



Date: December 21, 2021  
To: Mr. Fred Matian  
From: M. S. Hatch Consulting, LLC  
**Subject: Air Quality Study – Tentative Tract Map (TTM) 83554 Housing Development – 60<sup>th</sup> Street West in between Avenue K-9 and Avenue K-11, Lancaster, CA**

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M. S. Hatch Consulting, LLC (MSHC) appreciates the opportunity to prepare the air quality study for the proposed construction and operation of the housing development shown on Tentative Tract Map (TTM) 83554 for Civil Design and Drafting, Inc (Civil Design). The project consists of 18 single family homes on 5 acres in the City of Lancaster. This air quality study includes the estimated criteria pollutant and greenhouse gas emissions from the construction and operation of the proposed project.

### Executive Summary

Table 1 and Table 2 compare the estimated annual and daily emissions summaries from the construction and operation of the proposed housing development to the significant emission thresholds described in the Antelope Valley Air Quality Management District (AVAQMD) California Environmental Quality Act (CEQA) and Federal Conformity Guidelines, dated August 2016, included in Attachment A. The estimated emissions of criteria pollutants and greenhouse gases for each year of construction and the total operational emissions **are well below the applicable thresholds**. Greenhouse gas emissions are presented in units of carbon dioxide equivalent (CO<sub>2</sub>e). The proposed project is not considered one of the project types that the AVAQMD CEQA Guidelines require to be evaluated for potentially exposing sensitive receptors to substantial pollutant concentrations.<sup>1</sup> As such, hazardous air pollutants (HAP) emissions were not calculated, and the project was not evaluated for potential health risks to sensitive receptors.

**Table 1. Annual Emissions Summary and Significance Thresholds**

Emissions Source	Total Emissions (tons per year)						
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub> e
Year 1 Construction Emissions (2024)	0.25	2.28	2.64	< 0.01	0.17	0.12	419
Year 2 Construction Emissions (2025)	0.35	1.67	2.22	< 0.01	0.10	0.07	345
Total Operational Emissions	0.29	0.15	0.96	< 0.01	0.18	0.05	235
<b>Significant Emissions Threshold</b>	<b>25</b>	<b>25</b>	<b>100</b>	<b>25</b>	<b>15</b>	<b>12</b>	<b>100,000</b>

<sup>1</sup> Residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number 4 (refer to the significance threshold discussion): any industrial project within 1000 feet; a distribution center (40 or more trucks per day) within 1000 feet; a major transportation project (50,000 or more vehicles per day) within 1000 feet; a dry cleaner using perchloroethylene within 500 feet; or a gasoline dispensing facility within 300 feet.

**Table 2. Daily Emissions Summary and Significance Thresholds**

Emissions Source	Total Emissions (pounds per day)						
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2e</sub>
Year 1 Construction Emissions (2024)	2.72	27.21	18.93	0.04	5.21	3.14	3,858
Year 2 Construction Emissions (2025)	16.22	12.81	16.90	0.03	0.77	0.56	2,906
Total Operational Emissions	1.73	1.01	6.52	0.01	1.08	0.32	1,558
<b>Significant Emissions Threshold</b>	<b>137</b>	<b>137</b>	<b>548</b>	<b>137</b>	<b>82</b>	<b>65</b>	<b>548,000</b>

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO<sub>x</sub>: oxides of nitrogen; CO: Carbon monoxide; SO<sub>x</sub>: Oxides of sulfur; PM<sub>2.5</sub>: particulate matter less than 2.5 micrometers in diameter; PM<sub>10</sub>: particulate matter less than 10 micrometers in diameter; CO<sub>2e</sub>: Carbon dioxide equivalent

**Project Description**

The proposed project includes the construction of 18 single family homes and residential streets on 5 acres of land. The project location is currently a vacant lot located east of 60<sup>th</sup> Street West in between Avenue K-9 and Avenue K-11 in Lancaster, California. The site location is included in Figure 1 and the proposed site plan is included in Figure 2.

**Figure 1. Regional Vicinity**

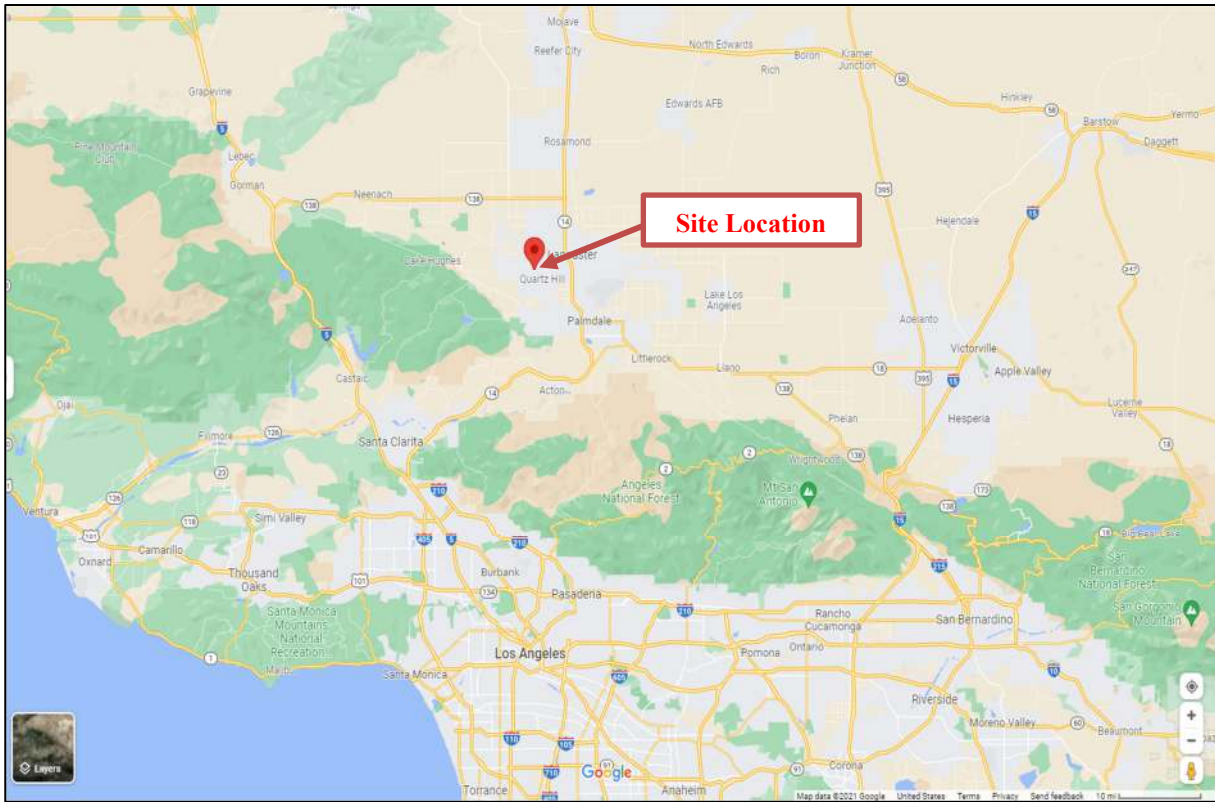
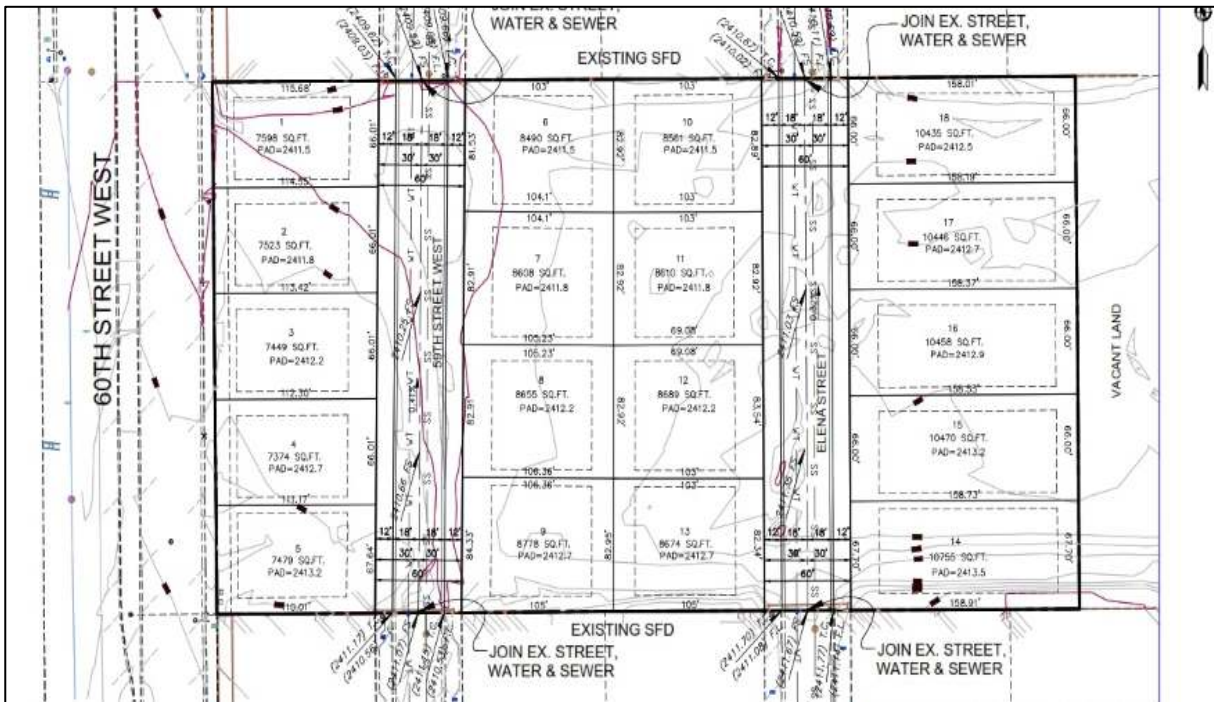


Figure 2. Site Plan – Proposed Housing Development - TTM 83554, Lancaster, CA



### Sources of Emissions

The emissions associated with the proposed project consist of construction and operational emissions from the housing development. Construction emissions are temporary and include emissions of criteria pollutants and greenhouse gases from construction activities during site preparation, grading, building construction, paving, and the application of architectural coatings. Operational emissions consist of area sources (i.e., re-applying architectural coatings, consumer products, and landscaping equipment), energy use (i.e., electricity and natural gas), mobile sources (e.g., commuting), solid waste disposal, and water and wastewater use (i.e., supplying and treating water and wastewater).

### Emissions Estimates

Table 3 and 4 present the annual and daily emissions summaries from the construction and operation of the proposed project, respectively. Emissions were estimated using CalEEMod Version 2020.4.0. The detailed emissions model outputs are included in Attachment B.

This project is not considered one of the project types that the AVAQM CEQA Guidelines require to be evaluated for potentially exposing sensitive receptors to substantial pollutant concentrations. As such, HAP emissions were not calculated, and the project was not evaluated for potential health risks to sensitive receptors.

**Table 3. Annual Construction and Operational Emissions Summary**

Emissions Source	Total Emissions (tons per year)						
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2e</sub>
<b>Construction Emissions</b>							
Year 1 Construction Emissions (2024)	0.25	2.28	2.64	< 0.01	0.17	0.12	419
Year 2 Construction Emissions (2025)	0.35	1.67	2.22	< 0.01	0.10	0.07	345
<b>Operational Emissions</b>							
Area Sources	0.20	0.01	0.14	< 0.01	< 0.01	< 0.01	14
Energy	< 0.01	0.02	0.01	< 0.01	< 0.01	< 0.01	50
Mobile	0.08	0.11	0.81	< 0.01	0.18	0.05	154
Waste	N/A	N/A	N/A	N/A	0.00	0.00	11
Water	N/A	N/A	N/A	N/A	0.00	0.00	6
<b>Total Operational Emissions</b>	<b>0.29</b>	<b>0.15</b>	<b>0.96</b>	<b>&lt; 0.01</b>	<b>0.18</b>	<b>0.05</b>	<b>235</b>
<b>Significant Emissions Threshold</b>	<b>25</b>	<b>25</b>	<b>100</b>	<b>25</b>	<b>15</b>	<b>12</b>	<b>100,000</b>

**Table 4. Daily Construction and Operational Emissions Summary**

Emissions Source	Total Emissions (pounds per day)						
	ROG	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2e</sub>
<b>Construction Emissions</b>							
Year 1 Construction Emissions (2024)	2.72	27.21	18.93	0.04	5.21	3.14	3,858
Year 2 Construction Emissions (2025)	16.22	12.81	16.90	0.03	0.77	0.56	2,906
<b>Operational Emissions</b>							
Area Sources	1.14	0.32	1.61	< 0.01	0.03	0.03	386
Energy	0.01	0.12	0.05	< 0.01	0.01	0.01	149
Mobile	0.57	0.58	4.86	0.01	1.04	0.28	1,023
Waste	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Water	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total Operational Emissions</b>	<b>1.73</b>	<b>1.01</b>	<b>6.52</b>	<b>0.01</b>	<b>1.08</b>	<b>0.32</b>	<b>1,558</b>
<b>Significant Emissions Threshold</b>	<b>137</b>	<b>137</b>	<b>548</b>	<b>137</b>	<b>82</b>	<b>65</b>	<b>548,000</b>

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO<sub>x</sub>: oxides of nitrogen; CO: Carbon monoxide; SO<sub>x</sub>: Oxides of sulfur; PM<sub>2.5</sub>: particulate matter less than 2.5 micrometers in diameter; PM<sub>10</sub>: particulate matter less than 10 micrometers in diameter; CO<sub>2e</sub>: Carbon dioxide equivalent

### Emissions Calculation Methodology

Construction and operational emissions were based on three CalEEMod land use types: *Single Family Housing, Other Asphalt Surfaces, and Other Non-Asphalt Surfaces*. A discussion on the land use types that were used for the emissions modeling is included below.

#### *CalEEMod Land Use Type: Single Family Housing*

The *Single Family Housing* land use type was used to model the emissions associated with the proposed housing development. The total building square footage (45,000 square feet) was calculated

based on the number of homes (18) and the average square footage per home (2,500 square feet) provided by Civil Design. The residential acreage (4.10 acres) was provided by Civil Design.

*CalEEMod Land Use Type: Other Asphalt Surfaces*

The *Other Asphalt Surfaces* land use type was used to model the emissions associated with the residential streets within the proposed housing development. The street acreage (0.54 acres) was provided by Civil Design.

*CalEEMod Land Use Type: Other Non-Asphalt Surfaces*

The *Other Non-Asphalt Surfaces* land use type was used to model the emissions associated with the sidewalks within the proposed housing development. The total sidewalk acreage (0.36 acres) was provided by Civil Design.

*Construction Emissions*

Construction emissions were calculated using CalEEMod defaults and input provided by Civil Design. Civil Design reviewed and verified the list of construction equipment and the anticipated construction schedule.

Table 5 provides the anticipated construction schedule. Civil Design provided the proposed start date (1/1/2024) and end date for the project (12/1/2025) and indicated that work would be conducted six days per week. The construction schedule was updated to match the schedule of a slightly larger (10 acre) housing development that Civil Design is also working on.<sup>2</sup> Civil Design reviewed and verified the anticipated construction schedule.

Table 6 provides the anticipated number of equipment that will be used during each construction phase, the hours per day the equipment will be operated, and the horsepower of the equipment. The values in Table 6 are based on CalEEMod default values.

Based on input from Civil Design, this project will not require any import or export during the *Site Preparation* or *Grading* phases.<sup>3</sup> For fugitive dust emissions, CalEEMod defaults do not include any control of fugitive dust from construction sites. AVAQMD Rule 403 requires that fugitive dust from any “active operation, open storage pile, or disturbed surface area” be controlled so that no presence of dust remains visible beyond the property line. To meet this requirement, the standard operation is watering active sites three times per day. Although the addition of watering for dust control is listed as a mitigation measure in CalEEMod, within the AVAQMD this is a requirement, and is therefore included.

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<sup>2</sup> Civil Design is simultaneously working on a slightly larger (10 acre) housing development (TTM 83553). The estimated start date, end date, and days per week that were provided for the two projects were the same.

<sup>3</sup> Civil Design confirmed via phone call on 12/7/2021 that no material import or export is expected.

For architectural coating operations, VOC emissions were calculated based on the assumption that the coatings would be compliant with the VOC content limits of AVAQMD Rule 1113.<sup>4</sup>

**Table 5. Construction Schedule**

Construction Phase	Start Date	End Date	Days/week	Total Days
Demolition	N/A	N/A	N/A	N/A
Site Preparation	1/1/2024	1/11/2024	6	10
Grading	1/12/2024	2/15/2024	6	30
Building Construction	2/16/2024	10/15/2025	6	521
Paving	10/16/2025	11/7/2025	6	20
Architectural Coating	11/8/2025	12/1/2025	6	20

**Table 6. Construction Equipment**

Construction Phase	Equipment	Number of Equipment	Hours per day	Horsepower
Site Preparation	Rubber Tired Dozers	3	8	247
	Tractors/Loaders/Backhoes	4	8	97
Grading	Excavators	1	8	158
	Graders	1	8	187
	Rubber Tired Dozers	1	8	247
	Tractors/Loaders/Backhoes	3	8	97
Building Construction	Cranes	1	7	231
	Forklifts	3	8	89
	Generator Sets	1	8	84
	Tractors/Loaders/Backhoes	3	7	97
	Welders	1	8	46
Paving	Cement and Mortar Mixers	2	6	9
	Pavers	1	8	130
	Paving Equipment	2	6	132
	Rollers	2	6	80
	Tractors/Loaders/Backhoes	1	8	97
Architectural Coating	Air Compressors	1	6	78

### *Operational Emissions*

Operational emissions consist of area sources (i.e., re-applying architectural coatings, consumer products, fireplaces, and landscaping equipment), energy use (i.e., electricity and natural gas), mobile sources (e.g.,

<sup>4</sup> For building coatings, assumed to be 90% flat paints (50 g/L) and 10% non-flat paints (100 g/L). For road marking paints, assumed to be compliant with the Traffic Marking Coating category (100 g/L). VOC limits based on AVAQMD Rule 1113.

commuting), solid waste disposal, and water and wastewater use (i.e., supplying and treating water and wastewater).

For area-source emissions, it was determined that woodstoves would not be installed, and natural gas fireplaces would be installed in every home.<sup>5</sup> For architectural coating operations (i.e., re-applying coatings), VOC emissions were calculated based on the assumption that the coatings would be compliant with the VOC content limits of AVAQMD Rule 1113.<sup>6</sup> All other operational emissions sources were calculated using CalEEMod default factors.

## Findings

The estimated emissions of criteria pollutants and greenhouse gases for each year of construction and the total operational emissions **are well below the applicable AVAQMD Significant Emissions Thresholds**; therefore, this project does not have a significant air quality impact on the environment. In addition, this project is not expected to expose sensitive receptors to substantial pollutant concentrations. Since the construction and operational emissions are below the significance thresholds, emissions mitigation measures are not required.

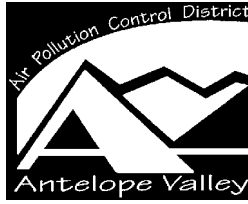
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<sup>5</sup> Civil Design confirmed via data request form that woodstoves would not be installed. Based on phone call with Civil Design on 12/6/2021, it was assumed that each home would have a natural gas fireplace.

<sup>6</sup> For building coatings, assumed to be 90% flat paints (50 g/L) and 10% non-flat paints (100 g/L). For road marking paints, assumed to be compliant with the Traffic Marking Coating category (100 g/L). VOC limits based on AVAQMD Rule 1113.

**ATTACHMENT A – Antelope Valley AQMD California Environmental Quality Act  
(CEQA) and Federal Conformity Guidelines**





# **Antelope Valley AQMD**

California Environmental Quality Act  
(CEQA)

and

Federal Conformity

Guidelines

August 2016

AVAQMD Planning, Rule-making and Grants Section  
AVAQMD Air Monitoring Section

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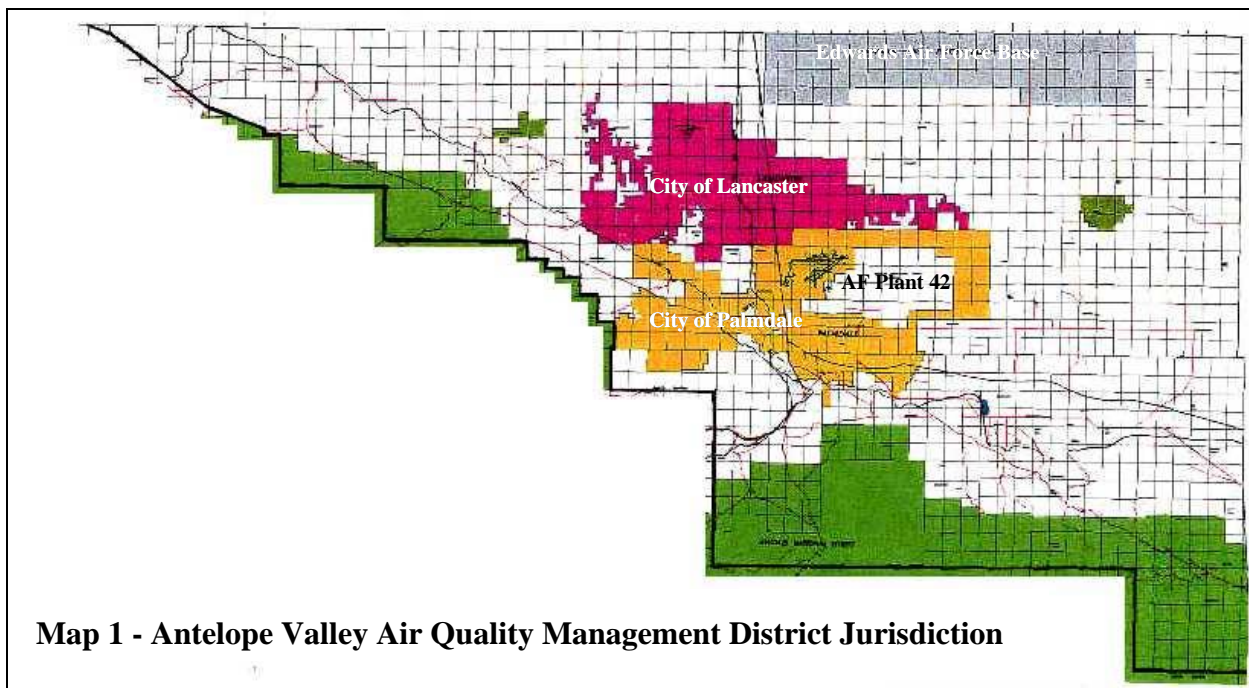
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## Background

Under the California Environmental Quality Act (CEQA), the AVAQMD (District) is an expert commenting agency on air quality and related matters within its jurisdiction (or impacting on its jurisdiction). The District has dedicated resources to reviewing projects to ensure that they will not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan. The District has adopted a federal attainment plan for ozone pursuant to the Federal Clean Air Act.

### *Purpose*

These Guidelines are intended to assist persons preparing environmental analysis or review documents for any project within the jurisdiction of the District by providing background information and guidance on the preferred analysis approach.



### ***Jurisdiction***

The District has jurisdiction over the northern, desert portion of Los Angeles County (please refer to Map 1). This region includes the incorporated cities of Lancaster and Palmdale, Air Force Plant 42, and the southern portion of Edwards Air Force Base. The Kern County-Los Angeles County boundary forms the northern boundary of the District; the San Bernardino-Los Angeles County boundary forms the eastern boundary of the District.

### ***Non-attainment Designations and Classification Status***

The United States Environmental Protection Agency and the California Air Resources Board have designated portions of the District non-attainment for a variety of pollutants, and some of those designations have an associated classification. Please refer to Table 1 for a chart of these designations and classifications.

**Table 1 – AVAQMD Designations and Classifications**

<b>Ambient Air Quality Standard</b>	<b>AVAQMD</b>
One-hour Ozone (Federal) – standard has been revoked, this is historical information only	Proposed attainment in 2014; historical classification Severe-17
Eight-hour Ozone (Federal 84 ppb (1997))	Subpart 2 Nonattainment; classified Severe-15
Eight-hour Ozone (Federal 75 ppb (2008))	Nonattainment, classified Severe-15
Eight-hour Ozone (Federal 70 ppb (2015))	Expected nonattainment; classification to be determined
Ozone (State)	Nonattainment; classified Extreme
PM <sub>10</sub> 24-hour (Federal)	Unclassifiable/attainment
PM <sub>2.5</sub> Annual (Federal)	Unclassified/attainment
PM <sub>2.5</sub> 24-hour (Federal)	Unclassified/attainment
PM <sub>2.5</sub> (State)	Unclassified
PM <sub>10</sub> (State)	Nonattainment
Carbon Monoxide (State and Federal)	Attainment
Nitrogen Dioxide (State and Federal)	Attainment/unclassified
Sulfur Dioxide (State and Federal)	Attainment/unclassified
Lead (State and Federal)	Attainment
Particulate Sulfate (State)	Unclassified
Hydrogen Sulfide (State)	Unclassified
Visibility Reducing Particles (State)	Unclassified

### ***Attainment Plans***

The District has adopted a single attainment plan for ozone. Please refer to Table 2 for information regarding this attainment plan.

**Table 2 – AVAQMD Attainment Plans**

<b>Name of Plan</b>	<b>Date of Adoption</b>	<b>Standard(s) Targeted</b>	<b>Applicable Area</b>	<b>Pollutant(s) Targeted</b>	<b>Attainment Date*</b>
AVAQMD 2004 Ozone Attainment Plan (State and Federal)	4/2004	Federal one hour ozone	Entire District	NO <sub>x</sub> and VOC	2007
AVAQMD Federal 8-Hour Ozone Attainment Plan	5/20/2008	Federal eight hour ozone (84 ppb)	Entire District	NO <sub>x</sub> and VOC	2019 (revised from 2021)

\*Note: A historical attainment date given in an attainment plan does not necessarily mean that the affected area has been re-designated to attainment; please refer to Table 1.

***Rules and Regulations***

The District maintains a set of Rules and Regulations to improve air quality and maintain good air quality. Please contact the District to obtain a copy of the District rulebook, or visit [www.avaqmd.ca.gov](http://www.avaqmd.ca.gov).

**Recommended Environmental Setting Elements**

***Air Quality Data***

The District gathers a variety of air quality data at the Lancaster monitoring site. Table 3 details the data available from the District for this site.

**Table 3 - Available Air Quality Data**

<b>Site</b>	<b>Address</b>	<b>Pollutants</b>	<b>Dates</b>
Lancaster	W. Ponderosa	O <sub>3</sub> , NO <sub>x</sub> , CO, PM <sub>10</sub> (Hi-Vol and TEOM)	7/1/97 to 11/01
Lancaster	W. Ponderosa	PM <sub>2.5</sub>	1/1/99 to 11/01
Lancaster	43301 Division St.	O <sub>3</sub> , NO <sub>x</sub> , CO, PM <sub>10</sub> (hourly), PM <sub>2.5</sub>	11/01 to present

***Meteorological Data***

A variety of meteorological data is available from the District for the Lancaster site. Table 4 contains a list of the data available for the Lancaster site.

**Table 4 - Available Meteorological Data**

<b>Site</b>	<b>Address</b>	<b>Data</b>	<b>Dates</b>
Lancaster	W. Ponderosa	Wind speed/direction, pressure, temperature, humidity	7/1/97 to 11/01
Lancaster	43301 Division St.	Wind speed/direction, pressure, temperature, humidity	11/01 to present

***Topography and Climate Discussion***

The District covers a western portion of the Mojave Desert Air Basin (MDAB). The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains which dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the 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 the MDAB. The MDAB is separated from the southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi Mountains, separated from the Sierra Nevadas in the north by the Tehachapi Pass (3,800 ft elevation). The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 ft).

During the summer the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. MDAB annual average precipitation is presented in Table 5; the data displayed is 1981-2010 averages from the NOAA National Climate Data Center. The MDAB is classified as a dry-hot desert climate (BWh), with portions classified as dry-very hot desert (BWwh), to indicate at least three months have maximum average temperatures over 100.4° F.

**Table 5 - MDAB Average Annual Precipitation**

<b>Site</b>	<b>County</b>	<b>District</b>	<b>Precipitation (inches)</b>
Baker	San Bernardino	MDAQMD	4.48
Barstow Daggett Airport	San Bernardino	MDAQMD	4.06
Barstow	San Bernardino	MDAQMD	5.30
Blythe Airport	Riverside	MDAQMD	3.77
Desert Center 2 NNE	Riverside	SCAQMD	3.92
Eagle Mountain	Riverside	SCAQMD	4.10
Goldstone Echo Number 2	San Bernardino	MDAQMD	5.88
Joshua Tree	San Bernardino	MDAQMD	5.11
Lancaster Wm J Fox Field	Los Angeles	AVAQMD	7.38
Mitchell Caverns	San Bernardino	MDAQMD	11.50
Mojave	Kern	EKAPCD	6.67
Mountain Pass 1 SE	San Bernardino	MDAQMD	9.94
Needles Airport	San Bernardino	MDAQMD	4.62
Palmdale Airport	Los Angeles	AVAQMD	8.30
Palmdale	Los Angeles	AVAQMD	7.40

Site	County	District	Precipitation (inches)
Parker Reservoir	San Bernardino	MDAQMD	6.16
Pearblossom	Los Angeles	AVAQMD	6.73
Randsburg	Kern	EKAPCD	7.26
Trona	San Bernardino	MDAQMD	3.88
Twentynine Palms	San Bernardino	MDAQMD	4.46
Victorville Pump Plant	San Bernardino	MDAQMD	6.15
Wrightwood	Los Angeles	AVAQMD	22.61

## Recommended Impacts Discussion Elements

### *Direct Impacts*

Direct impacts are the result of the project itself (from its construction and operation), in the form of project activity and trips generated by the project. For example, in the case of a subdivision project, construction emissions (equipment exhaust, wind erosion, vehicle exhaust), housing use activity (natural gas consumption) and trips to and from the housing (vehicle exhaust, tire wear) represent direct impacts. In the case of a new mine project, construction emissions (equipment exhaust, wind erosion, vehicle exhaust), material handling (drilling, blasting, transfers, crushing, screening, bagging), operational emissions (wind erosion, vehicle travel, vehicle exhaust, tire wear), and employee/customer/delivery travel (vehicle exhaust, tire wear) represent direct impacts.

### *Indirect Impacts*

Indirect impacts are the result of changes that would not occur without the project. In the case of a subdivision project, indirect impacts on the surrounding community can be generated in many ways: nearby construction of roadways (or roadway modifications) and other infrastructure to support the subdivision, construction and operation of new commercial/retail establishments, changes in traffic/circulation patterns that result in increased congestion/delays, etc. In the case of a new mine project, indirect impacts can be generated by nearby construction of infrastructure to support the mine, housing constructed and/or occupied by mine employees, changes in traffic/circulation patterns that result in increased congestion/delays, etc.

### *Cumulative Impacts*

Cumulative impacts are similar to direct and indirect impacts of the project, which the project contributes to. In the case of a subdivision project, a given project has a cumulative impact with all other subdivision projects, from the standpoint of each type of impact (cumulative construction emissions, residential natural gas consumption, solvent use, transportation emissions, congestion, etc.). Similarly, a new mine project has a cumulative impact with all other mining projects, from the standpoint of each type of impact (cumulative construction emissions, diesel equipment emissions, blasting emissions, fugitive emissions, transportation, congestion, etc.).

### ***Conformity Impacts***

A project is non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable District rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast. An example of a non-conforming project would be one that increases the gross number of dwelling units, increases the number of trips, and/or increases the overall vehicle miles traveled in an affected area (relative to the applicable land use plan).

### ***Sensitive Receptor Land Uses***

Residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number 4 (refer to the significance threshold discussion):

- Any industrial project within 1000 feet;
- A distribution center (40 or more trucks per day) within 1000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1000 feet;
- A dry cleaner using perchloroethylene within 500 feet;
- A gasoline dispensing facility within 300 feet.

### **Recommended Substantiation Discussion Elements**

For projects applying the emissions-based significance thresholds, project emissions quantification is required. In addition the environmental documentation must include support for the quantification methodology used, including emission factors, emission factors source, assumptions, and sample calculations where necessary. For projects using a calculation tool such as CalEEMod or URBEMIS, the support section must specify the inputs and settings used for the evaluation.

### **Significance Thresholds**

Any project is significant if it triggers or exceeds the most appropriate evaluation criteria. The District will clarify upon request which threshold is most appropriate for a given project; in general, the emissions comparison (criteria number 1) is sufficient:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 6;
2. Generates a violation of any ambient air quality standard when added to the local background;
3. Does not conform with the applicable attainment or maintenance plan(s)<sup>1</sup>;

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<sup>1</sup> A project is deemed to not exceed this threshold, and hence not be significant, if it is consistent with the existing land use plan. Zoning changes, specific plans, general plan amendments and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to not exceed this threshold.

4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.\*

*\*Refer to the Sensitive Receptor Land Use discussion above*

A significant project must incorporate mitigation sufficient to reduce its impact to a level that is not significant. A project that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation. Note that the emission thresholds are given as a daily value and an annual value, so that a multi-phased project (such as a project with a construction phase and a separate operational phase) with phases shorter than one year can be compared to the daily value.

**Table 6 – Significant Emissions Thresholds**

<b>Criteria Pollutant</b>	<b>Annual Threshold (tons)</b>	<b>Daily Threshold (pounds)</b>
Greenhouse Gases (CO <sub>2</sub> e)	100,000	548,000
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO <sub>x</sub> )	25	137
Volatile Organic Compounds (VOC)	25	137
Oxides of Sulfur (SO <sub>x</sub> )	25	137
Particulate Matter (PM <sub>10</sub> )	15	82
Particulate Matter (PM <sub>2.5</sub> )	12	65
Hydrogen Sulfide (H <sub>2</sub> S)	10	54
Lead (Pb)	0.6	3

### **District Contacts**

If an address is not listed, please use the general address, to the attention of the listed individual.

AVAQMD General and Rulebook	Crystal Goree (661) 723-8070 x1  Mailing and Physical Address: 43301 Division St., Suite 206 Lancaster, CA 93535-4649
Planning and Rules	Tracy Walters (760) 245-1661 x6122
Air Quality and Meteorological Data	Orlando Salinas (760) 245-1661 x1810
CEQA and Conformity	Alan De Salvio (760) 245-1661 x6726
Permitting	Bret Banks (661) 723-8070 x2



## Appendix A – Basic Definitions of Major Air Pollutants

Technical and/or legal definitions exist for many of these pollutants, depending on context. The following definitions are for general, introductory purposes only:

**Carbon Dioxide (CO<sub>2</sub>)** – Common product of combustion. Not a criteria pollutant, but considered an important “greenhouse gas.” Important on a national or global scale.

**Carbon Monoxide (CO)** – Common product of incomplete combustion. A criteria pollutant with state and federal standards. Not a primary photochemical reaction compound, but involved in photochemical reactions. Dissipates rapidly, and is therefore only important on a local scale near sources.

**Criteria Pollutants** – Those air pollutants specifically identified for control under the Federal Clean Air Act (currently six: carbon monoxide, nitrogen oxides, lead, sulfur oxides, ozone and particulates).

**Lead (Pb)** – A heavy metal, present in the environment mainly due to historical use in motor vehicle fuel. Primarily associated with lead smelting operations. A criteria pollutant with state and federal standards. Primarily of concern near sources.

**Oxides of Nitrogen (NO<sub>x</sub>)** – Common product of combustion in the presence of nitrogen. Includes NO<sub>2</sub>, which is a criteria pollutant with state and federal standards. Locally and regionally important due to its involvement in the photochemical formation of ozone.

**Oxides of Sulfur (SO<sub>x</sub>)** – Common product of combustion in the presence of sulfur. Associated primarily with diesel and coal burning. Includes SO<sub>2</sub>, a criteria pollutant with state and federal standards. Primarily of concern near sources.

**Ozone (O<sub>3</sub>)** – A gas mainly produced by a photochemical reaction between reactive organic gases and oxides of nitrogen in the presence of sunlight (also produced by molecular oxygen in the presence of ultraviolet light or electrical discharge). A strong oxidant that is damaging at ground level but necessary at high altitude (in the stratosphere, where it absorbs dangerous ultraviolet light). Also considered an important greenhouse gas. A criteria pollutant with state and federal standards.

**Particulate Matter (TSP or PM<sub>30</sub>)** – Solid or liquid matter suspended in the atmosphere, excluding water. Includes aerosols and droplets that form in the atmosphere. Locally and regionally important.

**Reactive/Volatile Organic Compounds/Gases (ROG, VOC, NMOG, NMOC)** – A portion of total organic compounds or gases, excludes methane, ethane and acetone (due to low photochemical reactivity). “ROG” is generally used by the California Air Resources Board, “VOC” is generally used by the United States Environmental Protection Agency, but all four terms are interchangeable for most uses. Regionally important due to its involvement in the photochemical reaction that produces ozone.

**Respirable Particulate Matter (coarse or PM<sub>10</sub>, and fine or PM<sub>2.5</sub>)** – That portion of particulate matter that tends to penetrate into the human lung. The subscript refers to aerodynamic diameter. Criteria pollutants with state and federal standards. Locally and regionally important.

**Total Organic Compounds/Gases (TOC or TOG)** – Compounds containing at least one atom of carbon, except carbon monoxide, carbon dioxide, carbonic acid, metallic carbides and metallic carbonates. Primarily methane in the atmosphere, a “greenhouse gas.”

**ATTACHMENT B – CalEEMod Emissions Model Output**

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Air Quality Study - TTM 83554 Housing Development, Lancaster, CA**

**Antelope Valley APCD Air District, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.54	Acre	0.54	23,522.40	0
Other Non-Asphalt Surfaces	0.36	Acre	0.36	15,681.60	0
Single Family Housing	18.00	Dwelling Unit	4.10	45,000.00	51

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9			<b>Operational Year</b>	2026
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	390.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Information provided by client.

Construction Phase - Schedule adjusted to follow the timeline of a similar project (TTM 83553).

Architectural Coating - VOC limits from AVAQMD Rule 1113. For the building, assumes 90% flat paint (50 g/L) and 10% non-flat (100 g/L). For parking lot coatings, assumed to be compliant with the Traffic Marking Coating category VOC limit of 100 g/L.

Woodstoves - Based on client input on the data request form no woodstoves will be installed and each home will have a gas fireplace.

Area Coating - VOC limits from AVAQMD Rule 1113. For the building, assumes 90% flat paint (50 g/L) and 10% non-flat (100 g/L). For parking lot coatings, assumed to be compliant with the Traffic Marking Coating category VOC limit of 100 g/L.

Construction Off-road Equipment Mitigation - Assumes that construction site will be watered 3 times per day to be in compliance with AVAQMD Rule 403.

Area Mitigation - -

## Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	55.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	55.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	55.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	55.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	55
tblAreaCoating	Area_EF_Nonresidential_Interior	250	55
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	55
tblAreaCoating	Area_EF_Residential_Interior	250	55
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	8.00	30.00
tblConstructionPhase	NumDays	230.00	521.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	9.90	18.00
tblFireplaces	NumberNoFireplace	1.80	0.00
tblFireplaces	NumberWood	6.30	0.00
tblLandUse	LandUseSquareFeet	32,400.00	45,000.00
tblLandUse	LotAcreage	5.84	4.10
tblWoodstoves	NumberCatalytic	0.90	0.00
tblWoodstoves	NumberNoncatalytic	0.90	0.00

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

**2.0 Emissions Summary**

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Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2511	2.2847	2.6428	4.7800e-003	0.1127	0.1014	0.2141	0.0485	0.0950	0.1435	0.0000	415.3417	415.3417	0.0940	3.5200e-003	418.7428
2025	0.3492	1.6722	2.2222	3.9400e-003	0.0315	0.0695	0.1010	8.5100e-003	0.0654	0.0739	0.0000	341.8686	341.8686	0.0733	3.0700e-003	344.6163
<b>Maximum</b>	<b>0.3492</b>	<b>2.2847</b>	<b>2.6428</b>	<b>4.7800e-003</b>	<b>0.1127</b>	<b>0.1014</b>	<b>0.2141</b>	<b>0.0485</b>	<b>0.0950</b>	<b>0.1435</b>	<b>0.0000</b>	<b>415.3417</b>	<b>415.3417</b>	<b>0.0940</b>	<b>3.5200e-003</b>	<b>418.7428</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2511	2.2847	2.6428	4.7800e-003	0.0654	0.1014	0.1669	0.0247	0.0950	0.1198	0.0000	415.3413	415.3413	0.0940	3.5200e-003	418.7424
2025	0.3492	1.6722	2.2222	3.9400e-003	0.0315	0.0695	0.1010	8.5100e-003	0.0654	0.0739	0.0000	341.8683	341.8683	0.0733	3.0700e-003	344.6160
<b>Maximum</b>	<b>0.3492</b>	<b>2.2847</b>	<b>2.6428</b>	<b>4.7800e-003</b>	<b>0.0654</b>	<b>0.1014</b>	<b>0.1669</b>	<b>0.0247</b>	<b>0.0950</b>	<b>0.1198</b>	<b>0.0000</b>	<b>415.3413</b>	<b>415.3413</b>	<b>0.0940</b>	<b>3.5200e-003</b>	<b>418.7424</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	32.78	0.00	15.00	41.69	0.00	10.93	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2024	3-31-2024	0.7190	0.7190
2	4-1-2024	6-30-2024	0.5988	0.5988
3	7-1-2024	9-30-2024	0.6053	0.6053
4	10-1-2024	12-31-2024	0.6058	0.6058
5	1-1-2025	3-31-2025	0.5506	0.5506
6	4-1-2025	6-30-2025	0.5562	0.5562
7	7-1-2025	9-30-2025	0.5623	0.5623
		Highest	0.7190	0.7190

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1998	0.0138	0.1387	9.0000e-005		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	14.3960	14.3960	4.8000e-004	2.6000e-004	14.4855
Energy	2.4700e-003	0.0211	9.0000e-003	1.3000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	49.5707	49.5707	2.5900e-003	7.1000e-004	49.8456
Mobile	0.0845	0.1125	0.8117	1.6400e-003	0.1800	1.3300e-003	0.1814	0.0482	1.2400e-003	0.0494	0.0000	151.7458	151.7458	0.0104	7.5400e-003	154.2534
Waste						0.0000	0.0000		0.0000	0.0000	4.2445	0.0000	4.2445	0.2509	0.0000	10.5157
Water						0.0000	0.0000		0.0000	0.0000	0.3721	4.1650	4.5370	0.0386	9.4000e-004	5.7828
<b>Total</b>	<b>0.2868</b>	<b>0.1475</b>	<b>0.9594</b>	<b>1.8600e-003</b>	<b>0.1800</b>	<b>4.7700e-003</b>	<b>0.1848</b>	<b>0.0482</b>	<b>4.6800e-003</b>	<b>0.0529</b>	<b>4.6166</b>	<b>219.8775</b>	<b>224.4941</b>	<b>0.3029</b>	<b>9.4500e-003</b>	<b>234.8829</b>



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.2 Overall Operational**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.1998	0.0138	0.1387	9.0000e-005		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	14.3960	14.3960	4.8000e-004	2.6000e-004	14.4855
Energy	2.4700e-003	0.0211	9.0000e-003	1.3000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	49.5707	49.5707	2.5900e-003	7.1000e-004	49.8456
Mobile	0.0845	0.1125	0.8117	1.6400e-003	0.1800	1.3300e-003	0.1814	0.0482	1.2400e-003	0.0494	0.0000	151.7458	151.7458	0.0104	7.5400e-003	154.2534
Waste						0.0000	0.0000		0.0000	0.0000	4.2445	0.0000	4.2445	0.2509	0.0000	10.5157
Water						0.0000	0.0000		0.0000	0.0000	0.3721	4.1650	4.5370	0.0386	9.4000e-004	5.7828
<b>Total</b>	<b>0.2868</b>	<b>0.1475</b>	<b>0.9594</b>	<b>1.8600e-003</b>	<b>0.1800</b>	<b>4.7700e-003</b>	<b>0.1848</b>	<b>0.0482</b>	<b>4.6800e-003</b>	<b>0.0529</b>	<b>4.6166</b>	<b>219.8775</b>	<b>224.4941</b>	<b>0.3029</b>	<b>9.4500e-003</b>	<b>234.8829</b>

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

**3.0 Construction Detail**

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2024	1/11/2024	6	10	
2	Grading	Grading	1/12/2024	2/15/2024	6	30	
3	Building Construction	Building Construction	2/16/2024	10/15/2025	6	521	

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

4	Paving	Paving	10/16/2025	11/7/2025	6	20
5	Architectural Coating	Architectural Coating	11/8/2025	12/1/2025	6	20

**Acres of Grading (Site Preparation Phase): 7.5**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 0.9**

**Residential Indoor: 91,125; Residential Outdoor: 30,375; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,352 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	23.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

**3.2 Site Preparation - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6600e-003	5.6600e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
<b>Total</b>	<b>0.0133</b>	<b>0.1359</b>	<b>0.0917</b>	<b>1.9000e-004</b>	<b>0.0491</b>	<b>6.1500e-003</b>	<b>0.0553</b>	<b>0.0253</b>	<b>5.6600e-003</b>	<b>0.0309</b>	<b>0.0000</b>	<b>16.7285</b>	<b>16.7285</b>	<b>5.4100e-003</b>	<b>0.0000</b>	<b>16.8638</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Site Preparation - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.1000e-004	2.5500e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5789	0.5789	2.0000e-005	2.0000e-005	0.5848
<b>Total</b>	<b>2.6000e-004</b>	<b>2.1000e-004</b>	<b>2.5500e-003</b>	<b>1.0000e-005</b>	<b>7.2000e-004</b>	<b>0.0000</b>	<b>7.3000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.5789</b>	<b>0.5789</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.5848</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0192	0.0000	0.0192	9.8500e-003	0.0000	9.8500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6500e-003	5.6500e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
<b>Total</b>	<b>0.0133</b>	<b>0.1359</b>	<b>0.0917</b>	<b>1.9000e-004</b>	<b>0.0192</b>	<b>6.1500e-003</b>	<b>0.0253</b>	<b>9.8500e-003</b>	<b>5.6500e-003</b>	<b>0.0155</b>	<b>0.0000</b>	<b>16.7285</b>	<b>16.7285</b>	<b>5.4100e-003</b>	<b>0.0000</b>	<b>16.8638</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Site Preparation - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.6000e-004	2.1000e-004	2.5500e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5789	0.5789	2.0000e-005	2.0000e-005	0.5848
<b>Total</b>	<b>2.6000e-004</b>	<b>2.1000e-004</b>	<b>2.5500e-003</b>	<b>1.0000e-005</b>	<b>7.2000e-004</b>	<b>0.0000</b>	<b>7.3000e-004</b>	<b>1.9000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.5789</b>	<b>0.5789</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.5848</b>

**3.3 Grading - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0283	0.0000	0.0283	0.0137	0.0000	0.0137	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.2555	0.2214	4.5000e-004		0.0109	0.0109		0.0100	0.0100	0.0000	39.0959	39.0959	0.0126	0.0000	39.4120
<b>Total</b>	<b>0.0249</b>	<b>0.2555</b>	<b>0.2214</b>	<b>4.5000e-004</b>	<b>0.0283</b>	<b>0.0109</b>	<b>0.0392</b>	<b>0.0137</b>	<b>0.0100</b>	<b>0.0237</b>	<b>0.0000</b>	<b>39.0959</b>	<b>39.0959</b>	<b>0.0126</b>	<b>0.0000</b>	<b>39.4120</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.3 Grading - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	5.1000e-004	6.3700e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4472	1.4472	5.0000e-005	5.0000e-005	1.4619
<b>Total</b>	<b>6.5000e-004</b>	<b>5.1000e-004</b>	<b>6.3700e-003</b>	<b>2.0000e-005</b>	<b>1.8100e-003</b>	<b>1.0000e-005</b>	<b>1.8200e-003</b>	<b>4.8000e-004</b>	<b>1.0000e-005</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>1.4472</b>	<b>1.4472</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>1.4619</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0111	0.0000	0.0111	5.3400e-003	0.0000	5.3400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0249	0.2555	0.2214	4.5000e-004		0.0109	0.0109		0.0100	0.0100	0.0000	39.0958	39.0958	0.0126	0.0000	39.4119
<b>Total</b>	<b>0.0249</b>	<b>0.2555</b>	<b>0.2214</b>	<b>4.5000e-004</b>	<b>0.0111</b>	<b>0.0109</b>	<b>0.0219</b>	<b>5.3400e-003</b>	<b>0.0100</b>	<b>0.0153</b>	<b>0.0000</b>	<b>39.0958</b>	<b>39.0958</b>	<b>0.0126</b>	<b>0.0000</b>	<b>39.4119</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.3 Grading - 2024**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	5.1000e-004	6.3700e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4472	1.4472	5.0000e-005	5.0000e-005	1.4619
<b>Total</b>	<b>6.5000e-004</b>	<b>5.1000e-004</b>	<b>6.3700e-003</b>	<b>2.0000e-005</b>	<b>1.8100e-003</b>	<b>1.0000e-005</b>	<b>1.8200e-003</b>	<b>4.8000e-004</b>	<b>1.0000e-005</b>	<b>4.9000e-004</b>	<b>0.0000</b>	<b>1.4472</b>	<b>1.4472</b>	<b>5.0000e-005</b>	<b>5.0000e-005</b>	<b>1.4619</b>

**3.4 Building Construction - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2016	1.8418	2.2149	3.6900e-003		0.0840	0.0840		0.0790	0.0790	0.0000	317.6333	317.6333	0.0751	0.0000	319.5111
<b>Total</b>	<b>0.2016</b>	<b>1.8418</b>	<b>2.2149</b>	<b>3.6900e-003</b>		<b>0.0840</b>	<b>0.0840</b>		<b>0.0790</b>	<b>0.0790</b>	<b>0.0000</b>	<b>317.6333</b>	<b>317.6333</b>	<b>0.0751</b>	<b>0.0000</b>	<b>319.5111</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.4 Building Construction - 2024**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2300e-003	0.0436	0.0167	2.0000e-004	7.3100e-003	2.1000e-004	7.5200e-003	2.1100e-003	2.1000e-004	2.3100e-003	0.0000	19.5913	19.5913	1.1000e-004	2.8200e-003	20.4357
Worker	9.0900e-003	7.1900e-003	0.0892	2.2000e-004	0.0254	1.5000e-004	0.0255	6.7400e-003	1.4000e-004	6.8800e-003	0.0000	20.2668	20.2668	7.0000e-004	6.4000e-004	20.4736
<b>Total</b>	<b>0.0103</b>	<b>0.0508</b>	<b>0.1059</b>	<b>4.2000e-004</b>	<b>0.0327</b>	<b>3.6000e-004</b>	<b>0.0331</b>	<b>8.8500e-003</b>	<b>3.5000e-004</b>	<b>9.1900e-003</b>	<b>0.0000</b>	<b>39.8580</b>	<b>39.8580</b>	<b>8.1000e-004</b>	<b>3.4600e-003</b>	<b>40.9093</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2016	1.8418	2.2149	3.6900e-003		0.0840	0.0840		0.0790	0.0790	0.0000	317.6329	317.6329	0.0751	0.0000	319.5107
<b>Total</b>	<b>0.2016</b>	<b>1.8418</b>	<b>2.2149</b>	<b>3.6900e-003</b>		<b>0.0840</b>	<b>0.0840</b>		<b>0.0790</b>	<b>0.0790</b>	<b>0.0000</b>	<b>317.6329</b>	<b>317.6329</b>	<b>0.0751</b>	<b>0.0000</b>	<b>319.5107</b>



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.4 Building Construction - 2024**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.2300e-003	0.0436	0.0167	2.0000e-004	7.3100e-003	2.1000e-004	7.5200e-003	2.1100e-003	2.1000e-004	2.3100e-003	0.0000	19.5913	19.5913	1.1000e-004	2.8200e-003	20.4357
Worker	9.0900e-003	7.1900e-003	0.0892	2.2000e-004	0.0254	1.5000e-004	0.0255	6.7400e-003	1.4000e-004	6.8800e-003	0.0000	20.2668	20.2668	7.0000e-004	6.4000e-004	20.4736
<b>Total</b>	<b>0.0103</b>	<b>0.0508</b>	<b>0.1059</b>	<b>4.2000e-004</b>	<b>0.0327</b>	<b>3.6000e-004</b>	<b>0.0331</b>	<b>8.8500e-003</b>	<b>3.5000e-004</b>	<b>9.1900e-003</b>	<b>0.0000</b>	<b>39.8580</b>	<b>39.8580</b>	<b>8.1000e-004</b>	<b>3.4600e-003</b>	<b>40.9093</b>

**3.4 Building Construction - 2025**

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1689	1.5400	1.9865	3.3300e-003		0.0652	0.0652		0.0613	0.0613	0.0000	286.4205	286.4205	0.0673	0.0000	288.1037
<b>Total</b>	<b>0.1689</b>	<b>1.5400</b>	<b>1.9865</b>	<b>3.3300e-003</b>		<b>0.0652</b>	<b>0.0652</b>		<b>0.0613</b>	<b>0.0613</b>	<b>0.0000</b>	<b>286.4205</b>	<b>286.4205</b>	<b>0.0673</b>	<b>0.0000</b>	<b>288.1037</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.4 Building Construction - 2025**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0900e-003	0.0391	0.0148	1.8000e-004	6.5900e-003	1.9000e-004	6.7800e-003	1.9000e-003	1.8000e-004	2.0900e-003	0.0000	17.3020	17.3020	1.0000e-004	2.4900e-003	18.0460
Worker	7.6200e-003	5.8100e-003	0.0745	1.9000e-004	0.0229	1.3000e-004	0.0230	6.0800e-003	1.2000e-004	6.2000e-003	0.0000	17.6603	17.6603	5.7000e-004	5.3000e-004	17.8334
<b>Total</b>	<b>8.7100e-003</b>	<b>0.0449</b>	<b>0.0893</b>	<b>3.7000e-004</b>	<b>0.0295</b>	<b>3.2000e-004</b>	<b>0.0298</b>	<b>7.9800e-003</b>	<b>3.0000e-004</b>	<b>8.2900e-003</b>	<b>0.0000</b>	<b>34.9623</b>	<b>34.9623</b>	<b>6.7000e-004</b>	<b>3.0200e-003</b>	<b>35.8794</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1689	1.5400	1.9865	3.3300e-003		0.0652	0.0652		0.0613	0.0613	0.0000	286.4202	286.4202	0.0673	0.0000	288.1034
<b>Total</b>	<b>0.1689</b>	<b>1.5400</b>	<b>1.9865</b>	<b>3.3300e-003</b>		<b>0.0652</b>	<b>0.0652</b>		<b>0.0613</b>	<b>0.0613</b>	<b>0.0000</b>	<b>286.4202</b>	<b>286.4202</b>	<b>0.0673</b>	<b>0.0000</b>	<b>288.1034</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.4 Building Construction - 2025**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0900e-003	0.0391	0.0148	1.8000e-004	6.5900e-003	1.9000e-004	6.7800e-003	1.9000e-003	1.8000e-004	2.0900e-003	0.0000	17.3020	17.3020	1.0000e-004	2.4900e-003	18.0460
Worker	7.6200e-003	5.8100e-003	0.0745	1.9000e-004	0.0229	1.3000e-004	0.0230	6.0800e-003	1.2000e-004	6.2000e-003	0.0000	17.6603	17.6603	5.7000e-004	5.3000e-004	17.8334
<b>Total</b>	<b>8.7100e-003</b>	<b>0.0449</b>	<b>0.0893</b>	<b>3.7000e-004</b>	<b>0.0295</b>	<b>3.2000e-004</b>	<b>0.0298</b>	<b>7.9800e-003</b>	<b>3.0000e-004</b>	<b>8.2900e-003</b>	<b>0.0000</b>	<b>34.9623</b>	<b>34.9623</b>	<b>6.7000e-004</b>	<b>3.0200e-003</b>	<b>35.8794</b>

**3.5 Paving - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2000e-003	0.0753	0.1218	1.9000e-004		3.5200e-003	3.5200e-003		3.2600e-003	3.2600e-003	0.0000	16.3783	16.3783	5.1500e-003	0.0000	16.5069
Paving	7.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>8.9100e-003</b>	<b>0.0753</b>	<b>0.1218</b>	<b>1.9000e-004</b>		<b>3.5200e-003</b>	<b>3.5200e-003</b>		<b>3.2600e-003</b>	<b>3.2600e-003</b>	<b>0.0000</b>	<b>16.3783</b>	<b>16.3783</b>	<b>5.1500e-003</b>	<b>0.0000</b>	<b>16.5069</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.5 Paving - 2025**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	4.1000e-004	5.2400e-003	1.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	1.2435	1.2435	4.0000e-005	4.0000e-005	1.2557
<b>Total</b>	<b>5.4000e-004</b>	<b>4.1000e-004</b>	<b>5.2400e-003</b>	<b>1.0000e-005</b>	<b>1.6100e-003</b>	<b>1.0000e-005</b>	<b>1.6200e-003</b>	<b>4.3000e-004</b>	<b>1.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>1.2435</b>	<b>1.2435</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.2557</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2000e-003	0.0753	0.1218	1.9000e-004		3.5200e-003	3.5200e-003		3.2600e-003	3.2600e-003	0.0000	16.3782	16.3782	5.1500e-003	0.0000	16.5069
Paving	7.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>8.9100e-003</b>	<b>0.0753</b>	<b>0.1218</b>	<b>1.9000e-004</b>		<b>3.5200e-003</b>	<b>3.5200e-003</b>		<b>3.2600e-003</b>	<b>3.2600e-003</b>	<b>0.0000</b>	<b>16.3782</b>	<b>16.3782</b>	<b>5.1500e-003</b>	<b>0.0000</b>	<b>16.5069</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.5 Paving - 2025**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.4000e-004	4.1000e-004	5.2400e-003	1.0000e-005	1.6100e-003	1.0000e-005	1.6200e-003	4.3000e-004	1.0000e-005	4.4000e-004	0.0000	1.2435	1.2435	4.0000e-005	4.0000e-005	1.2557
<b>Total</b>	<b>5.4000e-004</b>	<b>4.1000e-004</b>	<b>5.2400e-003</b>	<b>1.0000e-005</b>	<b>1.6100e-003</b>	<b>1.0000e-005</b>	<b>1.6200e-003</b>	<b>4.3000e-004</b>	<b>1.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>1.2435</b>	<b>1.2435</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.2557</b>

**3.6 Architectural Coating - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
<b>Total</b>	<b>0.1620</b>	<b>0.0115</b>	<b>0.0181</b>	<b>3.0000e-005</b>		<b>5.2000e-004</b>	<b>5.2000e-004</b>		<b>5.2000e-004</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>2.5567</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.6 Architectural Coating - 2025**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.0000e-004	1.3100e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3109	0.3109	1.0000e-005	1.0000e-005	0.3139
<b>Total</b>	<b>1.3000e-004</b>	<b>1.0000e-004</b>	<b>1.3100e-003</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.3109</b>	<b>0.3109</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.3139</b>

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1603					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7100e-003	0.0115	0.0181	3.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	2.5533	2.5533	1.4000e-004	0.0000	2.5567
<b>Total</b>	<b>0.1620</b>	<b>0.0115</b>	<b>0.0181</b>	<b>3.0000e-005</b>		<b>5.2000e-004</b>	<b>5.2000e-004</b>		<b>5.2000e-004</b>	<b>5.2000e-004</b>	<b>0.0000</b>	<b>2.5533</b>	<b>2.5533</b>	<b>1.4000e-004</b>	<b>0.0000</b>	<b>2.5567</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.6 Architectural Coating - 2025**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	1.0000e-004	1.3100e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.3109	0.3109	1.0000e-005	1.0000e-005	0.3139
<b>Total</b>	<b>1.3000e-004</b>	<b>1.0000e-004</b>	<b>1.3100e-003</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>4.0000e-004</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>1.1000e-004</b>	<b>0.0000</b>	<b>0.3109</b>	<b>0.3109</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.3139</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0845	0.1125	0.8117	1.6400e-003	0.1800	1.3300e-003	0.1814	0.0482	1.2400e-003	0.0494	0.0000	151.7458	151.7458	0.0104	7.5400e-003	154.2534
Unmitigated	0.0845	0.1125	0.8117	1.6400e-003	0.1800	1.3300e-003	0.1814	0.0482	1.2400e-003	0.0494	0.0000	151.7458	151.7458	0.0104	7.5400e-003	154.2534

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	169.92	171.72	153.90	476,824	476,824
Total	169.92	171.72	153.90	476,824	476,824

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60	86	11	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.603377	0.051886	0.141906	0.112313	0.025216	0.007131	0.012268	0.009274	0.000704	0.000491	0.027212	0.002387	0.005833
Other Non-Asphalt Surfaces	0.603377	0.051886	0.141906	0.112313	0.025216	0.007131	0.012268	0.009274	0.000704	0.000491	0.027212	0.002387	0.005833



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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Single Family Housing	0.603377	0.051886	0.141906	0.112313	0.025216	0.007131	0.012268	0.009274	0.000704	0.000491	0.027212	0.002387	0.005833
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**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	25.0843	25.0843	2.1200e-003	2.6000e-004	25.2137
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	25.0843	25.0843	2.1200e-003	2.6000e-004	25.2137
Natural Gas Mitigated	2.4700e-003	0.0211	9.0000e-003	1.3000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	24.4864	24.4864	4.7000e-004	4.5000e-004	24.6319
Natural Gas Unmitigated	2.4700e-003	0.0211	9.0000e-003	1.3000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	24.4864	24.4864	4.7000e-004	4.5000e-004	24.6319

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	458857	2.4700e-003	0.0211	9.0000e-003	1.3000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	24.4864	24.4864	4.7000e-004	4.5000e-004	24.6319
<b>Total</b>		<b>2.4700e-003</b>	<b>0.0211</b>	<b>9.0000e-003</b>	<b>1.3000e-004</b>		<b>1.7100e-003</b>	<b>1.7100e-003</b>		<b>1.7100e-003</b>	<b>1.7100e-003</b>	<b>0.0000</b>	<b>24.4864</b>	<b>24.4864</b>	<b>4.7000e-004</b>	<b>4.5000e-004</b>	<b>24.6319</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

**Mitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Land Use	kBTU/yr	tons/yr										MT/yr						
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	458857	2.4700e-003	0.0211	9.0000e-003	1.3000e-004		1.7100e-003	1.7100e-003		1.7100e-003	1.7100e-003	0.0000	24.4864	24.4864	4.7000e-004	4.5000e-004	24.6319	
<b>Total</b>		<b>2.4700e-003</b>	<b>0.0211</b>	<b>9.0000e-003</b>	<b>1.3000e-004</b>		<b>1.7100e-003</b>	<b>1.7100e-003</b>		<b>1.7100e-003</b>	<b>1.7100e-003</b>	<b>0.0000</b>	<b>24.4864</b>	<b>24.4864</b>	<b>4.7000e-004</b>	<b>4.5000e-004</b>	<b>24.6319</b>	

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	141443	25.0843	2.1200e-003	2.6000e-004	25.2137
<b>Total</b>		<b>25.0843</b>	<b>2.1200e-003</b>	<b>2.6000e-004</b>	<b>25.2137</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.3 Energy by Land Use - Electricity**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	141443	25.0843	2.1200e-003	2.6000e-004	25.2137
<b>Total</b>		<b>25.0843</b>	<b>2.1200e-003</b>	<b>2.6000e-004</b>	<b>25.2137</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1998	0.0138	0.1387	9.0000e-005		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	14.3960	14.3960	4.8000e-004	2.6000e-004	14.4855
Unmitigated	0.1998	0.0138	0.1387	9.0000e-005		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	14.3960	14.3960	4.8000e-004	2.6000e-004	14.4855

**6.2 Area by SubCategory**

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4300e-003	0.0122	5.2100e-003	8.0000e-005		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004	0.0000	14.1777	14.1777	2.7000e-004	2.6000e-004	14.2620
Landscaping	4.0100e-003	1.5400e-003	0.1335	1.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	0.2183	0.2183	2.1000e-004	0.0000	0.2236
<b>Total</b>	<b>0.1998</b>	<b>0.0138</b>	<b>0.1387</b>	<b>9.0000e-005</b>		<b>1.7300e-003</b>	<b>1.7300e-003</b>		<b>1.7300e-003</b>	<b>1.7300e-003</b>	<b>0.0000</b>	<b>14.3960</b>	<b>14.3960</b>	<b>4.8000e-004</b>	<b>2.6000e-004</b>	<b>14.4855</b>

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1783					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4300e-003	0.0122	5.2100e-003	8.0000e-005		9.9000e-004	9.9000e-004		9.9000e-004	9.9000e-004	0.0000	14.1777	14.1777	2.7000e-004	2.6000e-004	14.2620
Landscaping	4.0100e-003	1.5400e-003	0.1335	1.0000e-005		7.4000e-004	7.4000e-004		7.4000e-004	7.4000e-004	0.0000	0.2183	0.2183	2.1000e-004	0.0000	0.2236
<b>Total</b>	<b>0.1998</b>	<b>0.0138</b>	<b>0.1387</b>	<b>9.0000e-005</b>		<b>1.7300e-003</b>	<b>1.7300e-003</b>		<b>1.7300e-003</b>	<b>1.7300e-003</b>	<b>0.0000</b>	<b>14.3960</b>	<b>14.3960</b>	<b>4.8000e-004</b>	<b>2.6000e-004</b>	<b>14.4855</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.5370	0.0386	9.4000e-004	5.7828
Unmitigated	4.5370	0.0386	9.4000e-004	5.7828

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.17277 / 0.739357	4.5370	0.0386	9.4000e-004	5.7828
<b>Total</b>		<b>4.5370</b>	<b>0.0386</b>	<b>9.4000e-004</b>	<b>5.7828</b>



Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.17277 / 0.739357	4.5370	0.0386	9.4000e-004	5.7828
<b>Total</b>		<b>4.5370</b>	<b>0.0386</b>	<b>9.4000e-004</b>	<b>5.7828</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.2445	0.2509	0.0000	10.5157
Unmitigated	4.2445	0.2509	0.0000	10.5157

**8.2 Waste by Land Use**

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	20.91	4.2445	0.2509	0.0000	10.5157
<b>Total</b>		<b>4.2445</b>	<b>0.2509</b>	<b>0.0000</b>	<b>10.5157</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.2 Waste by Land Use**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Single Family Housing	20.91	4.2445	0.2509	0.0000	10.5157
<b>Total</b>		<b>4.2445</b>	<b>0.2509</b>	<b>0.0000</b>	<b>10.5157</b>

**9.0 Operational Offroad**

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

**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Annual

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**11.0 Vegetation**

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Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**Air Quality Study - TTM 83554 Housing Development, Lancaster, CA  
Antelope Valley APCD Air District, Summer**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.54	Acre	0.54	23,522.40	0
Other Non-Asphalt Surfaces	0.36	Acre	0.36	15,681.60	0
Single Family Housing	18.00	Dwelling Unit	4.10	45,000.00	51

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	33
<b>Climate Zone</b>	9	<b>Operational Year</b>	2026		
<b>Utility Company</b>	Southern California Edison				
<b>CO2 Intensity (lb/MW hr)</b>	390.98	<b>CH4 Intensity (lb/MW hr)</b>	0.033	<b>N2O Intensity (lb/MW hr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Information provided by client.

Construction Phase - Schedule adjusted to follow the timeline of a similar project (TTM 83553).

Architectural Coating - VOC limits from AVAQMD Rule 1113. For the building, assumes 90% flat paint (50 g/L) and 10% non-flat (100 g/L). For parking lot coatings, assumed to be compliant with the Traffic Marking Coating category VOC limit of 100 g/L.

Woodstoves - Based on client input on the data request form no woodstoves will be installed and each home will have a gas fireplace.

Area Coating - VOC limits from AVAQMD Rule 1113. For the building, assumes 90% flat paint (50 g/L) and 10% non-flat (100 g/L). For parking lot coatings, assumed to be compliant with the Traffic Marking Coating category VOC limit of 100 g/L.

Construction Off-road Equipment Mitigation - Assumes that construction site will be watered 3 times per day to be in compliance with AVAQMD Rule 403.

Area Mitigation - -

## Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	55.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	55.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	55.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	55.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	55
tblAreaCoating	Area_EF_Nonresidential_Interior	250	55
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	55
tblAreaCoating	Area_EF_Residential_Interior	250	55
tblConstructionPhase	NumDays	5.00	10.00
tblConstructionPhase	NumDays	8.00	30.00
tblConstructionPhase	NumDays	230.00	521.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	9.90	18.00
tblFireplaces	NumberNoFireplace	1.80	0.00
tblFireplaces	NumberWood	6.30	0.00
tblLandUse	LandUseSquareFeet	32,400.00	45,000.00
tblLandUse	LotAcreage	5.84	4.10
tblWoodstoves	NumberCatalytic	0.90	0.00
tblWoodstoves	NumberNoncatalytic	0.90	0.00

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

**2.0 Emissions Summary**

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Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

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

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	2.7226	27.2128	18.9259	0.0395	9.9764	1.2302	11.2066	5.0904	1.1318	6.2222	0.0000	3,827.1776	3,827.1776	1.1970	0.0274	3,858.2130
2025	16.2186	12.8124	16.9003	0.0301	0.2431	0.5302	0.7733	0.0657	0.4987	0.5644	0.0000	2,882.5852	2,882.5852	0.6067	0.0266	2,905.6786
<b>Maximum</b>	<b>16.2186</b>	<b>27.2128</b>	<b>18.9259</b>	<b>0.0395</b>	<b>9.9764</b>	<b>1.2302</b>	<b>11.2066</b>	<b>5.0904</b>	<b>1.1318</b>	<b>6.2222</b>	<b>0.0000</b>	<b>3,827.1776</b>	<b>3,827.1776</b>	<b>1.1970</b>	<b>0.0274</b>	<b>3,858.2130</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	2.7226	27.2128	18.9259	0.0395	3.9810	1.2302	5.2112	2.0092	1.1318	3.1410	0.0000	3,827.1776	3,827.1776	1.1970	0.0274	3,858.2130
2025	16.2186	12.8124	16.9003	0.0301	0.2431	0.5302	0.7733	0.0657	0.4987	0.5644	0.0000	2,882.5852	2,882.5852	0.6067	0.0266	2,905.6786
<b>Maximum</b>	<b>16.2186</b>	<b>27.2128</b>	<b>18.9259</b>	<b>0.0395</b>	<b>3.9810</b>	<b>1.2302</b>	<b>5.2112</b>	<b>2.0092</b>	<b>1.1318</b>	<b>3.1410</b>	<b>0.0000</b>	<b>3,827.1776</b>	<b>3,827.1776</b>	<b>1.1970</b>	<b>0.0274</b>	<b>3,858.2130</b>



Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	58.67	0.00	50.05	59.76	0.00	45.40	0.00	0.00	0.00	0.00	0.00	0.00

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1442	0.3157	1.6108	1.9800e-003		0.0324	0.0324		0.0324	0.0324	0.0000	383.8506	383.8506	9.8700e-003	6.9900e-003	386.1798
Energy	0.0136	0.1159	0.0493	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003		147.8993	147.8993	2.8300e-003	2.7100e-003	148.7782
Mobile	0.5690	0.5792	4.8610	9.9100e-003	1.0318	7.4800e-003	1.0393	0.2756	6.9800e-003	0.2826		1,007.9337	1,007.9337	0.0617	0.0445	1,022.7455
<b>Total</b>	<b>1.7267</b>	<b>1.0108</b>	<b>6.5210</b>	<b>0.0126</b>	<b>1.0318</b>	<b>0.0492</b>	<b>1.0810</b>	<b>0.2756</b>	<b>0.0487</b>	<b>0.3243</b>	<b>0.0000</b>	<b>1,539.6836</b>	<b>1,539.6836</b>	<b>0.0744</b>	<b>0.0542</b>	<b>1,557.7034</b>

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.1442	0.3157	1.6108	1.9800e-003		0.0324	0.0324		0.0324	0.0324	0.0000	383.8506	383.8506	9.8700e-003	6.9900e-003	386.1798
Energy	0.0136	0.1159	0.0493	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003		147.8993	147.8993	2.8300e-003	2.7100e-003	148.7782
Mobile	0.5690	0.5792	4.8610	9.9100e-003	1.0318	7.4800e-003	1.0393	0.2756	6.9800e-003	0.2826		1,007.9337	1,007.9337	0.0617	0.0445	1,022.7455
<b>Total</b>	<b>1.7267</b>	<b>1.0108</b>	<b>6.5210</b>	<b>0.0126</b>	<b>1.0318</b>	<b>0.0492</b>	<b>1.0810</b>	<b>0.2756</b>	<b>0.0487</b>	<b>0.3243</b>	<b>0.0000</b>	<b>1,539.6836</b>	<b>1,539.6836</b>	<b>0.0744</b>	<b>0.0542</b>	<b>1,557.7034</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

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

**3.0 Construction Detail**

**Construction Phase**

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2024	1/11/2024	6	10	
2	Grading	Grading	1/12/2024	2/15/2024	6	30	
3	Building Construction	Building Construction	2/16/2024	10/15/2025	6	521	
4	Paving	Paving	10/16/2025	11/7/2025	6	20	
5	Architectural Coating	Architectural Coating	11/8/2025	12/1/2025	6	20	

**Acres of Grading (Site Preparation Phase): 7.5**

**Acres of Grading (Grading Phase): 8**

**Acres of Paving: 0.9**

**Residential Indoor: 91,125; Residential Outdoor: 30,375; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 2,352 (Architectural Coating – sqft)**

**OffRoad Equipment**

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

**Trips and VMT**

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	23.00	8.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	5.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Site Preparation - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.8285	0.0000	9.8285	5.0512	0.0000	5.0512			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.010 0	3,688.010 0	1.1928		3,717.829 4
<b>Total</b>	<b>2.6609</b>	<b>27.1760</b>	<b>18.3356</b>	<b>0.0381</b>	<b>9.8285</b>	<b>1.2294</b>	<b>11.0579</b>	<b>5.0512</b>	<b>1.1310</b>	<b>6.1822</b>		<b>3,688.010 0</b>	<b>3,688.010 0</b>	<b>1.1928</b>		<b>3,717.829 4</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0617	0.0368	0.5903	1.3800e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		139.1677	139.1677	4.2200e-003	3.7300e-003	140.3837
<b>Total</b>	<b>0.0617</b>	<b>0.0368</b>	<b>0.5903</b>	<b>1.3800e-003</b>	<b>0.1479</b>	<b>8.6000e-004</b>	<b>0.1487</b>	<b>0.0392</b>	<b>7.9000e-004</b>	<b>0.0400</b>		<b>139.1677</b>	<b>139.1677</b>	<b>4.2200e-003</b>	<b>3.7300e-003</b>	<b>140.3837</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.2 Site Preparation - 2024**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.8331	0.0000	3.8331	1.9700	0.0000	1.9700			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310	0.0000	3,688.010 0	3,688.010 0	1.1928		3,717.829 4
<b>Total</b>	<b>2.6609</b>	<b>27.1760</b>	<b>18.3356</b>	<b>0.0381</b>	<b>3.8331</b>	<b>1.2294</b>	<b>5.0625</b>	<b>1.9700</b>	<b>1.1310</b>	<b>3.1010</b>	<b>0.0000</b>	<b>3,688.010 0</b>	<b>3,688.010 0</b>	<b>1.1928</b>		<b>3,717.829 4</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0617	0.0368	0.5903	1.3800e-003	0.1479	8.6000e-004	0.1487	0.0392	7.9000e-004	0.0400		139.1677	139.1677	4.2200e-003	3.7300e-003	140.3837
<b>Total</b>	<b>0.0617</b>	<b>0.0368</b>	<b>0.5903</b>	<b>1.3800e-003</b>	<b>0.1479</b>	<b>8.6000e-004</b>	<b>0.1487</b>	<b>0.0392</b>	<b>7.9000e-004</b>	<b>0.0400</b>		<b>139.1677</b>	<b>139.1677</b>	<b>4.2200e-003</b>	<b>3.7300e-003</b>	<b>140.3837</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.3 Grading - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.8887	0.0000	1.8887	0.9133	0.0000	0.9133			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665		2,873.054 1	2,873.054 1	0.9292		2,896.284 2
<b>Total</b>	<b>1.6617</b>	<b>17.0310</b>	<b>14.7594</b>	<b>0.0297</b>	<b>1.8887</b>	<b>0.7244</b>	<b>2.6131</b>	<b>0.9133</b>	<b>0.6665</b>	<b>1.5797</b>		<b>2,873.054 1</b>	<b>2,873.054 1</b>	<b>0.9292</b>		<b>2,896.284 2</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0515	0.0307	0.4919	1.1500e-003	0.1232	7.2000e-004	0.1239	0.0327	6.6000e-004	0.0333		115.9730	115.9730	3.5200e-003	3.1100e-003	116.9864
<b>Total</b>	<b>0.0515</b>	<b>0.0307</b>	<b>0.4919</b>	<b>1.1500e-003</b>	<b>0.1232</b>	<b>7.2000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.6000e-004</b>	<b>0.0333</b>		<b>115.9730</b>	<b>115.9730</b>	<b>3.5200e-003</b>	<b>3.1100e-003</b>	<b>116.9864</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.3 Grading - 2024**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7366	0.0000	0.7366	0.3562	0.0000	0.3562			0.0000			0.0000
Off-Road	1.6617	17.0310	14.7594	0.0297		0.7244	0.7244		0.6665	0.6665	0.0000	2,873.054 1	2,873.054 1	0.9292		2,896.284 2
<b>Total</b>	<b>1.6617</b>	<b>17.0310</b>	<b>14.7594</b>	<b>0.0297</b>	<b>0.7366</b>	<b>0.7244</b>	<b>1.4610</b>	<b>0.3562</b>	<b>0.6665</b>	<b>1.0226</b>	<b>0.0000</b>	<b>2,873.054 1</b>	<b>2,873.054 1</b>	<b>0.9292</b>		<b>2,896.284 2</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0515	0.0307	0.4919	1.1500e-003	0.1232	7.2000e-004	0.1239	0.0327	6.6000e-004	0.0333		115.9730	115.9730	3.5200e-003	3.1100e-003	116.9864
<b>Total</b>	<b>0.0515</b>	<b>0.0307</b>	<b>0.4919</b>	<b>1.1500e-003</b>	<b>0.1232</b>	<b>7.2000e-004</b>	<b>0.1239</b>	<b>0.0327</b>	<b>6.6000e-004</b>	<b>0.0333</b>		<b>115.9730</b>	<b>115.9730</b>	<b>3.5200e-003</b>	<b>3.1100e-003</b>	<b>116.9864</b>



Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.4 Building Construction - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
<b>Total</b>	<b>1.4716</b>	<b>13.4438</b>	<b>16.1668</b>	<b>0.0270</b>		<b>0.6133</b>	<b>0.6133</b>		<b>0.5769</b>	<b>0.5769</b>		<b>2,555.6989</b>	<b>2,555.6989</b>	<b>0.6044</b>		<b>2,570.8077</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.3700e-003	0.3022	0.1205	1.4900e-003	0.0542	1.5600e-003	0.0558	0.0156	1.4900e-003	0.0171		157.4530	157.4530	9.1000e-004	0.0227	164.2334
Worker	0.0789	0.0471	0.7543	1.7600e-003	0.1889	1.1000e-003	0.1900	0.0501	1.0100e-003	0.0511		177.8253	177.8253	5.4000e-003	4.7600e-003	179.3791
<b>Total</b>	<b>0.0883</b>	<b>0.3493</b>	<b>0.8748</b>	<b>3.2500e-003</b>	<b>0.2431</b>	<b>2.6600e-003</b>	<b>0.2458</b>	<b>0.0657</b>	<b>2.5000e-003</b>	<b>0.0682</b>		<b>335.2784</b>	<b>335.2784</b>	<b>6.3100e-003</b>	<b>0.0274</b>	<b>343.6125</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.4 Building Construction - 2024**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
<b>Total</b>	<b>1.4716</b>	<b>13.4438</b>	<b>16.1668</b>	<b>0.0270</b>		<b>0.6133</b>	<b>0.6133</b>		<b>0.5769</b>	<b>0.5769</b>	<b>0.0000</b>	<b>2,555.6989</b>	<b>2,555.6989</b>	<b>0.6044</b>		<b>2,570.8077</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.3700e-003	0.3022	0.1205	1.4900e-003	0.0542	1.5600e-003	0.0558	0.0156	1.4900e-003	0.0171		157.4530	157.4530	9.1000e-004	0.0227	164.2334
Worker	0.0789	0.0471	0.7543	1.7600e-003	0.1889	1.1000e-003	0.1900	0.0501	1.0100e-003	0.0511		177.8253	177.8253	5.4000e-003	4.7600e-003	179.3791
<b>Total</b>	<b>0.0883</b>	<b>0.3493</b>	<b>0.8748</b>	<b>3.2500e-003</b>	<b>0.2431</b>	<b>2.6600e-003</b>	<b>0.2458</b>	<b>0.0657</b>	<b>2.5000e-003</b>	<b>0.0682</b>		<b>335.2784</b>	<b>335.2784</b>	<b>6.3100e-003</b>	<b>0.0274</b>	<b>343.6125</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.4 Building Construction - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.474 4	2,556.474 4	0.6010		2,571.498 1
<b>Total</b>	<b>1.3674</b>	<b>12.4697</b>	<b>16.0847</b>	<b>0.0270</b>		<b>0.5276</b>	<b>0.5276</b>		<b>0.4963</b>	<b>0.4963</b>		<b>2,556.474 4</b>	<b>2,556.474 4</b>	<b>0.6010</b>		<b>2,571.498 1</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.2200e-003	0.3006	0.1185	1.4600e-003	0.0542	1.5600e-003	0.0558	0.0156	1.4900e-003	0.0171		154.2532	154.2532	8.9000e-004	0.0222	160.8803
Worker	0.0734	0.0422	0.6971	1.7000e-003	0.1889	1.0500e-003	0.1900	0.0501	9.6000e-004	0.0511		171.8577	171.8577	4.8700e-003	4.4300e-003	173.3003
<b>Total</b>	<b>0.0826</b>	<b>0.3428</b>	<b>0.8157</b>	<b>3.1600e-003</b>	<b>0.2431</b>	<b>2.6100e-003</b>	<b>0.2457</b>	<b>0.0657</b>	<b>2.4500e-003</b>	<b>0.0682</b>		<b>326.1109</b>	<b>326.1109</b>	<b>5.7600e-003</b>	<b>0.0266</b>	<b>334.1806</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.4 Building Construction - 2025**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.474 4	2,556.474 4	0.6010		2,571.498 1
<b>Total</b>	<b>1.3674</b>	<b>12.4697</b>	<b>16.0847</b>	<b>0.0270</b>		<b>0.5276</b>	<b>0.5276</b>		<b>0.4963</b>	<b>0.4963</b>	<b>0.0000</b>	<b>2,556.474 4</b>	<b>2,556.474 4</b>	<b>0.6010</b>		<b>2,571.498 1</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.2200e-003	0.3006	0.1185	1.4600e-003	0.0542	1.5600e-003	0.0558	0.0156	1.4900e-003	0.0171		154.2532	154.2532	8.9000e-004	0.0222	160.8803
Worker	0.0734	0.0422	0.6971	1.7000e-003	0.1889	1.0500e-003	0.1900	0.0501	9.6000e-004	0.0511		171.8577	171.8577	4.8700e-003	4.4300e-003	173.3003
<b>Total</b>	<b>0.0826</b>	<b>0.3428</b>	<b>0.8157</b>	<b>3.1600e-003</b>	<b>0.2431</b>	<b>2.6100e-003</b>	<b>0.2457</b>	<b>0.0657</b>	<b>2.4500e-003</b>	<b>0.0682</b>		<b>326.1109</b>	<b>326.1109</b>	<b>5.7600e-003</b>	<b>0.0266</b>	<b>334.1806</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.5 Paving - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8197	7.5321	12.1778	0.0189		0.3524	0.3524		0.3259	0.3259		1,805.3926	1,805.3926	0.5673		1,819.5741
Paving	0.0707					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8905</b>	<b>7.5321</b>	<b>12.1778</b>	<b>0.0189</b>		<b>0.3524</b>	<b>0.3524</b>		<b>0.3259</b>	<b>0.3259</b>		<b>1,805.3926</b>	<b>1,805.3926</b>	<b>0.5673</b>		<b>1,819.5741</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0638	0.0367	0.6062	1.4800e-003	0.1643	9.1000e-004	0.1652	0.0436	8.4000e-004	0.0444		149.4415	149.4415	4.2300e-003	3.8500e-003	150.6959
<b>Total</b>	<b>0.0638</b>	<b>0.0367</b>	<b>0.6062</b>	<b>1.4800e-003</b>	<b>0.1643</b>	<b>9.1000e-004</b>	<b>0.1652</b>	<b>0.0436</b>	<b>8.4000e-004</b>	<b>0.0444</b>		<b>149.4415</b>	<b>149.4415</b>	<b>4.2300e-003</b>	<b>3.8500e-003</b>	<b>150.6959</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.5 Paving - 2025**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8197	7.5321	12.1778	0.0189		0.3524	0.3524		0.3259	0.3259	0.0000	1,805.3926	1,805.3926	0.5673		1,819.5741
Paving	0.0707					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8905</b>	<b>7.5321</b>	<b>12.1778</b>	<b>0.0189</b>		<b>0.3524</b>	<b>0.3524</b>		<b>0.3259</b>	<b>0.3259</b>	<b>0.0000</b>	<b>1,805.3926</b>	<b>1,805.3926</b>	<b>0.5673</b>		<b>1,819.5741</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0638	0.0367	0.6062	1.4800e-003	0.1643	9.1000e-004	0.1652	0.0436	8.4000e-004	0.0444		149.4415	149.4415	4.2300e-003	3.8500e-003	150.6959
<b>Total</b>	<b>0.0638</b>	<b>0.0367</b>	<b>0.6062</b>	<b>1.4800e-003</b>	<b>0.1643</b>	<b>9.1000e-004</b>	<b>0.1652</b>	<b>0.0436</b>	<b>8.4000e-004</b>	<b>0.0444</b>		<b>149.4415</b>	<b>149.4415</b>	<b>4.2300e-003</b>	<b>3.8500e-003</b>	<b>150.6959</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.6 Architectural Coating - 2025**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.0318					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
<b>Total</b>	<b>16.2026</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>		<b>0.0515</b>	<b>0.0515</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0160	9.1700e-003	0.1516	3.7000e-004	0.0411	2.3000e-004	0.0413	0.0109	2.1000e-004	0.0111		37.3604	37.3604	1.0600e-003	9.6000e-004	37.6740
<b>Total</b>	<b>0.0160</b>	<b>9.1700e-003</b>	<b>0.1516</b>	<b>3.7000e-004</b>	<b>0.0411</b>	<b>2.3000e-004</b>	<b>0.0413</b>	<b>0.0109</b>	<b>2.1000e-004</b>	<b>0.0111</b>		<b>37.3604</b>	<b>37.3604</b>	<b>1.0600e-003</b>	<b>9.6000e-004</b>	<b>37.6740</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**3.6 Architectural Coating - 2025**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	16.0318					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
<b>Total</b>	<b>16.2026</b>	<b>1.1455</b>	<b>1.8091</b>	<b>2.9700e-003</b>		<b>0.0515</b>	<b>0.0515</b>		<b>0.0515</b>	<b>0.0515</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0154</b>		<b>281.8319</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0160	9.1700e-003	0.1516	3.7000e-004	0.0411	2.3000e-004	0.0413	0.0109	2.1000e-004	0.0111		37.3604	37.3604	1.0600e-003	9.6000e-004	37.6740
<b>Total</b>	<b>0.0160</b>	<b>9.1700e-003</b>	<b>0.1516</b>	<b>3.7000e-004</b>	<b>0.0411</b>	<b>2.3000e-004</b>	<b>0.0413</b>	<b>0.0109</b>	<b>2.1000e-004</b>	<b>0.0111</b>		<b>37.3604</b>	<b>37.3604</b>	<b>1.0600e-003</b>	<b>9.6000e-004</b>	<b>37.6740</b>



Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5690	0.5792	4.8610	9.9100e-003	1.0318	7.4800e-003	1.0393	0.2756	6.9800e-003	0.2826		1,007.9337	1,007.9337	0.0617	0.0445	1,022.7455
Unmitigated	0.5690	0.5792	4.8610	9.9100e-003	1.0318	7.4800e-003	1.0393	0.2756	6.9800e-003	0.2826		1,007.9337	1,007.9337	0.0617	0.0445	1,022.7455

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	169.92	171.72	153.90	476,824	476,824
<b>Total</b>	<b>169.92</b>	<b>171.72</b>	<b>153.90</b>	<b>476,824</b>	<b>476,824</b>

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60	86	11	3

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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.603377	0.051886	0.141906	0.112313	0.025216	0.007131	0.012268	0.009274	0.000704	0.000491	0.027212	0.002387	0.005833
Other Non-Asphalt Surfaces	0.603377	0.051886	0.141906	0.112313	0.025216	0.007131	0.012268	0.009274	0.000704	0.000491	0.027212	0.002387	0.005833
Single Family Housing	0.603377	0.051886	0.141906	0.112313	0.025216	0.007131	0.012268	0.009274	0.000704	0.000491	0.027212	0.002387	0.005833

**5.0 Energy Detail**

Historical Energy Use: N

**5.1 Mitigation Measures Energy**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0136	0.1159	0.0493	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003		147.8993	147.8993	2.8300e-003	2.7100e-003	148.7782
NaturalGas Unmitigated	0.0136	0.1159	0.0493	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003		147.8993	147.8993	2.8300e-003	2.7100e-003	148.7782

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1257.14	0.0136	0.1159	0.0493	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003		147.8993	147.8993	2.8300e-003	2.7100e-003	148.7782
<b>Total</b>		<b>0.0136</b>	<b>0.1159</b>	<b>0.0493</b>	<b>7.4000e-004</b>		<b>9.3700e-003</b>	<b>9.3700e-003</b>		<b>9.3700e-003</b>	<b>9.3700e-003</b>		<b>147.8993</b>	<b>147.8993</b>	<b>2.8300e-003</b>	<b>2.7100e-003</b>	<b>148.7782</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**5.2 Energy by Land Use - NaturalGas**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Single Family Housing	1.25714	0.0136	0.1159	0.0493	7.4000e-004		9.3700e-003	9.3700e-003		9.3700e-003	9.3700e-003		147.8993	147.8993	2.8300e-003	2.7100e-003	148.7782
<b>Total</b>		<b>0.0136</b>	<b>0.1159</b>	<b>0.0493</b>	<b>7.4000e-004</b>		<b>9.3700e-003</b>	<b>9.3700e-003</b>		<b>9.3700e-003</b>	<b>9.3700e-003</b>		<b>147.8993</b>	<b>147.8993</b>	<b>2.8300e-003</b>	<b>2.7100e-003</b>	<b>148.7782</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1442	0.3157	1.6108	1.9800e-003		0.0324	0.0324		0.0324	0.0324	0.0000	383.8506	383.8506	9.8700e-003	6.9900e-003	386.1798
Unmitigated	1.1442	0.3157	1.6108	1.9800e-003		0.0324	0.0324		0.0324	0.0324	0.0000	383.8506	383.8506	9.8700e-003	6.9900e-003	386.1798

**6.2 Area by SubCategory**

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0879					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9769					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0349	0.2986	0.1271	1.9100e-003		0.0241	0.0241		0.0241	0.0241	0.0000	381.1765	381.1765	7.3100e-003	6.9900e-003	383.4416
Landscaping	0.0446	0.0171	1.4837	8.0000e-005		8.2300e-003	8.2300e-003		8.2300e-003	8.2300e-003		2.6741	2.6741	2.5600e-003		2.7382
<b>Total</b>	<b>1.1442</b>	<b>0.3157</b>	<b>1.6108</b>	<b>1.9900e-003</b>		<b>0.0324</b>	<b>0.0324</b>		<b>0.0324</b>	<b>0.0324</b>	<b>0.0000</b>	<b>383.8506</b>	<b>383.8506</b>	<b>9.8700e-003</b>	<b>6.9900e-003</b>	<b>386.1798</b>

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0879					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9769					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0349	0.2986	0.1271	1.9100e-003		0.0241	0.0241		0.0241	0.0241	0.0000	381.1765	381.1765	7.3100e-003	6.9900e-003	383.4416
Landscaping	0.0446	0.0171	1.4837	8.0000e-005		8.2300e-003	8.2300e-003		8.2300e-003	8.2300e-003		2.6741	2.6741	2.5600e-003		2.7382
<b>Total</b>	<b>1.1442</b>	<b>0.3157</b>	<b>1.6108</b>	<b>1.9900e-003</b>		<b>0.0324</b>	<b>0.0324</b>		<b>0.0324</b>	<b>0.0324</b>	<b>0.0000</b>	<b>383.8506</b>	<b>383.8506</b>	<b>9.8700e-003</b>	<b>6.9900e-003</b>	<b>386.1798</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Air Quality Study - TTM 83554 Housing Development, Lancaster, CA - Antelope Valley APCD Air District, Summer

**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**9.0 Operational Offroad**

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

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**Fire Pumps and Emergency Generators**

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

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

Equipment Type	Number
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**11.0 Vegetation**

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