	2.62E-09
381700.673853035.05	381701	3853035	FENCEINT	3.49E-02	2.79E-06	3.52E-02	2.51E-06	1.21E-05	9.67E-10	3.68E-05	2.62E-09
381710.653853034.94	381711	3853035	FENCEINT	3.47E-02	2.80E-06	3.50E-02	2.51E-06	1.20E-05	9.69E-10	3.66E-05	2.63E-09
381720.633853034.83	381721	3853035	FENCEINT	3.46E-02	2.80E-06	3.49E-02	2.52E-06	1.20E-05	9.71E-10	3.64E-05	2.63E-09
381730.613853034.72	381731	3853035	FENCEINT	3.43E-02	2.81E-06	3.46E-02	2.52E-06	1.19E-05	9.73E-10	3.62E-05	2.64E-09
381740.593853034.61	381741	3853035	FENCEINT	3.42E-02	2.81E-06	3.45E-02	2.53E-06	1.18E-05	9.74E-10	3.60E-05	2.64E-09
381750.573853034.5	381751	3853035	FENCEINT	3.39E-02	2.82E-06	3.42E-02	2.53E-06	1.17E-05	9.77E-10	3.57E-05	2.65E-09
381760.563853034.39	381761	3853034	FENCEINT	3.37E-02	2.83E-06	3.39E-02	2.54E-06	1.17E-05	9.78E-10	3.55E-05	2.65E-09
381770.543853034.28	381771	3853034	FENCEINT	3.34E-02	2.83E-06	3.37E-02	2.54E-06	1.16E-05	9.80E-10	3.53E-05	2.66E-09
381780.523853034.17	381781	3853034	FENCEINT	3.32E-02	2.83E-06	3.35E-02	2.55E-06	1.15E-05	9.81E-10	3.50E-05	2.66E-09
381790.53853034.06	381791	3853034	FENCEINT	3.29E-02	2.84E-06	3.32E-02	2.55E-06	1.14E-05	9.83E-10	3.47E-05	2.67E-09
381800.483853033.95	381800	3853034	FENCEINT	3.26E-02	2.85E-06	3.29E-02	2.56E-06	1.13E-05	9.85E-10	3.44E-05	2.67E-09
381810.463853033.84	381810	3853034	FENCEINT	3.23E-02	2.85E-06	3.25E-02	2.56E-06	1.12E-05	9.87E-10	3.40E-05	2.68E-09
381820.443853033.73	381820	3853034	FENCEINT	3.19E-02	2.85E-06	3.22E-02	2.56E-06	1.10E-05	9.88E-10	3.36E-05	2.68E-09
381830.423853033.62	381830	3853034	FENCEINT	3.15E-02	2.86E-06	3.17E-02	2.57E-06	1.09E-05	9.90E-10	3.32E-05	2.69E-09
381840.43853033.51	381840	3853034	FENCEINT	3.11E-02	2.86E-06	3.13E-02	2.57E-06	1.08E-05	9.92E-10	3.27E-05	2.69E-09
381850.393853033.4	381850	3853033	FENCEINT	3.06E-02	2.87E-06	3.08E-02	2.58E-06	1.06E-05	9.94E-10	3.22E-05	2.70E-09
381860.373853033.29	381860	3853033	FENCEINT	3.00E-02	2.87E-06	3.03E-02	2.58E-06	1.04E-05	9.95E-10	3.16E-05	2.70E-09
381870.353853033.18	381870	3853033	FENCEINT	2.94E-02	2.88E-06	2.96E-02	2.59E-06	1.02E-05	9.97E-10	3.10E-05	2.70E-09
381880.333853033.07	381880	3853033	FENCEINT	2.87E-02	2.89E-06	2.90E-02	2.59E-06	9.94E-06	9.99E-10	3.03E-05	2.71E-09
381890.313853032.96	381890	3853033	FENCEINT	2.79E-02	2.89E-06	2.82E-02	2.60E-06	9.67E-06	1.00E-09	2.94E-05	2.72E-09
381900.293853032.85	381900	3853033	FENCEINT	2.71E-02	2.90E-06	2.73E-02	2.60E-06	9.37E-06	1.00E-09	2.85E-05	2.72E-09
381910.273853032.74	381910	3853033	FENCEINT	2.61E-02	2.90E-06	2.63E-02	2.61E-06	9.02E-06	1.00E-09	2.75E-05	2.72E-09
381920.253853032.63	381920	3853033	FENCEINT	2.49E-02	2.91E-06	2.51E-02	2.61E-06	8.62E-06	1.01E-09	2.63E-05	2.73E-09
381930.243853032.52	381930	3853033	FENCEINT	2.36E-02	2.91E-06	2.38E-02	2.61E-06	8.16E-06	1.01E-09	2.49E-05	2.73E-09
381940.223853032.41	381940	3853032	FENCEINT	2.21E-02	2.91E-06	2.23E-02	2.62E-06	7.65E-06	1.01E-09	2.33E-05	2.74E-09
381950.23853032.3	381950	3853032	FENCEINT	2.06E-02	2.92E-06	2.08E-02	2.62E-06	7.13E-06	1.01E-09	2.17E-05	2.74E-09
381960.183853032.19	381960	3853032	FENCEINT	1.94E-02	2.92E-06	1.96E-02	2.63E-06	6.72E-06	1.01E-09	2.05E-05	2.74E-09
381970.193853041.98	381970	3853042	FENCEINT	2.23E-02	2.98E-06	2.25E-02	2.68E-06	7.71E-06	1.03E-09	2.35E-05	2.80E-09
381970.233853051.87	381970	3853052	FENCEINT	2.60E-02	3.05E-06	2.62E-02	2.74E-06	9.01E-06	1.05E-09	2.74E-05	2.86E-09
381970.263853061.77	381970	3853062	FENCEINT	2.94E-02	3.11E-06	2.96E-02	2.79E-06	1.02E-05	1.08E-09	3.10E-05	2.92E-09
381970.293853071.66	381970	3853072	FENCEINT	3.22E-02	3.17E-06	3.25E-02	2.85E-06	1.11E-05	1.10E-09	3.39E-05	2.98E-09
381970.333853081.56	381970	3853082	FENCEINT	3.45E-02	3.24E-06	3.48E-02	2.91E-06	1.20E-05	1.12E-09	3.64E-05	3.04E-09
381970.363853091.45	381970	3853091	FENCEINT	3.65E-02	3.31E-06	3.68E-02	2.97E-06	1.26E-05	1.15E-09	3.85E-05	3.11E-09
381970.393853101.35	381970	3853101	FENCEINT	3.82E-02	3.38E-06	3.85E-02	3.04E-06	1.32E-05	1.17E-09	4.02E-05	3.17E-09
381970.433853111.25	381970	3853111	FENCEINT	3.96E-02	3.45E-06	4.00E-02	3.10E-06	1.37E-05	1.20E-09	4.18E-05	3.24E-09
381970.463853121.14	381970	3853121	FENCEINT	4.09E-02	3.53E-06	4.13E-02	3.17E-06	1.42E-05	1.22E-09	4.32E-05	3.31E-09
381970.493853131.04	381970	3853131	FENCEINT	4.21E-02	3.61E-06	4.24E-02	3.24E-06	1.46E-05	1.25E-09	4.43E-05	3.39E-09
381970.533853140.93	381971	3853141	FENCEINT	4.31E-02	3.69E-06	4.34E-02	3.31E-06	1.49E-05	1.28E-09	4.54E-05	3.46E-09
381970.563853150.83	381971	3853151	FENCEINT	4.40E-02	3.77E-06	4.43E-02	3.39E-06	1.52E-05	1.31E-09	4.63E-05	3.54E-09
381970.593853160.72	381971	3853161	FENCEINT	4.48E-02	3.86E-06	4.51E-02	3.47E-06	1.55E-05	1.34E-09	4.72E-05	3.62E-09
381970.633853170.62	381971	3853171	FENCEINT	4.55E-02	3.95E-06	4.59E-02	3.55E-06	1.57E-05	1.37E-09	4.80E-05	3.71E-09
381970.663853180.52	381971	3853181	FENCEINT	4.62E-02	4.04E-06	4.66E-02	3.63E-06	1.60E-05	1.40E-09	4.87E-05	3.79E-09
381970.693853190.41	381971	3853190	FENCEINT	4.68E-02	4.14E-06	4.72E-02	3.72E-06	1.62E-05	1.43E-09	4.94E-05	3.88E-09

RESIDENTIAL DOSE

				3rd Tri		0<2		3rd Tri		0<2	
				Project Concentrations (µg/m <sup>3</sup> )		Project Concentrations (µg/m <sup>3</sup> )		Dose (mg/kg-day)		Dose (mg/kg-day)	
XY	X	Y	Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX
381970.733853200.31	381971	3853200	FENCEINT	4.74E-02	4.24E-06	4.78E-02	3.81E-06	1.64E-05	1.47E-09	4.99E-05	3.98E-09
381970.763853210.2	381971	3853210	FENCEINT	4.79E-02	4.34E-06	4.83E-02	3.90E-06	1.66E-05	1.50E-09	5.05E-05	4.08E-09
381970.793853220.1	381971	3853220	FENCEINT	4.84E-02	4.45E-06	4.88E-02	3.99E-06	1.67E-05	1.54E-09	5.10E-05	4.18E-09
381970.833853229.99	381971	3853230	FENCEINT	4.89E-02	4.56E-06	4.93E-02	4.09E-06	1.69E-05	1.58E-09	5.15E-05	4.28E-09
381970.863853239.89	381971	3853240	FENCEINT	4.93E-02	4.67E-06	4.97E-02	4.20E-06	1.71E-05	1.62E-09	5.20E-05	4.39E-09
381970.893853249.79	381971	3853250	FENCEINT	4.97E-02	4.79E-06	5.01E-02	4.31E-06	1.72E-05	1.66E-09	5.24E-05	4.50E-09
381970.933853259.68	381971	3853260	FENCEINT	5.01E-02	4.92E-06	5.05E-02	4.42E-06	1.73E-05	1.70E-09	5.28E-05	4.62E-09
381970.963853269.58	381971	3853270	FENCEINT	5.04E-02	5.05E-06	5.08E-02	4.54E-06	1.74E-05	1.75E-09	5.31E-05	4.74E-09
381970.993853279.47	381971	3853279	FENCEINT	5.07E-02	5.18E-06	5.12E-02	4.66E-06	1.76E-05	1.79E-09	5.35E-05	4.87E-09
381971.033853289.37	381971	3853289	FENCEINT	5.10E-02	5.32E-06	5.15E-02	4.78E-06	1.77E-05	1.84E-09	5.38E-05	5.00E-09
381971.063853299.26	381971	3853299	FENCEINT	5.13E-02	5.47E-06	5.18E-02	4.91E-06	1.78E-05	1.89E-09	5.41E-05	5.14E-09
381971.093853309.16	381971	3853309	FENCEINT	5.16E-02	5.62E-06	5.21E-02	5.05E-06	1.79E-05	1.95E-09	5.44E-05	5.28E-09
381971.133853319.06	381971	3853319	FENCEINT	5.19E-02	5.78E-06	5.23E-02	5.20E-06	1.80E-05	2.00E-09	5.47E-05	5.43E-09
381971.163853328.95	381971	3853329	FENCEINT	5.22E-02	5.95E-06	5.26E-02	5.34E-06	1.81E-05	2.06E-09	5.50E-05	5.59E-09
381971.193853338.85	381971	3853339	FENCEINT	5.25E-02	6.12E-06	5.29E-02	5.50E-06	1.82E-05	2.12E-09	5.53E-05	5.75E-09
381971.233853348.74	381971	3853349	FENCEINT	5.27E-02	6.30E-06	5.31E-02	5.66E-06	1.82E-05	2.18E-09	5.55E-05	5.92E-09
381971.263853358.64	381971	3853359	FENCEINT	5.28E-02	6.50E-06	5.33E-02	5.84E-06	1.83E-05	2.25E-09	5.57E-05	6.10E-09
381971.293853368.53	381971	3853369	FENCEINT	5.30E-02	6.70E-06	5.34E-02	6.02E-06	1.83E-05	2.32E-09	5.58E-05	6.29E-09
381971.333853378.43	381971	3853378	FENCEINT	5.32E-02	6.91E-06	5.36E-02	6.21E-06	1.84E-05	2.39E-09	5.60E-05	6.49E-09
381971.363853388.33	381971	3853388	FENCEINT	5.34E-02	7.13E-06	5.38E-02	6.41E-06	1.85E-05	2.47E-09	5.63E-05	6.70E-09
381971.393853398.22	381971	3853398	FENCEINT	5.35E-02	7.37E-06	5.40E-02	6.62E-06	1.85E-05	2.55E-09	5.64E-05	6.92E-09
381971.433853408.12	381971	3853408	FENCEINT	5.37E-02	7.62E-06	5.41E-02	6.84E-06	1.86E-05	2.64E-09	5.66E-05	7.15E-09
381971.463853418.01	381971	3853418	FENCEINT	5.38E-02	7.88E-06	5.43E-02	7.08E-06	1.86E-05	2.73E-09	5.67E-05	7.40E-09
381971.493853427.91	381971	3853428	FENCEINT	5.39E-02	8.15E-06	5.44E-02	7.33E-06	1.87E-05	2.82E-09	5.68E-05	7.66E-09
381971.533853437.8	381972	3853438	FENCEINT	5.39E-02	8.45E-06	5.44E-02	7.59E-06	1.87E-05	2.92E-09	5.68E-05	7.93E-09
381971.563853447.7	381972	3853448	FENCEINT	5.40E-02	8.76E-06	5.44E-02	7.87E-06	1.87E-05	3.03E-09	5.69E-05	8.22E-09
381971.593853457.6	381972	3853458	FENCEINT	5.39E-02	9.09E-06	5.44E-02	8.16E-06	1.87E-05	3.15E-09	5.69E-05	8.53E-09
381971.623853467.49	381972	3853467	FENCEINT	5.40E-02	9.43E-06	5.44E-02	8.47E-06	1.87E-05	3.27E-09	5.69E-05	8.86E-09
381971.663853477.39	381972	3853477	FENCEINT	5.40E-02	9.80E-06	5.45E-02	8.81E-06	1.87E-05	3.39E-09	5.69E-05	9.20E-09
381971.693853487.28	381972	3853487	FENCEINT	5.41E-02	1.02E-05	5.45E-02	9.16E-06	1.87E-05	3.53E-09	5.70E-05	9.57E-09
381971.723853497.18	381972	3853497	FENCEINT	5.41E-02	1.06E-05	5.46E-02	9.53E-06	1.87E-05	3.67E-09	5.70E-05	9.96E-09
381971.763853507.08	381972	3853507	FENCEINT	5.41E-02	1.11E-05	5.46E-02	9.93E-06	1.87E-05	3.83E-09	5.70E-05	1.04E-08
381971.793853516.97	381972	3853517	FENCEINT	5.41E-02	1.15E-05	5.45E-02	1.04E-05	1.87E-05	3.99E-09	5.70E-05	1.08E-08
381971.823853526.87	381972	3853527	FENCEINT	5.41E-02	1.20E-05	5.45E-02	1.08E-05	1.87E-05	4.17E-09	5.70E-05	1.13E-08
381971.863853536.76	381972	3853537	FENCEINT	5.41E-02	1.26E-05	5.46E-02	1.13E-05	1.87E-05	4.36E-09	5.70E-05	1.18E-08
381971.893853546.66	381972	3853547	FENCEINT	5.41E-02	1.32E-05	5.46E-02	1.18E-05	1.87E-05	4.56E-09	5.70E-05	1.24E-08
381971.923853556.55	381972	3853557	FENCEINT	5.41E-02	1.38E-05	5.45E-02	1.24E-05	1.87E-05	4.78E-09	5.70E-05	1.30E-08
381971.963853566.45	381972	3853566	FENCEINT	5.41E-02	1.45E-05	5.45E-02	1.30E-05	1.87E-05	5.01E-09	5.70E-05	1.36E-08
381971.993853576.35	381972	3853576	FENCEINT	5.41E-02	1.52E-05	5.45E-02	1.37E-05	1.87E-05	5.27E-09	5.70E-05	1.43E-08
381972.023853586.24	381972	3853586	FENCEINT	5.40E-02	1.60E-05	5.45E-02	1.44E-05	1.87E-05	5.54E-09	5.70E-05	1.50E-08
381972.063853596.14	381972	3853596	FENCEINT	5.40E-02	1.69E-05	5.45E-02	1.52E-05	1.87E-05	5.84E-09	5.69E-05	1.59E-08
381972.093853606.03	381972	3853606	FENCEINT	5.39E-02	1.78E-05	5.44E-02	1.60E-05	1.87E-05	6.17E-09	5.69E-05	1.67E-08
381972.123853615.93	381972	3853616	FENCEINT	5.39E-02	1.89E-05	5.43E-02	1.69E-05	1.86E-05	6.53E-09	5.68E-05	1.77E-08
381972.163853625.82	381972	3853626	FENCEINT	5.38E-02	2.00E-05	5.42E-02	1.80E-05	1.86E-05	6.92E-09	5.67E-05	1.88E-08
381972.193853635.72	381972	3853636	FENCEINT	5.37E-02	2.12E-05	5.42E-02	1.91E-05	1.86E-05	7.35E-09	5.66E-05	1.99E-08

RESIDENTIAL DOSE

				3rd Tri		0<2		3rd Tri		0<2	
				Project Concentrations (µg/m <sup>3</sup> )		Project Concentrations (µg/m <sup>3</sup> )		Dose (mg/kg-day)		Dose (mg/kg-day)	
XY	X	Y	Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX
381972.223853645.62	381972	3853646	FENCEINT	5.36E-02	2.26E-05	5.41E-02	2.03E-05	1.86E-05	7.82E-09	5.65E-05	2.12E-08
381972.263853655.51	381972	3853656	FENCEINT	5.35E-02	2.41E-05	5.39E-02	2.17E-05	1.85E-05	8.35E-09	5.64E-05	2.26E-08
381972.293853665.41	381972	3853665	FENCEINT	5.33E-02	2.58E-05	5.37E-02	2.32E-05	1.84E-05	8.94E-09	5.62E-05	2.42E-08
381972.323853675.3	381972	3853675	FENCEINT	5.31E-02	2.77E-05	5.35E-02	2.49E-05	1.84E-05	9.59E-09	5.60E-05	2.60E-08
381972.363853685.2	381972	3853685	FENCEINT	5.29E-02	2.98E-05	5.33E-02	2.68E-05	1.83E-05	1.03E-08	5.57E-05	2.80E-08
381972.393853695.09	381972	3853695	FENCEINT	5.26E-02	3.23E-05	5.31E-02	2.90E-05	1.82E-05	1.12E-08	5.55E-05	3.03E-08
381972.423853704.99	381972	3853705	FENCEINT	5.24E-02	3.50E-05	5.28E-02	3.15E-05	1.81E-05	1.21E-08	5.52E-05	3.29E-08
381972.463853714.89	381972	3853715	FENCEINT	5.20E-02	3.82E-05	5.25E-02	3.43E-05	1.80E-05	1.32E-08	5.49E-05	3.59E-08
381972.493853724.78	381972	3853725	FENCEINT	5.17E-02	4.19E-05	5.22E-02	3.76E-05	1.79E-05	1.45E-08	5.45E-05	3.93E-08
381972.523853734.68	381973	3853735	FENCEINT	5.13E-02	4.62E-05	5.18E-02	4.15E-05	1.78E-05	1.60E-08	5.41E-05	4.34E-08
381972.563853744.57	381973	3853745	FENCEINT	5.09E-02	5.13E-05	5.13E-02	4.61E-05	1.76E-05	1.78E-08	5.37E-05	4.82E-08
381972.593853754.47	381973	3853754	FENCEINT	5.04E-02	5.75E-05	5.08E-02	5.17E-05	1.75E-05	1.99E-08	5.31E-05	5.40E-08
381972.623853764.36	381973	3853764	FENCEINT	4.99E-02	6.51E-05	5.03E-02	5.85E-05	1.73E-05	2.25E-08	5.26E-05	6.11E-08
381972.663853774.26	381973	3853774	FENCEINT	4.92E-02	7.46E-05	4.96E-02	6.70E-05	1.70E-05	2.58E-08	5.19E-05	7.00E-08
381972.693853784.16	381973	3853784	FENCEINT	4.85E-02	8.67E-05	4.89E-02	7.79E-05	1.68E-05	3.00E-08	5.11E-05	8.14E-08
381972.723853794.05	381973	3853794	FENCEINT	4.75E-02	1.03E-04	4.80E-02	9.22E-05	1.65E-05	3.55E-08	5.01E-05	9.64E-08
381972.763853803.95	381973	3853804	FENCEINT	4.65E-02	1.24E-04	4.69E-02	1.12E-04	1.61E-05	4.31E-08	4.90E-05	1.17E-07
381972.793853813.84	381973	3853814	FENCEINT	4.51E-02	1.55E-04	4.55E-02	1.40E-04	1.56E-05	5.38E-08	4.75E-05	1.46E-07
381972.823853823.74	381973	3853824	FENCEINT	4.34E-02	2.02E-04	4.37E-02	1.82E-04	1.50E-05	7.00E-08	4.57E-05	1.90E-07
381972.863853833.63	381973	3853834	FENCEINT	4.11E-02	2.80E-04	4.15E-02	2.51E-04	1.42E-05	9.68E-08	4.33E-05	2.62E-07
381962.923853843.66	381963	3853844	FENCEINT	3.93E-02	2.74E-04	3.96E-02	2.46E-04	1.36E-05	9.47E-08	4.14E-05	2.57E-07
381952.963853843.79	381953	3853844	FENCEINT	3.97E-02	2.75E-04	4.01E-02	2.47E-04	1.38E-05	9.52E-08	4.19E-05	2.58E-07
381942.993853843.92	381943	3853844	FENCEINT	4.03E-02	3.42E-04	4.07E-02	3.07E-04	1.40E-05	1.18E-07	4.25E-05	3.21E-07
381933.023853844.04	381933	3853844	FENCEINT	4.09E-02	2.75E-04	4.12E-02	2.47E-04	1.41E-05	9.50E-08	4.31E-05	2.58E-07
381923.063853844.17	381923	3853844	FENCEINT	4.13E-02	2.73E-04	4.17E-02	2.46E-04	1.43E-05	9.47E-08	4.36E-05	2.57E-07
381913.093853844.3	381913	3853844	FENCEINT	4.17E-02	3.43E-04	4.21E-02	3.08E-04	1.44E-05	1.19E-07	4.40E-05	3.22E-07
381903.123853844.43	381903	3853844	FENCEINT	4.20E-02	2.77E-04	4.24E-02	2.49E-04	1.46E-05	9.59E-08	4.43E-05	2.60E-07
381893.163853844.56	381893	3853845	FENCEINT	4.23E-02	2.73E-04	4.27E-02	2.45E-04	1.46E-05	9.45E-08	4.46E-05	2.56E-07
381883.193853844.69	381883	3853845	FENCEINT	4.26E-02	2.75E-04	4.29E-02	2.47E-04	1.47E-05	9.51E-08	4.49E-05	2.58E-07
381873.223853844.82	381873	3853845	FENCEINT	4.27E-02	3.41E-04	4.31E-02	3.07E-04	1.48E-05	1.18E-07	4.50E-05	3.21E-07
381863.253853844.94	381863	3853845	FENCEINT	4.29E-02	2.74E-04	4.33E-02	2.46E-04	1.49E-05	9.47E-08	4.52E-05	2.57E-07
381853.293853845.07	381853	3853845	FENCEINT	4.31E-02	2.73E-04	4.35E-02	2.45E-04	1.49E-05	9.45E-08	4.54E-05	2.56E-07
381843.323853845.2	381843	3853845	FENCEINT	4.32E-02	3.42E-04	4.36E-02	3.07E-04	1.50E-05	1.18E-07	4.56E-05	3.21E-07
381833.353853845.33	381833	3853845	FENCEINT	4.33E-02	2.76E-04	4.37E-02	2.48E-04	1.50E-05	9.55E-08	4.57E-05	2.59E-07
381823.393853845.46	381823	3853845	FENCEINT	4.34E-02	2.72E-04	4.38E-02	2.45E-04	1.50E-05	9.42E-08	4.58E-05	2.56E-07
381813.423853845.59	381813	3853846	FENCEINT	4.34E-02	2.74E-04	4.38E-02	2.46E-04	1.50E-05	9.50E-08	4.58E-05	2.58E-07
381803.453853845.72	381803	3853846	FENCEINT	4.34E-02	3.41E-04	4.38E-02	3.06E-04	1.50E-05	1.18E-07	4.58E-05	3.20E-07
381793.493853845.84	381793	3853846	FENCEINT	4.34E-02	2.73E-04	4.38E-02	2.45E-04	1.50E-05	9.44E-08	4.58E-05	2.56E-07
381783.523853845.97	381784	3853846	FENCEINT	4.35E-02	2.72E-04	4.38E-02	2.45E-04	1.50E-05	9.42E-08	4.58E-05	2.56E-07
381773.553853846.1	381774	3853846	FENCEINT	4.34E-02	3.41E-04	4.38E-02	3.06E-04	1.50E-05	1.18E-07	4.58E-05	3.20E-07
381763.593853846.23	381764	3853846	FENCEINT	4.34E-02	2.74E-04	4.38E-02	2.47E-04	1.50E-05	9.50E-08	4.58E-05	2.58E-07
381753.623853846.36	381754	3853846	FENCEINT	4.34E-02	2.71E-04	4.38E-02	2.44E-04	1.50E-05	9.39E-08	4.57E-05	2.55E-07
381743.653853846.49	381744	3853846	FENCEINT	4.33E-02	2.74E-04	4.37E-02	2.46E-04	1.50E-05	9.47E-08	4.57E-05	2.57E-07
381733.693853846.62	381734	3853847	FENCEINT	4.33E-02	3.39E-04	4.36E-02	3.05E-04	1.50E-05	1.17E-07	4.56E-05	3.19E-07
381723.723853846.75	381724	3853847	FENCEINT	4.32E-02	2.71E-04	4.36E-02	2.44E-04	1.50E-05	9.39E-08	4.56E-05	2.55E-07

RESIDENTIAL DOSE

				3rd Tri		0<2		3rd Tri		0<2	
				Project Concentrations (µg/m <sup>3</sup> )		Project Concentrations (µg/m <sup>3</sup> )		Dose (mg/kg-day)		Dose (mg/kg-day)	
XY	X	Y	Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX
381713.753853846.87	381714	3853847	FENCEINT	4.32E-02	2.71E-04	4.35E-02	2.44E-04	1.49E-05	9.38E-08	4.55E-05	2.55E-07
381703.793853847	381704	3853847	FENCEINT	4.31E-02	3.39E-04	4.34E-02	3.05E-04	1.49E-05	1.17E-07	4.54E-05	3.18E-07
381693.823853847.13	381694	3853847	FENCEINT	4.30E-02	2.73E-04	4.34E-02	2.45E-04	1.49E-05	9.44E-08	4.53E-05	2.56E-07
381683.853853847.26	381684	3853847	FENCEINT	4.29E-02	2.70E-04	4.33E-02	2.43E-04	1.49E-05	9.35E-08	4.52E-05	2.54E-07
381673.883853847.39	381674	3853847	FENCEINT	4.28E-02	2.73E-04	4.31E-02	2.45E-04	1.48E-05	9.43E-08	4.51E-05	2.56E-07
381663.923853847.52	381664	3853848	FENCEINT	4.27E-02	3.38E-04	4.30E-02	3.03E-04	1.48E-05	1.17E-07	4.50E-05	3.17E-07
381653.953853847.65	381654	3853848	FENCEINT	4.26E-02	2.70E-04	4.30E-02	2.43E-04	1.48E-05	9.35E-08	4.49E-05	2.54E-07
381643.983853847.77	381644	3853848	FENCEINT	4.26E-02	2.70E-04	4.29E-02	2.43E-04	1.47E-05	9.36E-08	4.49E-05	2.54E-07
381634.023853847.9	381634	3853848	FENCEINT	4.24E-02	3.38E-04	4.28E-02	3.04E-04	1.47E-05	1.17E-07	4.47E-05	3.17E-07
381624.053853848.03	381624	3853848	FENCEINT	4.23E-02	2.72E-04	4.27E-02	2.44E-04	1.46E-05	9.40E-08	4.46E-05	2.55E-07
381614.083853848.16	381614	3853848	FENCEINT	4.21E-02	2.69E-04	4.25E-02	2.42E-04	1.46E-05	9.31E-08	4.44E-05	2.52E-07
381604.123853848.29	381604	3853848	FENCEINT	4.19E-02	2.72E-04	4.23E-02	2.44E-04	1.45E-05	9.41E-08	4.42E-05	2.55E-07
381594.153853848.42	381594	3853848	FENCEINT	4.17E-02	3.37E-04	4.21E-02	3.03E-04	1.44E-05	1.17E-07	4.40E-05	3.17E-07
381584.183853848.55	381584	3853849	FENCEINT	4.15E-02	2.69E-04	4.18E-02	2.41E-04	1.44E-05	9.30E-08	4.37E-05	2.52E-07
381574.223853848.67	381574	3853849	FENCEINT	4.12E-02	2.69E-04	4.16E-02	2.42E-04	1.43E-05	9.31E-08	4.35E-05	2.53E-07
381564.253853848.8	381564	3853849	FENCEINT	4.10E-02	3.36E-04	4.14E-02	3.02E-04	1.42E-05	1.16E-07	4.33E-05	3.16E-07
381554.283853848.93	381554	3853849	FENCEINT	4.08E-02	2.70E-04	4.12E-02	2.42E-04	1.41E-05	9.33E-08	4.31E-05	2.53E-07
381544.323853849.06	381544	3853849	FENCEINT	4.07E-02	2.67E-04	4.10E-02	2.40E-04	1.41E-05	9.25E-08	4.29E-05	2.51E-07
381534.353853849.19	381534	3853849	FENCEINT	4.04E-02	2.70E-04	4.08E-02	2.43E-04	1.40E-05	9.35E-08	4.26E-05	2.54E-07
381524.383853849.32	381524	3853849	FENCEINT	4.02E-02	3.35E-04	4.05E-02	3.01E-04	1.39E-05	1.16E-07	4.24E-05	3.15E-07
381514.423853849.45	381514	3853849	FENCEINT	3.99E-02	2.66E-04	4.03E-02	2.39E-04	1.38E-05	9.22E-08	4.21E-05	2.50E-07
381504.453853849.57	381504	3853850	FENCEINT	3.97E-02	2.67E-04	4.00E-02	2.40E-04	1.37E-05	9.24E-08	4.19E-05	2.51E-07
381494.483853849.7	381494	3853850	FENCEINT	3.94E-02	3.34E-04	3.98E-02	3.00E-04	1.37E-05	1.16E-07	4.16E-05	3.13E-07
381484.523853849.83	381485	3853850	FENCEINT	3.91E-02	2.67E-04	3.95E-02	2.40E-04	1.35E-05	9.23E-08	4.13E-05	2.50E-07
381474.553853849.96	381475	3853850	FENCEINT	3.88E-02	2.65E-04	3.92E-02	2.38E-04	1.34E-05	9.16E-08	4.09E-05	2.48E-07
381464.583853850.09	381465	3853850	FENCEINT	3.85E-02	3.34E-04	3.88E-02	3.00E-04	1.33E-05	1.16E-07	4.06E-05	3.13E-07
381454.613853850.22	381455	3853850	FENCEINT	3.81E-02	3.32E-04	3.85E-02	2.99E-04	1.32E-05	1.15E-07	4.02E-05	3.12E-07
381444.653853850.35	381445	3853850	FENCEINT	3.78E-02	2.63E-04	3.81E-02	2.37E-04	1.31E-05	9.11E-08	3.99E-05	2.47E-07
381434.683853850.47	381435	3853850	FENCEINT	3.74E-02	2.64E-04	3.77E-02	2.37E-04	1.29E-05	9.13E-08	3.94E-05	2.48E-07
381424.713853850.6	381425	3853851	FENCEINT	3.70E-02	3.30E-04	3.73E-02	2.97E-04	1.28E-05	1.14E-07	3.90E-05	3.10E-07
381414.753853850.73	381415	3853851	FENCEINT	3.66E-02	2.63E-04	3.69E-02	2.36E-04	1.27E-05	9.09E-08	3.86E-05	2.47E-07
381404.783853850.86	381405	3853851	FENCEINT	3.62E-02	2.60E-04	3.65E-02	2.34E-04	1.25E-05	9.02E-08	3.81E-05	2.45E-07
381394.813853850.99	381395	3853851	FENCEINT	3.57E-02	3.29E-04	3.60E-02	2.96E-04	1.24E-05	1.14E-07	3.76E-05	3.09E-07
381384.853853851.12	381385	3853851	FENCEINT	3.52E-02	2.63E-04	3.55E-02	2.36E-04	1.22E-05	9.10E-08	3.71E-05	2.47E-07
381374.883853851.25	381375	3853851	FENCEINT	3.47E-02	2.58E-04	3.50E-02	2.32E-04	1.20E-05	8.92E-08	3.66E-05	2.42E-07
381364.913853851.38	381365	3853851	FENCEINT	3.41E-02	2.58E-04	3.44E-02	2.32E-04	1.18E-05	8.94E-08	3.59E-05	2.42E-07
381354.953853851.5	381355	3853852	FENCEINT	3.35E-02	3.24E-04	3.38E-02	2.91E-04	1.16E-05	1.12E-07	3.53E-05	3.04E-07
381344.983853851.63	381345	3853852	FENCEINT	3.28E-02	2.55E-04	3.31E-02	2.29E-04	1.14E-05	8.83E-08	3.46E-05	2.40E-07
381335.013853851.76	381335	3853852	FENCEINT	3.22E-02	2.53E-04	3.25E-02	2.27E-04	1.12E-05	8.75E-08	3.40E-05	2.37E-07
381325.053853851.89	381325	3853852	FENCEINT	3.15E-02	3.20E-04	3.18E-02	2.87E-04	1.09E-05	1.11E-07	3.32E-05	3.00E-07
381315.083853852.02	381315	3853852	FENCEINT	3.07E-02	2.53E-04	3.10E-02	2.27E-04	1.06E-05	8.75E-08	3.24E-05	2.37E-07
381305.113853852.15	381305	3853852	FENCEINT	2.98E-02	2.47E-04	3.01E-02	2.22E-04	1.03E-05	8.54E-08	3.15E-05	2.32E-07
381295.153853852.28	381295	3853852	FENCEINT	2.89E-02	2.46E-04	2.91E-02	2.21E-04	1.00E-05	8.51E-08	3.04E-05	2.31E-07
381285.183853852.4	381285	3853852	FENCEINT	2.79E-02	3.09E-04	2.81E-02	2.78E-04	9.65E-06	1.07E-07	2.94E-05	2.90E-07
381275.213853852.53	381275	3853853	FENCEINT	2.67E-02	2.38E-04	2.69E-02	2.14E-04	9.25E-06	8.25E-08	2.82E-05	2.24E-07

RESIDENTIAL DOSE

XY	X	Y	Type	3rd Tri		0<2		3rd Tri		0<2	
				Project Concentrations (µg/m <sup>3</sup> )		Project Concentrations (µg/m <sup>3</sup> )		Dose (mg/kg-day)		Dose (mg/kg-day)	
				OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX
381265.243853852.66	381265	3853853	FENCEINT	2.54E-02	2.33E-04	2.56E-02	2.09E-04	8.80E-06	8.07E-08	2.68E-05	2.19E-07
381255.283853852.79	381255	3853853	FENCEINT	2.40E-02	2.96E-04	2.42E-02	2.66E-04	8.29E-06	1.03E-07	2.53E-05	2.78E-07
381245.313853852.92	381245	3853853	FENCEINT	2.23E-02	2.24E-04	2.25E-02	2.01E-04	7.72E-06	7.76E-08	2.35E-05	2.10E-07
381235.343853853.05	381235	3853853	FENCEINT	2.04E-02	2.12E-04	2.06E-02	1.90E-04	7.06E-06	7.33E-08	2.15E-05	1.99E-07
381225.383853853.18	381225	3853853	FENCEINT	1.82E-02	2.02E-04	1.84E-02	1.82E-04	6.30E-06	7.00E-08	1.92E-05	1.90E-07
381215.413853853.3	381215	3853853	FENCEINT	1.56E-02	2.52E-04	1.57E-02	2.27E-04	5.40E-06	8.73E-08	1.65E-05	2.37E-07
381205.443853853.43	381205	3853853	FENCEINT	1.30E-02	1.62E-04	1.31E-02	1.46E-04	4.50E-06	5.62E-08	1.37E-05	1.52E-07
381195.483853853.56	381195	3853854	FENCEINT	1.11E-02	1.29E-04	1.12E-02	1.16E-04	3.85E-06	4.46E-08	1.17E-05	1.21E-07
381207.283853216.51	381207	3853217	RESIDENT	1.86E-02	3.45E-06	1.88E-02	3.10E-06	6.45E-06	1.19E-09	1.96E-05	3.24E-09
381206.463853158.25	381206	3853158	RESIDENT	1.73E-02	3.09E-06	1.75E-02	2.78E-06	6.00E-06	1.07E-09	1.83E-05	2.90E-09
381133.443853006.47	381133	3853006	RESIDENT	8.68E-03	2.36E-06	8.75E-03	2.12E-06	3.00E-06	8.16E-10	9.15E-06	2.21E-09
381572.573853899.35	381573	3853899	RESIDENT	2.08E-02	1.56E-04	2.10E-02	1.40E-04	7.21E-06	5.41E-08	2.20E-05	1.47E-07
381635.293853878.64	381635	3853879	RESIDENT	2.79E-02	2.76E-04	2.82E-02	2.48E-04	9.67E-06	9.56E-08	2.94E-05	2.59E-07
381724.423853880.35	381724	3853880	RESIDENT	2.80E-02	2.52E-04	2.82E-02	2.27E-04	9.69E-06	8.74E-08	2.95E-05	2.37E-07
381769.333854066.93	381769	3854067	RESIDENT	7.28E-03	2.42E-05	7.34E-03	2.17E-05	2.52E-06	8.37E-09	7.67E-06	2.27E-08
380838.73853925.28	380839	3853925	RESIDENT	1.51E-03	3.84E-06	1.52E-03	3.45E-06	5.22E-07	1.33E-09	1.59E-06	3.61E-09
380776.713853911.67	380777	3853912	RESIDENT	1.40E-03	3.35E-06	1.41E-03	3.01E-06	4.83E-07	1.16E-09	1.47E-06	3.15E-09
381905.063854191.95	381905	3854192	RESIDENT	4.72E-03	1.31E-05	4.76E-03	1.17E-05	1.63E-06	4.52E-09	4.98E-06	1.23E-08
381897.523854254.79	381898	3854255	RESIDENT	3.64E-03	9.85E-06	3.67E-03	8.85E-06	1.26E-06	3.41E-09	3.83E-06	9.25E-09
381770.173854255.62	381770	3854256	RESIDENT	2.98E-03	8.81E-06	3.01E-03	7.91E-06	1.03E-06	3.05E-09	3.14E-06	8.27E-09
381846.773853931.2	381847	3853931	RESIDENT	1.77E-02	8.51E-05	1.78E-02	7.65E-05	6.11E-06	2.95E-08	1.86E-05	7.99E-08
382759.033853899.12	382759	3853899	RESIDENT	4.46E-03	1.21E-04	4.50E-03	1.09E-04	1.54E-06	4.18E-08	4.70E-06	1.13E-07
382948.913853890.37	382949	3853890	RESIDENT	3.37E-03	1.36E-04	3.40E-03	1.22E-04	1.17E-06	4.70E-08	3.55E-06	1.28E-07
382818.213853903.75	382818	3853904	RESIDENT	4.06E-03	1.10E-04	4.10E-03	9.90E-05	1.41E-06	3.81E-08	4.28E-06	1.03E-07
382658.823853065.93	382659	3853066	RESIDENT	3.64E-03	3.31E-06	3.67E-03	2.97E-06	1.26E-06	1.15E-09	3.83E-06	3.11E-09
382705.843853071.63	382706	3853072	RESIDENT	3.43E-03	3.35E-06	3.46E-03	3.01E-06	1.19E-06	1.16E-09	3.62E-06	3.14E-09
382739.323853070.2	382739	3853070	RESIDENT	3.27E-03	3.32E-06	3.30E-03	2.99E-06	1.13E-06	1.15E-09	3.45E-06	3.12E-09
382765.673853062.36	382766	3853062	RESIDENT	3.13E-03	3.26E-06	3.15E-03	2.93E-06	1.08E-06	1.13E-09	3.30E-06	3.06E-09
380838.253852648.62	380838	3852649	RESIDENT	1.99E-03	1.42E-06	2.01E-03	1.28E-06	6.90E-07	4.93E-10	2.10E-06	1.34E-09
380596.713852456.08	380597	3852456	RESIDENT	1.23E-03	1.15E-06	1.24E-03	1.03E-06	4.26E-07	3.99E-10	1.30E-06	1.08E-09
380344.573853233.38	380345	3853233	RESIDENT	1.88E-03	2.00E-06	1.90E-03	1.80E-06	6.51E-07	6.94E-10	1.98E-06	1.88E-09
380414.583853989.01	380415	3853989	RESIDENT	6.95E-04	1.49E-06	7.01E-04	1.34E-06	2.41E-07	5.15E-10	7.33E-07	1.40E-09
380454.013853958.13	380454	3853958	RESIDENT	7.71E-04	1.64E-06	7.77E-04	1.47E-06	2.67E-07	5.67E-10	8.12E-07	1.54E-09

Residential Maximum: 3.55

Cancer Risk				3rd Tri		0<2		Total Cancer Risk (cases per million)
				Cancer Risk ( cases per million)		Cancer Risk ( cases per million)		
XY	X	Y	Receptor Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
381185.513853853.69	381185.51	3853853.69	FENCEPRI	1.38E-01	2.02E-03	1.14E+00	1.48E-02	1.29
381185.513853302.3	381185.51	3853302.30	FENCEPRI	3.64E-01	5.55E-05	3.00E+00	4.07E-04	3.37
381280.93853302.3	381280.90	3853302.30	FENCEPRI	5.58E-01	5.78E-05	4.60E+00	4.24E-04	5.16
381281.463853039.66	381281.46	3853039.66	FENCEPRI	3.22E-01	3.49E-05	2.65E+00	2.56E-04	2.97
381970.163853032.08	381970.16	3853032.08	FENCEPRI	2.56E-01	3.98E-05	2.11E+00	2.92E-04	2.37
381972.893853843.53	381972.89	3853843.53	FENCEPRI	5.21E-01	3.78E-03	4.29E+00	2.77E-02	4.84
381185.513853843.84	381185.51	3853843.84	FENCEINT	1.70E-01	2.08E-03	1.41E+00	1.53E-02	1.59
381185.513853834	381185.51	3853834.00	FENCEINT	2.07E-01	1.52E-03	1.71E+00	1.11E-02	1.93
381185.513853824.15	381185.51	3853824.15	FENCEINT	2.40E-01	1.17E-03	1.98E+00	8.58E-03	2.23
381185.513853814.3	381185.51	3853814.30	FENCEINT	2.66E-01	9.38E-04	2.19E+00	6.88E-03	2.47
381185.513853804.46	381185.51	3853804.46	FENCEINT	2.87E-01	7.75E-04	2.37E+00	5.69E-03	2.66
381185.513853794.61	381185.51	3853794.61	FENCEINT	3.05E-01	6.56E-04	2.51E+00	4.82E-03	2.82
381185.513853784.77	381185.51	3853784.77	FENCEINT	3.19E-01	5.66E-04	2.63E+00	4.16E-03	2.96
381185.513853774.92	381185.51	3853774.92	FENCEINT	3.32E-01	4.96E-04	2.74E+00	3.64E-03	3.07
381185.513853765.07	381185.51	3853765.07	FENCEINT	3.43E-01	4.40E-04	2.82E+00	3.23E-03	3.17
381185.513853755.23	381185.51	3853755.23	FENCEINT	3.52E-01	3.94E-04	2.90E+00	2.89E-03	3.26
381185.513853745.38	381185.51	3853745.38	FENCEINT	3.60E-01	3.56E-04	2.97E+00	2.62E-03	3.33
381185.513853735.54	381185.51	3853735.54	FENCEINT	3.67E-01	3.25E-04	3.03E+00	2.39E-03	3.40
381185.513853725.69	381185.51	3853725.69	FENCEINT	3.74E-01	2.98E-04	3.08E+00	2.19E-03	3.46
381185.513853715.84	381185.51	3853715.84	FENCEINT	3.80E-01	2.75E-04	3.13E+00	2.02E-03	3.51
381185.513853706	381185.51	3853706.00	FENCEINT	3.85E-01	2.55E-04	3.18E+00	1.87E-03	3.56
381185.513853696.15	381185.51	3853696.15	FENCEINT	3.90E-01	2.37E-04	3.22E+00	1.74E-03	3.61
381185.513853686.3	381185.51	3853686.30	FENCEINT	3.95E-01	2.22E-04	3.25E+00	1.63E-03	3.65
381185.513853676.46	381185.51	3853676.46	FENCEINT	3.99E-01	2.08E-04	3.29E+00	1.53E-03	3.69
381185.513853666.61	381185.51	3853666.61	FENCEINT	4.02E-01	1.96E-04	3.31E+00	1.44E-03	3.72
381185.513853656.76	381185.51	3853656.76	FENCEINT	4.05E-01	1.85E-04	3.34E+00	1.36E-03	3.75
381185.513853646.92	381185.51	3853646.92	FENCEINT	4.09E-01	1.75E-04	3.37E+00	1.28E-03	3.78
381185.513853637.07	381185.51	3853637.07	FENCEINT	4.12E-01	1.66E-04	3.40E+00	1.22E-03	3.81
381185.513853627.23	381185.51	3853627.23	FENCEINT	4.15E-01	1.58E-04	3.42E+00	1.16E-03	3.84
381185.513853617.38	381185.51	3853617.38	FENCEINT	4.17E-01	1.50E-04	3.44E+00	1.10E-03	3.86
381185.513853607.53	381185.51	3853607.53	FENCEINT	4.20E-01	1.43E-04	3.46E+00	1.05E-03	3.88
381185.513853597.69	381185.51	3853597.69	FENCEINT	4.22E-01	1.37E-04	3.48E+00	1.01E-03	3.90
381185.513853587.84	381185.51	3853587.84	FENCEINT	4.24E-01	1.31E-04	3.50E+00	9.63E-04	3.92
381185.513853578	381185.51	3853578.00	FENCEINT	4.26E-01	1.26E-04	3.51E+00	9.23E-04	3.94
381185.513853568.15	381185.51	3853568.15	FENCEINT	4.28E-01	1.21E-04	3.53E+00	8.86E-04	3.96
381185.513853558.3	381185.51	3853558.30	FENCEINT	4.30E-01	1.16E-04	3.54E+00	8.52E-04	3.98
381185.513853548.46	381185.51	3853548.46	FENCEINT	4.32E-01	1.12E-04	3.56E+00	8.20E-04	3.99
381185.513853538.61	381185.51	3853538.61	FENCEINT	4.33E-01	1.08E-04	3.57E+00	7.90E-04	4.00
381185.513853528.76	381185.51	3853528.76	FENCEINT	4.34E-01	1.04E-04	3.58E+00	7.62E-04	4.01
381185.513853518.92	381185.51	3853518.92	FENCEINT	4.35E-01	1.00E-04	3.58E+00	7.36E-04	4.02
381185.513853509.07	381185.51	3853509.07	FENCEINT	4.35E-01	9.68E-05	3.59E+00	7.11E-04	4.02
381185.513853499.22	381185.51	3853499.22	FENCEINT	4.36E-01	9.36E-05	3.59E+00	6.88E-04	4.03



Cancer Risk				3rd Tri		0<2		Total Cancer Risk (cases per million)
				Cancer Risk ( cases per million)		Cancer Risk ( cases per million)		
				OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
XY	X	Y	Receptor Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
381185.513853489.38	381185.51	3853489.38	FENCEINT	4.36E-01	9.06E-05	3.60E+00	6.66E-04	4.03
381185.513853479.53	381185.51	3853479.53	FENCEINT	4.36E-01	8.78E-05	3.60E+00	6.45E-04	4.03
381185.513853469.69	381185.51	3853469.69	FENCEINT	4.37E-01	8.51E-05	3.60E+00	6.25E-04	4.04
381185.513853459.84	381185.51	3853459.84	FENCEINT	4.37E-01	8.26E-05	3.60E+00	6.07E-04	4.04
381185.513853449.99	381185.51	3853449.99	FENCEINT	4.37E-01	8.02E-05	3.60E+00	5.89E-04	4.04
381185.513853440.15	381185.51	3853440.15	FENCEINT	4.37E-01	7.80E-05	3.60E+00	5.73E-04	4.04
381185.513853430.3	381185.51	3853430.30	FENCEINT	4.37E-01	7.59E-05	3.60E+00	5.57E-04	4.04
381185.513853420.46	381185.51	3853420.46	FENCEINT	4.37E-01	7.38E-05	3.60E+00	5.42E-04	4.04
381185.513853410.61	381185.51	3853410.61	FENCEINT	4.36E-01	7.19E-05	3.59E+00	5.28E-04	4.03
381185.513853400.76	381185.51	3853400.76	FENCEINT	4.35E-01	7.00E-05	3.59E+00	5.14E-04	4.02
381185.513853390.92	381185.51	3853390.92	FENCEINT	4.34E-01	6.82E-05	3.57E+00	5.01E-04	4.01
381185.513853381.07	381185.51	3853381.07	FENCEINT	4.32E-01	6.66E-05	3.56E+00	4.89E-04	4.00
381185.513853371.22	381185.51	3853371.22	FENCEINT	4.31E-01	6.50E-05	3.55E+00	4.77E-04	3.98
381185.513853361.38	381185.51	3853361.38	FENCEINT	4.28E-01	6.35E-05	3.53E+00	4.66E-04	3.96
381185.513853351.53	381185.51	3853351.53	FENCEINT	4.24E-01	6.20E-05	3.50E+00	4.55E-04	3.92
381185.513853341.68	381185.51	3853341.68	FENCEINT	4.19E-01	6.06E-05	3.46E+00	4.45E-04	3.88
381185.513853331.84	381185.51	3853331.84	FENCEINT	4.12E-01	5.92E-05	3.40E+00	4.35E-04	3.81
381185.513853321.99	381185.51	3853321.99	FENCEINT	4.02E-01	5.79E-05	3.31E+00	4.25E-04	3.71
381185.513853312.15	381185.51	3853312.15	FENCEINT	3.87E-01	5.67E-05	3.19E+00	4.16E-04	3.57
381195.053853302.3	381195.05	3853302.30	FENCEINT	3.76E-01	5.56E-05	3.10E+00	4.09E-04	3.48
381204.593853302.3	381204.59	3853302.30	FENCEINT	3.92E-01	5.59E-05	3.23E+00	4.11E-04	3.62
381214.133853302.3	381214.13	3853302.30	FENCEINT	4.11E-01	5.62E-05	3.39E+00	4.12E-04	3.80
381223.673853302.3	381223.67	3853302.30	FENCEINT	4.33E-01	5.64E-05	3.57E+00	4.14E-04	4.00
381233.213853302.3	381233.21	3853302.30	FENCEINT	4.54E-01	5.66E-05	3.74E+00	4.16E-04	4.20
381242.743853302.3	381242.74	3853302.30	FENCEINT	4.75E-01	5.69E-05	3.92E+00	4.18E-04	4.39
381252.283853302.3	381252.28	3853302.30	FENCEINT	4.97E-01	5.71E-05	4.10E+00	4.19E-04	4.60
381261.823853302.3	381261.82	3853302.30	FENCEINT	5.19E-01	5.73E-05	4.28E+00	4.21E-04	4.80
381271.363853302.3	381271.36	3853302.30	FENCEINT	5.40E-01	5.76E-05	4.45E+00	4.23E-04	4.99
381280.923853292.57	381280.92	3853292.57	FENCEINT	5.26E-01	5.65E-05	4.34E+00	4.15E-04	4.86
381280.943853282.85	381280.94	3853282.85	FENCEINT	5.03E-01	5.53E-05	4.15E+00	4.06E-04	4.65
381280.963853273.12	381280.96	3853273.12	FENCEINT	4.87E-01	5.41E-05	4.01E+00	3.98E-04	4.50
381280.983853263.39	381280.98	3853263.39	FENCEINT	4.76E-01	5.30E-05	3.92E+00	3.89E-04	4.40
3812813853253.66	381281.00	3853253.66	FENCEINT	4.67E-01	5.19E-05	3.85E+00	3.81E-04	4.32
381281.023853243.94	381281.02	3853243.94	FENCEINT	4.61E-01	5.09E-05	3.80E+00	3.73E-04	4.26
381281.053853234.21	381281.05	3853234.21	FENCEINT	4.56E-01	4.98E-05	3.76E+00	3.66E-04	4.22
381281.073853224.48	381281.07	3853224.48	FENCEINT	4.53E-01	4.88E-05	3.73E+00	3.59E-04	4.18
381281.093853214.75	381281.09	3853214.75	FENCEINT	4.49E-01	4.79E-05	3.70E+00	3.52E-04	4.15
381281.113853205.03	381281.11	3853205.03	FENCEINT	4.46E-01	4.69E-05	3.68E+00	3.45E-04	4.13
381281.133853195.3	381281.13	3853195.30	FENCEINT	4.44E-01	4.61E-05	3.66E+00	3.38E-04	4.10
381281.153853185.57	381281.15	3853185.57	FENCEINT	4.41E-01	4.52E-05	3.64E+00	3.32E-04	4.08
381281.173853175.84	381281.17	3853175.84	FENCEINT	4.39E-01	4.44E-05	3.62E+00	3.26E-04	4.06
381281.193853166.12	381281.19	3853166.12	FENCEINT	4.36E-01	4.36E-05	3.60E+00	3.20E-04	4.03
381281.213853156.39	381281.21	3853156.39	FENCEINT	4.33E-01	4.28E-05	3.57E+00	3.14E-04	4.01

Cancer Risk				3rd Tri		0<2		Total Cancer Risk (cases per million)
				Cancer Risk ( cases per million)		Cancer Risk ( cases per million)		
				OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
XY	X	Y	Receptor Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
381281.233853146.66	381281.23	3853146.66	FENCEINT	4.30E-01	4.20E-05	3.55E+00	3.08E-04	3.98
381281.253853136.93	381281.25	3853136.93	FENCEINT	4.27E-01	4.13E-05	3.52E+00	3.03E-04	3.95
381281.273853127.21	381281.27	3853127.21	FENCEINT	4.24E-01	4.06E-05	3.49E+00	2.98E-04	3.92
381281.293853117.48	381281.29	3853117.48	FENCEINT	4.20E-01	3.99E-05	3.46E+00	2.93E-04	3.88
381281.313853107.75	381281.31	3853107.75	FENCEINT	4.15E-01	3.92E-05	3.42E+00	2.88E-04	3.83
381281.343853098.02	381281.34	3853098.02	FENCEINT	4.09E-01	3.85E-05	3.37E+00	2.83E-04	3.78
381281.363853088.3	381281.36	3853088.30	FENCEINT	4.02E-01	3.79E-05	3.31E+00	2.78E-04	3.72
381281.383853078.57	381281.38	3853078.57	FENCEINT	3.94E-01	3.72E-05	3.24E+00	2.73E-04	3.64
381281.43853068.84	381281.40	3853068.84	FENCEINT	3.82E-01	3.66E-05	3.15E+00	2.69E-04	3.53
381281.423853059.11	381281.42	3853059.11	FENCEINT	3.68E-01	3.60E-05	3.03E+00	2.65E-04	3.40
381281.443853049.39	381281.44	3853049.39	FENCEINT	3.48E-01	3.54E-05	2.87E+00	2.60E-04	3.22
381291.443853039.55	381291.44	3853039.55	FENCEINT	3.30E-01	3.50E-05	2.72E+00	2.57E-04	3.05
381301.423853039.44	381301.42	3853039.44	FENCEINT	3.42E-01	3.50E-05	2.82E+00	2.57E-04	3.16
381311.43853039.33	381311.40	3853039.33	FENCEINT	3.57E-01	3.51E-05	2.94E+00	2.58E-04	3.30
381321.383853039.22	381321.38	3853039.22	FENCEINT	3.72E-01	3.52E-05	3.07E+00	2.58E-04	3.44
381331.373853039.11	381331.37	3853039.11	FENCEINT	3.86E-01	3.53E-05	3.18E+00	2.59E-04	3.57
381341.353853039	381341.35	3853039.00	FENCEINT	3.98E-01	3.53E-05	3.28E+00	2.59E-04	3.68
381351.333853038.89	381351.33	3853038.89	FENCEINT	4.09E-01	3.54E-05	3.37E+00	2.60E-04	3.78
381361.313853038.78	381361.31	3853038.78	FENCEINT	4.18E-01	3.55E-05	3.45E+00	2.60E-04	3.87
381371.293853038.67	381371.29	3853038.67	FENCEINT	4.26E-01	3.55E-05	3.52E+00	2.61E-04	3.94
381381.273853038.56	381381.27	3853038.56	FENCEINT	4.34E-01	3.56E-05	3.58E+00	2.61E-04	4.01
381391.253853038.45	381391.25	3853038.45	FENCEINT	4.41E-01	3.57E-05	3.64E+00	2.62E-04	4.08
381401.233853038.34	381401.23	3853038.34	FENCEINT	4.47E-01	3.58E-05	3.69E+00	2.63E-04	4.14
381411.223853038.23	381411.22	3853038.23	FENCEINT	4.53E-01	3.58E-05	3.73E+00	2.63E-04	4.18
381421.23853038.12	381421.20	3853038.12	FENCEINT	4.57E-01	3.59E-05	3.77E+00	2.64E-04	4.23
381431.183853038.01	381431.18	3853038.01	FENCEINT	4.61E-01	3.60E-05	3.80E+00	2.64E-04	4.26
381441.163853037.9	381441.16	3853037.90	FENCEINT	4.65E-01	3.60E-05	3.83E+00	2.65E-04	4.30
381451.143853037.79	381451.14	3853037.79	FENCEINT	4.68E-01	3.61E-05	3.86E+00	2.65E-04	4.33
381461.123853037.68	381461.12	3853037.68	FENCEINT	4.71E-01	3.62E-05	3.89E+00	2.66E-04	4.36
381471.13853037.57	381471.10	3853037.57	FENCEINT	4.74E-01	3.63E-05	3.91E+00	2.66E-04	4.39
381481.083853037.46	381481.08	3853037.46	FENCEINT	4.77E-01	3.63E-05	3.93E+00	2.67E-04	4.41
381491.063853037.35	381491.06	3853037.35	FENCEINT	4.79E-01	3.64E-05	3.95E+00	2.67E-04	4.43
381501.053853037.24	381501.05	3853037.24	FENCEINT	4.82E-01	3.65E-05	3.97E+00	2.68E-04	4.45
381511.033853037.13	381511.03	3853037.13	FENCEINT	4.83E-01	3.66E-05	3.98E+00	2.69E-04	4.46
381521.013853037.02	381521.01	3853037.02	FENCEINT	4.84E-01	3.67E-05	3.99E+00	2.69E-04	4.47
381530.993853036.91	381530.99	3853036.91	FENCEINT	4.85E-01	3.67E-05	4.00E+00	2.70E-04	4.48
381540.973853036.8	381540.97	3853036.80	FENCEINT	4.85E-01	3.68E-05	4.00E+00	2.70E-04	4.48
381550.953853036.69	381550.95	3853036.69	FENCEINT	4.85E-01	3.69E-05	4.00E+00	2.71E-04	4.48
381560.933853036.58	381560.93	3853036.58	FENCEINT	4.85E-01	3.70E-05	4.00E+00	2.71E-04	4.48
381570.913853036.47	381570.91	3853036.47	FENCEINT	4.85E-01	3.70E-05	3.99E+00	2.72E-04	4.48
381580.893853036.36	381580.89	3853036.36	FENCEINT	4.85E-01	3.71E-05	3.99E+00	2.72E-04	4.48
381590.883853036.25	381590.88	3853036.25	FENCEINT	4.84E-01	3.72E-05	3.99E+00	2.73E-04	4.48
381600.863853036.14	381600.86	3853036.14	FENCEINT	4.84E-01	3.73E-05	3.99E+00	2.74E-04	4.47

Cancer Risk				3rd Tri		0<2		Total Cancer Risk (cases per million)
				Cancer Risk ( cases per million)		Cancer Risk ( cases per million)		
XY	X	Y	Receptor Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
381610.843853036.03	381610.84	3853036.03	FENCEINT	4.83E-01	3.73E-05	3.98E+00	2.74E-04	4.46
381620.823853035.92	381620.82	3853035.92	FENCEINT	4.82E-01	3.74E-05	3.97E+00	2.75E-04	4.46
381630.83853035.82	381630.80	3853035.82	FENCEINT	4.81E-01	3.75E-05	3.97E+00	2.75E-04	4.45
381640.783853035.71	381640.78	3853035.71	FENCEINT	4.81E-01	3.76E-05	3.96E+00	2.76E-04	4.45
381650.763853035.6	381650.76	3853035.60	FENCEINT	4.80E-01	3.76E-05	3.96E+00	2.76E-04	4.44
381660.743853035.49	381660.74	3853035.49	FENCEINT	4.79E-01	3.77E-05	3.95E+00	2.77E-04	4.43
381670.733853035.38	381670.73	3853035.38	FENCEINT	4.77E-01	3.78E-05	3.94E+00	2.78E-04	4.41
381680.713853035.27	381680.71	3853035.27	FENCEINT	4.76E-01	3.79E-05	3.93E+00	2.78E-04	4.40
381690.693853035.16	381690.69	3853035.16	FENCEINT	4.76E-01	3.79E-05	3.92E+00	2.79E-04	4.40
381700.673853035.05	381700.67	3853035.05	FENCEINT	4.74E-01	3.80E-05	3.91E+00	2.79E-04	4.39
381710.653853034.94	381710.65	3853034.94	FENCEINT	4.72E-01	3.81E-05	3.89E+00	2.79E-04	4.37
381720.633853034.83	381720.63	3853034.83	FENCEINT	4.70E-01	3.81E-05	3.88E+00	2.80E-04	4.35
381730.613853034.72	381730.61	3853034.72	FENCEINT	4.67E-01	3.82E-05	3.85E+00	2.81E-04	4.32
381740.593853034.61	381740.59	3853034.61	FENCEINT	4.65E-01	3.83E-05	3.83E+00	2.81E-04	4.29
381750.573853034.5	381750.57	3853034.50	FENCEINT	4.61E-01	3.84E-05	3.80E+00	2.82E-04	4.26
381760.563853034.39	381760.56	3853034.39	FENCEINT	4.58E-01	3.84E-05	3.77E+00	2.82E-04	4.23
381770.543853034.28	381770.54	3853034.28	FENCEINT	4.55E-01	3.85E-05	3.75E+00	2.83E-04	4.20
381780.523853034.17	381780.52	3853034.17	FENCEINT	4.51E-01	3.85E-05	3.72E+00	2.83E-04	4.17
381790.53853034.06	381790.50	3853034.06	FENCEINT	4.48E-01	3.86E-05	3.69E+00	2.84E-04	4.14
381800.483853033.95	381800.48	3853033.95	FENCEINT	4.43E-01	3.87E-05	3.65E+00	2.84E-04	4.10
381810.463853033.84	381810.46	3853033.84	FENCEINT	4.39E-01	3.88E-05	3.62E+00	2.85E-04	4.06
381820.443853033.73	381820.44	3853033.73	FENCEINT	4.34E-01	3.88E-05	3.58E+00	2.85E-04	4.01
381830.423853033.62	381830.42	3853033.62	FENCEINT	4.28E-01	3.89E-05	3.53E+00	2.86E-04	3.96
381840.43853033.51	381840.40	3853033.51	FENCEINT	4.22E-01	3.90E-05	3.48E+00	2.86E-04	3.90
381850.393853033.4	381850.39	3853033.40	FENCEINT	4.16E-01	3.90E-05	3.43E+00	2.87E-04	3.84
381860.373853033.29	381860.37	3853033.29	FENCEINT	4.08E-01	3.91E-05	3.36E+00	2.87E-04	3.77
381870.353853033.18	381870.35	3853033.18	FENCEINT	4.00E-01	3.92E-05	3.29E+00	2.88E-04	3.69
381880.333853033.07	381880.33	3853033.07	FENCEINT	3.90E-01	3.92E-05	3.22E+00	2.88E-04	3.61
381890.313853032.96	381890.31	3853032.96	FENCEINT	3.80E-01	3.93E-05	3.13E+00	2.89E-04	3.51
381900.293853032.85	381900.29	3853032.85	FENCEINT	3.68E-01	3.94E-05	3.03E+00	2.89E-04	3.40
381910.273853032.74	381910.27	3853032.74	FENCEINT	3.54E-01	3.95E-05	2.92E+00	2.90E-04	3.28
381920.253853032.63	381920.25	3853032.63	FENCEINT	3.39E-01	3.95E-05	2.79E+00	2.90E-04	3.13
381930.243853032.52	381930.24	3853032.52	FENCEINT	3.21E-01	3.96E-05	2.64E+00	2.91E-04	2.96
381940.223853032.41	381940.22	3853032.41	FENCEINT	3.01E-01	3.96E-05	2.48E+00	2.91E-04	2.78
381950.23853032.3	381950.20	3853032.30	FENCEINT	2.80E-01	3.97E-05	2.31E+00	2.91E-04	2.59
381960.183853032.19	381960.18	3853032.19	FENCEINT	2.64E-01	3.97E-05	2.18E+00	2.92E-04	2.44
381970.193853041.98	381970.19	3853041.98	FENCEINT	3.03E-01	4.06E-05	2.50E+00	2.98E-04	2.80
381970.233853051.87	381970.23	3853051.87	FENCEINT	3.54E-01	4.14E-05	2.92E+00	3.04E-04	3.27
381970.263853061.77	381970.26	3853061.77	FENCEINT	4.00E-01	4.23E-05	3.29E+00	3.10E-04	3.69
381970.293853071.66	381970.29	3853071.66	FENCEINT	4.38E-01	4.32E-05	3.61E+00	3.17E-04	4.05
381970.333853081.56	381970.33	3853081.56	FENCEINT	4.70E-01	4.41E-05	3.87E+00	3.24E-04	4.34
381970.363853091.45	381970.36	3853091.45	FENCEINT	4.96E-01	4.50E-05	4.09E+00	3.30E-04	4.59
381970.393853101.35	381970.39	3853101.35	FENCEINT	5.19E-01	4.60E-05	4.28E+00	3.38E-04	4.80

Cancer Risk				3rd Tri		0<2		Total Cancer Risk (cases per million)
				Cancer Risk ( cases per million)		Cancer Risk ( cases per million)		
XY	X	Y	Receptor Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
381970.433853111.25	381970.43	3853111.25	FENCEINT	5.39E-01	4.69E-05	4.44E+00	3.45E-04	4.98
381970.463853121.14	381970.46	3853121.14	FENCEINT	5.57E-01	4.80E-05	4.59E+00	3.52E-04	5.15
381970.493853131.04	381970.49	3853131.04	FENCEINT	5.72E-01	4.90E-05	4.72E+00	3.60E-04	5.29
381970.533853140.93	381970.53	3853140.93	FENCEINT	5.86E-01	5.02E-05	4.83E+00	3.68E-04	5.41
381970.563853150.83	381970.56	3853150.83	FENCEINT	5.98E-01	5.13E-05	4.93E+00	3.77E-04	5.53
381970.593853160.72	381970.59	3853160.72	FENCEINT	6.09E-01	5.25E-05	5.02E+00	3.85E-04	5.63
381970.633853170.62	381970.63	3853170.62	FENCEINT	6.19E-01	5.37E-05	5.10E+00	3.94E-04	5.72
381970.663853180.52	381970.66	3853180.52	FENCEINT	6.28E-01	5.49E-05	5.18E+00	4.03E-04	5.81
381970.693853190.41	381970.69	3853190.41	FENCEINT	6.37E-01	5.62E-05	5.25E+00	4.13E-04	5.89
381970.733853200.31	381970.73	3853200.31	FENCEINT	6.44E-01	5.76E-05	5.31E+00	4.23E-04	5.96
381970.763853210.2	381970.76	3853210.20	FENCEINT	6.51E-01	5.90E-05	5.37E+00	4.33E-04	6.02
381970.793853220.1	381970.79	3853220.10	FENCEINT	6.58E-01	6.05E-05	5.42E+00	4.44E-04	6.08
381970.833853229.99	381970.83	3853229.99	FENCEINT	6.65E-01	6.20E-05	5.48E+00	4.55E-04	6.14
381970.863853239.89	381970.86	3853239.89	FENCEINT	6.70E-01	6.35E-05	5.53E+00	4.67E-04	6.20
381970.893853249.79	381970.89	3853249.79	FENCEINT	6.76E-01	6.52E-05	5.57E+00	4.79E-04	6.24
381970.933853259.68	381970.93	3853259.68	FENCEINT	6.81E-01	6.69E-05	5.61E+00	4.91E-04	6.29
381970.963853269.58	381970.96	3853269.58	FENCEINT	6.85E-01	6.86E-05	5.65E+00	5.04E-04	6.34
381970.993853279.47	381970.99	3853279.47	FENCEINT	6.90E-01	7.05E-05	5.69E+00	5.18E-04	6.38
381971.033853289.37	381971.03	3853289.37	FENCEINT	6.94E-01	7.24E-05	5.72E+00	5.32E-04	6.42
381971.063853299.26	381971.06	3853299.26	FENCEINT	6.98E-01	7.44E-05	5.75E+00	5.46E-04	6.45
381971.093853309.16	381971.09	3853309.16	FENCEINT	7.02E-01	7.65E-05	5.79E+00	5.62E-04	6.49
381971.133853319.06	381971.13	3853319.06	FENCEINT	7.06E-01	7.86E-05	5.82E+00	5.77E-04	6.52
381971.163853328.95	381971.16	3853328.95	FENCEINT	7.10E-01	8.09E-05	5.85E+00	5.94E-04	6.56
381971.193853338.85	381971.19	3853338.85	FENCEINT	7.13E-01	8.32E-05	5.88E+00	6.11E-04	6.60
381971.233853348.74	381971.23	3853348.74	FENCEINT	7.16E-01	8.57E-05	5.91E+00	6.29E-04	6.62
381971.263853358.64	381971.26	3853358.64	FENCEINT	7.18E-01	8.84E-05	5.92E+00	6.49E-04	6.64
381971.293853368.53	381971.29	3853368.53	FENCEINT	7.20E-01	9.12E-05	5.94E+00	6.69E-04	6.66
381971.333853378.43	381971.33	3853378.43	FENCEINT	7.23E-01	9.40E-05	5.96E+00	6.90E-04	6.68
381971.363853388.33	381971.36	3853388.33	FENCEINT	7.26E-01	9.70E-05	5.98E+00	7.12E-04	6.71
381971.393853398.22	381971.39	3853398.22	FENCEINT	7.28E-01	1.00E-04	6.00E+00	7.36E-04	6.73
381971.433853408.12	381971.43	3853408.12	FENCEINT	7.30E-01	1.04E-04	6.02E+00	7.61E-04	6.75
381971.463853418.01	381971.46	3853418.01	FENCEINT	7.32E-01	1.07E-04	6.03E+00	7.87E-04	6.77
381971.493853427.91	381971.49	3853427.91	FENCEINT	7.33E-01	1.11E-04	6.04E+00	8.14E-04	6.78
381971.533853437.8	381971.53	3853437.80	FENCEINT	7.33E-01	1.15E-04	6.04E+00	8.44E-04	6.78
381971.563853447.7	381971.56	3853447.70	FENCEINT	7.34E-01	1.19E-04	6.05E+00	8.74E-04	6.79
381971.593853457.6	381971.59	3853457.60	FENCEINT	7.34E-01	1.24E-04	6.05E+00	9.07E-04	6.78
381971.623853467.49	381971.62	3853467.49	FENCEINT	7.34E-01	1.28E-04	6.05E+00	9.42E-04	6.79
381971.663853477.39	381971.66	3853477.39	FENCEINT	7.35E-01	1.33E-04	6.06E+00	9.79E-04	6.79
381971.693853487.28	381971.69	3853487.28	FENCEINT	7.35E-01	1.39E-04	6.06E+00	1.02E-03	6.80
381971.723853497.18	381971.72	3853497.18	FENCEINT	7.36E-01	1.44E-04	6.06E+00	1.06E-03	6.80
381971.763853507.08	381971.76	3853507.08	FENCEINT	7.36E-01	1.50E-04	6.07E+00	1.10E-03	6.80
381971.793853516.97	381971.79	3853516.97	FENCEINT	7.35E-01	1.57E-04	6.06E+00	1.15E-03	6.80
381971.823853526.87	381971.82	3853526.87	FENCEINT	7.35E-01	1.64E-04	6.06E+00	1.20E-03	6.80

Cancer Risk				3rd Tri		0<2		Total Cancer Risk (cases per million)
				Cancer Risk ( cases per million)		Cancer Risk ( cases per million)		
XY	X	Y	Receptor Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
381971.863853536.76	381971.86	3853536.76	FENCEINT	7.36E-01	1.71E-04	6.06E+00	1.26E-03	6.80
381971.893853546.66	381971.89	3853546.66	FENCEINT	7.36E-01	1.79E-04	6.07E+00	1.32E-03	6.80
381971.923853556.55	381971.92	3853556.55	FENCEINT	7.35E-01	1.88E-04	6.06E+00	1.38E-03	6.80
381971.963853566.45	381971.96	3853566.45	FENCEINT	7.35E-01	1.97E-04	6.06E+00	1.45E-03	6.80
381971.993853576.35	381971.99	3853576.35	FENCEINT	7.35E-01	2.07E-04	6.06E+00	1.52E-03	6.80
381972.023853586.24	381972.02	3853586.24	FENCEINT	7.35E-01	2.18E-04	6.06E+00	1.60E-03	6.79
381972.063853596.14	381972.06	3853596.14	FENCEINT	7.34E-01	2.30E-04	6.05E+00	1.69E-03	6.79
381972.093853606.03	381972.09	3853606.03	FENCEINT	7.33E-01	2.42E-04	6.05E+00	1.78E-03	6.78
381972.123853615.93	381972.12	3853615.93	FENCEINT	7.33E-01	2.56E-04	6.04E+00	1.88E-03	6.77
381972.163853625.82	381972.16	3853625.82	FENCEINT	7.31E-01	2.72E-04	6.03E+00	2.00E-03	6.76
381972.193853635.72	381972.19	3853635.72	FENCEINT	7.30E-01	2.89E-04	6.02E+00	2.12E-03	6.75
381972.223853645.62	381972.22	3853645.62	FENCEINT	7.29E-01	3.07E-04	6.01E+00	2.26E-03	6.74
381972.263853655.51	381972.26	3853655.51	FENCEINT	7.27E-01	3.28E-04	5.99E+00	2.41E-03	6.72
381972.293853665.41	381972.29	3853665.41	FENCEINT	7.24E-01	3.51E-04	5.97E+00	2.58E-03	6.70
381972.323853675.3	381972.32	3853675.30	FENCEINT	7.22E-01	3.77E-04	5.95E+00	2.77E-03	6.68
381972.363853685.2	381972.36	3853685.20	FENCEINT	7.19E-01	4.06E-04	5.93E+00	2.98E-03	6.65
381972.393853695.09	381972.39	3853695.09	FENCEINT	7.16E-01	4.39E-04	5.90E+00	3.22E-03	6.62
381972.423853704.99	381972.42	3853704.99	FENCEINT	7.12E-01	4.76E-04	5.87E+00	3.50E-03	6.59
381972.463853714.89	381972.46	3853714.89	FENCEINT	7.08E-01	5.19E-04	5.83E+00	3.81E-03	6.55
381972.493853724.78	381972.49	3853724.78	FENCEINT	7.03E-01	5.70E-04	5.80E+00	4.18E-03	6.50
381972.523853734.68	381972.52	3853734.68	FENCEINT	6.98E-01	6.28E-04	5.75E+00	4.61E-03	6.46
381972.563853744.57	381972.56	3853744.57	FENCEINT	6.92E-01	6.98E-04	5.71E+00	5.13E-03	6.40
381972.593853754.47	381972.59	3853754.47	FENCEINT	6.86E-01	7.82E-04	5.65E+00	5.74E-03	6.34
381972.623853764.36	381972.62	3853764.36	FENCEINT	6.78E-01	8.85E-04	5.59E+00	6.50E-03	6.28
381972.663853774.26	381972.66	3853774.26	FENCEINT	6.69E-01	1.01E-03	5.52E+00	7.45E-03	6.20
381972.693853784.16	381972.69	3853784.16	FENCEINT	6.59E-01	1.18E-03	5.43E+00	8.66E-03	6.10
381972.723853794.05	381972.72	3853794.05	FENCEINT	6.47E-01	1.40E-03	5.33E+00	1.02E-02	5.99
381972.763853803.95	381972.76	3853803.95	FENCEINT	6.32E-01	1.69E-03	5.21E+00	1.24E-02	5.85
381972.793853813.84	381972.79	3853813.84	FENCEINT	6.13E-01	2.11E-03	5.05E+00	1.55E-02	5.68
381972.823853823.74	381972.82	3853823.74	FENCEINT	5.90E-01	2.75E-03	4.86E+00	2.02E-02	5.47
381972.863853833.63	381972.86	3853833.63	FENCEINT	5.59E-01	3.80E-03	4.61E+00	2.79E-02	5.20
381962.923853843.66	381962.92	3853843.66	FENCEINT	5.34E-01	3.72E-03	4.40E+00	2.73E-02	4.97
381952.963853843.79	381952.96	3853843.79	FENCEINT	5.40E-01	3.74E-03	4.45E+00	2.75E-02	5.03
381942.993853843.92	381942.99	3853843.92	FENCEINT	5.48E-01	4.65E-03	4.52E+00	3.42E-02	5.11
381933.023853844.04	381933.02	3853844.04	FENCEINT	5.56E-01	3.73E-03	4.58E+00	2.74E-02	5.17
381923.063853844.17	381923.06	3853844.17	FENCEINT	5.62E-01	3.72E-03	4.63E+00	2.73E-02	5.22
381913.093853844.3	381913.09	3853844.30	FENCEINT	5.67E-01	4.66E-03	4.67E+00	3.42E-02	5.28
381903.123853844.43	381903.12	3853844.43	FENCEINT	5.72E-01	3.77E-03	4.71E+00	2.77E-02	5.32
381893.163853844.56	381893.16	3853844.56	FENCEINT	5.75E-01	3.71E-03	4.74E+00	2.73E-02	5.35
381883.193853844.69	381883.19	3853844.69	FENCEINT	5.79E-01	3.74E-03	4.77E+00	2.74E-02	5.38
381873.223853844.82	381873.22	3853844.82	FENCEINT	5.81E-01	4.64E-03	4.79E+00	3.41E-02	5.41
381863.253853844.94	381863.25	3853844.94	FENCEINT	5.83E-01	3.72E-03	4.81E+00	2.73E-02	5.42
381853.293853845.07	381853.29	3853845.07	FENCEINT	5.86E-01	3.71E-03	4.83E+00	2.73E-02	5.45

Cancer Risk				3rd Tri		0<2		Total Cancer Risk (cases per million)
				Cancer Risk ( cases per million)		Cancer Risk ( cases per million)		
				OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
XY	X	Y	Receptor Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
381843.323853845.2	381843.32	3853845.20	FENCEINT	5.88E-01	4.65E-03	4.85E+00	3.41E-02	5.47
381833.353853845.33	381833.35	3853845.33	FENCEINT	5.89E-01	3.75E-03	4.86E+00	2.75E-02	5.48
381823.393853845.46	381823.39	3853845.46	FENCEINT	5.90E-01	3.70E-03	4.87E+00	2.72E-02	5.49
381813.423853845.59	381813.42	3853845.59	FENCEINT	5.90E-01	3.73E-03	4.87E+00	2.74E-02	5.49
381803.453853845.72	381803.45	3853845.72	FENCEINT	5.90E-01	4.63E-03	4.87E+00	3.40E-02	5.50
381793.493853845.84	381793.49	3853845.84	FENCEINT	5.91E-01	3.71E-03	4.87E+00	2.72E-02	5.49
381783.523853845.97	381783.52	3853845.97	FENCEINT	5.91E-01	3.70E-03	4.87E+00	2.72E-02	5.50
381773.553853846.1	381773.55	3853846.10	FENCEINT	5.91E-01	4.63E-03	4.87E+00	3.40E-02	5.50
381763.593853846.23	381763.59	3853846.23	FENCEINT	5.90E-01	3.73E-03	4.87E+00	2.74E-02	5.49
381753.623853846.36	381753.62	3853846.36	FENCEINT	5.90E-01	3.69E-03	4.86E+00	2.71E-02	5.48
381743.653853846.49	381743.65	3853846.49	FENCEINT	5.89E-01	3.72E-03	4.86E+00	2.73E-02	5.48
381733.693853846.62	381733.69	3853846.62	FENCEINT	5.88E-01	4.61E-03	4.85E+00	3.39E-02	5.48
381723.723853846.75	381723.72	3853846.75	FENCEINT	5.88E-01	3.69E-03	4.84E+00	2.71E-02	5.46
381713.753853846.87	381713.75	3853846.87	FENCEINT	5.87E-01	3.69E-03	4.84E+00	2.71E-02	5.46
381703.793853847	381703.79	3853847.00	FENCEINT	5.86E-01	4.61E-03	4.83E+00	3.39E-02	5.45
381693.823853847.13	381693.82	3853847.13	FENCEINT	5.85E-01	3.71E-03	4.82E+00	2.72E-02	5.43
381683.853853847.26	381683.85	3853847.26	FENCEINT	5.83E-01	3.67E-03	4.81E+00	2.70E-02	5.42
381673.883853847.39	381673.88	3853847.39	FENCEINT	5.82E-01	3.71E-03	4.80E+00	2.72E-02	5.41
381663.923853847.52	381663.92	3853847.52	FENCEINT	5.80E-01	4.59E-03	4.78E+00	3.37E-02	5.40
381653.953853847.65	381653.95	3853847.65	FENCEINT	5.80E-01	3.67E-03	4.78E+00	2.70E-02	5.39
381643.983853847.77	381643.98	3853847.77	FENCEINT	5.79E-01	3.68E-03	4.77E+00	2.70E-02	5.38
381634.023853847.9	381634.02	3853847.90	FENCEINT	5.77E-01	4.60E-03	4.76E+00	3.38E-02	5.37
381624.053853848.03	381624.05	3853848.03	FENCEINT	5.75E-01	3.69E-03	4.74E+00	2.71E-02	5.35
381614.083853848.16	381614.08	3853848.16	FENCEINT	5.73E-01	3.66E-03	4.72E+00	2.68E-02	5.33
381604.123853848.29	381604.12	3853848.29	FENCEINT	5.70E-01	3.70E-03	4.70E+00	2.72E-02	5.30
381594.153853848.42	381594.15	3853848.42	FENCEINT	5.67E-01	4.59E-03	4.68E+00	3.37E-02	5.28
381584.183853848.55	381584.18	3853848.55	FENCEINT	5.64E-01	3.65E-03	4.65E+00	2.68E-02	5.24
381574.223853848.67	381574.22	3853848.67	FENCEINT	5.61E-01	3.66E-03	4.62E+00	2.69E-02	5.21
381564.253853848.8	381564.25	3853848.80	FENCEINT	5.58E-01	4.57E-03	4.60E+00	3.36E-02	5.20
381554.283853848.93	381554.28	3853848.93	FENCEINT	5.55E-01	3.67E-03	4.58E+00	2.69E-02	5.16
381544.323853849.06	381544.32	3853849.06	FENCEINT	5.53E-01	3.63E-03	4.56E+00	2.67E-02	5.14
381534.353853849.19	381534.35	3853849.19	FENCEINT	5.50E-01	3.68E-03	4.53E+00	2.70E-02	5.11
381524.383853849.32	381524.38	3853849.32	FENCEINT	5.47E-01	4.56E-03	4.51E+00	3.35E-02	5.09
381514.423853849.45	381514.42	3853849.45	FENCEINT	5.43E-01	3.62E-03	4.48E+00	2.66E-02	5.05
381504.453853849.57	381504.45	3853849.57	FENCEINT	5.40E-01	3.63E-03	4.45E+00	2.66E-02	5.02
381494.483853849.7	381494.48	3853849.70	FENCEINT	5.36E-01	4.54E-03	4.42E+00	3.33E-02	5.00
381484.523853849.83	381484.52	3853849.83	FENCEINT	5.32E-01	3.63E-03	4.39E+00	2.66E-02	4.95
381474.553853849.96	381474.55	3853849.96	FENCEINT	5.28E-01	3.60E-03	4.35E+00	2.64E-02	4.91
381464.583853850.09	381464.58	3853850.09	FENCEINT	5.24E-01	4.54E-03	4.32E+00	3.33E-02	4.88
381454.613853850.22	381454.61	3853850.22	FENCEINT	5.18E-01	4.52E-03	4.27E+00	3.32E-02	4.83
381444.653853850.35	381444.65	3853850.35	FENCEINT	5.14E-01	3.58E-03	4.24E+00	2.63E-02	4.78
381434.683853850.47	381434.68	3853850.47	FENCEINT	5.09E-01	3.59E-03	4.19E+00	2.63E-02	4.73
381424.713853850.6	381424.71	3853850.60	FENCEINT	5.03E-01	4.49E-03	4.15E+00	3.30E-02	4.69

Cancer Risk				3rd Tri		0<2		Total Cancer Risk (cases per million)
				Cancer Risk ( cases per million)		Cancer Risk ( cases per million)		
				OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
XY	X	Y	Receptor Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
381414.753853850.73	381414.75	3853850.73	FENCEINT	4.97E-01	3.57E-03	4.10E+00	2.62E-02	4.63
381404.783853850.86	381404.78	3853850.86	FENCEINT	4.92E-01	3.54E-03	4.05E+00	2.60E-02	4.57
381394.813853850.99	381394.81	3853850.99	FENCEINT	4.86E-01	4.47E-03	4.00E+00	3.28E-02	4.53
381384.853853851.12	381384.85	3853851.12	FENCEINT	4.79E-01	3.58E-03	3.95E+00	2.63E-02	4.46
381374.883853851.25	381374.88	3853851.25	FENCEINT	4.72E-01	3.51E-03	3.89E+00	2.57E-02	4.39
381364.913853851.38	381364.91	3853851.38	FENCEINT	4.64E-01	3.51E-03	3.82E+00	2.58E-02	4.32
381354.953853851.5	381354.95	3853851.50	FENCEINT	4.56E-01	4.40E-03	3.76E+00	3.23E-02	4.25
381344.983853851.63	381344.98	3853851.63	FENCEINT	4.47E-01	3.47E-03	3.68E+00	2.55E-02	4.16
381335.013853851.76	381335.01	3853851.76	FENCEINT	4.38E-01	3.44E-03	3.61E+00	2.52E-02	4.08
381325.053853851.89	381325.05	3853851.89	FENCEINT	4.28E-01	4.35E-03	3.53E+00	3.19E-02	4.00
381315.083853852.02	381315.08	3853852.02	FENCEINT	4.18E-01	3.44E-03	3.44E+00	2.52E-02	3.89
381305.113853852.15	381305.11	3853852.15	FENCEINT	4.06E-01	3.35E-03	3.35E+00	2.46E-02	3.78
381295.153853852.28	381295.15	3853852.28	FENCEINT	3.93E-01	3.34E-03	3.24E+00	2.46E-02	3.66
381285.183853852.4	381285.18	3853852.40	FENCEINT	3.79E-01	4.20E-03	3.12E+00	3.09E-02	3.54
381275.213853852.53	381275.21	3853852.53	FENCEINT	3.63E-01	3.24E-03	3.00E+00	2.38E-02	3.39
381265.243853852.66	381265.24	3853852.66	FENCEINT	3.46E-01	3.17E-03	2.85E+00	2.33E-02	3.22
381255.283853852.79	381255.28	3853852.79	FENCEINT	3.26E-01	4.03E-03	2.69E+00	2.96E-02	3.04
381245.313853852.92	381245.31	3853852.92	FENCEINT	3.03E-01	3.05E-03	2.50E+00	2.24E-02	2.83
381235.343853853.05	381235.34	3853853.05	FENCEINT	2.77E-01	2.88E-03	2.29E+00	2.12E-02	2.59
381225.383853853.18	381225.38	3853853.18	FENCEINT	2.47E-01	2.75E-03	2.04E+00	2.02E-02	2.31
381215.413853853.3	381215.41	3853853.30	FENCEINT	2.12E-01	3.43E-03	1.75E+00	2.52E-02	1.99
381205.443853853.43	381205.44	3853853.43	FENCEINT	1.77E-01	2.21E-03	1.46E+00	1.62E-02	1.65
381195.483853853.56	381195.48	3853853.56	FENCEINT	1.51E-01	1.75E-03	1.25E+00	1.29E-02	1.41
381207.283853216.51	381207.28	3853216.51	RESIDENT	2.53E-01	4.69E-05	2.09E+00	3.44E-04	2.34
381206.463853158.25	381206.46	3853158.25	RESIDENT	2.36E-01	4.20E-05	1.94E+00	3.09E-04	2.18
381133.443853006.47	381133.44	3853006.47	RESIDENT	1.18E-01	3.21E-05	9.73E-01	2.35E-04	1.09
381572.573853899.35	381572.57	3853899.35	RESIDENT	2.83E-01	2.13E-03	2.33E+00	1.56E-02	2.64
381635.293853878.64	381635.29	3853878.64	RESIDENT	3.80E-01	3.76E-03	3.13E+00	2.76E-02	3.54
381724.423853880.35	381724.42	3853880.35	RESIDENT	3.81E-01	3.43E-03	3.14E+00	2.52E-02	3.55
381769.333854066.93	381769.33	3854066.93	RESIDENT	9.90E-02	3.29E-04	8.16E-01	2.41E-03	0.92
380838.73853925.28	380838.70	3853925.28	RESIDENT	2.05E-02	5.23E-05	1.69E-01	3.84E-04	0.19
380776.713853911.67	380776.71	3853911.67	RESIDENT	1.90E-02	4.56E-05	1.57E-01	3.35E-04	0.18
381905.063854191.95	381905.06	3854191.95	RESIDENT	6.42E-02	1.78E-04	5.29E-01	1.30E-03	0.59
381897.523854254.79	381897.52	3854254.79	RESIDENT	4.95E-02	1.34E-04	4.08E-01	9.84E-04	0.46
381770.173854255.62	381770.17	3854255.62	RESIDENT	4.05E-02	1.20E-04	3.34E-01	8.80E-04	0.38
381846.773853931.2	381846.77	3853931.20	RESIDENT	2.40E-01	1.16E-03	1.98E+00	8.50E-03	2.23
382759.033853899.12	382759.03	3853899.12	RESIDENT	6.06E-02	1.64E-03	5.00E-01	1.21E-02	0.57
382948.913853890.37	382948.91	3853890.37	RESIDENT	4.58E-02	1.85E-03	3.77E-01	1.36E-02	0.44
382818.213853903.75	382818.21	3853903.75	RESIDENT	5.52E-02	1.50E-03	4.55E-01	1.10E-02	0.52
382658.823853065.93	382658.82	3853065.93	RESIDENT	4.94E-02	4.50E-05	4.08E-01	3.30E-04	0.46
382705.843853071.63	382705.84	3853071.63	RESIDENT	4.67E-02	4.55E-05	3.85E-01	3.34E-04	0.43
382739.323853070.2	382739.32	3853070.20	RESIDENT	4.45E-02	4.52E-05	3.67E-01	3.32E-04	0.41
382765.673853062.36	382765.67	3853062.36	RESIDENT	4.25E-02	4.44E-05	3.50E-01	3.26E-04	0.39

Cancer Risk				3rd Tri		0<2		Total Cancer Risk (cases per million)
				Cancer Risk ( cases per million)		Cancer Risk ( cases per million)		
XY	X	Y	Receptor Type	OFFROAD	HAUL_EX	OFFROAD	HAUL_EX	
380838.253852648.62	380838.25	3852648.62	RESIDENT	2.71E-02	1.94E-05	2.24E-01	1.42E-04	0.25
380596.713852456.08	380596.71	3852456.08	RESIDENT	1.67E-02	1.57E-05	1.38E-01	1.15E-04	0.15
380344.573853233.38	380344.57	3853233.38	RESIDENT	2.56E-02	2.72E-05	2.11E-01	2.00E-04	0.24
380414.583853989.01	380414.58	3853989.01	RESIDENT	9.45E-03	2.02E-05	7.79E-02	1.49E-04	0.09
380454.013853958.13	380454.01	3853958.13	RESIDENT	1.05E-02	2.23E-05	8.64E-02	1.64E-04	0.10



Chronic Hazard Index DPM REL ( $\mu\text{g}/\text{m}^3$ )				Resident Maximum: 0.01			
				Year 1			CHRONIC HI
XY	X	Y	Type	Project Concentrations ( $\mu\text{g}/\text{m}^3$ )			
				OFFROAD	HAUL	TOTAL	
381185.513853853.69	381186	3853854	FENCEPRI	1.02E-02	1.38E-04	1.03E-02	2.07E-03
381185.513853302.3	381186	3853302	FENCEPRI	2.70E-02	3.78E-06	2.70E-02	5.39E-03
381280.93853302.3	381281	3853302	FENCEPRI	4.13E-02	3.94E-06	4.13E-02	8.26E-03
381281.463853039.66	381281	3853040	FENCEPRI	2.38E-02	2.38E-06	2.38E-02	4.76E-03
381970.163853032.08	381970	3853032	FENCEPRI	1.90E-02	2.71E-06	1.90E-02	3.80E-03
381972.893853843.53	381973	3853844	FENCEPRI	3.85E-02	2.57E-04	3.88E-02	7.76E-03
381185.513853843.84	381186	3853844	FENCEINT	1.26E-02	1.42E-04	1.28E-02	2.55E-03
381185.513853834	381186	3853834	FENCEINT	1.53E-02	1.03E-04	1.55E-02	3.09E-03
381185.513853824.15	381186	3853824	FENCEINT	1.77E-02	7.96E-05	1.78E-02	3.57E-03
381185.513853814.3	381186	3853814	FENCEINT	1.97E-02	6.38E-05	1.97E-02	3.95E-03
381185.513853804.46	381186	3853804	FENCEINT	2.12E-02	5.28E-05	2.13E-02	4.26E-03
381185.513853794.61	381186	3853795	FENCEINT	2.25E-02	4.47E-05	2.26E-02	4.52E-03
381185.513853784.77	381186	3853785	FENCEINT	2.36E-02	3.85E-05	2.37E-02	4.73E-03
381185.513853774.92	381186	3853775	FENCEINT	2.46E-02	3.38E-05	2.46E-02	4.92E-03
381185.513853765.07	381186	3853765	FENCEINT	2.53E-02	3.00E-05	2.54E-02	5.08E-03
381185.513853755.23	381186	3853755	FENCEINT	2.60E-02	2.68E-05	2.61E-02	5.21E-03
381185.513853745.38	381186	3853745	FENCEINT	2.66E-02	2.43E-05	2.67E-02	5.33E-03
381185.513853735.54	381186	3853736	FENCEINT	2.72E-02	2.21E-05	2.72E-02	5.44E-03
381185.513853725.69	381186	3853726	FENCEINT	2.77E-02	2.03E-05	2.77E-02	5.54E-03
381185.513853715.84	381186	3853716	FENCEINT	2.81E-02	1.87E-05	2.81E-02	5.62E-03
381185.513853706	381186	3853706	FENCEINT	2.85E-02	1.74E-05	2.85E-02	5.70E-03
381185.513853696.15	381186	3853696	FENCEINT	2.89E-02	1.62E-05	2.89E-02	5.78E-03
381185.513853686.3	381186	3853686	FENCEINT	2.92E-02	1.51E-05	2.92E-02	5.84E-03
381185.513853676.46	381186	3853676	FENCEINT	2.95E-02	1.42E-05	2.95E-02	5.90E-03
381185.513853666.61	381186	3853667	FENCEINT	2.98E-02	1.33E-05	2.98E-02	5.95E-03
381185.513853656.76	381186	3853657	FENCEINT	3.00E-02	1.26E-05	3.00E-02	6.00E-03
381185.513853646.92	381186	3853647	FENCEINT	3.02E-02	1.19E-05	3.03E-02	6.05E-03
381185.513853637.07	381186	3853637	FENCEINT	3.05E-02	1.13E-05	3.05E-02	6.10E-03
381185.513853627.23	381186	3853627	FENCEINT	3.07E-02	1.07E-05	3.07E-02	6.14E-03
381185.513853617.38	381186	3853617	FENCEINT	3.09E-02	1.02E-05	3.09E-02	6.18E-03
381185.513853607.53	381186	3853608	FENCEINT	3.11E-02	9.76E-06	3.11E-02	6.22E-03
381185.513853597.69	381186	3853598	FENCEINT	3.12E-02	9.33E-06	3.12E-02	6.25E-03
381185.513853587.84	381186	3853588	FENCEINT	3.14E-02	8.93E-06	3.14E-02	6.28E-03
381185.513853578	381186	3853578	FENCEINT	3.15E-02	8.56E-06	3.16E-02	6.31E-03
381185.513853568.15	381186	3853568	FENCEINT	3.17E-02	8.22E-06	3.17E-02	6.34E-03
381185.513853558.3	381186	3853558	FENCEINT	3.18E-02	7.90E-06	3.18E-02	6.36E-03
381185.513853548.46	381186	3853548	FENCEINT	3.19E-02	7.61E-06	3.19E-02	6.39E-03
381185.513853538.61	381186	3853539	FENCEINT	3.20E-02	7.33E-06	3.20E-02	6.41E-03
381185.513853528.76	381186	3853529	FENCEINT	3.21E-02	7.07E-06	3.21E-02	6.42E-03
381185.513853518.92	381186	3853519	FENCEINT	3.22E-02	6.82E-06	3.22E-02	6.43E-03
381185.513853509.07	381186	3853509	FENCEINT	3.22E-02	6.59E-06	3.22E-02	6.44E-03
381185.513853499.22	381186	3853499	FENCEINT	3.22E-02	6.38E-06	3.22E-02	6.45E-03
381185.513853489.38	381186	3853489	FENCEINT	3.23E-02	6.17E-06	3.23E-02	6.46E-03
381185.513853479.53	381186	3853480	FENCEINT	3.23E-02	5.98E-06	3.23E-02	6.46E-03
381185.513853469.69	381186	3853470	FENCEINT	3.23E-02	5.80E-06	3.23E-02	6.46E-03
381185.513853459.84	381186	3853460	FENCEINT	3.23E-02	5.63E-06	3.23E-02	6.46E-03
381185.513853449.99	381186	3853450	FENCEINT	3.23E-02	5.46E-06	3.23E-02	6.47E-03
381185.513853440.15	381186	3853440	FENCEINT	3.23E-02	5.31E-06	3.23E-02	6.47E-03
381185.513853430.3	381186	3853430	FENCEINT	3.23E-02	5.17E-06	3.23E-02	6.47E-03
381185.513853420.46	381186	3853420	FENCEINT	3.23E-02	5.03E-06	3.23E-02	6.46E-03
381185.513853410.61	381186	3853411	FENCEINT	3.23E-02	4.89E-06	3.23E-02	6.45E-03
381185.513853400.76	381186	3853401	FENCEINT	3.22E-02	4.77E-06	3.22E-02	6.44E-03
381185.513853390.92	381186	3853391	FENCEINT	3.21E-02	4.65E-06	3.21E-02	6.42E-03
381185.513853381.07	381186	3853381	FENCEINT	3.20E-02	4.53E-06	3.20E-02	6.40E-03
381185.513853371.22	381186	3853371	FENCEINT	3.19E-02	4.43E-06	3.19E-02	6.38E-03
381185.513853361.38	381186	3853361	FENCEINT	3.17E-02	4.32E-06	3.17E-02	6.34E-03
381185.513853351.53	381186	3853352	FENCEINT	3.14E-02	4.22E-06	3.14E-02	6.28E-03
381185.513853341.68	381186	3853342	FENCEINT	3.10E-02	4.12E-06	3.10E-02	6.21E-03
381185.513853331.84	381186	3853332	FENCEINT	3.05E-02	4.03E-06	3.05E-02	6.10E-03
381185.513853321.99	381186	3853322	FENCEINT	2.97E-02	3.94E-06	2.97E-02	5.94E-03
381185.513853312.15	381186	3853312	FENCEINT	2.86E-02	3.86E-06	2.86E-02	5.72E-03
381195.053853302.3	381195	3853302	FENCEINT	2.78E-02	3.79E-06	2.78E-02	5.57E-03
381204.593853302.3	381205	3853302	FENCEINT	2.90E-02	3.81E-06	2.90E-02	5.80E-03
381214.133853302.3	381214	3853302	FENCEINT	3.04E-02	3.82E-06	3.04E-02	6.09E-03
381223.673853302.3	381224	3853302	FENCEINT	3.20E-02	3.84E-06	3.20E-02	6.40E-03
381233.213853302.3	381233	3853302	FENCEINT	3.36E-02	3.86E-06	3.36E-02	6.72E-03
381242.743853302.3	381243	3853302	FENCEINT	3.52E-02	3.87E-06	3.52E-02	7.03E-03
381252.283853302.3	381252	3853302	FENCEINT	3.68E-02	3.89E-06	3.68E-02	7.36E-03
381261.823853302.3	381262	3853302	FENCEINT	3.84E-02	3.90E-06	3.84E-02	7.69E-03

Chronic Hazard Index				Year 1			
DPM REL ( $\mu\text{g}/\text{m}^3$ )	5.0			Project Concentrations ( $\mu\text{g}/\text{m}^3$ )			CHRONIC HI
XY	X	Y	Type	OFFROAD	HAUL	TOTAL	
381271.363853302.3	381271	3853302	FENCEINT	4.00E-02	3.92E-06	4.00E-02	8.00E-03
381280.923853292.57	381281	3853293	FENCEINT	3.89E-02	3.85E-06	3.89E-02	7.79E-03
381280.943853282.85	381281	3853283	FENCEINT	3.73E-02	3.77E-06	3.73E-02	7.45E-03
381280.963853273.12	381281	3853273	FENCEINT	3.60E-02	3.69E-06	3.60E-02	7.21E-03
381280.983853263.39	381281	3853263	FENCEINT	3.52E-02	3.61E-06	3.52E-02	7.04E-03
3812813853253.66	381281	3853254	FENCEINT	3.46E-02	3.53E-06	3.46E-02	6.92E-03
381281.023853243.94	381281	3853244	FENCEINT	3.41E-02	3.46E-06	3.41E-02	6.83E-03
381281.053853234.21	381281	3853234	FENCEINT	3.38E-02	3.39E-06	3.38E-02	6.76E-03
381281.073853224.48	381281	3853224	FENCEINT	3.35E-02	3.33E-06	3.35E-02	6.70E-03
381281.093853214.75	381281	3853215	FENCEINT	3.33E-02	3.26E-06	3.33E-02	6.65E-03
381281.113853205.03	381281	3853205	FENCEINT	3.30E-02	3.20E-06	3.30E-02	6.61E-03
381281.133853195.3	381281	3853195	FENCEINT	3.28E-02	3.14E-06	3.28E-02	6.57E-03
381281.153853185.57	381281	3853186	FENCEINT	3.27E-02	3.08E-06	3.27E-02	6.53E-03
381281.173853175.84	381281	3853176	FENCEINT	3.25E-02	3.02E-06	3.25E-02	6.49E-03
381281.193853166.12	381281	3853166	FENCEINT	3.23E-02	2.97E-06	3.23E-02	6.46E-03
381281.213853156.39	381281	3853156	FENCEINT	3.21E-02	2.91E-06	3.21E-02	6.41E-03
381281.233853146.66	381281	3853147	FENCEINT	3.19E-02	2.86E-06	3.19E-02	6.37E-03
381281.253853136.93	381281	3853137	FENCEINT	3.16E-02	2.81E-06	3.16E-02	6.33E-03
381281.273853127.21	381281	3853127	FENCEINT	3.14E-02	2.76E-06	3.14E-02	6.27E-03
381281.293853117.48	381281	3853117	FENCEINT	3.10E-02	2.72E-06	3.11E-02	6.21E-03
381281.313853107.75	381281	3853108	FENCEINT	3.07E-02	2.67E-06	3.07E-02	6.14E-03
381281.343853098.02	381281	3853098	FENCEINT	3.03E-02	2.62E-06	3.03E-02	6.05E-03
381281.363853088.3	381281	3853088	FENCEINT	2.98E-02	2.58E-06	2.98E-02	5.95E-03
381281.383853078.57	381281	3853079	FENCEINT	2.91E-02	2.54E-06	2.91E-02	5.82E-03
381281.43853068.84	381281	3853069	FENCEINT	2.83E-02	2.49E-06	2.83E-02	5.66E-03
381281.423853059.11	381281	3853059	FENCEINT	2.72E-02	2.45E-06	2.72E-02	5.44E-03
381281.443853049.39	381281	3853049	FENCEINT	2.58E-02	2.41E-06	2.58E-02	5.15E-03
381291.443853039.55	381291	3853040	FENCEINT	2.44E-02	2.38E-06	2.44E-02	4.88E-03
381301.423853039.44	381301	3853039	FENCEINT	2.53E-02	2.39E-06	2.53E-02	5.06E-03
381311.43853039.33	381311	3853039	FENCEINT	2.64E-02	2.39E-06	2.64E-02	5.28E-03
381321.383853039.22	381321	3853039	FENCEINT	2.75E-02	2.40E-06	2.75E-02	5.51E-03
381331.373853039.11	381331	3853039	FENCEINT	2.86E-02	2.40E-06	2.86E-02	5.71E-03
381341.353853039	381341	3853039	FENCEINT	2.94E-02	2.41E-06	2.94E-02	5.89E-03
381351.333853038.89	381351	3853039	FENCEINT	3.02E-02	2.41E-06	3.02E-02	6.05E-03
381361.313853038.78	381361	3853039	FENCEINT	3.09E-02	2.42E-06	3.09E-02	6.19E-03
381371.293853038.67	381371	3853039	FENCEINT	3.16E-02	2.42E-06	3.16E-02	6.31E-03
381381.273853038.56	381381	3853039	FENCEINT	3.21E-02	2.42E-06	3.21E-02	6.42E-03
381391.253853038.45	381391	3853038	FENCEINT	3.26E-02	2.43E-06	3.26E-02	6.53E-03
381401.233853038.34	381401	3853038	FENCEINT	3.31E-02	2.43E-06	3.31E-02	6.62E-03
381411.223853038.23	381411	3853038	FENCEINT	3.35E-02	2.44E-06	3.35E-02	6.70E-03
381421.23853038.12	381421	3853038	FENCEINT	3.38E-02	2.44E-06	3.38E-02	6.77E-03
381431.183853038.01	381431	3853038	FENCEINT	3.41E-02	2.45E-06	3.41E-02	6.82E-03
381441.163853037.9	381441	3853038	FENCEINT	3.44E-02	2.45E-06	3.44E-02	6.88E-03
381451.143853037.79	381451	3853038	FENCEINT	3.47E-02	2.46E-06	3.47E-02	6.93E-03
381461.123853037.68	381461	3853038	FENCEINT	3.49E-02	2.46E-06	3.49E-02	6.98E-03
381471.13853037.57	381471	3853038	FENCEINT	3.51E-02	2.47E-06	3.51E-02	7.02E-03
381481.083853037.46	381481	3853037	FENCEINT	3.53E-02	2.48E-06	3.53E-02	7.06E-03
381491.063853037.35	381491	3853037	FENCEINT	3.55E-02	2.48E-06	3.55E-02	7.10E-03
381501.053853037.24	381501	3853037	FENCEINT	3.56E-02	2.49E-06	3.57E-02	7.13E-03
381511.033853037.13	381511	3853037	FENCEINT	3.57E-02	2.49E-06	3.57E-02	7.15E-03
381521.013853037.02	381521	3853037	FENCEINT	3.58E-02	2.50E-06	3.58E-02	7.16E-03
381530.993853036.91	381531	3853037	FENCEINT	3.59E-02	2.50E-06	3.59E-02	7.17E-03
381540.973853036.8	381541	3853037	FENCEINT	3.59E-02	2.51E-06	3.59E-02	7.18E-03
381550.953853036.69	381551	3853037	FENCEINT	3.59E-02	2.51E-06	3.59E-02	7.18E-03
381560.933853036.58	381561	3853037	FENCEINT	3.59E-02	2.52E-06	3.59E-02	7.17E-03
381570.913853036.47	381571	3853036	FENCEINT	3.59E-02	2.52E-06	3.59E-02	7.17E-03
381580.893853036.36	381581	3853036	FENCEINT	3.59E-02	2.53E-06	3.59E-02	7.17E-03
381590.883853036.25	381591	3853036	FENCEINT	3.58E-02	2.53E-06	3.58E-02	7.17E-03
381600.863853036.14	381601	3853036	FENCEINT	3.58E-02	2.54E-06	3.58E-02	7.16E-03
381610.843853036.03	381611	3853036	FENCEINT	3.57E-02	2.54E-06	3.57E-02	7.15E-03
381620.823853035.92	381621	3853036	FENCEINT	3.57E-02	2.55E-06	3.57E-02	7.13E-03
381630.83853035.82	381631	3853036	FENCEINT	3.56E-02	2.55E-06	3.56E-02	7.13E-03
381640.783853035.71	381641	3853036	FENCEINT	3.56E-02	2.56E-06	3.56E-02	7.12E-03
381650.763853035.6	381651	3853036	FENCEINT	3.55E-02	2.56E-06	3.55E-02	7.10E-03
381660.743853035.49	381661	3853035	FENCEINT	3.54E-02	2.57E-06	3.54E-02	7.09E-03
381670.733853035.38	381671	3853035	FENCEINT	3.53E-02	2.57E-06	3.53E-02	7.06E-03
381680.713853035.27	381681	3853035	FENCEINT	3.53E-02	2.58E-06	3.53E-02	7.05E-03
381690.693853035.16	381691	3853035	FENCEINT	3.52E-02	2.58E-06	3.52E-02	7.04E-03
381700.673853035.05	381701	3853035	FENCEINT	3.51E-02	2.59E-06	3.51E-02	7.02E-03
381710.653853034.94	381711	3853035	FENCEINT	3.50E-02	2.59E-06	3.50E-02	6.99E-03

Chronic Hazard Index				Year 1			
DPM REL ( $\mu\text{g}/\text{m}^3$ )	5.0			Project Concentrations ( $\mu\text{g}/\text{m}^3$ )			CHRONIC HI
XY	X	Y	Type	OFFROAD	HAUL	TOTAL	
381720.633853034.83	381721	3853035	FENCEINT	3.48E-02	2.60E-06	3.48E-02	6.96E-03
381730.613853034.72	381731	3853035	FENCEINT	3.46E-02	2.60E-06	3.46E-02	6.91E-03
381740.593853034.61	381741	3853035	FENCEINT	3.44E-02	2.61E-06	3.44E-02	6.88E-03
381750.573853034.5	381751	3853035	FENCEINT	3.41E-02	2.61E-06	3.41E-02	6.82E-03
381760.563853034.39	381761	3853034	FENCEINT	3.39E-02	2.62E-06	3.39E-02	6.77E-03
381770.543853034.28	381771	3853034	FENCEINT	3.36E-02	2.62E-06	3.37E-02	6.73E-03
381780.523853034.17	381781	3853034	FENCEINT	3.34E-02	2.62E-06	3.34E-02	6.68E-03
381790.53853034.06	381791	3853034	FENCEINT	3.31E-02	2.63E-06	3.31E-02	6.62E-03
381800.483853033.95	381800	3853034	FENCEINT	3.28E-02	2.63E-06	3.28E-02	6.56E-03
381810.463853033.84	381810	3853034	FENCEINT	3.25E-02	2.64E-06	3.25E-02	6.49E-03
381820.443853033.73	381820	3853034	FENCEINT	3.21E-02	2.64E-06	3.21E-02	6.42E-03
381830.423853033.62	381830	3853034	FENCEINT	3.17E-02	2.65E-06	3.17E-02	6.33E-03
381840.43853033.51	381840	3853034	FENCEINT	3.12E-02	2.65E-06	3.13E-02	6.25E-03
381850.393853033.4	381850	3853033	FENCEINT	3.07E-02	2.66E-06	3.07E-02	6.15E-03
381860.373853033.29	381860	3853033	FENCEINT	3.02E-02	2.66E-06	3.02E-02	6.04E-03
381870.353853033.18	381870	3853033	FENCEINT	2.96E-02	2.67E-06	2.96E-02	5.91E-03
381880.333853033.07	381880	3853033	FENCEINT	2.89E-02	2.67E-06	2.89E-02	5.78E-03
381890.313853032.96	381890	3853033	FENCEINT	2.81E-02	2.68E-06	2.81E-02	5.62E-03
381900.293853032.85	381900	3853033	FENCEINT	2.72E-02	2.68E-06	2.72E-02	5.45E-03
381910.273853032.74	381910	3853033	FENCEINT	2.62E-02	2.69E-06	2.62E-02	5.24E-03
381920.253853032.63	381920	3853033	FENCEINT	2.51E-02	2.69E-06	2.51E-02	5.01E-03
381930.243853032.52	381930	3853033	FENCEINT	2.37E-02	2.69E-06	2.37E-02	4.74E-03
381940.223853032.41	381940	3853032	FENCEINT	2.22E-02	2.70E-06	2.22E-02	4.45E-03
381950.23853032.3	381950	3853032	FENCEINT	2.07E-02	2.70E-06	2.07E-02	4.15E-03
381960.183853032.19	381960	3853032	FENCEINT	1.95E-02	2.71E-06	1.95E-02	3.91E-03
381970.193853041.98	381970	3853042	FENCEINT	2.24E-02	2.76E-06	2.24E-02	4.48E-03
381970.233853051.87	381970	3853052	FENCEINT	2.62E-02	2.82E-06	2.62E-02	5.24E-03
381970.263853061.77	381970	3853062	FENCEINT	2.96E-02	2.88E-06	2.96E-02	5.92E-03
381970.293853071.66	381970	3853072	FENCEINT	3.24E-02	2.94E-06	3.24E-02	6.48E-03
381970.333853081.56	381970	3853082	FENCEINT	3.47E-02	3.00E-06	3.47E-02	6.95E-03
381970.363853091.45	381970	3853091	FENCEINT	3.67E-02	3.06E-06	3.67E-02	7.34E-03
381970.393853101.35	381970	3853101	FENCEINT	3.84E-02	3.13E-06	3.84E-02	7.68E-03
381970.433853111.25	381970	3853111	FENCEINT	3.99E-02	3.20E-06	3.99E-02	7.98E-03
381970.463853121.14	381970	3853121	FENCEINT	4.12E-02	3.27E-06	4.12E-02	8.24E-03
381970.493853131.04	381970	3853131	FENCEINT	4.23E-02	3.34E-06	4.23E-02	8.47E-03
381970.533853140.93	381971	3853141	FENCEINT	4.33E-02	3.42E-06	4.33E-02	8.67E-03
381970.563853150.83	381971	3853151	FENCEINT	4.42E-02	3.49E-06	4.42E-02	8.85E-03
381970.593853160.72	381971	3853161	FENCEINT	4.50E-02	3.57E-06	4.50E-02	9.01E-03
381970.633853170.62	381971	3853171	FENCEINT	4.58E-02	3.66E-06	4.58E-02	9.16E-03
381970.663853180.52	381971	3853181	FENCEINT	4.65E-02	3.74E-06	4.65E-02	9.30E-03
381970.693853190.41	381971	3853190	FENCEINT	4.71E-02	3.83E-06	4.71E-02	9.43E-03
381970.733853200.31	381971	3853200	FENCEINT	4.77E-02	3.92E-06	4.77E-02	9.53E-03
381970.763853210.2	381971	3853210	FENCEINT	4.82E-02	4.02E-06	4.82E-02	9.63E-03
381970.793853220.1	381971	3853220	FENCEINT	4.87E-02	4.12E-06	4.87E-02	9.74E-03
381970.833853229.99	381971	3853230	FENCEINT	4.92E-02	4.22E-06	4.92E-02	9.83E-03
381970.863853239.89	381971	3853240	FENCEINT	4.96E-02	4.33E-06	4.96E-02	9.92E-03
381970.893853249.79	381971	3853250	FENCEINT	5.00E-02	4.44E-06	5.00E-02	1.00E-02
381970.933853259.68	381971	3853260	FENCEINT	5.04E-02	4.55E-06	5.04E-02	1.01E-02
381970.963853269.58	381971	3853270	FENCEINT	5.07E-02	4.68E-06	5.07E-02	1.01E-02
381970.993853279.47	381971	3853279	FENCEINT	5.11E-02	4.80E-06	5.11E-02	1.02E-02
381971.033853289.37	381971	3853289	FENCEINT	5.14E-02	4.93E-06	5.14E-02	1.03E-02
381971.063853299.26	381971	3853299	FENCEINT	5.17E-02	5.07E-06	5.17E-02	1.03E-02
381971.093853309.16	381971	3853309	FENCEINT	5.19E-02	5.21E-06	5.19E-02	1.04E-02
381971.133853319.06	381971	3853319	FENCEINT	5.22E-02	5.36E-06	5.22E-02	1.04E-02
381971.163853328.95	381971	3853329	FENCEINT	5.25E-02	5.51E-06	5.25E-02	1.05E-02
381971.193853338.85	381971	3853339	FENCEINT	5.28E-02	5.67E-06	5.28E-02	1.06E-02
381971.233853348.74	381971	3853349	FENCEINT	5.30E-02	5.84E-06	5.30E-02	1.06E-02
381971.263853358.64	381971	3853359	FENCEINT	5.32E-02	6.02E-06	5.32E-02	1.06E-02
381971.293853368.53	381971	3853369	FENCEINT	5.33E-02	6.21E-06	5.33E-02	1.07E-02
381971.333853378.43	381971	3853378	FENCEINT	5.35E-02	6.40E-06	5.35E-02	1.07E-02
381971.363853388.33	381971	3853388	FENCEINT	5.37E-02	6.61E-06	5.37E-02	1.07E-02
381971.393853398.22	381971	3853398	FENCEINT	5.39E-02	6.82E-06	5.39E-02	1.08E-02
381971.433853408.12	381971	3853408	FENCEINT	5.40E-02	7.05E-06	5.40E-02	1.08E-02
381971.463853418.01	381971	3853418	FENCEINT	5.42E-02	7.30E-06	5.42E-02	1.08E-02
381971.493853427.91	381971	3853428	FENCEINT	5.42E-02	7.55E-06	5.42E-02	1.08E-02
381971.533853437.8	381972	3853438	FENCEINT	5.43E-02	7.82E-06	5.43E-02	1.09E-02
381971.563853447.7	381972	3853448	FENCEINT	5.43E-02	8.11E-06	5.43E-02	1.09E-02
381971.593853457.6	381972	3853458	FENCEINT	5.43E-02	8.42E-06	5.43E-02	1.09E-02
381971.623853467.49	381972	3853467	FENCEINT	5.43E-02	8.74E-06	5.43E-02	1.09E-02
381971.663853477.39	381972	3853477	FENCEINT	5.44E-02	9.08E-06	5.44E-02	1.09E-02

Chronic Hazard Index				Year 1			
DPM REL ( $\mu\text{g}/\text{m}^3$ )	5.0			Project Concentrations ( $\mu\text{g}/\text{m}^3$ )			CHRONIC HI
XY	X	Y	Type	OFFROAD	HAUL	TOTAL	
381971.693853487.28	381972	3853487	FENCEINT	5.44E-02	9.44E-06	5.44E-02	1.09E-02
381971.723853497.18	381972	3853497	FENCEINT	5.44E-02	9.83E-06	5.44E-02	1.09E-02
381971.763853507.08	381972	3853507	FENCEINT	5.44E-02	1.02E-05	5.45E-02	1.09E-02
381971.793853516.97	381972	3853517	FENCEINT	5.44E-02	1.07E-05	5.44E-02	1.09E-02
381971.823853526.87	381972	3853527	FENCEINT	5.44E-02	1.12E-05	5.44E-02	1.09E-02
381971.863853536.76	381972	3853537	FENCEINT	5.44E-02	1.17E-05	5.44E-02	1.09E-02
381971.893853546.66	381972	3853547	FENCEINT	5.44E-02	1.22E-05	5.45E-02	1.09E-02
381971.923853556.55	381972	3853557	FENCEINT	5.44E-02	1.28E-05	5.44E-02	1.09E-02
381971.963853566.45	381972	3853566	FENCEINT	5.44E-02	1.34E-05	5.44E-02	1.09E-02
381971.993853576.35	381972	3853576	FENCEINT	5.44E-02	1.41E-05	5.44E-02	1.09E-02
381972.023853586.24	381972	3853586	FENCEINT	5.44E-02	1.48E-05	5.44E-02	1.09E-02
381972.063853596.14	381972	3853596	FENCEINT	5.43E-02	1.56E-05	5.44E-02	1.09E-02
381972.093853606.03	381972	3853606	FENCEINT	5.43E-02	1.65E-05	5.43E-02	1.09E-02
381972.123853615.93	381972	3853616	FENCEINT	5.42E-02	1.75E-05	5.42E-02	1.08E-02
381972.163853625.82	381972	3853626	FENCEINT	5.41E-02	1.85E-05	5.41E-02	1.08E-02
381972.193853635.72	381972	3853636	FENCEINT	5.40E-02	1.97E-05	5.41E-02	1.08E-02
381972.223853645.62	381972	3853646	FENCEINT	5.39E-02	2.09E-05	5.40E-02	1.08E-02
381972.263853655.51	381972	3853656	FENCEINT	5.38E-02	2.23E-05	5.38E-02	1.08E-02
381972.293853665.41	381972	3853665	FENCEINT	5.36E-02	2.39E-05	5.36E-02	1.07E-02
381972.323853675.3	381972	3853675	FENCEINT	5.34E-02	2.57E-05	5.34E-02	1.07E-02
381972.363853685.2	381972	3853685	FENCEINT	5.32E-02	2.76E-05	5.32E-02	1.06E-02
381972.393853695.09	381972	3853695	FENCEINT	5.30E-02	2.99E-05	5.30E-02	1.06E-02
381972.423853704.99	381972	3853705	FENCEINT	5.27E-02	3.24E-05	5.27E-02	1.05E-02
381972.463853714.89	381972	3853715	FENCEINT	5.24E-02	3.54E-05	5.24E-02	1.05E-02
381972.493853724.78	381972	3853725	FENCEINT	5.20E-02	3.88E-05	5.21E-02	1.04E-02
381972.523853734.68	381973	3853735	FENCEINT	5.16E-02	4.28E-05	5.17E-02	1.03E-02
381972.563853744.57	381973	3853745	FENCEINT	5.12E-02	4.75E-05	5.13E-02	1.03E-02
381972.593853754.47	381973	3853754	FENCEINT	5.07E-02	5.33E-05	5.08E-02	1.02E-02
381972.623853764.36	381973	3853764	FENCEINT	5.02E-02	6.03E-05	5.02E-02	1.00E-02
381972.663853774.26	381973	3853774	FENCEINT	4.95E-02	6.91E-05	4.96E-02	9.92E-03
381972.693853784.16	381973	3853784	FENCEINT	4.88E-02	8.03E-05	4.88E-02	9.77E-03
381972.723853794.05	381973	3853794	FENCEINT	4.78E-02	9.51E-05	4.79E-02	9.59E-03
381972.763853803.95	381973	3853804	FENCEINT	4.68E-02	1.15E-04	4.69E-02	9.37E-03
381972.793853813.84	381973	3853814	FENCEINT	4.53E-02	1.44E-04	4.55E-02	9.10E-03
381972.823853823.74	381973	3853824	FENCEINT	4.36E-02	1.87E-04	4.38E-02	8.77E-03
381972.863853833.63	381973	3853834	FENCEINT	4.14E-02	2.59E-04	4.16E-02	8.33E-03
381962.923853843.66	381963	3853844	FENCEINT	3.95E-02	2.53E-04	3.98E-02	7.95E-03
381952.963853843.79	381953	3853844	FENCEINT	4.00E-02	2.55E-04	4.02E-02	8.05E-03
381942.993853843.92	381943	3853844	FENCEINT	4.06E-02	3.17E-04	4.09E-02	8.18E-03
381933.023853844.04	381933	3853844	FENCEINT	4.11E-02	2.54E-04	4.14E-02	8.28E-03
381923.063853844.17	381923	3853844	FENCEINT	4.16E-02	2.53E-04	4.18E-02	8.37E-03
381913.093853844.3	381913	3853844	FENCEINT	4.20E-02	3.17E-04	4.23E-02	8.46E-03
381903.123853844.43	381903	3853844	FENCEINT	4.23E-02	2.56E-04	4.26E-02	8.51E-03
381893.163853844.56	381893	3853845	FENCEINT	4.26E-02	2.53E-04	4.28E-02	8.57E-03
381883.193853844.69	381883	3853845	FENCEINT	4.28E-02	2.55E-04	4.31E-02	8.62E-03
381873.223853844.82	381873	3853845	FENCEINT	4.30E-02	3.16E-04	4.33E-02	8.66E-03
381863.253853844.94	381863	3853845	FENCEINT	4.32E-02	2.53E-04	4.34E-02	8.69E-03
381853.293853845.07	381853	3853845	FENCEINT	4.34E-02	2.53E-04	4.36E-02	8.72E-03
381843.323853845.2	381843	3853845	FENCEINT	4.35E-02	3.17E-04	4.38E-02	8.76E-03
381833.353853845.33	381833	3853845	FENCEINT	4.36E-02	2.55E-04	4.39E-02	8.77E-03
381823.393853845.46	381823	3853845	FENCEINT	4.37E-02	2.52E-04	4.39E-02	8.79E-03
381813.423853845.59	381813	3853846	FENCEINT	4.37E-02	2.54E-04	4.39E-02	8.79E-03
381803.453853845.72	381803	3853846	FENCEINT	4.37E-02	3.15E-04	4.40E-02	8.80E-03
381793.493853845.84	381793	3853846	FENCEINT	4.37E-02	2.52E-04	4.40E-02	8.79E-03
381783.523853845.97	381784	3853846	FENCEINT	4.37E-02	2.52E-04	4.40E-02	8.80E-03
381773.553853846.1	381774	3853846	FENCEINT	4.37E-02	3.15E-04	4.40E-02	8.81E-03
381763.593853846.23	381764	3853846	FENCEINT	4.37E-02	2.54E-04	4.39E-02	8.79E-03
381753.623853846.36	381754	3853846	FENCEINT	4.37E-02	2.51E-04	4.39E-02	8.78E-03
381743.653853846.49	381744	3853846	FENCEINT	4.36E-02	2.53E-04	4.39E-02	8.77E-03
381733.693853846.62	381734	3853847	FENCEINT	4.35E-02	3.14E-04	4.38E-02	8.77E-03
381723.723853846.75	381724	3853847	FENCEINT	4.35E-02	2.51E-04	4.37E-02	8.75E-03
381713.753853846.87	381714	3853847	FENCEINT	4.34E-02	2.51E-04	4.37E-02	8.74E-03
381703.793853847	381704	3853847	FENCEINT	4.33E-02	3.14E-04	4.36E-02	8.73E-03
381693.823853847.13	381694	3853847	FENCEINT	4.33E-02	2.53E-04	4.35E-02	8.70E-03
381683.853853847.26	381684	3853847	FENCEINT	4.32E-02	2.50E-04	4.34E-02	8.68E-03
381673.883853847.39	381674	3853847	FENCEINT	4.30E-02	2.52E-04	4.33E-02	8.66E-03
381663.923853847.52	381664	3853848	FENCEINT	4.29E-02	3.13E-04	4.33E-02	8.65E-03
381653.953853847.65	381654	3853848	FENCEINT	4.29E-02	2.50E-04	4.32E-02	8.63E-03
381643.983853847.77	381644	3853848	FENCEINT	4.28E-02	2.50E-04	4.31E-02	8.62E-03
381634.023853847.9	381634	3853848	FENCEINT	4.27E-02	3.13E-04	4.30E-02	8.60E-03

Chronic Hazard Index DPM REL ( $\mu\text{g}/\text{m}^3$ )				Year 1			
				Project Concentrations ( $\mu\text{g}/\text{m}^3$ )			CHRONIC HI
XY	X	Y	Type	OFFROAD	HAUL	TOTAL	
381624.053853848.03	381624	3853848	FENCEINT	4.26E-02	2.51E-04	4.28E-02	8.56E-03
381614.083853848.16	381614	3853848	FENCEINT	4.24E-02	2.49E-04	4.26E-02	8.53E-03
381604.123853848.29	381604	3853848	FENCEINT	4.22E-02	2.52E-04	4.24E-02	8.49E-03
381594.153853848.42	381594	3853848	FENCEINT	4.20E-02	3.12E-04	4.23E-02	8.46E-03
381584.183853848.55	381584	3853849	FENCEINT	4.17E-02	2.49E-04	4.20E-02	8.40E-03
381574.223853848.67	381574	3853849	FENCEINT	4.15E-02	2.49E-04	4.17E-02	8.35E-03
381564.253853848.8	381564	3853849	FENCEINT	4.13E-02	3.11E-04	4.16E-02	8.32E-03
381554.283853848.93	381554	3853849	FENCEINT	4.11E-02	2.50E-04	4.13E-02	8.27E-03
381544.323853849.06	381544	3853849	FENCEINT	4.09E-02	2.47E-04	4.12E-02	8.23E-03
381534.353853849.19	381534	3853849	FENCEINT	4.07E-02	2.50E-04	4.09E-02	8.19E-03
381524.383853849.32	381524	3853849	FENCEINT	4.04E-02	3.10E-04	4.08E-02	8.15E-03
381514.423853849.45	381514	3853849	FENCEINT	4.02E-02	2.47E-04	4.04E-02	8.09E-03
381504.453853849.57	381504	3853850	FENCEINT	3.99E-02	2.47E-04	4.02E-02	8.04E-03
381494.483853849.7	381494	3853850	FENCEINT	3.97E-02	3.09E-04	4.00E-02	8.00E-03
381484.523853849.83	381485	3853850	FENCEINT	3.94E-02	2.47E-04	3.96E-02	7.93E-03
381474.553853849.96	381475	3853850	FENCEINT	3.91E-02	2.45E-04	3.93E-02	7.86E-03
381464.583853850.09	381465	3853850	FENCEINT	3.87E-02	3.09E-04	3.90E-02	7.81E-03
381454.613853850.22	381455	3853850	FENCEINT	3.84E-02	3.08E-04	3.87E-02	7.73E-03
381444.653853850.35	381445	3853850	FENCEINT	3.80E-02	2.44E-04	3.83E-02	7.66E-03
381434.683853850.47	381435	3853850	FENCEINT	3.76E-02	2.44E-04	3.79E-02	7.58E-03
381424.713853850.6	381425	3853851	FENCEINT	3.72E-02	3.06E-04	3.75E-02	7.51E-03
381414.753853850.73	381415	3853851	FENCEINT	3.68E-02	2.43E-04	3.71E-02	7.41E-03
381404.783853850.86	381405	3853851	FENCEINT	3.64E-02	2.41E-04	3.66E-02	7.33E-03
381394.813853850.99	381395	3853851	FENCEINT	3.59E-02	3.05E-04	3.62E-02	7.25E-03
381384.853853851.12	381385	3853851	FENCEINT	3.54E-02	2.44E-04	3.57E-02	7.14E-03
381374.883853851.25	381375	3853851	FENCEINT	3.49E-02	2.39E-04	3.51E-02	7.03E-03
381364.913853851.38	381365	3853851	FENCEINT	3.43E-02	2.39E-04	3.46E-02	6.91E-03
381354.953853851.5	381355	3853852	FENCEINT	3.37E-02	3.00E-04	3.40E-02	6.80E-03
381344.983853851.63	381345	3853852	FENCEINT	3.31E-02	2.36E-04	3.33E-02	6.66E-03
381335.013853851.76	381335	3853852	FENCEINT	3.24E-02	2.34E-04	3.27E-02	6.53E-03
381325.053853851.89	381325	3853852	FENCEINT	3.17E-02	2.96E-04	3.20E-02	6.40E-03
381315.083853852.02	381315	3853852	FENCEINT	3.09E-02	2.34E-04	3.11E-02	6.23E-03
381305.113853852.15	381305	3853852	FENCEINT	3.00E-02	2.28E-04	3.03E-02	6.05E-03
381295.153853852.28	381295	3853852	FENCEINT	2.91E-02	2.28E-04	2.93E-02	5.86E-03
381285.183853852.4	381285	3853852	FENCEINT	2.80E-02	2.86E-04	2.83E-02	5.67E-03
381275.213853852.53	381275	3853853	FENCEINT	2.69E-02	2.21E-04	2.71E-02	5.42E-03
381265.243853852.66	381265	3853853	FENCEINT	2.56E-02	2.16E-04	2.58E-02	5.16E-03
381255.283853852.79	381255	3853853	FENCEINT	2.41E-02	2.74E-04	2.44E-02	4.88E-03
381245.313853852.92	381245	3853853	FENCEINT	2.24E-02	2.08E-04	2.26E-02	4.53E-03
381235.343853853.05	381235	3853853	FENCEINT	2.05E-02	1.96E-04	2.07E-02	4.14E-03
381225.383853853.18	381225	3853853	FENCEINT	1.83E-02	1.87E-04	1.85E-02	3.70E-03
381215.413853853.3	381215	3853853	FENCEINT	1.57E-02	2.34E-04	1.59E-02	3.19E-03
381205.443853853.43	381205	3853853	FENCEINT	1.31E-02	1.50E-04	1.32E-02	2.65E-03
381195.483853853.56	381195	3853854	FENCEINT	1.12E-02	1.19E-04	1.13E-02	2.26E-03
381207.283853216.51	381207	3853217	RESIDENT	1.87E-02	3.19E-06	1.87E-02	3.75E-03
381206.463853158.25	381206	3853158	RESIDENT	1.74E-02	2.86E-06	1.74E-02	3.49E-03
381133.443853006.47	381133	3853006	RESIDENT	8.73E-03	2.18E-06	8.73E-03	1.75E-03
381572.573853899.35	381573	3853899	RESIDENT	2.10E-02	1.45E-04	2.11E-02	4.22E-03
381635.293853878.64	381635	3853879	RESIDENT	2.81E-02	2.56E-04	2.84E-02	5.67E-03
381724.423853880.35	381724	3853880	RESIDENT	2.82E-02	2.34E-04	2.84E-02	5.68E-03
381769.333854066.93	381769	3854067	RESIDENT	7.32E-03	2.24E-05	7.35E-03	1.47E-03
380838.73853925.28	380839	3853925	RESIDENT	1.52E-03	3.56E-06	1.52E-03	3.04E-04
380776.713853911.67	380777	3853912	RESIDENT	1.40E-03	3.10E-06	1.41E-03	2.82E-04
381905.063854191.95	381905	3854192	RESIDENT	4.75E-03	1.21E-05	4.76E-03	9.53E-04
381897.523854254.79	381898	3854255	RESIDENT	3.66E-03	9.13E-06	3.67E-03	7.34E-04
381770.173854255.62	381770	3854256	RESIDENT	3.00E-03	8.16E-06	3.01E-03	6.02E-04
381846.773853931.2	381847	3853931	RESIDENT	1.78E-02	7.88E-05	1.78E-02	3.57E-03
382759.033853899.12	382759	3853899	RESIDENT	4.49E-03	1.12E-04	4.60E-03	9.20E-04
382948.913853890.37	382949	3853890	RESIDENT	3.39E-03	1.26E-04	3.51E-03	7.03E-04
382818.213853903.75	382818	3853904	RESIDENT	4.09E-03	1.02E-04	4.19E-03	8.38E-04
382658.823853065.93	382659	3853066	RESIDENT	3.66E-03	3.06E-06	3.66E-03	7.32E-04
382705.843853071.63	382706	3853072	RESIDENT	3.45E-03	3.10E-06	3.46E-03	6.91E-04
382739.323853070.2	382739	3853070	RESIDENT	3.29E-03	3.08E-06	3.30E-03	6.59E-04
382765.673853062.36	382766	3853062	RESIDENT	3.15E-03	3.02E-06	3.15E-03	6.30E-04
380838.253852648.62	380838	3852649	RESIDENT	2.01E-03	1.32E-06	2.01E-03	4.02E-04
380596.713852456.08	380597	3852456	RESIDENT	1.24E-03	1.07E-06	1.24E-03	2.48E-04
380344.573853233.38	380345	3853233	RESIDENT	1.89E-03	1.86E-06	1.89E-03	3.79E-04
380414.583853989.01	380415	3853989	RESIDENT	7.00E-04	1.38E-06	7.01E-04	1.40E-04
380454.013853958.13	380454	3853958	RESIDENT	7.75E-04	1.52E-06	7.77E-04	1.55E-04

Resident Max: 0.80  
 Fenceline Max: 1.44

24-HR PM10 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381185.513853853.69	381186	3853854	FENCEPRI	2.88E-01	7.63E-01	1.76E-03	6.58E-02	1.12
381185.513853302.3	381186	3853302	FENCEPRI	3.24E-01	8.41E-01	1.29E-04	3.01E-03	1.17
381280.93853302.3	381281	3853302	FENCEPRI	3.51E-01	1.07E+00	1.27E-04	2.97E-03	1.42
381281.463853039.66	381281	3853040	FENCEPRI	2.69E-01	7.59E-01	8.68E-05	1.91E-03	1.03
381970.163853032.08	381970	3853032	FENCEPRI	3.00E-01	8.40E-01	7.96E-05	1.81E-03	1.14
381972.893853843.53	381973	3853844	FENCEPRI	2.92E-01	7.80E-01	1.68E-03	5.78E-02	1.07
381185.513853843.84	381186	3853844	FENCEINT	2.90E-01	7.77E-01	1.38E-03	4.45E-02	1.07
381185.513853834	381186	3853834	FENCEINT	2.90E-01	7.83E-01	1.06E-03	3.01E-02	1.07
381185.513853824.15	381186	3853824	FENCEINT	2.89E-01	7.87E-01	8.66E-04	2.35E-02	1.08
381185.513853814.3	381186	3853814	FENCEINT	2.89E-01	8.10E-01	7.37E-04	1.95E-02	1.10
381185.513853804.46	381186	3853804	FENCEINT	2.88E-01	8.35E-01	6.44E-04	1.68E-02	1.12
381185.513853794.61	381186	3853795	FENCEINT	2.87E-01	8.58E-01	5.72E-04	1.48E-02	1.14
381185.513853784.77	381186	3853785	FENCEINT	2.87E-01	8.72E-01	5.17E-04	1.33E-02	1.16
381185.513853774.92	381186	3853775	FENCEINT	2.86E-01	8.86E-01	4.72E-04	1.20E-02	1.17
381185.513853765.07	381186	3853765	FENCEINT	2.85E-01	8.99E-01	4.35E-04	1.10E-02	1.18
381185.513853755.23	381186	3853755	FENCEINT	2.84E-01	9.11E-01	4.03E-04	1.02E-02	1.20
381185.513853745.38	381186	3853745	FENCEINT	2.83E-01	9.21E-01	3.77E-04	9.45E-03	1.20
381185.513853735.54	381186	3853736	FENCEINT	2.85E-01	9.31E-01	3.54E-04	8.83E-03	1.22
381185.513853725.69	381186	3853726	FENCEINT	2.89E-01	9.38E-01	3.34E-04	8.29E-03	1.23
381185.513853715.84	381186	3853716	FENCEINT	2.93E-01	9.45E-01	3.17E-04	7.83E-03	1.24
381185.513853706	381186	3853706	FENCEINT	2.96E-01	9.52E-01	3.02E-04	7.42E-03	1.25
381185.513853696.15	381186	3853696	FENCEINT	2.99E-01	9.58E-01	2.88E-04	7.05E-03	1.26
381185.513853686.3	381186	3853686	FENCEINT	3.01E-01	9.65E-01	2.76E-04	6.72E-03	1.27
381185.513853676.46	381186	3853676	FENCEINT	3.04E-01	9.69E-01	2.64E-04	6.43E-03	1.27
381185.513853666.61	381186	3853667	FENCEINT	3.06E-01	9.75E-01	2.54E-04	6.16E-03	1.28
381185.513853656.76	381186	3853657	FENCEINT	3.08E-01	9.80E-01	2.45E-04	5.93E-03	1.29
381185.513853646.92	381186	3853647	FENCEINT	3.11E-01	9.84E-01	2.36E-04	5.71E-03	1.29
381185.513853637.07	381186	3853637	FENCEINT	3.14E-01	9.89E-01	2.28E-04	5.50E-03	1.30
381185.513853627.23	381186	3853627	FENCEINT	3.16E-01	9.94E-01	2.21E-04	5.31E-03	1.31
381185.513853617.38	381186	3853617	FENCEINT	3.18E-01	9.98E-01	2.13E-04	5.13E-03	1.32
381185.513853607.53	381186	3853608	FENCEINT	3.22E-01	1.00E+00	2.07E-04	4.97E-03	1.32
381185.513853597.69	381186	3853598	FENCEINT	3.26E-01	1.01E+00	2.00E-04	4.81E-03	1.33
381185.513853587.84	381186	3853588	FENCEINT	3.31E-01	1.02E+00	1.94E-04	4.66E-03	1.35
381185.513853578	381186	3853578	FENCEINT	3.34E-01	1.02E+00	1.89E-04	4.52E-03	1.36
381185.513853568.15	381186	3853568	FENCEINT	3.36E-01	1.03E+00	1.87E-04	4.38E-03	1.37
381185.513853558.3	381186	3853558	FENCEINT	3.39E-01	1.04E+00	1.85E-04	4.25E-03	1.38
381185.513853548.46	381186	3853548	FENCEINT	3.42E-01	1.05E+00	1.83E-04	4.12E-03	1.39
381185.513853538.61	381186	3853539	FENCEINT	3.45E-01	1.05E+00	1.83E-04	4.00E-03	1.40
381185.513853528.76	381186	3853529	FENCEINT	3.47E-01	1.06E+00	1.82E-04	3.91E-03	1.40
381185.513853518.92	381186	3853519	FENCEINT	3.50E-01	1.06E+00	1.81E-04	3.87E-03	1.41
381185.513853509.07	381186	3853509	FENCEINT	3.52E-01	1.06E+00	1.80E-04	3.84E-03	1.42
381185.513853499.22	381186	3853499	FENCEINT	3.53E-01	1.07E+00	1.79E-04	3.80E-03	1.42
381185.513853489.38	381186	3853489	FENCEINT	3.55E-01	1.07E+00	1.77E-04	3.76E-03	1.42
381185.513853479.53	381186	3853480	FENCEINT	3.56E-01	1.07E+00	1.74E-04	3.72E-03	1.43
381185.513853469.69	381186	3853470	FENCEINT	3.58E-01	1.07E+00	1.72E-04	3.68E-03	1.43
381185.513853459.84	381186	3853460	FENCEINT	3.59E-01	1.07E+00	1.69E-04	3.64E-03	1.43
381185.513853449.99	381186	3853450	FENCEINT	3.60E-01	1.07E+00	1.67E-04	3.60E-03	1.43

Resident Max: 0.80  
 Fenceline Max: 1.44

24-HR PM10 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381185.513853440.15	381186	3853440	FENCEINT	3.61E-01	1.07E+00	1.64E-04	3.56E-03	1.43
381185.513853430.3	381186	3853430	FENCEINT	3.62E-01	1.07E+00	1.61E-04	3.52E-03	1.44
381185.513853420.46	381186	3853420	FENCEINT	3.63E-01	1.07E+00	1.59E-04	3.48E-03	1.44
381185.513853410.61	381186	3853411	FENCEINT	3.65E-01	1.07E+00	1.56E-04	3.44E-03	1.43
381185.513853400.76	381186	3853401	FENCEINT	3.66E-01	1.07E+00	1.54E-04	3.41E-03	1.43
381185.513853390.92	381186	3853391	FENCEINT	3.66E-01	1.06E+00	1.51E-04	3.37E-03	1.43
381185.513853381.07	381186	3853381	FENCEINT	3.66E-01	1.07E+00	1.49E-04	3.33E-03	1.43
381185.513853371.22	381186	3853371	FENCEINT	3.64E-01	1.07E+00	1.46E-04	3.28E-03	1.44
381185.513853361.38	381186	3853361	FENCEINT	3.64E-01	1.07E+00	1.44E-04	3.25E-03	1.43
381185.513853351.53	381186	3853352	FENCEINT	3.62E-01	1.06E+00	1.41E-04	3.21E-03	1.43
381185.513853341.68	381186	3853342	FENCEINT	3.60E-01	1.06E+00	1.39E-04	3.17E-03	1.42
381185.513853331.84	381186	3853332	FENCEINT	3.56E-01	1.05E+00	1.37E-04	3.13E-03	1.40
381185.513853321.99	381186	3853322	FENCEINT	3.49E-01	1.03E+00	1.34E-04	3.09E-03	1.38
381185.513853312.15	381186	3853312	FENCEINT	3.40E-01	9.92E-01	1.32E-04	3.05E-03	1.33
381195.053853302.3	381195	3853302	FENCEINT	3.26E-01	8.43E-01	1.29E-04	3.01E-03	1.17
381204.593853302.3	381205	3853302	FENCEINT	3.27E-01	8.51E-01	1.29E-04	3.01E-03	1.18
381214.133853302.3	381214	3853302	FENCEINT	3.29E-01	8.58E-01	1.29E-04	3.00E-03	1.19
381223.673853302.3	381224	3853302	FENCEINT	3.32E-01	8.65E-01	1.29E-04	3.00E-03	1.20
381233.213853302.3	381233	3853302	FENCEINT	3.35E-01	8.75E-01	1.29E-04	2.99E-03	1.21
381242.743853302.3	381243	3853302	FENCEINT	3.40E-01	8.87E-01	1.28E-04	2.99E-03	1.23
381252.283853302.3	381252	3853302	FENCEINT	3.45E-01	9.03E-01	1.28E-04	2.98E-03	1.25
381261.823853302.3	381262	3853302	FENCEINT	3.49E-01	9.25E-01	1.28E-04	2.98E-03	1.27
381271.363853302.3	381271	3853302	FENCEINT	3.52E-01	9.64E-01	1.28E-04	2.98E-03	1.32
381280.923853292.57	381281	3853293	FENCEINT	3.52E-01	1.07E+00	1.25E-04	2.92E-03	1.42
381280.943853282.85	381281	3853283	FENCEINT	3.52E-01	1.07E+00	1.22E-04	2.87E-03	1.42
381280.963853273.12	381281	3853273	FENCEINT	3.51E-01	1.07E+00	1.19E-04	2.82E-03	1.42
381280.983853263.39	381281	3853263	FENCEINT	3.51E-01	1.06E+00	1.16E-04	2.77E-03	1.41
3812813853253.66	381281	3853254	FENCEINT	3.50E-01	1.06E+00	1.14E-04	2.71E-03	1.41
381281.023853243.94	381281	3853244	FENCEINT	3.50E-01	1.06E+00	1.11E-04	2.65E-03	1.41
381281.053853234.21	381281	3853234	FENCEINT	3.49E-01	1.06E+00	1.08E-04	2.59E-03	1.40
381281.073853224.48	381281	3853224	FENCEINT	3.49E-01	1.05E+00	1.05E-04	2.52E-03	1.40
381281.093853214.75	381281	3853215	FENCEINT	3.48E-01	1.05E+00	1.02E-04	2.46E-03	1.40
381281.113853205.03	381281	3853205	FENCEINT	3.47E-01	1.05E+00	1.01E-04	2.38E-03	1.39
381281.133853195.3	381281	3853195	FENCEINT	3.46E-01	1.04E+00	9.99E-05	2.31E-03	1.39
381281.153853185.57	381281	3853186	FENCEINT	3.45E-01	1.04E+00	9.89E-05	2.23E-03	1.39
381281.173853175.84	381281	3853176	FENCEINT	3.44E-01	1.04E+00	9.79E-05	2.15E-03	1.38
381281.193853166.12	381281	3853166	FENCEINT	3.43E-01	1.04E+00	9.70E-05	2.09E-03	1.38
381281.213853156.39	381281	3853156	FENCEINT	3.42E-01	1.03E+00	9.60E-05	2.08E-03	1.37
381281.233853146.66	381281	3853147	FENCEINT	3.40E-01	1.03E+00	9.51E-05	2.06E-03	1.37
381281.253853136.93	381281	3853137	FENCEINT	3.38E-01	1.03E+00	9.42E-05	2.05E-03	1.36
381281.273853127.21	381281	3853127	FENCEINT	3.36E-01	1.02E+00	9.34E-05	2.03E-03	1.36
381281.293853117.48	381281	3853117	FENCEINT	3.34E-01	1.01E+00	9.26E-05	2.02E-03	1.35
381281.313853107.75	381281	3853108	FENCEINT	3.31E-01	1.01E+00	9.18E-05	2.00E-03	1.34
381281.343853098.02	381281	3853098	FENCEINT	3.27E-01	9.97E-01	9.10E-05	1.99E-03	1.32
381281.363853088.3	381281	3853088	FENCEINT	3.21E-01	9.87E-01	9.03E-05	1.98E-03	1.31
381281.383853078.57	381281	3853079	FENCEINT	3.15E-01	9.74E-01	8.96E-05	1.96E-03	1.29
381281.43853068.84	381281	3853069	FENCEINT	3.09E-01	9.56E-01	8.89E-05	1.95E-03	1.26

Resident Max: 0.80  
 Fenceline Max: 1.44

24-HR PM10 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381281.423853059.11	381281	3853059	FENCEINT	3.00E-01	9.28E-01	8.82E-05	1.94E-03	1.23
381281.443853049.39	381281	3853049	FENCEINT	2.87E-01	8.84E-01	8.75E-05	1.92E-03	1.17
381291.443853039.55	381291	3853040	FENCEINT	2.67E-01	7.59E-01	8.68E-05	1.91E-03	1.03
381301.423853039.44	381301	3853039	FENCEINT	2.65E-01	7.58E-01	8.68E-05	1.91E-03	1.02
381311.43853039.33	381311	3853039	FENCEINT	2.63E-01	7.57E-01	8.68E-05	1.91E-03	1.02
381321.383853039.22	381321	3853039	FENCEINT	2.61E-01	7.77E-01	8.68E-05	1.91E-03	1.04
381331.373853039.11	381331	3853039	FENCEINT	2.60E-01	8.10E-01	8.68E-05	1.91E-03	1.07
381341.353853039	381341	3853039	FENCEINT	2.58E-01	8.38E-01	8.69E-05	1.91E-03	1.10
381351.333853038.89	381351	3853039	FENCEINT	2.61E-01	8.60E-01	8.69E-05	1.91E-03	1.12
381361.313853038.78	381361	3853039	FENCEINT	2.68E-01	8.79E-01	8.69E-05	1.91E-03	1.15
381371.293853038.67	381371	3853039	FENCEINT	2.73E-01	8.94E-01	8.70E-05	1.91E-03	1.17
381381.273853038.56	381381	3853039	FENCEINT	2.78E-01	9.06E-01	8.70E-05	1.91E-03	1.18
381391.253853038.45	381391	3853038	FENCEINT	2.82E-01	9.16E-01	8.70E-05	1.91E-03	1.20
381401.233853038.34	381401	3853038	FENCEINT	2.86E-01	9.23E-01	8.70E-05	1.91E-03	1.21
381411.223853038.23	381411	3853038	FENCEINT	2.89E-01	9.29E-01	8.70E-05	1.91E-03	1.22
381421.23853038.12	381421	3853038	FENCEINT	2.91E-01	9.34E-01	8.71E-05	1.91E-03	1.23
381431.183853038.01	381431	3853038	FENCEINT	2.93E-01	9.38E-01	8.71E-05	1.91E-03	1.23
381441.163853037.9	381441	3853038	FENCEINT	2.95E-01	9.43E-01	8.71E-05	1.91E-03	1.24
381451.143853037.79	381451	3853038	FENCEINT	2.96E-01	9.47E-01	8.71E-05	1.91E-03	1.24
381461.123853037.68	381461	3853038	FENCEINT	2.98E-01	9.48E-01	8.71E-05	1.91E-03	1.25
381471.13853037.57	381471	3853038	FENCEINT	2.99E-01	9.49E-01	8.71E-05	1.91E-03	1.25
381481.083853037.46	381481	3853037	FENCEINT	2.99E-01	9.50E-01	8.71E-05	1.91E-03	1.25
381491.063853037.35	381491	3853037	FENCEINT	3.00E-01	9.50E-01	8.71E-05	1.91E-03	1.25
381501.053853037.24	381501	3853037	FENCEINT	3.01E-01	9.50E-01	8.71E-05	1.91E-03	1.25
381511.033853037.13	381511	3853037	FENCEINT	3.00E-01	9.49E-01	8.71E-05	1.91E-03	1.25
381521.013853037.02	381521	3853037	FENCEINT	3.00E-01	9.48E-01	8.71E-05	1.91E-03	1.25
381530.993853036.91	381531	3853037	FENCEINT	3.00E-01	9.47E-01	8.71E-05	1.91E-03	1.25
381540.973853036.8	381541	3853037	FENCEINT	2.99E-01	9.45E-01	8.70E-05	1.91E-03	1.24
381550.953853036.69	381551	3853037	FENCEINT	2.99E-01	9.41E-01	8.70E-05	1.91E-03	1.24
381560.933853036.58	381561	3853037	FENCEINT	2.98E-01	9.38E-01	8.70E-05	1.90E-03	1.24
381570.913853036.47	381571	3853036	FENCEINT	2.97E-01	9.34E-01	8.69E-05	1.90E-03	1.23
381580.893853036.36	381581	3853036	FENCEINT	2.96E-01	9.31E-01	8.69E-05	1.90E-03	1.23
381590.883853036.25	381591	3853036	FENCEINT	2.95E-01	9.26E-01	8.68E-05	1.90E-03	1.22
381600.863853036.14	381601	3853036	FENCEINT	2.94E-01	9.22E-01	8.68E-05	1.90E-03	1.22
381610.843853036.03	381611	3853036	FENCEINT	2.93E-01	9.17E-01	8.67E-05	1.90E-03	1.21
381620.823853035.92	381621	3853036	FENCEINT	2.91E-01	9.11E-01	8.67E-05	1.90E-03	1.20
381630.83853035.82	381631	3853036	FENCEINT	2.90E-01	9.08E-01	8.66E-05	1.90E-03	1.20
381640.783853035.71	381641	3853036	FENCEINT	2.89E-01	9.04E-01	8.66E-05	1.90E-03	1.19
381650.763853035.6	381651	3853036	FENCEINT	2.88E-01	8.99E-01	8.65E-05	1.90E-03	1.19
381660.743853035.49	381661	3853035	FENCEINT	2.88E-01	8.94E-01	8.64E-05	1.89E-03	1.18
381670.733853035.38	381671	3853035	FENCEINT	2.88E-01	8.89E-01	8.63E-05	1.89E-03	1.18
381680.713853035.27	381681	3853035	FENCEINT	2.86E-01	8.85E-01	8.62E-05	1.89E-03	1.17
381690.693853035.16	381691	3853035	FENCEINT	2.82E-01	8.87E-01	8.61E-05	1.89E-03	1.17
381700.673853035.05	381701	3853035	FENCEINT	2.83E-01	8.89E-01	8.60E-05	1.89E-03	1.17
381710.653853034.94	381711	3853035	FENCEINT	2.84E-01	8.91E-01	8.59E-05	1.89E-03	1.17
381720.633853034.83	381721	3853035	FENCEINT	2.85E-01	8.92E-01	8.58E-05	1.89E-03	1.18
381730.613853034.72	381731	3853035	FENCEINT	2.85E-01	8.93E-01	8.56E-05	1.88E-03	1.18



Resident Max: 0.80  
 Fenceline Max: 1.44

24-HR PM10 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381740.593853034.61	381741	3853035	FENCEINT	2.86E-01	8.97E-01	8.55E-05	1.89E-03	1.18
381750.573853034.5	381751	3853035	FENCEINT	2.86E-01	8.95E-01	8.54E-05	1.88E-03	1.18
381760.563853034.39	381761	3853034	FENCEINT	2.87E-01	8.97E-01	8.52E-05	1.88E-03	1.18
381770.543853034.28	381771	3853034	FENCEINT	2.88E-01	8.99E-01	8.51E-05	1.88E-03	1.19
381780.523853034.17	381781	3853034	FENCEINT	2.88E-01	9.01E-01	8.49E-05	1.88E-03	1.19
381790.53853034.06	381791	3853034	FENCEINT	2.89E-01	9.01E-01	8.48E-05	1.88E-03	1.19
381800.483853033.95	381800	3853034	FENCEINT	2.90E-01	9.01E-01	8.46E-05	1.87E-03	1.19
381810.463853033.84	381810	3853034	FENCEINT	2.91E-01	9.02E-01	8.44E-05	1.87E-03	1.19
381820.443853033.73	381820	3853034	FENCEINT	2.92E-01	9.02E-01	8.42E-05	1.87E-03	1.19
381830.423853033.62	381830	3853034	FENCEINT	2.92E-01	9.02E-01	8.39E-05	1.86E-03	1.19
381840.43853033.51	381840	3853034	FENCEINT	2.93E-01	9.03E-01	8.37E-05	1.86E-03	1.20
381850.393853033.4	381850	3853033	FENCEINT	2.92E-01	9.02E-01	8.34E-05	1.86E-03	1.19
381860.373853033.29	381860	3853033	FENCEINT	2.92E-01	9.01E-01	8.32E-05	1.85E-03	1.19
381870.353853033.18	381870	3853033	FENCEINT	2.91E-01	9.00E-01	8.29E-05	1.85E-03	1.19
381880.333853033.07	381880	3853033	FENCEINT	2.91E-01	8.99E-01	8.26E-05	1.85E-03	1.19
381890.313853032.96	381890	3853033	FENCEINT	2.91E-01	8.97E-01	8.24E-05	1.84E-03	1.19
381900.293853032.85	381900	3853033	FENCEINT	2.92E-01	8.95E-01	8.21E-05	1.84E-03	1.19
381910.273853032.74	381910	3853033	FENCEINT	2.93E-01	8.93E-01	8.18E-05	1.83E-03	1.19
381920.253853032.63	381920	3853033	FENCEINT	2.94E-01	8.89E-01	8.14E-05	1.83E-03	1.18
381930.243853032.52	381930	3853033	FENCEINT	2.96E-01	8.85E-01	8.11E-05	1.82E-03	1.18
381940.223853032.41	381940	3853032	FENCEINT	2.97E-01	8.79E-01	8.07E-05	1.82E-03	1.18
381950.23853032.3	381950	3853032	FENCEINT	2.98E-01	8.70E-01	8.03E-05	1.81E-03	1.17
381960.183853032.19	381960	3853032	FENCEINT	2.99E-01	8.57E-01	7.99E-05	1.81E-03	1.16
381970.193853041.98	381970	3853042	FENCEINT	3.07E-01	8.91E-01	8.12E-05	1.83E-03	1.20
381970.233853051.87	381970	3853052	FENCEINT	3.09E-01	9.02E-01	8.27E-05	1.86E-03	1.21
381970.263853061.77	381970	3853062	FENCEINT	3.10E-01	9.07E-01	8.43E-05	1.88E-03	1.22
381970.293853071.66	381970	3853072	FENCEINT	3.10E-01	9.09E-01	8.58E-05	1.90E-03	1.22
381970.333853081.56	381970	3853082	FENCEINT	3.10E-01	9.09E-01	8.72E-05	1.92E-03	1.22
381970.363853091.45	381970	3853091	FENCEINT	3.10E-01	9.08E-01	8.87E-05	1.94E-03	1.22
381970.393853101.35	381970	3853101	FENCEINT	3.10E-01	9.12E-01	9.01E-05	1.96E-03	1.22
381970.433853111.25	381970	3853111	FENCEINT	3.09E-01	9.27E-01	9.15E-05	1.98E-03	1.24
381970.463853121.14	381970	3853121	FENCEINT	3.08E-01	9.39E-01	9.29E-05	2.01E-03	1.25
381970.493853131.04	381970	3853131	FENCEINT	3.08E-01	9.48E-01	9.44E-05	2.03E-03	1.26
381970.533853140.93	381971	3853141	FENCEINT	3.06E-01	9.56E-01	9.58E-05	2.05E-03	1.26
381970.563853150.83	381971	3853151	FENCEINT	3.05E-01	9.63E-01	9.71E-05	2.06E-03	1.27
381970.593853160.72	381971	3853161	FENCEINT	3.04E-01	9.68E-01	9.85E-05	2.08E-03	1.27
381970.633853170.62	381971	3853171	FENCEINT	3.03E-01	9.72E-01	9.97E-05	2.10E-03	1.27
381970.663853180.52	381971	3853181	FENCEINT	3.05E-01	9.77E-01	1.01E-04	2.12E-03	1.28
381970.693853190.41	381971	3853190	FENCEINT	3.08E-01	9.82E-01	1.02E-04	2.15E-03	1.29
381970.733853200.31	381971	3853200	FENCEINT	3.10E-01	9.85E-01	1.03E-04	2.16E-03	1.29
381970.763853210.2	381971	3853210	FENCEINT	3.12E-01	9.87E-01	1.04E-04	2.18E-03	1.30
381970.793853220.1	381971	3853220	FENCEINT	3.14E-01	9.90E-01	1.05E-04	2.20E-03	1.30
381970.833853229.99	381971	3853230	FENCEINT	3.15E-01	9.92E-01	1.06E-04	2.22E-03	1.31
381970.863853239.89	381971	3853240	FENCEINT	3.17E-01	9.94E-01	1.06E-04	2.24E-03	1.31
381970.893853249.79	381971	3853250	FENCEINT	3.18E-01	9.95E-01	1.07E-04	2.25E-03	1.31
381970.933853259.68	381971	3853260	FENCEINT	3.20E-01	9.96E-01	1.08E-04	2.28E-03	1.32
381970.963853269.58	381971	3853270	FENCEINT	3.21E-01	9.97E-01	1.08E-04	2.29E-03	1.32

Resident Max: 0.80  
 Fenceline Max: 1.44

24-HR PM10 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381970.993853279.47	381971	3853279	FENCEINT	3.23E-01	9.98E-01	1.08E-04	2.31E-03	1.32
381971.033853289.37	381971	3853289	FENCEINT	3.25E-01	9.99E-01	1.09E-04	2.33E-03	1.32
381971.063853299.26	381971	3853299	FENCEINT	3.26E-01	1.00E+00	1.09E-04	2.35E-03	1.33
381971.093853309.16	381971	3853309	FENCEINT	3.26E-01	1.00E+00	1.09E-04	2.36E-03	1.33
381971.133853319.06	381971	3853319	FENCEINT	3.27E-01	1.00E+00	1.10E-04	2.39E-03	1.33
381971.163853328.95	381971	3853329	FENCEINT	3.28E-01	1.00E+00	1.11E-04	2.42E-03	1.33
381971.193853338.85	381971	3853339	FENCEINT	3.30E-01	1.00E+00	1.12E-04	2.45E-03	1.33
381971.233853348.74	381971	3853349	FENCEINT	3.30E-01	1.01E+00	1.12E-04	2.53E-03	1.34
381971.263853358.64	381971	3853359	FENCEINT	3.30E-01	1.00E+00	1.16E-04	2.64E-03	1.33
381971.293853368.53	381971	3853369	FENCEINT	3.30E-01	1.00E+00	1.21E-04	2.74E-03	1.33
381971.333853378.43	381971	3853378	FENCEINT	3.31E-01	1.00E+00	1.26E-04	2.85E-03	1.33
381971.363853388.33	381971	3853388	FENCEINT	3.32E-01	1.00E+00	1.31E-04	2.95E-03	1.34
381971.393853398.22	381971	3853398	FENCEINT	3.33E-01	1.00E+00	1.35E-04	3.05E-03	1.34
381971.433853408.12	381971	3853408	FENCEINT	3.33E-01	1.00E+00	1.40E-04	3.14E-03	1.34
381971.463853418.01	381971	3853418	FENCEINT	3.34E-01	1.00E+00	1.44E-04	3.23E-03	1.34
381971.493853427.91	381971	3853428	FENCEINT	3.35E-01	1.00E+00	1.48E-04	3.32E-03	1.34
381971.533853437.8	381972	3853438	FENCEINT	3.35E-01	1.00E+00	1.51E-04	3.39E-03	1.33
381971.563853447.7	381972	3853448	FENCEINT	3.34E-01	9.99E-01	1.55E-04	3.46E-03	1.33
381971.593853457.6	381972	3853458	FENCEINT	3.32E-01	9.98E-01	1.57E-04	3.53E-03	1.33
381971.623853467.49	381972	3853467	FENCEINT	3.32E-01	9.97E-01	1.61E-04	3.60E-03	1.33
381971.663853477.39	381972	3853477	FENCEINT	3.33E-01	9.96E-01	1.63E-04	3.66E-03	1.33
381971.693853487.28	381972	3853487	FENCEINT	3.32E-01	9.95E-01	1.66E-04	3.73E-03	1.33
381971.723853497.18	381972	3853497	FENCEINT	3.32E-01	9.94E-01	1.69E-04	3.80E-03	1.33
381971.763853507.08	381972	3853507	FENCEINT	3.32E-01	9.93E-01	1.71E-04	3.86E-03	1.32
381971.793853516.97	381972	3853517	FENCEINT	3.30E-01	9.91E-01	1.73E-04	3.92E-03	1.32
381971.823853526.87	381972	3853527	FENCEINT	3.29E-01	9.90E-01	1.75E-04	4.00E-03	1.32
381971.863853536.76	381972	3853537	FENCEINT	3.29E-01	9.89E-01	1.78E-04	4.08E-03	1.32
381971.893853546.66	381972	3853547	FENCEINT	3.28E-01	9.88E-01	1.81E-04	4.17E-03	1.32
381971.923853556.55	381972	3853557	FENCEINT	3.27E-01	9.85E-01	1.84E-04	4.26E-03	1.31
381971.963853566.45	381972	3853566	FENCEINT	3.26E-01	9.83E-01	1.87E-04	4.37E-03	1.31
381971.993853576.35	381972	3853576	FENCEINT	3.25E-01	9.81E-01	1.92E-04	4.48E-03	1.31
381972.023853586.24	381972	3853586	FENCEINT	3.24E-01	9.79E-01	1.95E-04	4.60E-03	1.30
381972.063853596.14	381972	3853596	FENCEINT	3.22E-01	9.76E-01	2.00E-04	4.74E-03	1.30
381972.093853606.03	381972	3853606	FENCEINT	3.20E-01	9.72E-01	2.05E-04	4.88E-03	1.29
381972.123853615.93	381972	3853616	FENCEINT	3.19E-01	9.68E-01	2.11E-04	5.10E-03	1.29
381972.163853625.82	381972	3853626	FENCEINT	3.18E-01	9.63E-01	2.18E-04	5.37E-03	1.28
381972.193853635.72	381972	3853636	FENCEINT	3.16E-01	9.59E-01	2.29E-04	5.64E-03	1.28
381972.223853645.62	381972	3853646	FENCEINT	3.14E-01	9.54E-01	2.42E-04	5.94E-03	1.27
381972.263853655.51	381972	3853656	FENCEINT	3.13E-01	9.48E-01	2.55E-04	6.25E-03	1.26
381972.293853665.41	381972	3853665	FENCEINT	3.10E-01	9.41E-01	2.70E-04	6.59E-03	1.25
381972.323853675.3	381972	3853675	FENCEINT	3.08E-01	9.34E-01	2.86E-04	6.95E-03	1.24
381972.363853685.2	381972	3853685	FENCEINT	3.04E-01	9.26E-01	3.03E-04	7.35E-03	1.23
381972.393853695.09	381972	3853695	FENCEINT	3.01E-01	9.17E-01	3.22E-04	7.78E-03	1.22
381972.423853704.99	381972	3853705	FENCEINT	2.99E-01	9.08E-01	3.42E-04	8.27E-03	1.21
381972.463853714.89	381972	3853715	FENCEINT	2.98E-01	8.98E-01	3.66E-04	8.82E-03	1.20
381972.493853724.78	381972	3853725	FENCEINT	2.97E-01	8.87E-01	3.92E-04	9.45E-03	1.18
381972.523853734.68	381973	3853735	FENCEINT	2.96E-01	8.75E-01	4.22E-04	1.02E-02	1.17

Resident Max: 0.80  
 Fenceline Max: 1.44

24-HR PM10 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381972.563853744.57	381973	3853745	FENCEINT	2.94E-01	8.64E-01	4.56E-04	1.10E-02	1.16
381972.593853754.47	381973	3853754	FENCEINT	2.93E-01	8.62E-01	4.97E-04	1.20E-02	1.15
381972.623853764.36	381973	3853764	FENCEINT	2.93E-01	8.59E-01	5.45E-04	1.33E-02	1.15
381972.663853774.26	381973	3853774	FENCEINT	2.94E-01	8.55E-01	6.03E-04	1.48E-02	1.15
381972.693853784.16	381973	3853784	FENCEINT	2.94E-01	8.49E-01	6.76E-04	1.67E-02	1.14
381972.723853794.05	381973	3853794	FENCEINT	2.95E-01	8.41E-01	7.67E-04	1.92E-02	1.14
381972.763853803.95	381973	3853804	FENCEINT	2.95E-01	8.31E-01	8.88E-04	2.26E-02	1.13
381972.793853813.84	381973	3853814	FENCEINT	2.95E-01	8.16E-01	1.05E-03	2.77E-02	1.11
381972.823853823.74	381973	3853824	FENCEINT	2.96E-01	8.06E-01	1.28E-03	3.64E-02	1.10
381972.863853833.63	381973	3853834	FENCEINT	2.96E-01	8.06E-01	1.64E-03	5.46E-02	1.10
381962.923853843.66	381963	3853844	FENCEINT	2.99E-01	8.19E-01	1.70E-03	5.81E-02	1.12
381952.963853843.79	381953	3853844	FENCEINT	2.99E-01	8.18E-01	1.74E-03	6.29E-02	1.12
381942.993853843.92	381943	3853844	FENCEINT	2.99E-01	8.17E-01	1.93E-03	7.17E-02	1.12
381933.023853844.04	381933	3853844	FENCEINT	2.97E-01	8.14E-01	1.69E-03	5.76E-02	1.11
381923.063853844.17	381923	3853844	FENCEINT	2.97E-01	8.11E-01	1.71E-03	5.99E-02	1.11
381913.093853844.3	381913	3853844	FENCEINT	2.95E-01	8.08E-01	1.91E-03	7.08E-02	1.10
381903.123853844.43	381903	3853844	FENCEINT	2.94E-01	8.05E-01	1.68E-03	5.74E-02	1.10
381893.163853844.56	381893	3853845	FENCEINT	2.93E-01	8.02E-01	1.69E-03	5.78E-02	1.10
381883.193853844.69	381883	3853845	FENCEINT	2.92E-01	7.99E-01	1.75E-03	6.33E-02	1.09
381873.223853844.82	381873	3853845	FENCEINT	2.90E-01	7.95E-01	1.92E-03	7.19E-02	1.09
381863.253853844.94	381863	3853845	FENCEINT	2.89E-01	7.93E-01	1.68E-03	5.73E-02	1.08
381853.293853845.07	381853	3853845	FENCEINT	2.88E-01	7.91E-01	1.70E-03	6.02E-02	1.08
381843.323853845.2	381843	3853845	FENCEINT	2.86E-01	7.88E-01	1.90E-03	7.05E-02	1.07
381833.353853845.33	381833	3853845	FENCEINT	2.85E-01	7.84E-01	1.66E-03	5.71E-02	1.07
381823.393853845.46	381823	3853845	FENCEINT	2.83E-01	7.80E-01	1.68E-03	5.75E-02	1.06
381813.423853845.59	381813	3853846	FENCEINT	2.81E-01	7.76E-01	1.75E-03	6.37E-02	1.06
381803.453853845.72	381803	3853846	FENCEINT	2.80E-01	7.73E-01	1.90E-03	7.23E-02	1.05
381793.493853845.84	381793	3853846	FENCEINT	2.78E-01	7.70E-01	1.66E-03	5.69E-02	1.05
381783.523853845.97	381784	3853846	FENCEINT	2.76E-01	7.69E-01	1.70E-03	6.05E-02	1.05
381773.553853846.1	381774	3853846	FENCEINT	2.76E-01	7.68E-01	1.89E-03	7.01E-02	1.04
381763.593853846.23	381764	3853846	FENCEINT	2.74E-01	7.69E-01	1.65E-03	5.66E-02	1.04
381753.623853846.36	381754	3853846	FENCEINT	2.71E-01	7.72E-01	1.66E-03	5.76E-02	1.04
381743.653853846.49	381744	3853846	FENCEINT	2.70E-01	7.74E-01	1.76E-03	6.41E-02	1.04
381733.693853846.62	381734	3853847	FENCEINT	2.68E-01	7.75E-01	1.89E-03	7.27E-02	1.04
381723.723853846.75	381724	3853847	FENCEINT	2.66E-01	7.77E-01	1.65E-03	5.64E-02	1.04
381713.753853846.87	381714	3853847	FENCEINT	2.64E-01	7.79E-01	1.71E-03	6.08E-02	1.04
381703.793853847	381704	3853847	FENCEINT	2.62E-01	7.80E-01	1.87E-03	6.97E-02	1.04
381693.823853847.13	381694	3853847	FENCEINT	2.62E-01	7.81E-01	1.63E-03	5.61E-02	1.04
381683.853853847.26	381684	3853847	FENCEINT	2.62E-01	7.82E-01	1.66E-03	5.79E-02	1.04
381673.883853847.39	381674	3853847	FENCEINT	2.62E-01	7.81E-01	1.76E-03	6.45E-02	1.04
381663.923853847.52	381664	3853848	FENCEINT	2.62E-01	7.81E-01	1.88E-03	7.31E-02	1.04
381653.953853847.65	381654	3853848	FENCEINT	2.63E-01	7.83E-01	1.63E-03	5.59E-02	1.05
381643.983853847.77	381644	3853848	FENCEINT	2.63E-01	7.84E-01	1.72E-03	6.12E-02	1.05
381634.023853847.9	381634	3853848	FENCEINT	2.65E-01	7.83E-01	1.85E-03	6.95E-02	1.05
381624.053853848.03	381624	3853848	FENCEINT	2.65E-01	7.83E-01	1.61E-03	5.55E-02	1.05
381614.083853848.16	381614	3853848	FENCEINT	2.64E-01	7.82E-01	1.67E-03	5.83E-02	1.05
381604.123853848.29	381604	3853848	FENCEINT	2.63E-01	7.82E-01	1.77E-03	6.48E-02	1.05

Resident Max: 0.80  
 Fenceline Max: 1.44

24-HR PM10 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381594.153853848.42	381594	3853848	FENCEINT	2.63E-01	7.82E-01	1.88E-03	7.34E-02	1.05
381584.183853848.55	381584	3853849	FENCEINT	2.62E-01	7.81E-01	1.62E-03	5.55E-02	1.04
381574.223853848.67	381574	3853849	FENCEINT	2.62E-01	7.80E-01	1.72E-03	6.16E-02	1.04
381564.253853848.8	381564	3853849	FENCEINT	2.62E-01	7.80E-01	1.84E-03	6.99E-02	1.04
381554.283853848.93	381554	3853849	FENCEINT	2.61E-01	7.79E-01	1.58E-03	5.46E-02	1.04
381544.323853849.06	381544	3853849	FENCEINT	2.60E-01	7.78E-01	1.67E-03	5.86E-02	1.04
381534.353853849.19	381534	3853849	FENCEINT	2.59E-01	7.76E-01	1.77E-03	6.52E-02	1.04
381524.383853849.32	381524	3853849	FENCEINT	2.59E-01	7.75E-01	1.88E-03	7.38E-02	1.03
381514.423853849.45	381514	3853849	FENCEINT	2.59E-01	7.76E-01	1.63E-03	5.58E-02	1.03
381504.453853849.57	381504	3853850	FENCEINT	2.58E-01	7.79E-01	1.73E-03	6.19E-02	1.04
381494.483853849.7	381494	3853850	FENCEINT	2.57E-01	7.81E-01	1.84E-03	7.03E-02	1.04
381484.523853849.83	381485	3853850	FENCEINT	2.58E-01	7.84E-01	1.58E-03	5.34E-02	1.04
381474.553853849.96	381475	3853850	FENCEINT	2.59E-01	7.86E-01	1.68E-03	5.89E-02	1.05
381464.583853850.09	381465	3853850	FENCEINT	2.60E-01	7.88E-01	1.80E-03	6.70E-02	1.05
381454.613853850.22	381455	3853850	FENCEINT	2.61E-01	7.90E-01	1.89E-03	7.42E-02	1.05
381444.653853850.35	381445	3853850	FENCEINT	2.62E-01	7.94E-01	1.63E-03	5.61E-02	1.06
381434.683853850.47	381435	3853850	FENCEINT	2.63E-01	7.96E-01	1.73E-03	6.23E-02	1.06
381424.713853850.6	381425	3853851	FENCEINT	2.64E-01	7.98E-01	1.85E-03	7.06E-02	1.06
381414.753853850.73	381415	3853851	FENCEINT	2.64E-01	8.00E-01	1.58E-03	5.35E-02	1.06
381404.783853850.86	381405	3853851	FENCEINT	2.65E-01	8.03E-01	1.68E-03	5.92E-02	1.07
381394.813853850.99	381395	3853851	FENCEINT	2.66E-01	8.06E-01	1.80E-03	6.73E-02	1.07
381384.853853851.12	381385	3853851	FENCEINT	2.66E-01	8.08E-01	1.54E-03	5.14E-02	1.07
381374.883853851.25	381375	3853851	FENCEINT	2.68E-01	8.11E-01	1.63E-03	5.63E-02	1.08
381364.913853851.38	381365	3853851	FENCEINT	2.69E-01	8.13E-01	1.73E-03	6.26E-02	1.08
381354.953853851.5	381355	3853852	FENCEINT	2.71E-01	8.15E-01	1.85E-03	7.09E-02	1.09
381344.983853851.63	381345	3853852	FENCEINT	2.72E-01	8.17E-01	1.59E-03	5.37E-02	1.09
381335.013853851.76	381335	3853852	FENCEINT	2.74E-01	8.21E-01	1.69E-03	5.94E-02	1.10
381325.053853851.89	381325	3853852	FENCEINT	2.76E-01	8.23E-01	1.81E-03	6.75E-02	1.10
381315.083853852.02	381315	3853852	FENCEINT	2.77E-01	8.26E-01	1.54E-03	5.13E-02	1.10
381305.113853852.15	381305	3853852	FENCEINT	2.78E-01	8.28E-01	1.64E-03	5.65E-02	1.11
381295.153853852.28	381295	3853852	FENCEINT	2.80E-01	8.30E-01	1.74E-03	6.28E-02	1.11
381285.183853852.4	381285	3853852	FENCEINT	2.81E-01	8.32E-01	1.85E-03	7.11E-02	1.11
381275.213853852.53	381275	3853853	FENCEINT	2.82E-01	8.34E-01	1.59E-03	5.38E-02	1.12
381265.243853852.66	381265	3853853	FENCEINT	2.83E-01	8.36E-01	1.69E-03	5.96E-02	1.12
381255.283853852.79	381255	3853853	FENCEINT	2.84E-01	8.37E-01	1.80E-03	6.77E-02	1.12
381245.313853852.92	381245	3853853	FENCEINT	2.85E-01	8.39E-01	1.54E-03	5.13E-02	1.12
381235.343853853.05	381235	3853853	FENCEINT	2.86E-01	8.39E-01	1.63E-03	5.65E-02	1.13
381225.383853853.18	381225	3853853	FENCEINT	2.86E-01	8.39E-01	1.73E-03	6.27E-02	1.13
381215.413853853.3	381215	3853853	FENCEINT	2.85E-01	8.39E-01	1.84E-03	7.09E-02	1.12
381205.443853853.43	381205	3853853	FENCEINT	2.86E-01	8.35E-01	1.57E-03	5.33E-02	1.12
381195.483853853.56	381195	3853854	FENCEINT	2.87E-01	8.26E-01	1.66E-03	5.87E-02	1.11
381207.283853216.51	381207	3853217	RESIDENT	2.63E-01	5.40E-01	1.06E-04	2.55E-03	0.80
381206.463853158.25	381206	3853158	RESIDENT	2.56E-01	5.25E-01	9.57E-05	2.12E-03	0.78
381133.443853006.47	381133	3853006	RESIDENT	1.71E-01	3.49E-01	8.39E-05	1.86E-03	0.52
381572.573853899.35	381573	3853899	RESIDENT	2.02E-01	4.47E-01	8.58E-04	2.12E-02	0.65
381635.293853878.64	381635	3853879	RESIDENT	2.14E-01	4.97E-01	1.50E-03	4.23E-02	0.71
381724.423853880.35	381724	3853880	RESIDENT	2.08E-01	4.70E-01	1.39E-03	3.74E-02	0.68

Resident Max: 0.80  
 Fenceline Max: 1.44

24-HR PM10 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381769.333854066.93	381769	3854067	RESIDENT	1.08E-01	2.43E-01	2.16E-04	5.11E-03	0.35
380838.73853925.28	380839	3853925	RESIDENT	1.15E-01	2.41E-01	2.60E-04	8.05E-03	0.36
380776.713853911.67	380777	3853912	RESIDENT	1.05E-01	2.13E-01	2.41E-04	7.55E-03	0.32
381905.063854191.95	381905	3854192	RESIDENT	8.25E-02	1.76E-01	1.50E-04	3.53E-03	0.26
381897.523854254.79	381898	3854255	RESIDENT	7.43E-02	1.58E-01	1.30E-04	3.08E-03	0.23
381770.173854255.62	381770	3854256	RESIDENT	7.70E-02	1.74E-01	1.29E-04	3.06E-03	0.25
381846.773853931.2	381847	3853931	RESIDENT	1.63E-01	3.43E-01	5.06E-04	1.26E-02	0.51
382759.033853899.12	382759	3853899	RESIDENT	8.28E-02	1.73E-01	7.37E-04	1.75E-02	0.26
382948.913853890.37	382949	3853890	RESIDENT	7.39E-02	1.53E-01	8.31E-04	2.00E-02	0.23
382818.213853903.75	382818	3853904	RESIDENT	7.98E-02	1.67E-01	6.77E-04	1.59E-02	0.25
382658.823853065.93	382659	3853066	RESIDENT	8.87E-02	1.90E-01	7.28E-05	1.70E-03	0.28
382705.843853071.63	382706	3853072	RESIDENT	8.25E-02	1.74E-01	7.35E-05	1.71E-03	0.26
382739.323853070.2	382739	3853070	RESIDENT	8.06E-02	1.65E-01	7.34E-05	1.70E-03	0.25
382765.673853062.36	382766	3853062	RESIDENT	7.91E-02	1.62E-01	7.28E-05	1.69E-03	0.24
380838.253852648.62	380838	3852649	RESIDENT	7.93E-02	1.80E-01	6.43E-05	1.48E-03	0.26
380596.713852456.08	380597	3852456	RESIDENT	6.45E-02	1.45E-01	5.57E-05	1.32E-03	0.21
380344.573853233.38	380345	3853233	RESIDENT	8.30E-02	1.70E-01	1.14E-04	2.59E-03	0.25
380414.583853989.01	380415	3853989	RESIDENT	7.73E-02	1.61E-01	1.73E-04	5.15E-03	0.24
380454.013853958.13	380454	3853958	RESIDENT	7.93E-02	1.65E-01	1.83E-04	5.54E-03	0.24

Resident Max: 0.60  
 Fenceline Max: 1.04

24-HR PM2.5 Concentrations

XY	X	Y	Type	Project Concentrations ( $\mu\text{g}/\text{m}^3$ )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381185.513853853.69	381186	3853854	FENCEPRI	2.66E-01	5.00E-01	1.68E-03	1.68E-02	0.78
381185.513853302.3	381186	3853302	FENCEPRI	3.00E-01	5.52E-01	1.23E-04	7.70E-04	0.85
381280.93853302.3	381281	3853302	FENCEPRI	3.25E-01	7.02E-01	1.21E-04	7.61E-04	1.03
381281.463853039.66	381281	3853040	FENCEPRI	2.49E-01	4.97E-01	8.27E-05	4.89E-04	0.75
381970.163853032.08	381970	3853032	FENCEPRI	2.78E-01	5.51E-01	7.58E-05	4.63E-04	0.83
381972.893853843.53	381973	3853844	FENCEPRI	2.70E-01	5.12E-01	1.61E-03	1.48E-02	0.80
381185.513853843.84	381186	3853844	FENCEINT	2.68E-01	5.10E-01	1.31E-03	1.14E-02	0.79
381185.513853834	381186	3853834	FENCEINT	2.68E-01	5.14E-01	1.01E-03	7.71E-03	0.79
381185.513853824.15	381186	3853824	FENCEINT	2.67E-01	5.16E-01	8.25E-04	6.01E-03	0.79
381185.513853814.3	381186	3853814	FENCEINT	2.67E-01	5.31E-01	7.02E-04	4.99E-03	0.80
381185.513853804.46	381186	3853804	FENCEINT	2.66E-01	5.47E-01	6.13E-04	4.30E-03	0.82
381185.513853794.61	381186	3853795	FENCEINT	2.66E-01	5.62E-01	5.46E-04	3.79E-03	0.83
381185.513853784.77	381186	3853785	FENCEINT	2.65E-01	5.71E-01	4.92E-04	3.39E-03	0.84
381185.513853774.92	381186	3853775	FENCEINT	2.64E-01	5.81E-01	4.50E-04	3.08E-03	0.85
381185.513853765.07	381186	3853765	FENCEINT	2.64E-01	5.89E-01	4.14E-04	2.82E-03	0.86
381185.513853755.23	381186	3853755	FENCEINT	2.63E-01	5.97E-01	3.85E-04	2.60E-03	0.86
381185.513853745.38	381186	3853745	FENCEINT	2.62E-01	6.04E-01	3.59E-04	2.42E-03	0.87
381185.513853735.54	381186	3853736	FENCEINT	2.64E-01	6.10E-01	3.38E-04	2.26E-03	0.88
381185.513853725.69	381186	3853726	FENCEINT	2.67E-01	6.15E-01	3.19E-04	2.12E-03	0.88
381185.513853715.84	381186	3853716	FENCEINT	2.71E-01	6.20E-01	3.02E-04	2.00E-03	0.89
381185.513853706	381186	3853706	FENCEINT	2.74E-01	6.24E-01	2.88E-04	1.90E-03	0.90
381185.513853696.15	381186	3853696	FENCEINT	2.76E-01	6.28E-01	2.75E-04	1.81E-03	0.91
381185.513853686.3	381186	3853686	FENCEINT	2.79E-01	6.33E-01	2.63E-04	1.72E-03	0.91
381185.513853676.46	381186	3853676	FENCEINT	2.81E-01	6.36E-01	2.52E-04	1.65E-03	0.92
381185.513853666.61	381186	3853667	FENCEINT	2.83E-01	6.39E-01	2.42E-04	1.58E-03	0.92
381185.513853656.76	381186	3853657	FENCEINT	2.85E-01	6.42E-01	2.34E-04	1.52E-03	0.93
381185.513853646.92	381186	3853647	FENCEINT	2.87E-01	6.45E-01	2.25E-04	1.46E-03	0.93
381185.513853637.07	381186	3853637	FENCEINT	2.90E-01	6.48E-01	2.18E-04	1.41E-03	0.94
381185.513853627.23	381186	3853627	FENCEINT	2.92E-01	6.51E-01	2.10E-04	1.36E-03	0.94
381185.513853617.38	381186	3853617	FENCEINT	2.94E-01	6.54E-01	2.03E-04	1.31E-03	0.95
381185.513853607.53	381186	3853608	FENCEINT	2.98E-01	6.57E-01	1.97E-04	1.27E-03	0.96
381185.513853597.69	381186	3853598	FENCEINT	3.01E-01	6.61E-01	1.91E-04	1.23E-03	0.96
381185.513853587.84	381186	3853588	FENCEINT	3.06E-01	6.67E-01	1.85E-04	1.19E-03	0.97
381185.513853578	381186	3853578	FENCEINT	3.09E-01	6.72E-01	1.80E-04	1.16E-03	0.98
381185.513853568.15	381186	3853568	FENCEINT	3.11E-01	6.77E-01	1.78E-04	1.12E-03	0.99
381185.513853558.3	381186	3853558	FENCEINT	3.14E-01	6.81E-01	1.76E-04	1.09E-03	1.00
381185.513853548.46	381186	3853548	FENCEINT	3.16E-01	6.86E-01	1.75E-04	1.06E-03	1.00
381185.513853538.61	381186	3853539	FENCEINT	3.19E-01	6.89E-01	1.74E-04	1.02E-03	1.01
381185.513853528.76	381186	3853529	FENCEINT	3.21E-01	6.92E-01	1.74E-04	1.00E-03	1.01
381185.513853518.92	381186	3853519	FENCEINT	3.24E-01	6.96E-01	1.73E-04	9.91E-04	1.02
381185.513853509.07	381186	3853509	FENCEINT	3.26E-01	6.98E-01	1.72E-04	9.82E-04	1.02
381185.513853499.22	381186	3853499	FENCEINT	3.27E-01	6.99E-01	1.70E-04	9.73E-04	1.03
381185.513853489.38	381186	3853489	FENCEINT	3.29E-01	7.00E-01	1.68E-04	9.63E-04	1.03
381185.513853479.53	381186	3853480	FENCEINT	3.29E-01	7.01E-01	1.66E-04	9.53E-04	1.03
381185.513853469.69	381186	3853470	FENCEINT	3.31E-01	7.01E-01	1.64E-04	9.43E-04	1.03
381185.513853459.84	381186	3853460	FENCEINT	3.32E-01	7.01E-01	1.61E-04	9.33E-04	1.03
381185.513853449.99	381186	3853450	FENCEINT	3.33E-01	7.01E-01	1.59E-04	9.23E-04	1.04
381185.513853440.15	381186	3853440	FENCEINT	3.34E-01	7.02E-01	1.56E-04	9.12E-04	1.04
381185.513853430.3	381186	3853430	FENCEINT	3.35E-01	7.03E-01	1.54E-04	9.01E-04	1.04
381185.513853420.46	381186	3853420	FENCEINT	3.36E-01	7.03E-01	1.51E-04	8.91E-04	1.04
381185.513853410.61	381186	3853411	FENCEINT	3.37E-01	7.02E-01	1.49E-04	8.82E-04	1.04

Resident Max: 0.60  
 Fenceline Max: 1.04

24-HR PM2.5 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381185.513853400.76	381186	3853401	FENCEINT	3.38E-01	6.99E-01	1.46E-04	8.73E-04	1.04
381185.513853390.92	381186	3853391	FENCEINT	3.39E-01	6.98E-01	1.44E-04	8.64E-04	1.04
381185.513853381.07	381186	3853381	FENCEINT	3.39E-01	6.99E-01	1.42E-04	8.53E-04	1.04
381185.513853371.22	381186	3853371	FENCEINT	3.37E-01	7.03E-01	1.39E-04	8.40E-04	1.04
381185.513853361.38	381186	3853361	FENCEINT	3.37E-01	6.99E-01	1.37E-04	8.32E-04	1.04
381185.513853351.53	381186	3853352	FENCEINT	3.35E-01	6.97E-01	1.35E-04	8.22E-04	1.03
381185.513853341.68	381186	3853342	FENCEINT	3.33E-01	6.92E-01	1.33E-04	8.13E-04	1.03
381185.513853331.84	381186	3853332	FENCEINT	3.29E-01	6.86E-01	1.30E-04	8.02E-04	1.02
381185.513853321.99	381186	3853322	FENCEINT	3.23E-01	6.75E-01	1.28E-04	7.92E-04	1.00
381185.513853312.15	381186	3853312	FENCEINT	3.14E-01	6.50E-01	1.26E-04	7.82E-04	0.97
381195.053853302.3	381195	3853302	FENCEINT	3.01E-01	5.53E-01	1.23E-04	7.71E-04	0.85
381204.593853302.3	381205	3853302	FENCEINT	3.03E-01	5.58E-01	1.23E-04	7.70E-04	0.86
381214.133853302.3	381214	3853302	FENCEINT	3.04E-01	5.62E-01	1.23E-04	7.68E-04	0.87
381223.673853302.3	381224	3853302	FENCEINT	3.07E-01	5.67E-01	1.23E-04	7.67E-04	0.87
381233.213853302.3	381233	3853302	FENCEINT	3.10E-01	5.74E-01	1.23E-04	7.66E-04	0.88
381242.743853302.3	381243	3853302	FENCEINT	3.14E-01	5.82E-01	1.22E-04	7.65E-04	0.90
381252.283853302.3	381252	3853302	FENCEINT	3.19E-01	5.92E-01	1.22E-04	7.64E-04	0.91
381261.823853302.3	381262	3853302	FENCEINT	3.23E-01	6.07E-01	1.22E-04	7.64E-04	0.93
381271.363853302.3	381271	3853302	FENCEINT	3.26E-01	6.32E-01	1.22E-04	7.62E-04	0.96
381280.923853292.57	381281	3853293	FENCEINT	3.25E-01	7.02E-01	1.19E-04	7.49E-04	1.03
381280.943853282.85	381281	3853283	FENCEINT	3.25E-01	7.00E-01	1.16E-04	7.36E-04	1.03
381280.963853273.12	381281	3853273	FENCEINT	3.25E-01	6.99E-01	1.14E-04	7.23E-04	1.02
381280.983853263.39	381281	3853263	FENCEINT	3.24E-01	6.97E-01	1.11E-04	7.09E-04	1.02
3812813853253.66	381281	3853254	FENCEINT	3.24E-01	6.96E-01	1.08E-04	6.95E-04	1.02
381281.023853243.94	381281	3853244	FENCEINT	3.24E-01	6.94E-01	1.06E-04	6.79E-04	1.02
381281.053853234.21	381281	3853234	FENCEINT	3.23E-01	6.92E-01	1.03E-04	6.63E-04	1.02
381281.073853224.48	381281	3853224	FENCEINT	3.22E-01	6.90E-01	9.99E-05	6.47E-04	1.01
381281.093853214.75	381281	3853215	FENCEINT	3.22E-01	6.88E-01	9.73E-05	6.29E-04	1.01
381281.113853205.03	381281	3853205	FENCEINT	3.21E-01	6.86E-01	9.62E-05	6.11E-04	1.01
381281.133853195.3	381281	3853195	FENCEINT	3.20E-01	6.85E-01	9.52E-05	5.91E-04	1.01
381281.153853185.57	381281	3853186	FENCEINT	3.19E-01	6.84E-01	9.42E-05	5.71E-04	1.00
381281.173853175.84	381281	3853176	FENCEINT	3.18E-01	6.82E-01	9.33E-05	5.50E-04	1.00
381281.193853166.12	381281	3853166	FENCEINT	3.17E-01	6.80E-01	9.24E-05	5.36E-04	1.00
381281.213853156.39	381281	3853156	FENCEINT	3.16E-01	6.77E-01	9.15E-05	5.32E-04	0.99
381281.233853146.66	381281	3853147	FENCEINT	3.15E-01	6.75E-01	9.07E-05	5.28E-04	0.99
381281.253853136.93	381281	3853137	FENCEINT	3.13E-01	6.73E-01	8.98E-05	5.24E-04	0.99
381281.273853127.21	381281	3853127	FENCEINT	3.11E-01	6.69E-01	8.90E-05	5.20E-04	0.98
381281.293853117.48	381281	3853117	FENCEINT	3.09E-01	6.65E-01	8.83E-05	5.16E-04	0.97
381281.313853107.75	381281	3853108	FENCEINT	3.06E-01	6.59E-01	8.75E-05	5.13E-04	0.97
381281.343853098.02	381281	3853098	FENCEINT	3.03E-01	6.54E-01	8.68E-05	5.09E-04	0.96
381281.363853088.3	381281	3853088	FENCEINT	2.97E-01	6.47E-01	8.61E-05	5.06E-04	0.94
381281.383853078.57	381281	3853079	FENCEINT	2.92E-01	6.39E-01	8.54E-05	5.02E-04	0.93
381281.43853068.84	381281	3853069	FENCEINT	2.85E-01	6.27E-01	8.47E-05	4.99E-04	0.91
381281.423853059.11	381281	3853059	FENCEINT	2.77E-01	6.09E-01	8.40E-05	4.96E-04	0.89
381281.443853049.39	381281	3853049	FENCEINT	2.66E-01	5.80E-01	8.34E-05	4.93E-04	0.85
381291.443853039.55	381291	3853040	FENCEINT	2.47E-01	4.98E-01	8.27E-05	4.89E-04	0.75
381301.423853039.44	381301	3853039	FENCEINT	2.45E-01	4.97E-01	8.27E-05	4.89E-04	0.74
381311.43853039.33	381311	3853039	FENCEINT	2.43E-01	4.96E-01	8.27E-05	4.89E-04	0.74
381321.383853039.22	381321	3853039	FENCEINT	2.42E-01	5.09E-01	8.28E-05	4.88E-04	0.75
381331.373853039.11	381331	3853039	FENCEINT	2.40E-01	5.31E-01	8.28E-05	4.88E-04	0.77
381341.353853039	381341	3853039	FENCEINT	2.38E-01	5.49E-01	8.28E-05	4.88E-04	0.79

Resident Max: 0.60  
 Fenceline Max: 1.04

24-HR PM2.5 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381351.333853038.89	381351	3853039	FENCEINT	2.42E-01	5.64E-01	8.28E-05	4.89E-04	0.81
381361.313853038.78	381361	3853039	FENCEINT	2.48E-01	5.76E-01	8.28E-05	4.88E-04	0.82
381371.293853038.67	381371	3853039	FENCEINT	2.53E-01	5.86E-01	8.29E-05	4.89E-04	0.84
381381.273853038.56	381381	3853039	FENCEINT	2.57E-01	5.94E-01	8.29E-05	4.89E-04	0.85
381391.253853038.45	381391	3853038	FENCEINT	2.61E-01	6.01E-01	8.29E-05	4.88E-04	0.86
381401.233853038.34	381401	3853038	FENCEINT	2.64E-01	6.05E-01	8.29E-05	4.89E-04	0.87
381411.223853038.23	381411	3853038	FENCEINT	2.67E-01	6.09E-01	8.29E-05	4.89E-04	0.88
381421.23853038.12	381421	3853038	FENCEINT	2.69E-01	6.12E-01	8.30E-05	4.89E-04	0.88
381431.183853038.01	381431	3853038	FENCEINT	2.71E-01	6.15E-01	8.30E-05	4.89E-04	0.89
381441.163853037.9	381441	3853038	FENCEINT	2.73E-01	6.18E-01	8.30E-05	4.89E-04	0.89
381451.143853037.79	381451	3853038	FENCEINT	2.74E-01	6.21E-01	8.30E-05	4.88E-04	0.90
381461.123853037.68	381461	3853038	FENCEINT	2.75E-01	6.22E-01	8.30E-05	4.89E-04	0.90
381471.13853037.57	381471	3853038	FENCEINT	2.76E-01	6.22E-01	8.30E-05	4.89E-04	0.90
381481.083853037.46	381481	3853037	FENCEINT	2.77E-01	6.23E-01	8.30E-05	4.89E-04	0.90
381491.063853037.35	381491	3853037	FENCEINT	2.78E-01	6.23E-01	8.30E-05	4.89E-04	0.90
381501.053853037.24	381501	3853037	FENCEINT	2.78E-01	6.23E-01	8.30E-05	4.88E-04	0.90
381511.033853037.13	381511	3853037	FENCEINT	2.78E-01	6.22E-01	8.30E-05	4.88E-04	0.90
381521.013853037.02	381521	3853037	FENCEINT	2.78E-01	6.22E-01	8.30E-05	4.89E-04	0.90
381530.993853036.91	381531	3853037	FENCEINT	2.77E-01	6.21E-01	8.30E-05	4.89E-04	0.90
381540.973853036.8	381541	3853037	FENCEINT	2.77E-01	6.19E-01	8.30E-05	4.88E-04	0.90
381550.953853036.69	381551	3853037	FENCEINT	2.76E-01	6.17E-01	8.29E-05	4.88E-04	0.89
381560.933853036.58	381561	3853037	FENCEINT	2.75E-01	6.15E-01	8.29E-05	4.88E-04	0.89
381570.913853036.47	381571	3853036	FENCEINT	2.74E-01	6.13E-01	8.28E-05	4.88E-04	0.89
381580.893853036.36	381581	3853036	FENCEINT	2.74E-01	6.10E-01	8.28E-05	4.87E-04	0.88
381590.883853036.25	381591	3853036	FENCEINT	2.73E-01	6.07E-01	8.28E-05	4.87E-04	0.88
381600.863853036.14	381601	3853036	FENCEINT	2.72E-01	6.04E-01	8.27E-05	4.87E-04	0.88
381610.843853036.03	381611	3853036	FENCEINT	2.71E-01	6.01E-01	8.27E-05	4.87E-04	0.87
381620.823853035.92	381621	3853036	FENCEINT	2.70E-01	5.98E-01	8.26E-05	4.86E-04	0.87
381630.83853035.82	381631	3853036	FENCEINT	2.68E-01	5.95E-01	8.26E-05	4.86E-04	0.86
381640.783853035.71	381641	3853036	FENCEINT	2.67E-01	5.92E-01	8.25E-05	4.86E-04	0.86
381650.763853035.6	381651	3853036	FENCEINT	2.66E-01	5.89E-01	8.24E-05	4.85E-04	0.86
381660.743853035.49	381661	3853035	FENCEINT	2.66E-01	5.86E-01	8.23E-05	4.85E-04	0.85
381670.733853035.38	381671	3853035	FENCEINT	2.66E-01	5.83E-01	8.22E-05	4.84E-04	0.85
381680.713853035.27	381681	3853035	FENCEINT	2.64E-01	5.80E-01	8.22E-05	4.84E-04	0.84
381690.693853035.16	381691	3853035	FENCEINT	2.61E-01	5.81E-01	8.21E-05	4.84E-04	0.84
381700.673853035.05	381701	3853035	FENCEINT	2.61E-01	5.83E-01	8.20E-05	4.84E-04	0.84
381710.653853034.94	381711	3853035	FENCEINT	2.62E-01	5.84E-01	8.19E-05	4.83E-04	0.85
381720.633853034.83	381721	3853035	FENCEINT	2.63E-01	5.84E-01	8.17E-05	4.83E-04	0.85
381730.613853034.72	381731	3853035	FENCEINT	2.64E-01	5.85E-01	8.16E-05	4.83E-04	0.85
381740.593853034.61	381741	3853035	FENCEINT	2.65E-01	5.88E-01	8.15E-05	4.83E-04	0.85
381750.573853034.5	381751	3853035	FENCEINT	2.65E-01	5.87E-01	8.14E-05	4.82E-04	0.85
381760.563853034.39	381761	3853034	FENCEINT	2.65E-01	5.88E-01	8.12E-05	4.81E-04	0.85
381770.543853034.28	381771	3853034	FENCEINT	2.66E-01	5.90E-01	8.11E-05	4.81E-04	0.86
381780.523853034.17	381781	3853034	FENCEINT	2.67E-01	5.90E-01	8.09E-05	4.81E-04	0.86
381790.53853034.06	381791	3853034	FENCEINT	2.67E-01	5.91E-01	8.08E-05	4.80E-04	0.86
381800.483853033.95	381800	3853034	FENCEINT	2.68E-01	5.91E-01	8.06E-05	4.80E-04	0.86
381810.463853033.84	381810	3853034	FENCEINT	2.69E-01	5.92E-01	8.04E-05	4.79E-04	0.86
381820.443853033.73	381820	3853034	FENCEINT	2.70E-01	5.92E-01	8.02E-05	4.78E-04	0.86
381830.423853033.62	381830	3853034	FENCEINT	2.70E-01	5.91E-01	8.00E-05	4.77E-04	0.86
381840.43853033.51	381840	3853034	FENCEINT	2.71E-01	5.92E-01	7.98E-05	4.77E-04	0.86
381850.393853033.4	381850	3853033	FENCEINT	2.70E-01	5.91E-01	7.95E-05	4.76E-04	0.86



Resident Max: 0.60  
 Fenceline Max: 1.04

24-HR PM2.5 Concentrations

XY	X	Y	Type	Project Concentrations ( $\mu\text{g}/\text{m}^3$ )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381860.373853033.29	381860	3853033	FENCEINT	2.70E-01	5.91E-01	7.93E-05	4.75E-04	0.86
381870.353853033.18	381870	3853033	FENCEINT	2.70E-01	5.90E-01	7.90E-05	4.74E-04	0.86
381880.333853033.07	381880	3853033	FENCEINT	2.69E-01	5.89E-01	7.87E-05	4.73E-04	0.86
381890.313853032.96	381890	3853033	FENCEINT	2.69E-01	5.88E-01	7.85E-05	4.72E-04	0.86
381900.293853032.85	381900	3853033	FENCEINT	2.70E-01	5.87E-01	7.83E-05	4.71E-04	0.86
381910.273853032.74	381910	3853033	FENCEINT	2.71E-01	5.85E-01	7.80E-05	4.70E-04	0.86
381920.253853032.63	381920	3853033	FENCEINT	2.72E-01	5.83E-01	7.76E-05	4.68E-04	0.86
381930.243853032.52	381930	3853033	FENCEINT	2.73E-01	5.80E-01	7.73E-05	4.67E-04	0.85
381940.223853032.41	381940	3853032	FENCEINT	2.74E-01	5.76E-01	7.69E-05	4.66E-04	0.85
381950.23853032.3	381950	3853032	FENCEINT	2.75E-01	5.71E-01	7.66E-05	4.65E-04	0.85
381960.183853032.19	381960	3853032	FENCEINT	2.76E-01	5.62E-01	7.62E-05	4.63E-04	0.84
381970.193853041.98	381970	3853042	FENCEINT	2.84E-01	5.84E-01	7.74E-05	4.70E-04	0.87
381970.233853051.87	381970	3853052	FENCEINT	2.86E-01	5.92E-01	7.89E-05	4.76E-04	0.88
381970.263853061.77	381970	3853062	FENCEINT	2.87E-01	5.95E-01	8.03E-05	4.82E-04	0.88
381970.293853071.66	381970	3853072	FENCEINT	2.87E-01	5.96E-01	8.17E-05	4.87E-04	0.88
381970.333853081.56	381970	3853082	FENCEINT	2.87E-01	5.96E-01	8.31E-05	4.92E-04	0.88
381970.363853091.45	381970	3853091	FENCEINT	2.87E-01	5.95E-01	8.45E-05	4.97E-04	0.88
381970.393853101.35	381970	3853101	FENCEINT	2.86E-01	5.98E-01	8.58E-05	5.03E-04	0.89
381970.433853111.25	381970	3853111	FENCEINT	2.86E-01	6.08E-01	8.72E-05	5.08E-04	0.89
381970.463853121.14	381970	3853121	FENCEINT	2.85E-01	6.15E-01	8.85E-05	5.14E-04	0.90
381970.493853131.04	381970	3853131	FENCEINT	2.84E-01	6.22E-01	8.99E-05	5.19E-04	0.91
381970.533853140.93	381971	3853141	FENCEINT	2.83E-01	6.27E-01	9.13E-05	5.24E-04	0.91
381970.563853150.83	381971	3853151	FENCEINT	2.82E-01	6.31E-01	9.26E-05	5.29E-04	0.91
381970.593853160.72	381971	3853161	FENCEINT	2.81E-01	6.35E-01	9.38E-05	5.34E-04	0.92
381970.633853170.62	381971	3853171	FENCEINT	2.80E-01	6.37E-01	9.50E-05	5.38E-04	0.92
381970.663853180.52	381971	3853181	FENCEINT	2.82E-01	6.41E-01	9.62E-05	5.44E-04	0.92
381970.693853190.41	381971	3853190	FENCEINT	2.85E-01	6.44E-01	9.74E-05	5.50E-04	0.93
381970.733853200.31	381971	3853200	FENCEINT	2.87E-01	6.46E-01	9.84E-05	5.54E-04	0.93
381970.763853210.2	381971	3853210	FENCEINT	2.88E-01	6.47E-01	9.93E-05	5.58E-04	0.94
381970.793853220.1	381971	3853220	FENCEINT	2.90E-01	6.49E-01	1.00E-04	5.64E-04	0.94
381970.833853229.99	381971	3853230	FENCEINT	2.92E-01	6.50E-01	1.01E-04	5.69E-04	0.94
381970.863853239.89	381971	3853240	FENCEINT	2.93E-01	6.51E-01	1.01E-04	5.73E-04	0.95
381970.893853249.79	381971	3853250	FENCEINT	2.94E-01	6.52E-01	1.02E-04	5.77E-04	0.95
381970.933853259.68	381971	3853260	FENCEINT	2.96E-01	6.53E-01	1.03E-04	5.83E-04	0.95
381970.963853269.58	381971	3853270	FENCEINT	2.97E-01	6.54E-01	1.03E-04	5.86E-04	0.95
381970.993853279.47	381971	3853279	FENCEINT	2.99E-01	6.55E-01	1.03E-04	5.91E-04	0.95
381971.033853289.37	381971	3853289	FENCEINT	3.00E-01	6.55E-01	1.04E-04	5.96E-04	0.96
381971.063853299.26	381971	3853299	FENCEINT	3.01E-01	6.55E-01	1.04E-04	6.01E-04	0.96
381971.093853309.16	381971	3853309	FENCEINT	3.02E-01	6.56E-01	1.04E-04	6.05E-04	0.96
381971.133853319.06	381971	3853319	FENCEINT	3.03E-01	6.56E-01	1.05E-04	6.13E-04	0.96
381971.163853328.95	381971	3853329	FENCEINT	3.04E-01	6.58E-01	1.05E-04	6.20E-04	0.96
381971.193853338.85	381971	3853339	FENCEINT	3.05E-01	6.59E-01	1.07E-04	6.28E-04	0.96
381971.233853348.74	381971	3853349	FENCEINT	3.05E-01	6.59E-01	1.07E-04	6.49E-04	0.97
381971.263853358.64	381971	3853359	FENCEINT	3.06E-01	6.58E-01	1.11E-04	6.76E-04	0.96
381971.293853368.53	381971	3853369	FENCEINT	3.06E-01	6.57E-01	1.15E-04	7.01E-04	0.96
381971.333853378.43	381971	3853378	FENCEINT	3.06E-01	6.57E-01	1.20E-04	7.29E-04	0.96
381971.363853388.33	381971	3853388	FENCEINT	3.07E-01	6.58E-01	1.24E-04	7.57E-04	0.97
381971.393853398.22	381971	3853398	FENCEINT	3.08E-01	6.58E-01	1.29E-04	7.82E-04	0.97
381971.433853408.12	381971	3853408	FENCEINT	3.08E-01	6.57E-01	1.33E-04	8.05E-04	0.97
381971.463853418.01	381971	3853418	FENCEINT	3.09E-01	6.57E-01	1.37E-04	8.28E-04	0.97
381971.493853427.91	381971	3853428	FENCEINT	3.10E-01	6.57E-01	1.41E-04	8.49E-04	0.97

Resident Max: 0.60  
 Fenceline Max: 1.04

24-HR PM2.5 Concentrations

XY	X	Y	Type	Project Concentrations ( $\mu\text{g}/\text{m}^3$ )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381971.533853437.8	381972	3853438	FENCEINT	3.10E-01	6.55E-01	1.44E-04	8.68E-04	0.97
381971.563853447.7	381972	3853448	FENCEINT	3.09E-01	6.55E-01	1.47E-04	8.87E-04	0.96
381971.593853457.6	381972	3853458	FENCEINT	3.07E-01	6.54E-01	1.50E-04	9.03E-04	0.96
381971.623853467.49	381972	3853467	FENCEINT	3.07E-01	6.54E-01	1.53E-04	9.21E-04	0.96
381971.663853477.39	381972	3853477	FENCEINT	3.08E-01	6.53E-01	1.56E-04	9.38E-04	0.96
381971.693853487.28	381972	3853487	FENCEINT	3.07E-01	6.52E-01	1.58E-04	9.54E-04	0.96
381971.723853497.18	381972	3853497	FENCEINT	3.07E-01	6.52E-01	1.61E-04	9.72E-04	0.96
381971.763853507.08	381972	3853507	FENCEINT	3.07E-01	6.51E-01	1.63E-04	9.88E-04	0.96
381971.793853516.97	381972	3853517	FENCEINT	3.05E-01	6.50E-01	1.64E-04	1.00E-03	0.96
381971.823853526.87	381972	3853527	FENCEINT	3.04E-01	6.49E-01	1.67E-04	1.02E-03	0.95
381971.863853536.76	381972	3853537	FENCEINT	3.04E-01	6.48E-01	1.69E-04	1.04E-03	0.95
381971.893853546.66	381972	3853547	FENCEINT	3.03E-01	6.47E-01	1.72E-04	1.07E-03	0.95
381971.923853556.55	381972	3853557	FENCEINT	3.02E-01	6.46E-01	1.75E-04	1.09E-03	0.95
381971.963853566.45	381972	3853566	FENCEINT	3.02E-01	6.45E-01	1.79E-04	1.12E-03	0.95
381971.993853576.35	381972	3853576	FENCEINT	3.01E-01	6.43E-01	1.83E-04	1.15E-03	0.95
381972.023853586.24	381972	3853586	FENCEINT	3.00E-01	6.42E-01	1.86E-04	1.18E-03	0.94
381972.063853596.14	381972	3853596	FENCEINT	2.97E-01	6.40E-01	1.91E-04	1.21E-03	0.94
381972.093853606.03	381972	3853606	FENCEINT	2.96E-01	6.37E-01	1.96E-04	1.25E-03	0.93
381972.123853615.93	381972	3853616	FENCEINT	2.95E-01	6.35E-01	2.02E-04	1.31E-03	0.93
381972.163853625.82	381972	3853626	FENCEINT	2.94E-01	6.32E-01	2.08E-04	1.37E-03	0.93
381972.193853635.72	381972	3853636	FENCEINT	2.92E-01	6.29E-01	2.19E-04	1.45E-03	0.92
381972.223853645.62	381972	3853646	FENCEINT	2.91E-01	6.25E-01	2.31E-04	1.52E-03	0.92
381972.263853655.51	381972	3853656	FENCEINT	2.89E-01	6.21E-01	2.43E-04	1.60E-03	0.91
381972.293853665.41	381972	3853665	FENCEINT	2.87E-01	6.17E-01	2.57E-04	1.69E-03	0.91
381972.323853675.3	381972	3853675	FENCEINT	2.85E-01	6.12E-01	2.72E-04	1.78E-03	0.90
381972.363853685.2	381972	3853685	FENCEINT	2.81E-01	6.07E-01	2.89E-04	1.88E-03	0.89
381972.393853695.09	381972	3853695	FENCEINT	2.79E-01	6.01E-01	3.07E-04	1.99E-03	0.88
381972.423853704.99	381972	3853705	FENCEINT	2.76E-01	5.95E-01	3.26E-04	2.12E-03	0.87
381972.463853714.89	381972	3853715	FENCEINT	2.76E-01	5.88E-01	3.49E-04	2.26E-03	0.87
381972.493853724.78	381972	3853725	FENCEINT	2.75E-01	5.81E-01	3.74E-04	2.42E-03	0.86
381972.523853734.68	381973	3853735	FENCEINT	2.73E-01	5.74E-01	4.02E-04	2.61E-03	0.85
381972.563853744.57	381973	3853745	FENCEINT	2.72E-01	5.66E-01	4.35E-04	2.83E-03	0.84
381972.593853754.47	381973	3853754	FENCEINT	2.71E-01	5.65E-01	4.74E-04	3.08E-03	0.84
381972.623853764.36	381973	3853764	FENCEINT	2.71E-01	5.63E-01	5.19E-04	3.40E-03	0.84
381972.663853774.26	381973	3853774	FENCEINT	2.72E-01	5.60E-01	5.75E-04	3.79E-03	0.84
381972.693853784.16	381973	3853784	FENCEINT	2.72E-01	5.57E-01	6.44E-04	4.28E-03	0.83
381972.723853794.05	381973	3853794	FENCEINT	2.72E-01	5.52E-01	7.31E-04	4.92E-03	0.83
381972.763853803.95	381973	3853804	FENCEINT	2.73E-01	5.45E-01	8.46E-04	5.80E-03	0.82
381972.793853813.84	381973	3853814	FENCEINT	2.73E-01	5.35E-01	1.00E-03	7.10E-03	0.82
381972.823853823.74	381973	3853824	FENCEINT	2.73E-01	5.28E-01	1.22E-03	9.32E-03	0.81
381972.863853833.63	381973	3853834	FENCEINT	2.73E-01	5.28E-01	1.56E-03	1.40E-02	0.82
381962.923853843.66	381963	3853844	FENCEINT	2.77E-01	5.37E-01	1.62E-03	1.49E-02	0.83
381952.963853843.79	381953	3853844	FENCEINT	2.77E-01	5.37E-01	1.66E-03	1.61E-02	0.83
381942.993853843.92	381943	3853844	FENCEINT	2.76E-01	5.36E-01	1.84E-03	1.84E-02	0.83
381933.023853844.04	381933	3853844	FENCEINT	2.75E-01	5.34E-01	1.61E-03	1.48E-02	0.83
381923.063853844.17	381923	3853844	FENCEINT	2.74E-01	5.32E-01	1.63E-03	1.53E-02	0.82
381913.093853844.3	381913	3853844	FENCEINT	2.73E-01	5.30E-01	1.82E-03	1.81E-02	0.82
381903.123853844.43	381903	3853844	FENCEINT	2.72E-01	5.28E-01	1.60E-03	1.47E-02	0.82
381893.163853844.56	381893	3853845	FENCEINT	2.71E-01	5.26E-01	1.61E-03	1.48E-02	0.81
381883.193853844.69	381883	3853845	FENCEINT	2.70E-01	5.24E-01	1.66E-03	1.62E-02	0.81
381873.223853844.82	381873	3853845	FENCEINT	2.68E-01	5.21E-01	1.83E-03	1.84E-02	0.81

Resident Max: 0.60  
 Fenceline Max: 1.04

24-HR PM2.5 Concentrations

XY	X	Y	Type	Project Concentrations ( $\mu\text{g}/\text{m}^3$ )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381863.253853844.94	381863	3853845	FENCEINT	2.67E-01	5.20E-01	1.60E-03	1.47E-02	0.80
381853.293853845.07	381853	3853845	FENCEINT	2.66E-01	5.18E-01	1.62E-03	1.54E-02	0.80
381843.323853845.2	381843	3853845	FENCEINT	2.65E-01	5.16E-01	1.81E-03	1.81E-02	0.80
381833.353853845.33	381833	3853845	FENCEINT	2.63E-01	5.14E-01	1.58E-03	1.46E-02	0.79
381823.393853845.46	381823	3853845	FENCEINT	2.62E-01	5.12E-01	1.60E-03	1.47E-02	0.79
381813.423853845.59	381813	3853846	FENCEINT	2.60E-01	5.09E-01	1.67E-03	1.63E-02	0.79
381803.453853845.72	381803	3853846	FENCEINT	2.59E-01	5.07E-01	1.81E-03	1.85E-02	0.79
381793.493853845.84	381793	3853846	FENCEINT	2.57E-01	5.05E-01	1.58E-03	1.46E-02	0.78
381783.523853845.97	381784	3853846	FENCEINT	2.56E-01	5.04E-01	1.62E-03	1.55E-02	0.78
381773.553853846.1	381774	3853846	FENCEINT	2.55E-01	5.03E-01	1.80E-03	1.80E-02	0.78
381763.593853846.23	381764	3853846	FENCEINT	2.53E-01	5.04E-01	1.57E-03	1.45E-02	0.77
381753.623853846.36	381754	3853846	FENCEINT	2.51E-01	5.06E-01	1.59E-03	1.47E-02	0.77
381743.653853846.49	381744	3853846	FENCEINT	2.49E-01	5.07E-01	1.68E-03	1.64E-02	0.77
381733.693853846.62	381734	3853847	FENCEINT	2.47E-01	5.08E-01	1.80E-03	1.86E-02	0.78
381723.723853846.75	381724	3853847	FENCEINT	2.46E-01	5.10E-01	1.57E-03	1.45E-02	0.77
381713.753853846.87	381714	3853847	FENCEINT	2.44E-01	5.11E-01	1.63E-03	1.56E-02	0.77
381703.793853847	381704	3853847	FENCEINT	2.43E-01	5.11E-01	1.78E-03	1.78E-02	0.77
381693.823853847.13	381694	3853847	FENCEINT	2.42E-01	5.12E-01	1.55E-03	1.44E-02	0.77
381683.853853847.26	381684	3853847	FENCEINT	2.43E-01	5.13E-01	1.59E-03	1.48E-02	0.77
381673.883853847.39	381674	3853847	FENCEINT	2.43E-01	5.12E-01	1.68E-03	1.65E-02	0.77
381663.923853847.52	381664	3853848	FENCEINT	2.43E-01	5.12E-01	1.79E-03	1.87E-02	0.78
381653.953853847.65	381654	3853848	FENCEINT	2.43E-01	5.13E-01	1.55E-03	1.43E-02	0.77
381643.983853847.77	381644	3853848	FENCEINT	2.44E-01	5.14E-01	1.64E-03	1.57E-02	0.77
381634.023853847.9	381634	3853848	FENCEINT	2.45E-01	5.14E-01	1.76E-03	1.78E-02	0.78
381624.053853848.03	381624	3853848	FENCEINT	2.45E-01	5.13E-01	1.53E-03	1.42E-02	0.77
381614.083853848.16	381614	3853848	FENCEINT	2.44E-01	5.13E-01	1.59E-03	1.49E-02	0.77
381604.123853848.29	381604	3853848	FENCEINT	2.43E-01	5.13E-01	1.69E-03	1.66E-02	0.77
381594.153853848.42	381594	3853848	FENCEINT	2.43E-01	5.13E-01	1.79E-03	1.88E-02	0.78
381584.183853848.55	381584	3853849	FENCEINT	2.43E-01	5.12E-01	1.55E-03	1.42E-02	0.77
381574.223853848.67	381574	3853849	FENCEINT	2.42E-01	5.11E-01	1.64E-03	1.58E-02	0.77
381564.253853848.8	381564	3853849	FENCEINT	2.42E-01	5.11E-01	1.75E-03	1.79E-02	0.77
381554.283853848.93	381554	3853849	FENCEINT	2.41E-01	5.11E-01	1.51E-03	1.40E-02	0.77
381544.323853849.06	381544	3853849	FENCEINT	2.41E-01	5.10E-01	1.60E-03	1.50E-02	0.77
381534.353853849.19	381534	3853849	FENCEINT	2.40E-01	5.09E-01	1.69E-03	1.67E-02	0.77
381524.383853849.32	381524	3853849	FENCEINT	2.40E-01	5.08E-01	1.80E-03	1.89E-02	0.77
381514.423853849.45	381514	3853849	FENCEINT	2.39E-01	5.09E-01	1.55E-03	1.43E-02	0.76
381504.453853849.57	381504	3853850	FENCEINT	2.38E-01	5.11E-01	1.64E-03	1.59E-02	0.77
381494.483853849.7	381494	3853850	FENCEINT	2.38E-01	5.12E-01	1.76E-03	1.80E-02	0.77
381484.523853849.83	381485	3853850	FENCEINT	2.39E-01	5.14E-01	1.50E-03	1.37E-02	0.77
381474.553853849.96	381475	3853850	FENCEINT	2.40E-01	5.15E-01	1.60E-03	1.51E-02	0.77
381464.583853850.09	381465	3853850	FENCEINT	2.41E-01	5.17E-01	1.72E-03	1.72E-02	0.78
381454.613853850.22	381455	3853850	FENCEINT	2.41E-01	5.18E-01	1.80E-03	1.90E-02	0.78
381444.653853850.35	381445	3853850	FENCEINT	2.42E-01	5.21E-01	1.55E-03	1.44E-02	0.78
381434.683853850.47	381435	3853850	FENCEINT	2.43E-01	5.22E-01	1.65E-03	1.59E-02	0.78
381424.713853850.6	381425	3853851	FENCEINT	2.44E-01	5.23E-01	1.76E-03	1.81E-02	0.79
381414.753853850.73	381415	3853851	FENCEINT	2.44E-01	5.25E-01	1.51E-03	1.37E-02	0.78
381404.783853850.86	381405	3853851	FENCEINT	2.45E-01	5.26E-01	1.60E-03	1.52E-02	0.79
381394.813853850.99	381395	3853851	FENCEINT	2.46E-01	5.28E-01	1.72E-03	1.72E-02	0.79
381384.853853851.12	381385	3853851	FENCEINT	2.46E-01	5.30E-01	1.46E-03	1.32E-02	0.79
381374.883853851.25	381375	3853851	FENCEINT	2.48E-01	5.32E-01	1.56E-03	1.44E-02	0.80
381364.913853851.38	381365	3853851	FENCEINT	2.49E-01	5.33E-01	1.65E-03	1.60E-02	0.80

Resident Max: 0.60  
 Fenceline Max: 1.04

24-HR PM2.5 Concentrations

XY	X	Y	Type	Project Concentrations (µg/m <sup>3</sup> )				
				OFFROAD	ON_DUST	HAUL_EX	HAUL_DST	TOTAL
381354.953853851.5	381355	3853852	FENCEINT	2.50E-01	5.35E-01	1.76E-03	1.82E-02	0.80
381344.983853851.63	381345	3853852	FENCEINT	2.52E-01	5.36E-01	1.51E-03	1.38E-02	0.80
381335.013853851.76	381335	3853852	FENCEINT	2.54E-01	5.38E-01	1.61E-03	1.52E-02	0.81
381325.053853851.89	381325	3853852	FENCEINT	2.55E-01	5.40E-01	1.72E-03	1.73E-02	0.81
381315.083853852.02	381315	3853852	FENCEINT	2.56E-01	5.41E-01	1.47E-03	1.31E-02	0.81
381305.113853852.15	381305	3853852	FENCEINT	2.58E-01	5.43E-01	1.56E-03	1.45E-02	0.82
381295.153853852.28	381295	3853852	FENCEINT	2.59E-01	5.44E-01	1.65E-03	1.61E-02	0.82
381285.183853852.4	381285	3853852	FENCEINT	2.60E-01	5.46E-01	1.76E-03	1.82E-02	0.83
381275.213853852.53	381275	3853853	FENCEINT	2.61E-01	5.47E-01	1.51E-03	1.38E-02	0.82
381265.243853852.66	381265	3853853	FENCEINT	2.62E-01	5.48E-01	1.61E-03	1.53E-02	0.83
381255.283853852.79	381255	3853853	FENCEINT	2.63E-01	5.49E-01	1.72E-03	1.73E-02	0.83
381245.313853852.92	381245	3853853	FENCEINT	2.64E-01	5.50E-01	1.46E-03	1.31E-02	0.83
381235.343853853.05	381235	3853853	FENCEINT	2.64E-01	5.50E-01	1.56E-03	1.45E-02	0.83
381225.383853853.18	381225	3853853	FENCEINT	2.65E-01	5.50E-01	1.65E-03	1.61E-02	0.83
381215.413853853.3	381215	3853853	FENCEINT	2.64E-01	5.50E-01	1.75E-03	1.82E-02	0.83
381205.443853853.43	381205	3853853	FENCEINT	2.64E-01	5.48E-01	1.50E-03	1.37E-02	0.83
381195.483853853.56	381195	3853854	FENCEINT	2.65E-01	5.42E-01	1.58E-03	1.50E-02	0.82
381207.283853216.51	381207	3853217	RESIDENT	2.44E-01	3.54E-01	1.01E-04	6.52E-04	0.60
381206.463853158.25	381206	3853158	RESIDENT	2.37E-01	3.44E-01	9.12E-05	5.43E-04	0.58
381133.443853006.47	381133	3853006	RESIDENT	1.58E-01	2.29E-01	7.99E-05	4.76E-04	0.39
381572.573853899.35	381573	3853899	RESIDENT	1.87E-01	2.93E-01	8.18E-04	5.43E-03	0.49
381635.293853878.64	381635	3853879	RESIDENT	1.98E-01	3.26E-01	1.43E-03	1.08E-02	0.54
381724.423853880.35	381724	3853880	RESIDENT	1.92E-01	3.08E-01	1.33E-03	9.59E-03	0.51
381769.333854066.93	381769	3854067	RESIDENT	9.98E-02	1.59E-01	2.06E-04	1.31E-03	0.26
380838.73853925.28	380839	3853925	RESIDENT	1.07E-01	1.58E-01	2.47E-04	2.06E-03	0.27
380776.713853911.67	380777	3853912	RESIDENT	9.71E-02	1.40E-01	2.30E-04	1.93E-03	0.24
381905.063854191.95	381905	3854192	RESIDENT	7.63E-02	1.15E-01	1.43E-04	9.03E-04	0.19
381897.523854254.79	381898	3854255	RESIDENT	6.87E-02	1.04E-01	1.24E-04	7.88E-04	0.17
381770.173854255.62	381770	3854256	RESIDENT	7.12E-02	1.14E-01	1.23E-04	7.84E-04	0.19
381846.773853931.2	381847	3853931	RESIDENT	1.51E-01	2.25E-01	4.82E-04	3.23E-03	0.38
382759.033853899.12	382759	3853899	RESIDENT	7.66E-02	1.14E-01	7.02E-04	4.48E-03	0.20
382948.913853890.37	382949	3853890	RESIDENT	6.84E-02	1.00E-01	7.92E-04	5.12E-03	0.17
382818.213853903.75	382818	3853904	RESIDENT	7.38E-02	1.09E-01	6.45E-04	4.08E-03	0.19
382658.823853065.93	382659	3853066	RESIDENT	8.21E-02	1.25E-01	6.94E-05	4.35E-04	0.21
382705.843853071.63	382706	3853072	RESIDENT	7.63E-02	1.14E-01	7.01E-05	4.38E-04	0.19
382739.323853070.2	382739	3853070	RESIDENT	7.46E-02	1.08E-01	7.00E-05	4.37E-04	0.18
382765.673853062.36	382766	3853062	RESIDENT	7.32E-02	1.06E-01	6.94E-05	4.33E-04	0.18
380838.253852648.62	380838	3852649	RESIDENT	7.33E-02	1.18E-01	6.13E-05	3.79E-04	0.19
380596.713852456.08	380597	3852456	RESIDENT	5.97E-02	9.51E-02	5.31E-05	3.38E-04	0.16
380344.573853233.38	380345	3853233	RESIDENT	7.68E-02	1.12E-01	1.09E-04	6.63E-04	0.19
380414.583853989.01	380415	3853989	RESIDENT	7.15E-02	1.05E-01	1.65E-04	1.32E-03	0.18
380454.013853958.13	380454	3853958	RESIDENT	7.33E-02	1.08E-01	1.74E-04	1.42E-03	0.18

**RESIDENTIAL**

Parameter	Abbr.	3rd Tri	0<2
Daily Breathing Rate (mg/kg/day) <sup>1</sup>	DBR	361	1,090
Inhalation Absorption Factor (unitless)	A	1.0	1.0
Exposure Frequency (unitless) <sup>2</sup>	EF	0.96	0.96
Conversion Factor (ug to mg, L to m <sup>3</sup> )	CF	1.00E-06	1.00E-06
Age Sensitivity Factor (unitless)	ASF	10	10
Exposure Duration (years)	ED	0.25	0.68
Averaging Time for Lifetime (years)	AT	70.0	70.0
Fraction of Time at Home (unitless)	FAH	1.0	1.0
Worker Adjustment Factor (unitless)	WAF	4.2	4.2
Cancer Conversion Factor (unitless)	CCF	1.00E+06	1.00E+06
Cancer Potency Factor (mg/kg/day) <sup>-1</sup>	CPF	1.1	1.1

1. 95th percentile DBR for 3rd Tri & 0<2, 80th percentile for other age groups
2. Based on 350 days/365 days per year