APPENDICES

APPENDIX A-1
AIR QUALITY STUDY

Date: October 15, 2021
To: Ms. Kris Pinero, Royal Investors Group, LLC
From: M. S. Hatch Consulting, LLC
Subject: Air Quality Study – Tentative Tract Map (TTM) 20341 Housing Development – Eucalyptus Street and Oak Hill Road, Victorville, CA

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) 20341 for Royal Investors Group, LLC (Royal). The project consists of 298 single family homes on approximately 77 acres in the City of Victorville. 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 Mojave Desert Air Quality Management District (MDAQMD) California Environmental Quality Act (CEQA) and Federal Conformity Guidelines, dated February 2020, 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_2e). The proposed project is not considered one of the project types that the MDAQMD CEQA Guidelines require to be evaluated for potentially exposing sensitive receptors to substantial pollutant concentrations.[1] As such, hazardous air pollutants (HAP) emissions were not calculated, and the project was not evaluated for potential health risks to sensitive receptors.

[1] 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 1. Annual Emissions Summary and Significance Thresholds

Emissions Source	Total Emissions (tons per year)						
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
Year 1 Construction Emissions (2022)	0.29	3.67	2.20	0.01	0.71	0.35	770
Year 2 Construction Emissions (2023)	0.46	3.80	4.25	0.01	0.94	0.34	1,374
Year 3 Construction Emissions (2024)	0.43	2.80	4.11	0.01	0.82	0.28	1,218
Year 4 Construction Emissions (2025)	0.35	1.98	3.09	0.01	0.49	0.18	795
Year 5 Construction Emissions (2026)	2.64	0.07	0.21	< 0.01	0.05	0.02	46
Total Operational Emissions	4.58	2.29	14.23	0.03	3.04	0.86	3,611
Significant Emissions Threshold	**25**	**25**	**100**	**25**	**15**	**12**	**100,000**

Table 2. Daily Emissions Summary and Significance Thresholds

Emissions Source	Total Emissions (pounds per day)						
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
Year 1 Construction Emissions (2022)	4.18	56.58	34.22	0.15	9.43	5.46	15,770
Year 2 Construction Emissions (2023)	3.81	49.67	34.61	0.15	8.08	3.71	15,444
Year 3 Construction Emissions (2024)	3.55	20.95	33.30	0.10	6.38	2.19	10,571
Year 4 Construction Emissions (2025)	49.04	19.81	32.12	0.10	6.29	2.11	10,352
Year 5 Construction Emissions (2026)	49.02	1.29	4.21	0.01	0.93	0.29	1,004
Total Operational Emissions	27.23	12.15	96.71	0.17	17.47	4.97	18,976
Significant Emissions Threshold	**137**	**137**	**548**	**137**	**82**	**65**	**548,000**

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO_X: oxides of nitrogen; CO: Carbon monoxide; SO_X: Oxides of sulfur; $PM_{2.5}$: particulate matter less than 2.5 micrometers in diameter; PM_{10}: particulate matter less than 10 micrometers in diameter; CO_2e: Carbon dioxide equivalent

Project Description

The proposed project includes the construction of 298 single family homes and residential streets on approximately 77 acres. The project site is located southwest of the intersection of Eucalyptus Street and Oak Hill Road in the City of Victorville. The site location is included in Figure 1 and the proposed site plan is included in Figure 2.

Figure 1. Regional Vicinity

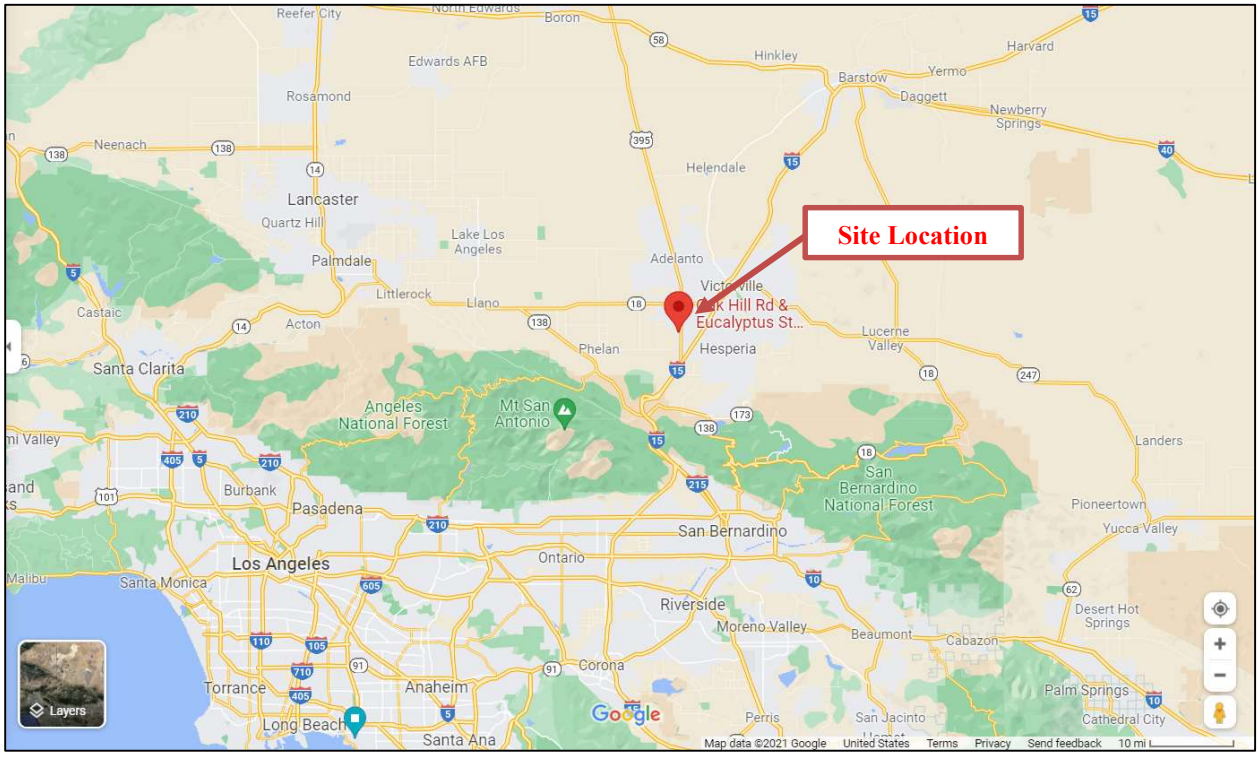
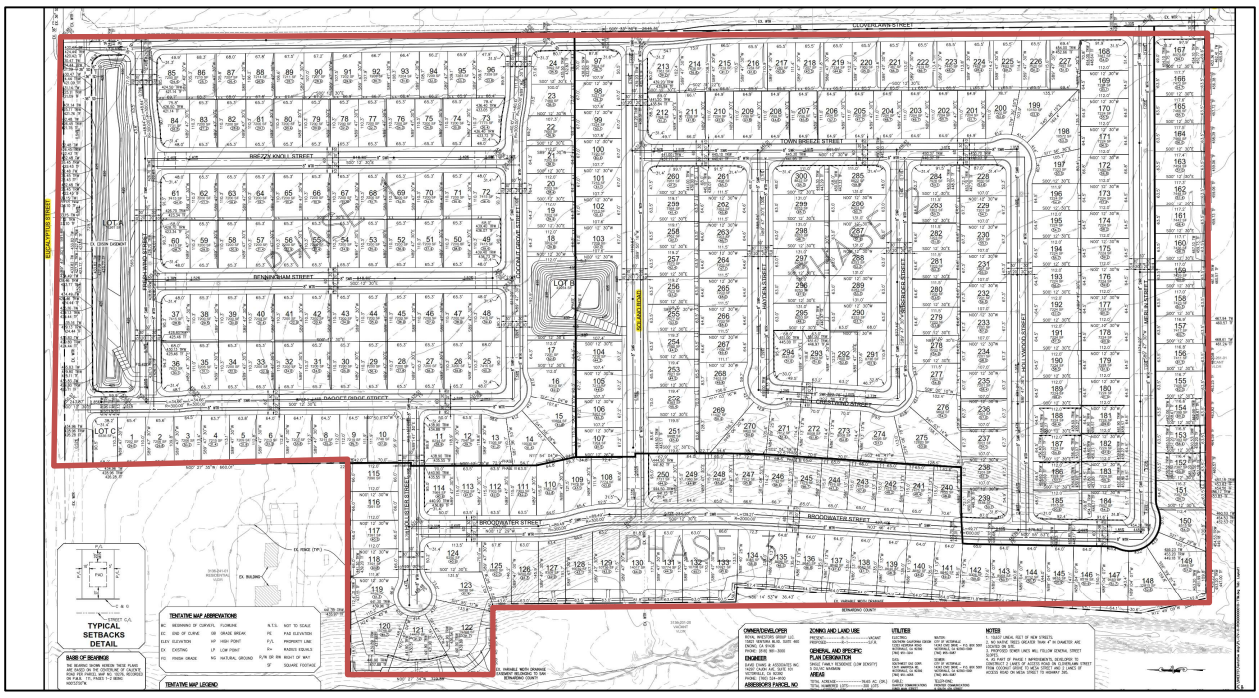


Figure 2. Site Plan – Proposed Housing Development - TTM 20341, Victorville, CA



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 MDAQMD 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_X	CO	SO_X	PM_{10}	$PM_{2.5}$	CO_2e
Construction Emissions							
Year 1 Construction Emissions (2022)	0.29	3.67	2.20	0.01	0.71	0.35	770
Year 2 Construction Emissions (2023)	0.46	3.80	4.25	0.01	0.94	0.34	1,374
Year 3 Construction Emissions (2024)	0.43	2.80	4.11	0.01	0.82	0.28	1,218
Year 4 Construction Emissions (2025)	0.35	1.98	3.09	0.01	0.49	0.18	795
Year 5 Construction Emissions (2026)	2.64	0.07	0.21	< 0.01	0.05	0.02	46
Operational Emissions							
Area Sources	3.29	0.03	2.21	< 0.01	0.01	0.01	4
Energy	0.05	0.39	0.17	< 0.01	0.03	0.03	876
Mobile	1.24	1.88	11.85	0.03	3.00	0.82	2,447
Waste	N/A	N/A	N/A	N/A	0.00	0.00	176
Water	N/A	N/A	N/A	N/A	0.00	0.00	109
Total Operational Emissions	**4.58**	**2.29**	**14.23**	**0.03**	**3.04**	**0.86**	**3,611**
Significant Emissions Threshold	**25**	**25**	**100**	**25**	**15**	**12**	**100,000**

Table 4. Daily Construction and Operational Emissions Summary

Emissions Source	Total Emissions (pounds per day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2e
Construction Emissions							
Year 1 Construction Emissions (2022)	4.18	56.58	34.22	0.15	9.43	5.46	15,770
Year 2 Construction Emissions (2023)	3.81	49.67	34.61	0.15	8.08	3.71	15,444
Year 3 Construction Emissions (2024)	3.55	20.95	33.30	0.10	6.38	2.19	10,571
Year 4 Construction Emissions (2025)	49.04	19.81	32.12	0.10	6.29	2.11	10,352
Year 5 Construction Emissions (2026)	49.02	1.29	4.21	0.01	0.93	0.29	1,004
Operational Emissions							
Area Sources	18.43	0.28	24.56	< 0.01	0.14	0.14	45
Energy	0.25	2.13	0.91	0.01	0.17	0.17	2,733
Mobile	8.55	9.74	71.24	0.16	17.16	4.66	16,198
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
Total Operational Emissions	**27.23**	**12.15**	**96.71**	**0.17**	**17.47**	**4.97**	**18,976**
Significant Emissions Threshold	**137**	**137**	**548**	**137**	**82**	**65**	**548,000**

ROG: Reactive Organic Compounds, used interchangeably with Volatile Organic Compounds (VOC); NO_X: oxides of nitrogen; CO: Carbon monoxide; SO_X: Oxides of sulfur; $PM_{2.5}$: particulate matter less than 2.5 micrometers in diameter; PM_{10}: particulate matter less than 10 micrometers in diameter; CO_2e: Carbon dioxide equivalent

Emissions Calculation Methodology

Construction and operational emissions were based on four CalEEMod land use types*: Single Family Housing, City Park, 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 (745,000 square feet) was based on the number of homes (298) and the average square footage per home (2,500 square feet) that was provided by David Evans and Associates, Inc (DEA). The residential acreage (53.6 acres) was provided by DEA.

CalEEMod Land Use Type: City Park

The *City Park* land use type was used to model the emissions associated with any open space (e.g., natural detention basins, landscaped land, walk-through areas, etc.) within the proposed housing development. The open space acreage (5.59 acres) was provided by DEA.

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 (14.03 acres) was provided by DEA.

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 sidewalk acreage (3.41 acres) was provided by DEA.

Construction Emissions

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

Table 5 provides the anticipated construction schedule. DEA provided the proposed start date (6/1/2022) and end date for the project (6/1/2026) and indicated that work would be conducted five days per week. Apart from the *Building Construction* phase, all phase durations are based on CalEEMod default values. The *Building Construction* phase was shortened to complete the project by the anticipated end date.

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 DEA, this project will require 185,470 cubic yards of material export during the *Grading* phase; as such, the emissions for material haul trips were included in the construction emissions. For fugitive dust emissions, CalEEMod defaults do not include any control of fugitive dust from construction sites. MDAQMD Rule 403 requires that "any person shall not cause or allow the emissions of Fugitive Dust from any transport, handling, construction or storage activity so that the Visible Fugitive Dust remains visible in the atmosphere beyond the property line of the emission source"; to meet this requirement, it is assumed that the construction site will be watered three times per day. Although the addition of watering for dust control is listed as a mitigation measure in CalEEMod, within the MDAQMD this is a requirement, and is therefore included.

For architectural coating operations, VOC emissions were calculated based on the assumption that the coatings would be compliant with the VOC content limits of MDAQMD Rule 1113.[2]

[2] For building coatings, assumed to be 90% flat paints (50 g/L) and 10% non-flat paints (100 g/L). For the parking lot coatings, assumed to be compliant with the Traffic Marking Coating category (100 g/L). VOC limits based on MDAQMD Rule 1113.

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	6/1/2022	8/23/2022	5	60
Grading	8/24/2022	3/28/2023	5	155
Building Construction	3/29/2023	7/28/2025	5	609
Paving	7/29/2025	12/29/2025	5	110
Architectural Coating	12/30/2025	6/1/2026	5	110

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	2	8	158
	Graders	1	8	187
	Rubber Tired Dozers	1	8	247
	Scrapers	2	8	367
	Tractors/Loaders/Backhoes	2	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	Pavers	2	8	130
	Paving Equipment	2	8	132
	Rollers	2	8	80
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., 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 and fireplaces would not be installed based on input from DEA. For mobile emissions, it was assumed that there would not be any external vehicle

trips to the housing development's open space (e.g., walk-through areas for residents), modeled under the *City Park* land use type.

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 MDAQMD Rule 1113.[3] 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 MDAQMD 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.

[3] For building coatings, assumed to be 90% flat paints (50 g/L) and 10% non-flat paints (100 g/L). For the parking lot coatings, assumed to be compliant with the Traffic Marking Coating category (100 g/L). VOC limits based on MDAQMD Rule 1113.

ATTACHMENT A – Mojave Desert AQMD California Environmental Quality Act (CEQA) and Federal Conformity Guidelines

MDAQMD

California Environmental Quality Act (CEQA)

And

Federal Conformity

Guidelines

February 2020

Planning and Rule Making Section
Air Monitoring Section

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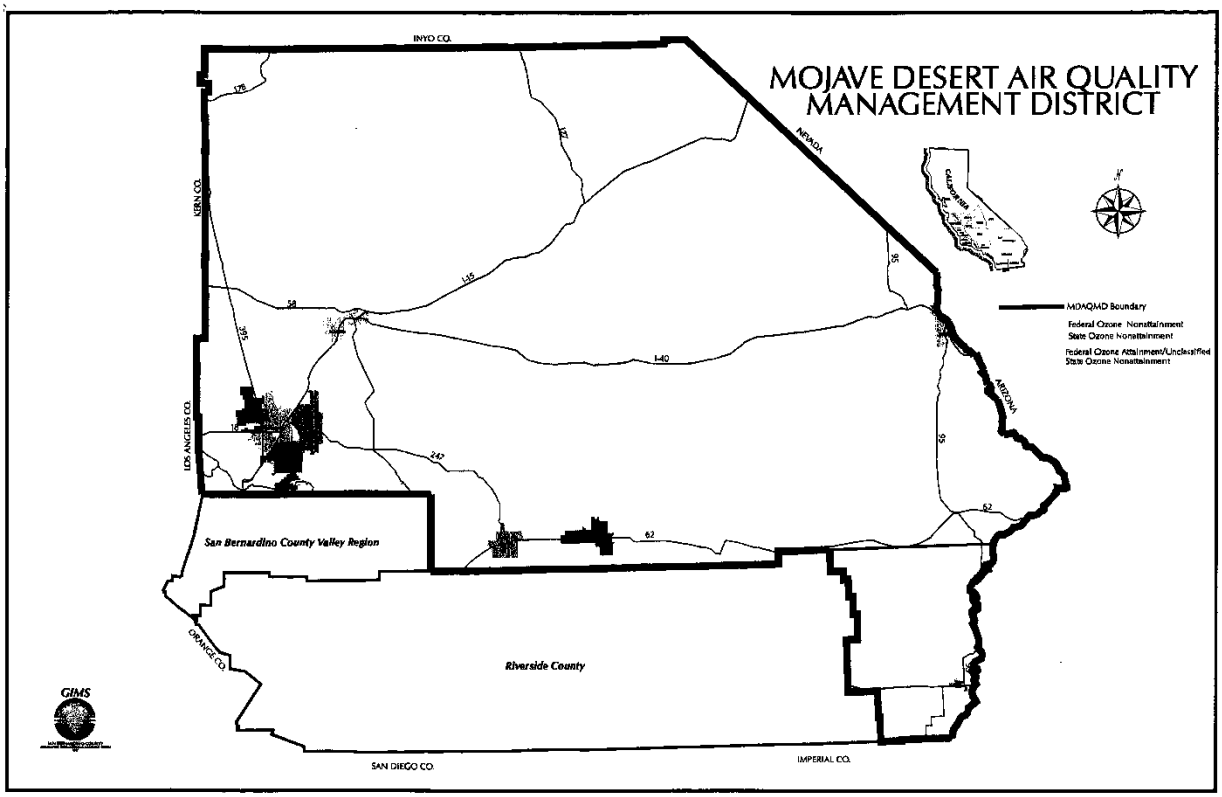
Background

Under CEQA, the Mojave Desert Air Quality Management District (District) is an expert commenting agency on air quality and related matters within its jurisdiction or impacting on its jurisdiction. Under the Federal Clean Air Act the District has adopted federal attainment plans for ozone and PM_{10}. The District has dedicated assets 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. 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.

Map 1 - District Boundaries



Jurisdiction

The District has jurisdiction over the desert portion of San Bernardino County and the far eastern end of Riverside County (please refer to Map 1). This region includes the incorporated communities of Adelanto, Apple Valley, Barstow, Blythe, Hesperia, Needles, Twentynine Palms, Victorville, and Yucca Valley. This region also includes the National Training Center at Fort Irwin, the Marine Corps Air Ground Combat Center, the Marine Corps Logistics Base, the eastern portion of Edwards Air Force Base, and a portion of the China Lake Naval Air Weapons Station.

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 - Designations and Classifications

Ambient Air Quality Standard	**MDAQMD**
One-hour Ozone (Federal) – standard has been revoked	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; classified Severe-15**
Ozone (State)	Nonattainment; classified Moderate
PM_{10} 24-hour (Federal)	Nonattainment; classified Moderate (portion of MDAQMD in Riverside County is unclassifiable/attainment)
$PM_{2.5}$ Annual (Federal)	Unclassified/attainment
$PM_{2.5}$ 24-hour (Federal)	Unclassified/attainment
$PM_{2.5}$ (State)	Nonattainment**
PM_{10} (State)	Nonattainment
Carbon Monoxide (State and Federal)	Unclassifiable/Attainment
Nitrogen Dioxide (State and Federal)	Unclassifiable/Attainment
Sulfur Dioxide (State and Federal)	Attainment/unclassified
Lead (State and Federal)	Unclassifiable/Attainment
Particulate Sulfate (State)	Attainment
Hydrogen Sulfide (State)	Unclassified (Searles Valley Planning Area is nonattainment)
Visibility Reducing Particles (State)	Unclassified

*Note: Portion of MDAQMD outside of Southeast Desert Modified AQMA is unclassified/attainment

**Note: Portion of MDAQMD outside of Western Mojave Desert Ozone Nonattainment Area is unclassifiable/attainment

Attainment Plans

The District has adopted a variety of attainment plans for a variety of nonattainment pollutants. Please refer to Table 2 for a chart of these attainment plans.

Table 2 – MDAQMD Attainment Plans

Name of Plan	Date of Adoption	Standard(s) Targeted	Applicable Area	Pollutant(s) Targeted	Attainment Date*
MDAQMD Federal 75 ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Area)	27-Feb-17	Federal eight hour ozone (75 ppb)	Western Mojave Desert Nonattainment Area (MDAQMD portion)	NO_x and VOC	2027
Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Nonattainment Area)	9-Jun-08	Federal eight hour ozone (84 ppb)	Western Mojave Desert Nonattainment Area (MDAQMD portion)	NO_x and VOC	2019 (revised from 2021)
2004 Ozone Attainment Plan (State and Federal)	26-Apr-04	Federal one hour ozone	Entire District	NO_x and VOC	2007
Attainment Demonstration, Maintenance Plan, and Redesignation Request for the Trona Portion of the Searles Valley PM_{10} Non-attainment Area	25-Mar-96	Federal daily and annual PM_{10}	Searles Valley Planning Area	PM_{10}	N/A
Triennial Revision to the 1991 Air Quality Attainment Plan	22-Jan-96	State one hour ozone	Entire District	NO_x and VOC	2005
Mojave Desert Planning Area Federal Particulate Matter Attainment Plan	31-Jul-95	Federal daily and annual PM_{10}	Mojave Desert Planning Area	PM_{10}	2000
Searles Valley PM_{10} Plan	28-Jun-95	Federal daily and annual PM_{10}	Searles Valley Planning Area	PM_{10}	1994
Post 1996 Attainment Demonstration and Reasonable Further Progress Plan	26-Oct-94	Federal one hour ozone	Southeast Desert Modified AQMA	NO_x and VOC	2007
Reasonable Further Progress Rate-Of-Progress Plan	26-Oct-94	Federal one hour ozone	Southeast Desert Modified AQMA	NO_x and VOC	2007

Name of Plan	Date of Adoption	Standard(s) Targeted	Applicable Area	Pollutant(s) Targeted	Attainment Date*
1991 Air Quality Attainment Plan	26-Aug-91	State one hour ozone	San Bernardino County portion	NO_x and VOC	1994

*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 visit www.mdaqmd.ca.gov.

Recommended Environmental Setting Elements

Air Quality Data

The District gathers a variety of air quality data from a variety of monitoring sites (from the USMC AGCC site on contract). Table 3 details the data available from the District for each monitoring site. Each site with current PM10 monitoring is operating a Beta Attenuation Monitor (or BAM) with realtime hourly data, and BAMs replaced TEOMs and Hi-Vols beginning in 2011.

Table 3 - Available Air Quality Data

Site	Address	Pollutants	Dates
Barstow	225 E. Mountain View	O_3, NO_x, CO, PM_{10}	5/1/80 to present
Hesperia	17288 Olive	O_3, PM_{10}	1/2/86 to present
Lucerne Valley	8560 Aliento Road	PM_{10}	6/1/89 to present
Phelan	Beekley and Phelan Road	O_3	1/1/88 to present
Trona	Market Street	O_3, NO_x, SO_2, H_2S, PM_{10}	8/1//80 to 2/13/93
Trona	Athol Street	O_3, NO_x, SO_2, H_2S, PM_{10}	1/25/93 to 3/1997
Trona	Telescope	O_3, NO_x, SO_2, H_2S, PM_{10}	4/1997 to present
Twentynine Palms	6136 Adobe Road	O_3, NO_x, SO_2, CO, PM_{10}	8/1/80 to 12/2005
Victorville	County Fairgrounds	O_3, NO_x, SO_2, CO, TSP	8/1980 to 12/1985
Victorville	Eighth Street	O_3, NO_x, SO_2, CO, TSP	1/1985 to 12/1989
Victorville	County Fairgrounds	O_3, NO_x, SO_2, CO, PM_{10}	1/1990 to 4/1991
Victorville	14029 Amargosa Rd	O_3, NO_x, SO_2, CO, PM_{10}	4/1991 to 12/1999
Victorville	14306 Park Avenue	O_3, NO_x, SO_2, CO, $PM_{2.5}$ (dual co-located), PM_{10}	1/2000 to present

Meteorological Data

A variety of meteorological data is available from the District for several monitoring sites

throughout the District. Table 4 contains a list of monitoring sites and the date range the following data is available for: wind speed (hourly average and peak), wind direction, temperature, barometric pressure, and relative humidity.

Table 4 - Available Meteorological Data

Site	Address	Dates
Barstow	225 E. Mountain View	1/1988 to present
Hesperia	17288 Olive Street	1/1988 to present
Lucerne Valley	8560 Aliento Road	3/2020 to present
Phelan	Beekley and Phelan Road	1/88 to present
Trona	Athol Street	2/1993 to 3/1997
Trona	Telescope	4/1997 to present
Twentynine Palms	6136 Adobe Road	1/1988 to 12/2005
Victorville	14029 Amargosa Road	4/91 to 12/1999
Victorville	14306 Park Avenue	1/2000 to present

Topography and Climate Discussion

The District covers the majority 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). The Mojave Desert is bordered in the southwest by the San Bernardino Mountains, separated from the San Gabriels by the Cajon Pass (4,200 ft). A lesser channel lies between the San Bernardino Mountains and the Little San Bernardino Mountains (the Morongo Valley).

The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley) whose primary channel is the San Gorgonio Pass (2,300 ft) between the San Bernardino and San Jacinto Mountains.

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. As can be seen from Table 5, the MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inches of precipitation). The MDAB is classified as a dry-hot desert

climate (BWh), with portions classified as dry-very hot desert (BWhh), to indicate at least three months have maximum average temperatures over 100.4° F.

Table 5 - MDAB Average Precipitation and Evaporation History

Location	Precipitation (inches)	Precipitation (days)	Evaporation (inches)	Length of Observations (years)
Trona	3.82	16		48
Randsburg	5.89	23		48
China Lake	4.42			34
Goldstone Echo	5.42	20		23
Daggett Airport	3.87	23		48
Barstow Fire	4.60	23		16
Barstow CIMIS	5.10	27	70	22
Granite Mountain	5.76	22		5
Victorville CIMIS	7.30	29	63	15
Mitchell Caverns	10.41	32		38
Mountain Pass	7.63	28		41
Parker Reservoir	5.38	24		48
Needles Airport	4.55	23		48
Twentynine Palms	3.95	19		48
Blythe Airport	3.57	17		48
Iron Mountain	3.40	19		48

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.

Friant Ranch Decision

The MDAQMD does not currently have a methodology that would correlate the expected air quality emissions of project to the likely health consequences of those emissions. However, the MDAQMD does recommend the use of specific tools which are available (such as CalEEMod) for the purposes of project evaluation. Outside of existing tools, the MDAQMD does not currently have methodologies that would provide lead agencies and the public with a consistent, reliable and meaningful analysis to correlate specific health impacts that may result from a

proposed project's air emissions.

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) [1];
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 multi-phased project (such as 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

Criteria Pollutant	Annual Threshold (short tons)	Daily Threshold (pounds)
Greenhouse Gases (CO2e)	100,000	548,000
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO_x)	25	137
Volatile Organic Compounds (VOC)	25	137
Oxides of Sulfur (SO_x)	25	137
Particulate Matter (PM_{10})	15	82

[1] 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.

Criteria Pollutant	Annual Threshold (short tons)	Daily Threshold (pounds)
Particulate Matter ($PM_{2.5}$)	12	65
Hydrogen Sulfide (H_2S)	10	54
Lead (Pb)	0.6	3

District Contacts

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

Mojave Desert Air Quality Management District General	(760) 245-1661 14306 Park Avenue Victorville, CA 92392-2310
Planning and Rules	Tracy Walters (760) 245-1661 x6122
Air Quality and Meteorological Data	Chris Collins (760) 245-1661 x6282
CEQA and Conformity	Alan De Salvio (760) 245-1661 x6726
Permitting	Sheri Haggard (760) 245-1661 x1864

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_2) – 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_x) – Common product of combustion in the presence of nitrogen. Includes NO_2, 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_x) – Common product of combustion in the presence of sulfur. Associated primarily with diesel and coal burning. Includes SO_2, a criteria pollutant with state and federal standards. Primarily of concern near sources.

Ozone (O_3) – 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_{30}) – 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_{10}, and fine or $PM_{2.5}$) – 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

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

Air Quality Study - TTM 20341 Housing Development, Victorville, CA

Mojave Desert AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	298.00	Dwelling Unit	53.60	745,000.00	852
City Park	5.59	Acre	5.59	243,500.40	0
Other Asphalt Surfaces	14.03	Acre	14.03	611,146.80	0
Other Non-Asphalt Surfaces	3.41	Acre	3.41	148,539.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	30
Climate Zone	10			**Operational Year**	2027
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information provided by client.

Construction Phase - Schedule adjusted to the start and end date provided on the data request form.

Grading - Amount provided by client input.

Architectural Coating - VOC limits from MDAQMD 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 or fireplaces will be installed.

Vehicle Trips - All areas modeled as City Park are within the housing development and no vehicle trips are expected.

Area Coating - VOC limits from MDAQMD 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.

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Annual

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

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

Area Mitigation - VOC limits from MDAQMD 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.

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	1,550.00	609.00
tblConstructionPhase	PhaseEndDate	5/28/2030	6/1/2026
tblConstructionPhase	PhaseEndDate	7/24/2029	7/28/2025
tblConstructionPhase	PhaseEndDate	8/15/2023	3/28/2023
tblConstructionPhase	PhaseEndDate	12/25/2029	12/29/2025
tblConstructionPhase	PhaseEndDate	1/10/2023	8/23/2022
tblConstructionPhase	PhaseStartDate	12/26/2029	12/30/2025
tblConstructionPhase	PhaseStartDate	8/16/2023	3/29/2023
tblConstructionPhase	PhaseStartDate	1/11/2023	8/24/2022
tblConstructionPhase	PhaseStartDate	7/25/2029	7/29/2025
tblConstructionPhase	PhaseStartDate	10/19/2022	6/1/2022
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	163.90	0.00

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

tblFireplaces	NumberNoFireplace	29.80	0.00
tblFireplaces	NumberWood	104.30	0.00
tblGrading	MaterialExported	0.00	185,470.00
tblLandUse	LandUseSquareFeet	536,400.00	745,000.00
tblLandUse	LotAcreage	96.75	53.60
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	WD_TR	0.78	0.00
tblWoodstoves	NumberCatalytic	14.90	0.00
tblWoodstoves	NumberNoncatalytic	14.90	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

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					
2022	0.2899	3.6736	2.1950	8.1400e-003	1.2613	0.1354	1.3968	0.5218	0.1250	0.6468	0.0000	748.5030	748.5030	0.1158	0.0608	769.5283
2023	0.4612	3.8011	4.2481	0.0146	1.0836	0.1288	1.2124	0.3042	0.1204	0.4246	0.0000	1,341.3816	1,341.3816	0.1218	0.0989	1,373.9041
2024	0.4259	2.8039	4.1149	0.0130	0.7307	0.0917	0.8224	0.1980	0.0864	0.2844	0.0000	1,192.9041	1,192.9041	0.0862	0.0766	1,217.8857
2025	0.3459	1.9832	3.0873	8.5800e-003	0.4231	0.0688	0.4919	0.1146	0.0643	0.1789	0.0000	780.5901	780.5901	0.0838	0.0424	795.3209
2026	2.6443	0.0706	0.2094	5.1000e-004	0.0462	2.9700e-003	0.0492	0.0123	2.9500e-003	0.0152	0.0000	45.9005	45.9005	1.5900e-003	8.8000e-004	46.2015
Maximum	**2.6443**	**3.8011**	**4.2481**	**0.0146**	**1.2613**	**0.1354**	**1.3968**	**0.5218**	**0.1250**	**0.6468**	**0.0000**	**1,341.3816**	**1,341.3816**	**0.1218**	**0.0989**	**1,373.9041**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.2899	3.6736	2.1950	8.1400e-003	0.5724	0.1354	0.7079	0.2256	0.1250	0.3505	0.0000	748.5026	748.5026	0.1158	0.0608	769.5279
2023	0.4612	3.8011	4.2481	0.0146	0.8114	0.1288	0.9401	0.2242	0.1204	0.3446	0.0000	1,341.3811	1,341.3811	0.1218	0.0989	1,373.9036
2024	0.4259	2.8039	4.1149	0.0130	0.7307	0.0917	0.8224	0.1980	0.0864	0.2844	0.0000	1,192.9038	1,192.9038	0.0862	0.0766	1,217.8854
2025	0.3459	1.9832	3.0873	8.5800e-003	0.4231	0.0688	0.4919	0.1146	0.0643	0.1789	0.0000	780.5898	780.5898	0.0838	0.0424	795.3206
2026	2.6443	0.0706	0.2094	5.1000e-004	0.0462	2.9700e-003	0.0492	0.0123	2.9500e-003	0.0152	0.0000	45.9005	45.9005	1.5900e-003	8.8000e-004	46.2015
Maximum	**2.6443**	**3.8011**	**4.2481**	**0.0146**	**0.8114**	**0.1354**	**0.9401**	**0.2256**	**0.1250**	**0.3505**	**0.0000**	**1,341.3811**	**1,341.3811**	**0.1218**	**0.0989**	**1,373.9036**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**27.11**	**0.00**	**24.19**	**32.69**	**0.00**	**24.28**	**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	**6-1-2022**	**8-31-2022**	1.2645	1.2645
2	**9-1-2022**	**11-30-2022**	1.9952	1.9952
3	**12-1-2022**	**2-28-2023**	1.8276	1.8276
4	**3-1-2023**	**5-31-2023**	1.1353	1.1353
5	**6-1-2023**	**8-31-2023**	0.8508	0.8508
6	**9-1-2023**	**11-30-2023**	0.8470	0.8470
7	**12-1-2023**	**2-29-2024**	0.8200	0.8200

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

8	**3-1-2024**	**5-31-2024**	0.8079	0.8079
9	**6-1-2024**	**8-31-2024**	0.8051	0.8051
10	**9-1-2024**	**11-30-2024**	0.8019	0.8019
11	**12-1-2024**	**2-28-2025**	0.7670	0.7670
12	**3-1-2025**	**5-31-2025**	0.7627	0.7627
13	**6-1-2025**	**8-31-2025**	0.5992	0.5992
14	**9-1-2025**	**11-30-2025**	0.3217	0.3217
15	**12-1-2025**	**2-28-2026**	1.1981	1.1981
16	**3-1-2026**	**5-31-2026**	1.6528	1.6528
17	**6-1-2026**	**8-31-2026**	0.0180	0.0180
		Highest	1.9952	1.9952

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	3.2943	0.0255	2.2108	1.2000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	3.6148	3.6148	3.4600e-003	0.0000	3.7014
Energy	0.0455	0.3884	0.1653	2.4800e-003		0.0314	0.0314		0.0314	0.0314	0.0000	870.7548	870.7548	0.0442	0.0126	875.5994
Mobile	1.2360	1.8774	11.8492	0.0260	2.9777	0.0223	3.0000	0.7947	0.0209	0.8157	0.0000	2,405.4962	2,405.4962	0.1345	0.1280	2,447.0087
Waste						0.0000	0.0000		0.0000	0.0000	71.0062	0.0000	71.0062	4.1964	0.0000	175.9150
Water						0.0000	0.0000		0.0000	0.0000	6.1598	82.0760	88.2358	0.6396	0.0158	108.9276
Total	**4.5758**	**2.2913**	**14.2253**	**0.0286**	**2.9777**	**0.0660**	**3.0436**	**0.7947**	**0.0646**	**0.8593**	**77.1660**	**3,361.9417**	**3,439.1078**	**5.0180**	**0.1564**	**3,611.1519**

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	3.2943	0.0255	2.2108	1.2000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	3.6148	3.6148	3.4600e-003	0.0000	3.7014
Energy	0.0455	0.3884	0.1653	2.4800e-003		0.0314	0.0314		0.0314	0.0314	0.0000	870.7548	870.7548	0.0442	0.0126	875.5994
Mobile	1.2360	1.8774	11.8492	0.0260	2.9777	0.0223	3.0000	0.7947	0.0209	0.8157	0.0000	2,405.4962	2,405.4962	0.1345	0.1280	2,447.0087
Waste						0.0000	0.0000		0.0000	0.0000	71.0062	0.0000	71.0062	4.1964	0.0000	175.9150
Water						0.0000	0.0000		0.0000	0.0000	6.1598	82.0760	88.2358	0.6396	0.0158	108.9276
Total	**4.5758**	**2.2913**	**14.2253**	**0.0286**	**2.9777**	**0.0660**	**3.0436**	**0.7947**	**0.0646**	**0.8593**	**77.1660**	**3,361.9417**	**3,439.1078**	**5.0180**	**0.1564**	**3,611.1519**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2022	8/23/2022	5	60	
2	Grading	Grading	8/24/2022	3/28/2023	5	155	
3	Building Construction	Building Construction	3/29/2023	7/28/2025	5	609	

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

4	Paving	Paving	7/29/2025	12/29/2025	5	110	
5	Architectural Coating	Architectural Coating	12/30/2025	6/1/2026	5	110	

Acres of Grading (Site Preparation Phase): 90

Acres of Grading (Grading Phase): 465

Acres of Paving: 17.44

Residential Indoor: 1,508,625; Residential Outdoor: 502,875; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 45,581 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Annual

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

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	8	20.00	0.00	23,184.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	529.00	196.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	106.00	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 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5897	0.0000	0.5897	0.3031	0.0000	0.3031	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3182	100.3182	0.0324	0.0000	101.1293
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.5897**	**0.0484**	**0.6381**	**0.3031**	**0.0445**	**0.3476**	**0.0000**	**100.3182**	**100.3182**	**0.0324**	**0.0000**	**101.1293**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Annual

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

3.2 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7900e-003	1.3100e-003	0.0143	4.0000e-005	4.3600e-003	2.0000e-005	4.3800e-003	1.1600e-003	2.0000e-005	1.1800e-003	0.0000	3.4620	3.4620	1.2000e-004	1.1000e-004	3.4980
Total	**1.7900e-003**	**1.3100e-003**	**0.0143**	**4.0000e-005**	**4.3600e-003**	**2.0000e-005**	**4.3800e-003**	**1.1600e-003**	**2.0000e-005**	**1.1800e-003**	**0.0000**	**3.4620**	**3.4620**	**1.2000e-004**	**1.1000e-004**	**3.4980**

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					0.2300	0.0000	0.2300	0.1182	0.0000	0.1182	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3181	100.3181	0.0324	0.0000	101.1292
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.2300**	**0.0484**	**0.2784**	**0.1182**	**0.0445**	**0.1627**	**0.0000**	**100.3181**	**100.3181**	**0.0324**	**0.0000**	**101.1292**

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

3.2 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7900e-003	1.3100e-003	0.0143	4.0000e-005	4.3600e-003	2.0000e-005	4.3800e-003	1.1600e-003	2.0000e-005	1.1800e-003	0.0000	3.4620	3.4620	1.2000e-004	1.1000e-004	3.4980
Total	**1.7900e-003**	**1.3100e-003**	**0.0143**	**4.0000e-005**	**4.3600e-003**	**2.0000e-005**	**4.3800e-003**	**1.1600e-003**	**2.0000e-005**	**1.1800e-003**	**0.0000**	**3.4620**	**3.4620**	**1.2000e-004**	**1.1000e-004**	**3.4980**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5396	0.0000	0.5396	0.1825	0.0000	0.1825	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1686	1.8062	1.3504	2.8900e-003		0.0760	0.0760		0.0699	0.0699	0.0000	253.5859	253.5859	0.0820	0.0000	255.6363
Total	**0.1686**	**1.8062**	**1.3504**	**2.8900e-003**	**0.5396**	**0.0760**	**0.6156**	**0.1825**	**0.0699**	**0.2525**	**0.0000**	**253.5859**	**253.5859**	**0.0820**	**0.0000**	**255.6363**

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

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0214	0.8713	0.2148	4.0100e-003	0.1201	0.0110	0.1311	0.0330	0.0105	0.0435	0.0000	385.1748	385.1748	9.9000e-004	0.0605	403.2406
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0800e-003	2.2500e-003	0.0246	7.0000e-005	7.5000e-003	4.0000e-005	7.5400e-003	1.9900e-003	4.0000e-005	2.0300e-003	0.0000	5.9623	5.9623	2.0000e-004	1.9000e-004	6.0243
Total	**0.0245**	**0.8736**	**0.2394**	**4.0800e-003**	**0.1276**	**0.0110**	**0.1387**	**0.0350**	**0.0105**	**0.0455**	**0.0000**	**391.1370**	**391.1370**	**1.1900e-003**	**0.0607**	**409.2648**

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					0.2105	0.0000	0.2105	0.0712	0.0000	0.0712	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1686	1.8062	1.3504	2.8900e-003		0.0760	0.0760		0.0699	0.0699	0.0000	253.5856	253.5856	0.0820	0.0000	255.6360
Total	**0.1686**	**1.8062**	**1.3504**	**2.8900e-003**	**0.2105**	**0.0760**	**0.2865**	**0.0712**	**0.0699**	**0.1411**	**0.0000**	**253.5856**	**253.5856**	**0.0820**	**0.0000**	**255.6360**

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

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0214	0.8713	0.2148	4.0100e-003	0.1201	0.0110	0.1311	0.0330	0.0105	0.0435	0.0000	385.1748	385.1748	9.9000e-004	0.0605	403.2406
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0800e-003	2.2500e-003	0.0246	7.0000e-005	7.5000e-003	4.0000e-005	7.5400e-003	1.9900e-003	4.0000e-005	2.0300e-003	0.0000	5.9623	5.9623	2.0000e-004	1.9000e-004	6.0243
Total	**0.0245**	**0.8736**	**0.2394**	**4.0800e-003**	**0.1276**	**0.0110**	**0.1387**	**0.0350**	**0.0105**	**0.0455**	**0.0000**	**391.1370**	**391.1370**	**1.1900e-003**	**0.0607**	**409.2648**

3.3 Grading - 2023

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					0.4463	0.0000	0.4463	0.1312	0.0000	0.1312	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1030	1.0700	0.8696	1.9200e-003		0.0442	0.0442		0.0406	0.0406	0.0000	169.0592	169.0592	0.0547	0.0000	170.4261
Total	**0.1030**	**1.0700**	**0.8696**	**1.9200e-003**	**0.4463**	**0.0442**	**0.4904**	**0.1312**	**0.0406**	**0.1718**	**0.0000**	**169.0592**	**169.0592**	**0.0547**	**0.0000**	**170.4261**

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

3.3 Grading - 2023

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	0.0116	0.4965	0.1422	2.5800e-003	0.0801	6.5700e-003	0.0867	0.0220	6.2800e-003	0.0283	0.0000	248.2348	248.2348	5.5000e-004	0.0390	259.8754
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	1.3200e-003	0.0150	4.0000e-005	5.0000e-003	2.0000e-005	5.0300e-003	1.3300e-003	2.0000e-005	1.3500e-003	0.0000	3.8467	3.8467	1.2000e-004	1.2000e-004	3.8847
Total	**0.0135**	**0.4979**	**0.1573**	**2.6200e-003**	**0.0851**	**6.5900e-003**	**0.0917**	**0.0233**	**6.3000e-003**	**0.0297**	**0.0000**	**252.0815**	**252.0815**	**6.7000e-004**	**0.0391**	**263.7601**

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					0.1741	0.0000	0.1741	0.0512	0.0000	0.0512	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1030	1.0700	0.8696	1.9200e-003		0.0442	0.0442		0.0406	0.0406	0.0000	169.0590	169.0590	0.0547	0.0000	170.4259
Total	**0.1030**	**1.0700**	**0.8696**	**1.9200e-003**	**0.1741**	**0.0442**	**0.2182**	**0.0512**	**0.0406**	**0.0918**	**0.0000**	**169.0590**	**169.0590**	**0.0547**	**0.0000**	**170.4259**

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

3.3 Grading - 2023

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	0.0116	0.4965	0.1422	2.5800e-003	0.0801	6.5700e-003	0.0867	0.0220	6.2800e-003	0.0283	0.0000	248.2348	248.2348	5.5000e-004	0.0390	259.8754
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9000e-003	1.3200e-003	0.0150	4.0000e-005	5.0000e-003	2.0000e-005	5.0300e-003	1.3300e-003	2.0000e-005	1.3500e-003	0.0000	3.8467	3.8467	1.2000e-004	1.2000e-004	3.8847
Total	**0.0135**	**0.4979**	**0.1573**	**2.6200e-003**	**0.0851**	**6.5900e-003**	**0.0917**	**0.0233**	**6.3000e-003**	**0.0297**	**0.0000**	**252.0815**	**252.0815**	**6.7000e-004**	**0.0391**	**263.7601**

3.4 Building Construction - 2023

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	0.1557	1.4241	1.6082	2.6700e-003		0.0693	0.0693		0.0652	0.0652	0.0000	229.4867	229.4867	0.0546	0.0000	230.8515
Total	**0.1557**	**1.4241**	**1.6082**	**2.6700e-003**		**0.0693**	**0.0693**		**0.0652**	**0.0652**	**0.0000**	**229.4867**	**229.4867**	**0.0546**	**0.0000**	**230.8515**

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

3.4 Building Construction - 2023

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	0.0287	0.6974	0.3440	3.8400e-003	0.1297	6.7200e-003	0.1364	0.0374	6.4300e-003	0.0439	0.0000	365.8280	365.8280	1.5900e-003	0.0499	380.7301
Worker	0.1603	0.1117	1.2691	3.5400e-003	0.4225	2.0300e-003	0.4246	0.1122	1.8700e-003	0.1141	0.0000	324.9263	324.9263	0.0103	9.9100e-003	328.1363
Total	**0.1890**	**0.8092**	**1.6131**	**7.3800e-003**	**0.5522**	**8.7500e-003**	**0.5610**	**0.1497**	**8.3000e-003**	**0.1580**	**0.0000**	**690.7543**	**690.7543**	**0.0119**	**0.0598**	**708.8664**

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	0.1557	1.4241	1.6082	2.6700e-003		0.0693	0.0693		0.0652	0.0652	0.0000	229.4864	229.4864	0.0546	0.0000	230.8512
Total	**0.1557**	**1.4241**	**1.6082**	**2.6700e-003**		**0.0693**	**0.0693**		**0.0652**	**0.0652**	**0.0000**	**229.4864**	**229.4864**	**0.0546**	**0.0000**	**230.8512**

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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 - 2023

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	0.0287	0.6974	0.3440	3.8400e-003	0.1297	6.7200e-003	0.1364	0.0374	6.4300e-003	0.0439	0.0000	365.8280	365.8280	1.5900e-003	0.0499	380.7301
Worker	0.1603	0.1117	1.2691	3.5400e-003	0.4225	2.0300e-003	0.4246	0.1122	1.8700e-003	0.1141	0.0000	324.9263	324.9263	0.0103	9.9100e-003	328.1363
Total	**0.1890**	**0.8092**	**1.6131**	**7.3800e-003**	**0.5522**	**8.7500e-003**	**0.5610**	**0.1497**	**8.3000e-003**	**0.1580**	**0.0000**	**690.7543**	**690.7543**	**0.0119**	**0.0598**	**708.8664**

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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

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	0.0367	0.9119	0.4393	4.9700e-003	0.1716	8.8500e-003	0.1805	0.0495	8.4600e-003	0.0580	0.0000	473.5357	473.5357	2.0000e-003	0.0645	492.7973
Worker	0.1964	0.1309	1.5578	4.5300e-003	0.5591	2.5300e-003	0.5616	0.1485	2.3300e-003	0.1508	0.0000	415.6460	415.6460	0.0123	0.0121	419.5706
Total	**0.2331**	**1.0428**	**1.9971**	**9.5000e-003**	**0.7307**	**0.0114**	**0.7421**	**0.1980**	**0.0108**	**0.2088**	**0.0000**	**889.1818**	**889.1818**	**0.0143**	**0.0766**	**912.3679**

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	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Annual

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	0.0367	0.9119	0.4393	4.9700e-003	0.1716	8.8500e-003	0.1805	0.0495	8.4600e-003	0.0580	0.0000	473.5357	473.5357	2.0000e-003	0.0645	492.7973
Worker	0.1964	0.1309	1.5578	4.5300e-003	0.5591	2.5300e-003	0.5616	0.1485	2.3300e-003	0.1508	0.0000	415.6460	415.6460	0.0123	0.0121	419.5706
Total	**0.2331**	**1.0428**	**1.9971**	**9.5000e-003**	**0.7307**	**0.0114**	**0.7421**	**0.1980**	**0.0108**	**0.2088**	**0.0000**	**889.1818**	**889.1818**	**0.0143**	**0.0766**	**912.3679**

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	0.1019	0.9290	1.1983	2.0100e-003		0.0393	0.0393		0.0370	0.0370	0.0000	172.7800	172.7800	0.0406	0.0000	173.7954
Total	**0.1019**	**0.9290**	**1.1983**	**2.0100e-003**		**0.0393**	**0.0393**		**0.0370**	**0.0370**	**0.0000**	**172.7800**	**172.7800**	**0.0406**	**0.0000**	**173.7954**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Annual

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	0.0204	0.5130	0.2438	2.7700e-003	0.0976	5.0100e-003	0.1026	0.0282	4.7900e-003	0.0330	0.0000	263.7651	263.7651	1.1000e-003	0.0358	274.4672
Worker	0.1038	0.0665	0.8222	2.4900e-003	0.3180	1.3700e-003	0.3193	0.0845	1.2600e-003	0.0857	0.0000	228.2908	228.2908	6.3400e-003	6.4300e-003	230.3646
Total	**0.1242**	**0.5795**	**1.0660**	**5.2600e-003**	**0.4156**	**6.3800e-003**	**0.4219**	**0.1126**	**6.0500e-003**	**0.1187**	**0.0000**	**492.0559**	**492.0559**	**7.4400e-003**	**0.0423**	**504.8318**

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	0.1019	0.9290	1.1983	2.0100e-003		0.0393	0.0393		0.0370	0.0370	0.0000	172.7798	172.7798	0.0406	0.0000	173.7952
Total	**0.1019**	**0.9290**	**1.1983**	**2.0100e-003**		**0.0393**	**0.0393**		**0.0370**	**0.0370**	**0.0000**	**172.7798**	**172.7798**	**0.0406**	**0.0000**	**173.7952**

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	0.0204	0.5130	0.2438	2.7700e-003	0.0976	5.0100e-003	0.1026	0.0282	4.7900e-003	0.0330	0.0000	263.7651	263.7651	1.1000e-003	0.0358	274.4672
Worker	0.1038	0.0665	0.8222	2.4900e-003	0.3180	1.3700e-003	0.3193	0.0845	1.2600e-003	0.0857	0.0000	228.2908	228.2908	6.3400e-003	6.4300e-003	230.3646
Total	**0.1242**	**0.5795**	**1.0660**	**5.2600e-003**	**0.4156**	**6.3800e-003**	**0.4219**	**0.1126**	**6.0500e-003**	**0.1187**	**0.0000**	**492.0559**	**492.0559**	**7.4400e-003**	**0.0423**	**504.8318**

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	0.0503	0.4720	0.8018	1.2500e-003		0.0230	0.0230		0.0212	0.0212	0.0000	110.1059	110.1059	0.0356	0.0000	110.9962
Paving	0.0184					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0687**	**0.4720**	**0.8018**	**1.2500e-003**		**0.0230**	**0.0230**		**0.0212**	**0.0212**	**0.0000**	**110.1059**	**110.1059**	**0.0356**	**0.0000**	**110.9962**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Annual

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	2.1700e-003	1.3900e-003	0.0172	5.0000e-005	6.6600e-003	3.0000e-005	6.6800e-003	1.7700e-003	3.0000e-005	1.7900e-003	0.0000	4.7789	4.7789	1.3000e-004	1.3000e-004	4.8223
Total	**2.1700e-003**	**1.3900e-003**	**0.0172**	**5.0000e-005**	**6.6600e-003**	**3.0000e-005**	**6.6800e-003**	**1.7700e-003**	**3.0000e-005**	**1.7900e-003**	**0.0000**	**4.7789**	**4.7789**	**1.3000e-004**	**1.3000e-004**	**4.8223**

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	0.0503	0.4720	0.8018	1.2500e-003		0.0230	0.0230		0.0212	0.0212	0.0000	110.1058	110.1058	0.0356	0.0000	110.9960
Paving	0.0184					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0687**	**0.4720**	**0.8018**	**1.2500e-003**		**0.0230**	**0.0230**		**0.0212**	**0.0212**	**0.0000**	**110.1058**	**110.1058**	**0.0356**	**0.0000**	**110.9960**

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	2.1700e-003	1.3900e-003	0.0172	5.0000e-005	6.6600e-003	3.0000e-005	6.6800e-003	1.7700e-003	3.0000e-005	1.7900e-003	0.0000	4.7789	4.7789	1.3000e-004	1.3000e-004	4.8223
Total	**2.1700e-003**	**1.3900e-003**	**0.0172**	**5.0000e-005**	**6.6600e-003**	**3.0000e-005**	**6.6800e-003**	**1.7700e-003**	**3.0000e-005**	**1.7900e-003**	**0.0000**	**4.7789**	**4.7789**	**1.3000e-004**	**1.3000e-004**	**4.8223**

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	0.0485					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7000e-004	1.1500e-003	1.8100e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.2553	0.2553	1.0000e-005	0.0000	0.2557
Total	**0.0487**	**1.1500e-003**	**1.8100e-003**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.2553**	**0.2553**	**1.0000e-005**	**0.0000**	**0.2557**

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	2.8000e-004	1.8000e-004	2.2100e-003	1.0000e-005	8.6000e-004	0.0000	8.6000e-004	2.3000e-004	0.0000	2.3000e-004	0.0000	0.6140	0.6140	2.0000e-005	2.0000e-005	0.6196
Total	**2.8000e-004**	**1.8000e-004**	**2.2100e-003**	**1.0000e-005**	**8.6000e-004**	**0.0000**	**8.6000e-004**	**2.3000e-004**	**0.0000**	**2.3000e-004**	**0.0000**	**0.6140**	**0.6140**	**2.0000e-005**	**2.0000e-005**	**0.6196**

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	0.0485					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.7000e-004	1.1500e-003	1.8100e-003	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.2553	0.2553	1.0000e-005	0.0000	0.2557
Total	**0.0487**	**1.1500e-003**	**1.8100e-003**	**0.0000**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.2553**	**0.2553**	**1.0000e-005**	**0.0000**	**0.2557**

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	2.8000e-004	1.8000e-004	2.2100e-003	1.0000e-005	8.6000e-004	0.0000	8.6000e-004	2.3000e-004	0.0000	2.3000e-004	0.0000	0.6140	0.6140	2.0000e-005	2.0000e-005	0.6196
Total	**2.8000e-004**	**1.8000e-004**	**2.2100e-003**	**1.0000e-005**	**8.6000e-004**	**0.0000**	**8.6000e-004**	**2.3000e-004**	**0.0000**	**2.3000e-004**	**0.0000**	**0.6140**	**0.6140**	**2.0000e-005**	**2.0000e-005**	**0.6196**

3.6 Architectural Coating - 2026

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	2.6210					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2300e-003	0.0619	0.0977	1.6000e-004		2.7800e-003	2.7800e-003		2.7800e-003	2.7800e-003	0.0000	13.7876	13.7876	7.5000e-004	0.0000	13.8064
Total	**2.6302**	**0.0619**	**0.0977**	**1.6000e-004**		**2.7800e-003**	**2.7800e-003**		**2.7800e-003**	**2.7800e-003**	**0.0000**	**13.7876**	**13.7876**	**7.5000e-004**	**0.0000**	**13.8064**

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

3.6 Architectural Coating - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0141	8.7100e-003	0.1117	3.5000e-004	0.0462	1.9000e-004	0.0464	0.0123	1.7000e-004	0.0124	0.0000	32.1130	32.1130	8.4000e-004	8.8000e-004	32.3951
Total	**0.0141**	**8.7100e-003**	**0.1117**	**3.5000e-004**	**0.0462**	**1.9000e-004**	**0.0464**	**0.0123**	**1.7000e-004**	**0.0124**	**0.0000**	**32.1130**	**32.1130**	**8.4000e-004**	**8.8000e-004**	**32.3951**

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	2.6210					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2300e-003	0.0619	0.0977	1.6000e-004		2.7800e-003	2.7800e-003		2.7800e-003	2.7800e-003	0.0000	13.7876	13.7876	7.5000e-004	0.0000	13.8064
Total	**2.6302**	**0.0619**	**0.0977**	**1.6000e-004**		**2.7800e-003**	**2.7800e-003**		**2.7800e-003**	**2.7800e-003**	**0.0000**	**13.7876**	**13.7876**	**7.5000e-004**	**0.0000**	**13.8064**

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

3.6 Architectural Coating - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0141	8.7100e-003	0.1117	3.5000e-004	0.0462	1.9000e-004	0.0464	0.0123	1.7000e-004	0.0124	0.0000	32.1130	32.1130	8.4000e-004	8.8000e-004	32.3951
Total	**0.0141**	**8.7100e-003**	**0.1117**	**3.5000e-004**	**0.0462**	**1.9000e-004**	**0.0464**	**0.0123**	**1.7000e-004**	**0.0124**	**0.0000**	**32.1130**	**32.1130**	**8.4000e-004**	**8.8000e-004**	**32.3951**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Annual

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	1.2360	1.8774	11.8492	0.0260	2.9777	0.0223	3.0000	0.7947	0.0209	0.8157	0.0000	2,405.4962	2,405.4962	0.1345	0.1280	2,447.0087
Unmitigated	1.2360	1.8774	11.8492	0.0260	2.9777	0.0223	3.0000	0.7947	0.0209	0.8157	0.0000	2,405.4962	2,405.4962	0.1345	0.1280	2,447.0087

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	2,813.12	2,842.92	2547.90	7,894,081	7,894,081
Total	2,813.12	2,842.92	2,547.90	7,894,081	7,894,081

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.539521	0.057540	0.175606	0.131212	0.026823	0.007323	0.006522	0.022451	0.000470	0.000153	0.026808	0.000938	0.004634
Other Asphalt Surfaces	0.539521	0.057540	0.175606	0.131212	0.026823	0.007323	0.006522	0.022451	0.000470	0.000153	0.026808	0.000938	0.004634
Other Non-Asphalt Surfaces	0.539521	0.057540	0.175606	0.131212	0.026823	0.007323	0.006522	0.022451	0.000470	0.000153	0.026808	0.000938	0.004634
Single Family Housing	0.539521	0.057540	0.175606	0.131212	0.026823	0.007323	0.006522	0.022451	0.000470	0.000153	0.026808	0.000938	0.004634

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	420.9241	420.9241	0.0355	4.3100e-003	423.0956
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	420.9241	420.9241	0.0355	4.3100e-003	423.0956
NaturalGas Mitigated	0.0455	0.3884	0.1653	2.4800e-003		0.0314	0.0314		0.0314	0.0314	0.0000	449.8307	449.8307	8.6200e-003	8.2500e-003	452.5038
NaturalGas Unmitigated	0.0455	0.3884	0.1653	2.4800e-003		0.0314	0.0314		0.0314	0.0314	0.0000	449.8307	449.8307	8.6200e-003	8.2500e-003	452.5038

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Annual

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					
City Park	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 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	8.42951e+006	0.0455	0.3884	0.1653	2.4800e-003		0.0314	0.0314		0.0314	0.0314	0.0000	449.8307	449.8307	8.6200e-003	8.2500e-003	452.5038
Total		**0.0455**	**0.3884**	**0.1653**	**2.4800e-003**		**0.0314**	**0.0314**		**0.0314**	**0.0314**	**0.0000**	**449.8307**	**449.8307**	**8.6200e-003**	**8.2500e-003**	**452.5038**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Annual

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					
City Park	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 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	8.42951e+006	0.0455	0.3884	0.1653	2.4800e-003		0.0314	0.0314		0.0314	0.0314	0.0000	449.8307	449.8307	8.6200e-003	8.2500e-003	452.5038
Total		**0.0455**	**0.3884**	**0.1653**	**2.4800e-003**		**0.0314**	**0.0314**		**0.0314**	**0.0314**	**0.0000**	**449.8307**	**449.8307**	**8.6200e-003**	**8.2500e-003**	**452.5038**

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			
City Park	0	0.0000	0.0000	0.0000	0.0000
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	2.37347e+006	420.9241	0.0355	4.3100e-003	423.0956
Total		**420.9241**	**0.0355**	**4.3100e-003**	**423.0956**

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			
City Park	0	0.0000	0.0000	0.0000	0.0000
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	2.37347e+006	420.9241	0.0355	4.3100e-003	423.0956
Total		**420.9241**	**0.0355**	**4.3100e-003**	**423.0956**

6.0 Area Detail

6.1 Mitigation Measures Area

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	3.2943	0.0255	2.2108	1.2000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	3.6148	3.6148	3.4600e-003	0.0000	3.7014
Unmitigated	3.2943	0.0255	2.2108	1.2000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	3.6148	3.6148	3.4600e-003	0.0000	3.7014

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	0.2670					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9610					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0664	0.0255	2.2108	1.2000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	3.6148	3.6148	3.4600e-003	0.0000	3.7014
Total	**3.2943**	**0.0255**	**2.2108**	**1.2000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**3.6148**	**3.6148**	**3.4600e-003**	**0.0000**	**3.7014**

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	0.2670					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9610					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0664	0.0255	2.2108	1.2000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	3.6148	3.6148	3.4600e-003	0.0000	3.7014
Total	**3.2943**	**0.0255**	**2.2108**	**1.2000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**3.6148**	**3.6148**	**3.4600e-003**	**0.0000**	**3.7014**

7.0 Water Detail

7.1 Mitigation Measures Water

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	88.2358	0.6396	0.0158	108.9276
Unmitigated	88.2358	0.6396	0.0158	108.9276

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 6.66038	13.1230	1.1100e-003	1.3000e-004	13.1907
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	19.4159 / 12.2405	75.1128	0.6385	0.0156	95.7369
Total		**88.2358**	**0.6396**	**0.0158**	**108.9276**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 6.66038	13.1230	1.1100e-003	1.3000e-004	13.1907
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	19.4159 / 12.2405	75.1128	0.6385	0.0156	95.7369
Total		**88.2358**	**0.6396**	**0.0158**	**108.9276**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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	71.0062	4.1964	0.0000	175.9150
Unmitigated	71.0062	4.1964	0.0000	175.9150

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.48	0.0974	5.7600e-003	0.0000	0.2414
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	349.32	70.9088	4.1906	0.0000	175.6736
Total		**71.0062**	**4.1964**	**0.0000**	**175.9150**

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			
City Park	0.48	0.0974	5.7600e-003	0.0000	0.2414
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	349.32	70.9088	4.1906	0.0000	175.6736
Total		**71.0062**	**4.1964**	**0.0000**	**175.9150**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Annual

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

Equipment Type	Number

11.0 Vegetation

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

Air Quality Study - TTM 20341 Housing Development, Victorville, CA

Mojave Desert AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	298.00	Dwelling Unit	53.60	745,000.00	852
City Park	5.59	Acre	5.59	243,500.40	0
Other Asphalt Surfaces	14.03	Acre	14.03	611,146.80	0
Other Non-Asphalt Surfaces	3.41	Acre	3.41	148,539.60	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	30
Climate Zone	10			**Operational Year**	2027
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Information provided by client.

Construction Phase - Schedule adjusted to the start and end date provided on the data request form.

Grading - Amount provided by client input.

Architectural Coating - VOC limits from MDAQMD 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 or fireplaces will be installed.

Vehicle Trips - All areas modeled as City Park are within the housing development and no vehicle trips are expected.

Area Coating - VOC limits from MDAQMD 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.

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Summer

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

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

Area Mitigation - VOC limits from MDAQMD 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.

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	1,550.00	609.00
tblConstructionPhase	PhaseEndDate	5/28/2030	6/1/2026
tblConstructionPhase	PhaseEndDate	7/24/2029	7/28/2025
tblConstructionPhase	PhaseEndDate	8/15/2023	3/28/2023
tblConstructionPhase	PhaseEndDate	12/25/2029	12/29/2025
tblConstructionPhase	PhaseEndDate	1/10/2023	8/23/2022
tblConstructionPhase	PhaseStartDate	12/26/2029	12/30/2025
tblConstructionPhase	PhaseStartDate	8/16/2023	3/29/2023
tblConstructionPhase	PhaseStartDate	1/11/2023	8/24/2022
tblConstructionPhase	PhaseStartDate	7/25/2029	7/29/2025
tblConstructionPhase	PhaseStartDate	10/19/2022	6/1/2022
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	163.90	0.00

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD Air District, Summer

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

tblFireplaces	NumberNoFireplace	29.80	0.00
tblFireplaces	NumberWood	104.30	0.00
tblGrading	MaterialExported	0.00	185,470.00
tblLandUse	LandUseSquareFeet	536,400.00	745,000.00
tblLandUse	LotAcreage	96.75	53.60
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	DV_TP	28.00	0.00
tblVehicleTrips	PB_TP	6.00	0.00
tblVehicleTrips	PR_TP	66.00	0.00
tblVehicleTrips	ST_TR	1.96	0.00
tblVehicleTrips	SU_TR	2.19	0.00
tblVehicleTrips	WD_TR	0.78	0.00
tblWoodstoves	NumberCatalytic	14.90	0.00
tblWoodstoves	NumberNoncatalytic	14.90	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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					
2022	4.1765	56.5846	34.2236	0.1498	19.8049	1.8714	21.4182	10.1417	1.7303	11.6259	0.0000	15,292.3219	15,292.3219	1.9728	1.4387	15,770.3682
2023	3.8059	49.6715	34.6140	0.1469	12.1603	1.6370	13.7973	4.4428	1.5138	5.9567	0.0000	14,980.6519	14,980.6519	1.9686	1.3901	15,444.1228
2024	3.5496	20.9523	33.3041	0.1027	5.6750	0.7001	6.3751	1.5355	0.6592	2.1947	0.0000	10,363.0200	10,363.0200	0.7202	0.6373	10,570.9379
2025	49.0405	19.8119	32.1194	0.1006	5.6750	0.6131	6.2881	1.5355	0.5774	2.1129	0.0000	10,150.2113	10,150.2113	0.7162	0.6183	10,352.1332
2026	49.0183	1.2931	4.2095	0.0101	0.8708	0.0550	0.9258	0.2310	0.0547	0.2857	0.0000	998.5550	998.5550	0.0315	0.0169	1,004.3794
Maximum	**49.0405**	**56.5846**	**34.6140**	**0.1498**	**19.8049**	**1.8714**	**21.4182**	**10.1417**	**1.7303**	**11.6259**	**0.0000**	**15,292.3219**	**15,292.3219**	**1.9728**	**1.4387**	**15,770.3682**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	4.1765	56.5846	34.2236	0.1498	7.8141	1.8714	9.4274	3.9792	1.7303	5.4634	0.0000	15,292.3219	15,292.3219	1.9728	1.4387	15,770.3682
2023	3.8059	49.6715	34.6140	0.1469	6.4435	1.6370	8.0805	2.1985	1.5138	3.7123	0.0000	14,980.6519	14,980.6519	1.9686	1.3901	15,444.1228
2024	3.5496	20.9523	33.3041	0.1027	5.6750	0.7001	6.3751	1.5355	0.6592	2.1947	0.0000	10,363.0200	10,363.0200	0.7202	0.6373	10,570.9379
2025	49.0405	19.8119	32.1194	0.1006	5.6750	0.6131	6.2881	1.5355	0.5774	2.1129	0.0000	10,150.2113	10,150.2113	0.7162	0.6183	10,352.1332
2026	49.0183	1.2931	4.2095	0.0101	0.8708	0.0550	0.9258	0.2310	0.0547	0.2857	0.0000	998.5550	998.5550	0.0315	0.0169	1,004.3794
Maximum	**49.0405**	**56.5846**	**34.6140**	**0.1498**	**7.8141**	**1.8714**	**9.4274**	**3.9792**	**1.7303**	**5.4634**	**0.0000**	**15,292.3219**	**15,292.3219**	**1.9728**	**1.4387**	**15,770.3682**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**40.08**	**0.00**	**36.28**	**47.00**	**0.00**	**37.91**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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	18.4251	0.2830	24.5644	1.3000e-003		0.1363	0.1363		0.1363	0.1363	0.0000	44.2736	44.2736	0.0424	0.0000	45.3338
Energy	0.2491	2.1283	0.9057	0.0136		0.1721	0.1721		0.1721	0.1721		2,717.0050	2,717.0050	0.0521	0.0498	2,733.1508
Mobile	8.5527	9.7424	71.2428	0.1567	17.0355	0.1254	17.1609	4.5402	0.1178	4.6580		15,949.8218	15,949.8218	0.7931	0.7647	16,197.5169
Total	**27.2268**	**12.1537**	**96.7129**	**0.1716**	**17.0355**	**0.4338**	**17.4693**	**4.5402**	**0.4262**	**4.9664**	**0.0000**	**18,711.1005**	**18,711.1005**	**0.8876**	**0.8145**	**18,976.0015**

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	18.4251	0.2830	24.5644	1.3000e-003		0.1363	0.1363		0.1363	0.1363	0.0000	44.2736	44.2736	0.0424	0.0000	45.3338
Energy	0.2491	2.1283	0.9057	0.0136		0.1721	0.1721		0.1721	0.1721		2,717.0050	2,717.0050	0.0521	0.0498	2,733.1508
Mobile	8.5527	9.7424	71.2428	0.1567	17.0355	0.1254	17.1609	4.5402	0.1178	4.6580		15,949.8218	15,949.8218	0.7931	0.7647	16,197.5169
Total	**27.2268**	**12.1537**	**96.7129**	**0.1716**	**17.0355**	**0.4338**	**17.4693**	**4.5402**	**0.4262**	**4.9664**	**0.0000**	**18,711.1005**	**18,711.1005**	**0.8876**	**0.8145**	**18,976.0015**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2022	8/23/2022	5	60	
2	Grading	Grading	8/24/2022	3/28/2023	5	155	
3	Building Construction	Building Construction	3/29/2023	7/28/2025	5	609	
4	Paving	Paving	7/29/2025	12/29/2025	5	110	
5	Architectural Coating	Architectural Coating	12/30/2025	6/1/2026	5	110	

Acres of Grading (Site Preparation Phase): 90

Acres of Grading (Grading Phase): 465

Acres of Paving: 17.44

Residential Indoor: 1,508,625; Residential Outdoor: 502,875; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 45,581 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Building Construction	Cranes	1	7.00	231	0.29
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41

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

Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

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	8	20.00	0.00	23,184.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	529.00	196.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	106.00	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 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	0.0713	0.0398	0.5573	1.3800e-003	0.1479	7.4000e-004	0.1486	0.0392	6.8000e-004	0.0399		139.2770	139.2770	4.1600e-003	3.8400e-003	140.5257
Total	**0.0713**	**0.0398**	**0.5573**	**1.3800e-003**	**0.1479**	**7.4000e-004**	**0.1486**	**0.0392**	**6.8000e-004**	**0.0399**		**139.2770**	**139.2770**	**4.1600e-003**	**3.8400e-003**	**140.5257**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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 - 2022

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					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**7.6662**	**1.6126**	**9.2788**	**3.9400**	**1.4836**	**5.4235**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

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	0.0713	0.0398	0.5573	1.3800e-003	0.1479	7.4000e-004	0.1486	0.0392	6.8000e-004	0.0399		139.2770	139.2770	4.1600e-003	3.8400e-003	140.5257
Total	**0.0713**	**0.0398**	**0.5573**	**1.3800e-003**	**0.1479**	**7.4000e-004**	**0.1486**	**0.0392**	**6.8000e-004**	**0.0399**		**139.2770**	**139.2770**	**4.1600e-003**	**3.8400e-003**	**140.5257**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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 - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.3717	0.0000	9.3717	3.6792	0.0000	3.6792			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**9.3717**	**1.6349**	**11.0066**	**3.6792**	**1.5041**	**5.1833**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

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	0.4725	17.6969	4.5629	0.0862	2.6243	0.2357	2.8600	0.7200	0.2255	0.9455		9,126.1592	9,126.1592	0.0239	1.4344	9,554.2126
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	0.0792	0.0443	0.6192	1.5300e-003	0.1643	8.3000e-004	0.1651	0.0436	7.6000e-004	0.0443		154.7522	154.7522	4.6200e-003	4.2700e-003	156.1397
Total	**0.5517**	**17.7411**	**5.1821**	**0.0877**	**2.7886**	**0.2365**	**3.0251**	**0.7636**	**0.2263**	**0.9899**		**9,280.9114**	**9,280.9114**	**0.0286**	**1.4387**	**9,710.3523**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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 - 2022

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					3.6550	0.0000	3.6550	1.4349	0.0000	1.4349			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**3.6550**	**1.6349**	**5.2899**	**1.4349**	**1.5041**	**2.9390**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

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	0.4725	17.6969	4.5629	0.0862	2.6243	0.2357	2.8600	0.7200	0.2255	0.9455		9,126.1592	9,126.1592	0.0239	1.4344	9,554.2126
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	0.0792	0.0443	0.6192	1.5300e-003	0.1643	8.3000e-004	0.1651	0.0436	7.6000e-004	0.0443		154.7522	154.7522	4.6200e-003	4.2700e-003	156.1397
Total	**0.5517**	**17.7411**	**5.1821**	**0.0877**	**2.7886**	**0.2365**	**3.0251**	**0.7636**	**0.2263**	**0.9899**		**9,280.9114**	**9,280.9114**	**0.0286**	**1.4387**	**9,710.3523**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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 - 2023

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					9.3717	0.0000	9.3717	3.6792	0.0000	3.6792			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.3717**	**1.4245**	**10.7962**	**3.6792**	**1.3105**	**4.9898**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	0.3879	15.1169	4.5448	0.0833	2.6243	0.2118	2.8360	0.7200	0.2026	0.9226		8,819.4521	8,819.4521	0.0202	1.3862	9,233.0415
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	0.0730	0.0390	0.5655	1.4800e-003	0.1643	7.8000e-004	0.1651	0.0436	7.1000e-004	0.0443		149.7221	149.7221	4.1500e-003	3.9300e-003	150.9978
Total	**0.4609**	**15.1559**	**5.1102**	**0.0848**	**2.7886**	**0.2125**	**3.0011**	**0.7636**	**0.2033**	**0.9669**		**8,969.1742**	**8,969.1742**	**0.0244**	**1.3901**	**9,384.0393**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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 - 2023

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					3.6550	0.0000	3.6550	1.4349	0.0000	1.4349			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**3.6550**	**1.4245**	**5.0795**	**1.4349**	**1.3105**	**2.7454**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

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	0.3879	15.1169	4.5448	0.0833	2.6243	0.2118	2.8360	0.7200	0.2026	0.9226		8,819.4521	8,819.4521	0.0202	1.3862	9,233.0415
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	0.0730	0.0390	0.5655	1.4800e-003	0.1643	7.8000e-004	0.1651	0.0436	7.1000e-004	0.0443		149.7221	149.7221	4.1500e-003	3.9300e-003	150.9978
Total	**0.4609**	**15.1559**	**5.1102**	**0.0848**	**2.7886**	**0.2125**	**3.0011**	**0.7636**	**0.2033**	**0.9669**		**8,969.1742**	**8,969.1742**	**0.0244**	**1.3901**	**9,384.0393**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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 - 2023

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.3022	6.6715	3.4127	0.0387	1.3294	0.0678	1.3972	0.3829	0.0649	0.4477		4,068.4771	4,068.4771	0.0180	0.5537	4,233.9239
Worker	1.9310	1.0313	14.9573	0.0392	4.3456	0.0205	4.3661	1.1527	0.0189	1.1715		3,960.1496	3,960.1496	0.1097	0.1040	3,993.8914
Total	**2.2332**	**7.7028**	**18.3700**	**0.0779**	**5.6750**	**0.0883**	**5.7633**	**1.5355**	**0.0837**	**1.6193**		**8,028.6267**	**8,028.6267**	**0.1277**	**0.6577**	**8,227.8153**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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 - 2023

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

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	0.3022	6.6715	3.4127	0.0387	1.3294	0.0678	1.3972	0.3829	0.0649	0.4477		4,068.4771	4,068.4771	0.0180	0.5537	4,233.9239
Worker	1.9310	1.0313	14.9573	0.0392	4.3456	0.0205	4.3661	1.1527	0.0189	1.1715		3,960.1496	3,960.1496	0.1097	0.1040	3,993.8914
Total	**2.2332**	**7.7028**	**18.3700**	**0.0779**	**5.6750**	**0.0883**	**5.7633**	**1.5355**	**0.0837**	**1.6193**		**8,028.6267**	**8,028.6267**	**0.1277**	**0.6577**	**8,227.8153**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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
Total	**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**

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	0.2916	6.5948	3.2906	0.0379	1.3294	0.0674	1.3968	0.3829	0.0645	0.4474		3,979.8430	3,979.8430	0.0172	0.5409	4,141.4712
Worker	1.7865	0.9138	13.8467	0.0379	4.3456	0.0193	4.3650	1.1527	0.0178	1.1705		3,827.4782	3,827.4782	0.0987	0.0964	3,858.6590
Total	**2.0781**	**7.5086**	**17.1373**	**0.0757**	**5.6750**	**0.0868**	**5.7618**	**1.5355**	**0.0823**	**1.6178**		**7,807.3211**	**7,807.3211**	**0.1159**	**0.6373**	**8,000.1303**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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
Total	**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**

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	0.2916	6.5948	3.2906	0.0379	1.3294	0.0674	1.3968	0.3829	0.0645	0.4474		3,979.8430	3,979.8430	0.0172	0.5409	4,141.4712
Worker	1.7865	0.9138	13.8467	0.0379	4.3456	0.0193	4.3650	1.1527	0.0178	1.1705		3,827.4782	3,827.4782	0.0987	0.0964	3,858.6590
Total	**2.0781**	**7.5086**	**17.1373**	**0.0757**	**5.6750**	**0.0868**	**5.7618**	**1.5355**	**0.0823**	**1.6178**		**7,807.3211**	**7,807.3211**	**0.1159**	**0.6373**	**8,000.1303**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.2847	6.5258	3.2090	0.0371	1.3294	0.0672	1.3966	0.3829	0.0643	0.4471		3,898.0038	3,898.0038	0.0166	0.5285	4,055.9250
Worker	1.6593	0.8164	12.8257	0.0366	4.3456	0.0183	4.3639	1.1527	0.0169	1.1695		3,695.7332	3,695.7332	0.0890	0.0898	3,724.7101
Total	**1.9439**	**7.3422**	**16.0348**	**0.0736**	**5.6750**	**0.0855**	**5.7605**	**1.5355**	**0.0811**	**1.6166**		**7,593.7370**	**7,593.7370**	**0.1056**	**0.6183**	**7,780.6351**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.2847	6.5258	3.2090	0.0371	1.3294	0.0672	1.3966	0.3829	0.0643	0.4471		3,898.0038	3,898.0038	0.0166	0.5285	4,055.9250
Worker	1.6593	0.8164	12.8257	0.0366	4.3456	0.0183	4.3639	1.1527	0.0169	1.1695		3,695.7332	3,695.7332	0.0890	0.0898	3,724.7101
Total	**1.9439**	**7.3422**	**16.0348**	**0.0736**	**5.6750**	**0.0855**	**5.7605**	**1.5355**	**0.0811**	**1.6166**		**7,593.7370**	**7,593.7370**	**0.1056**	**0.6183**	**7,780.6351**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.3342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2493**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0471	0.0232	0.3637	1.0400e-003	0.1232	5.2000e-004	0.1237	0.0327	4.8000e-004	0.0332		104.7940	104.7940	2.5200e-003	2.5500e-003	105.6156
Total	**0.0471**	**0.0232**	**0.3637**	**1.0400e-003**	**0.1232**	**5.2000e-004**	**0.1237**	**0.0327**	**4.8000e-004**	**0.0332**		**104.7940**	**104.7940**	**2.5200e-003**	**2.5500e-003**	**105.6156**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.3342					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2493**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	0.0471	0.0232	0.3637	1.0400e-003	0.1232	5.2000e-004	0.1237	0.0327	4.8000e-004	0.0332		104.7940	104.7940	2.5200e-003	2.5500e-003	105.6156
Total	**0.0471**	**0.0232**	**0.3637**	**1.0400e-003**	**0.1232**	**5.2000e-004**	**0.1237**	**0.0327**	**4.8000e-004**	**0.0332**		**104.7940**	**104.7940**	**2.5200e-003**	**2.5500e-003**	**105.6156**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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	48.5371					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
Total	**48.7080**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.3325	0.1636	2.5700	7.3300e-003	0.8708	3.6700e-003	0.8744	0.2310	3.3800e-003	0.2344		740.5439	740.5439	0.0178	0.0180	746.3502
Total	**0.3325**	**0.1636**	**2.5700**	**7.3300e-003**	**0.8708**	**3.6700e-003**	**0.8744**	**0.2310**	**3.3800e-003**	**0.2344**		**740.5439**	**740.5439**	**0.0178**	**0.0180**	**746.3502**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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	48.5371					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
Total	**48.7080**	**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**

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	0.3325	0.1636	2.5700	7.3300e-003	0.8708	3.6700e-003	0.8744	0.2310	3.3800e-003	0.2344		740.5439	740.5439	0.0178	0.0180	746.3502
Total	**0.3325**	**0.1636**	**2.5700**	**7.3300e-003**	**0.8708**	**3.6700e-003**	**0.8744**	**0.2310**	**3.3800e-003**	**0.2344**		**740.5439**	**740.5439**	**0.0178**	**0.0180**	**746.3502**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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 - 2026

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	48.5371					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
Total	**48.7080**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	0.3103	0.1476	2.4004	7.0900e-003	0.8708	3.4700e-003	0.8742	0.2310	3.2000e-003	0.2342		717.1070	717.1070	0.0162	0.0169	722.5475
Total	**0.3103**	**0.1476**	**2.4004**	**7.0900e-003**	**0.8708**	**3.4700e-003**	**0.8742**	**0.2310**	**3.2000e-003**	**0.2342**		**717.1070**	**717.1070**	**0.0162**	**0.0169**	**722.5475**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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 - 2026

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	48.5371					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
Total	**48.7080**	**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**

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	0.3103	0.1476	2.4004	7.0900e-003	0.8708	3.4700e-003	0.8742	0.2310	3.2000e-003	0.2342		717.1070	717.1070	0.0162	0.0169	722.5475
Total	**0.3103**	**0.1476**	**2.4004**	**7.0900e-003**	**0.8708**	**3.4700e-003**	**0.8742**	**0.2310**	**3.2000e-003**	**0.2342**		**717.1070**	**717.1070**	**0.0162**	**0.0169**	**722.5475**

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	8.5527	9.7424	71.2428	0.1567	17.0355	0.1254	17.1609	4.5402	0.1178	4.6580		15,949.8218	15,949.8218	0.7931	0.7647	16,197.5169
Unmitigated	8.5527	9.7424	71.2428	0.1567	17.0355	0.1254	17.1609	4.5402	0.1178	4.6580		15,949.8218	15,949.8218	0.7931	0.7647	16,197.5169

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	2,813.12	2,842.92	2547.90	7,894,081	7,894,081
Total	2,813.12	2,842.92	2,547.90	7,894,081	7,894,081

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
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

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
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
City Park	0.539521	0.057540	0.175606	0.131212	0.026823	0.007323	0.006522	0.022451	0.000470	0.000153	0.026808	0.000938	0.004634
Other Asphalt Surfaces	0.539521	0.057540	0.175606	0.131212	0.026823	0.007323	0.006522	0.022451	0.000470	0.000153	0.026808	0.000938	0.004634
Other Non-Asphalt Surfaces	0.539521	0.057540	0.175606	0.131212	0.026823	0.007323	0.006522	0.022451	0.000470	0.000153	0.026808	0.000938	0.004634
Single Family Housing	0.539521	0.057540	0.175606	0.131212	0.026823	0.007323	0.006522	0.022451	0.000470	0.000153	0.026808	0.000938	0.004634

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	0.2491	2.1283	0.9057	0.0136		0.1721	0.1721		0.1721	0.1721		2,717.0050	2,717.0050	0.0521	0.0498	2,733.1508
NaturalGas Unmitigated	0.2491	2.1283	0.9057	0.0136		0.1721	0.1721		0.1721	0.1721		2,717.0050	2,717.0050	0.0521	0.0498	2,733.1508

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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					
City Park	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 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	23094.5	0.2491	2.1283	0.9057	0.0136		0.1721	0.1721		0.1721	0.1721		2,717.0050	2,717.0050	0.0521	0.0498	2,733.1508
Total		**0.2491**	**2.1283**	**0.9057**	**0.0136**		**0.1721**	**0.1721**		**0.1721**	**0.1721**		**2,717.0050**	**2,717.0050**	**0.0521**	**0.0498**	**2,733.1508**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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					
City Park	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 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	23.0945	0.2491	2.1283	0.9057	0.0136		0.1721	0.1721		0.1721	0.1721		2,717.0050	2,717.0050	0.0521	0.0498	2,733.1508
Total		**0.2491**	**2.1283**	**0.9057**	**0.0136**		**0.1721**	**0.1721**		**0.1721**	**0.1721**		**2,717.0050**	**2,717.0050**	**0.0521**	**0.0498**	**2,733.1508**

6.0 Area Detail

6.1 Mitigation Measures Area

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	18.4251	0.2830	24.5644	1.3000e-003		0.1363	0.1363		0.1363	0.1363	0.0000	44.2736	44.2736	0.0424	0.0000	45.3338
Unmitigated	18.4251	0.2830	24.5644	1.3000e-003		0.1363	0.1363		0.1363	0.1363	0.0000	44.2736	44.2736	0.0424	0.0000	45.3338

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	1.4628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.2246					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.7377	0.2830	24.5644	1.3000e-003		0.1363	0.1363		0.1363	0.1363		44.2736	44.2736	0.0424		45.3338
Total	**18.4251**	**0.2830**	**24.5644**	**1.3000e-003**		**0.1363**	**0.1363**		**0.1363**	**0.1363**	**0.0000**	**44.2736**	**44.2736**	**0.0424**	**0.0000**	**45.3338**

Air Quality Study - TTM 20341 Housing Development, Victorville, CA - Mojave Desert AQMD 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	1.4628					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.2246					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.7377	0.2830	24.5644	1.3000e-003		0.1363	0.1363		0.1363	0.1363		44.2736	44.2736	0.0424		45.3338
Total	**18.4251**	**0.2830**	**24.5644**	**1.3000e-003**		**0.1363**	**0.1363**		**0.1363**	**0.1363**	**0.0000**	**44.2736**	**44.2736**	**0.0424**	**0.0000**	**45.3338**

7.0 Water Detail

7.1 Mitigation Measures Water

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX A-2
ENERGY STUDY

TTM 20341 Housing Development Project
Energy Calculations

Land Use	Natural Gas Use		Electricity Use	
	(kBTU/yr)	(Therms)	(kWh/yr)	(MWh/yr)
City Park	0	0	0	0
Other Asphalt Surfaces	0	0	0	0
Other Non-Asphalt Surfaces	0	0	0	0
Single Family Housing	8,429,510	84,295	2,373,470	2,373
Totals	**8,429,510**	**84,295**	**2,373,470**	**2,373**

1 kBTU = 0.01 therms

Energy Type	Project Annual Energy Consumption	San Bernardino Annual Energy Consumption (2020)	Percentage Increase Countywide
Electricity (MWh/YR)	2,373	15,968,515	0.0149%
Natural Gas (Therms)	84,295	527,236,428	0.0160%

Source: Refer to CalEEMod outputs for assumptions used in this analysis.

TTM 20341 Housing Development
Energy Calculations

Vehicle Type	Percent of Vehicle Trips[1]	Daily Trips[2]	Annual Vehicle Miles Traveled[3]	Average Fuel Economy (miles per gallon)[4]	Total Annual Fuel Consumption (gallons)[5]
Passenger Cars	0.57	1,618	4,470,647	22	203,211
Light/Medium Trucks	0.23	666	1,840,473	17.3	106,386
Heavy Trucks/Other	0.20	573	1,582,961	6.4	247,338
TOTAL [6]	***1.00***	2,857	***7,894,081***	**--**	***556,935***

Notes:

1. Percent of Vehicle Trip distribution based on trip characteristics within the CalEEMod model.

2. Daily Trips calculated by multiplying the total daily trips by percent vehicle trips (i.e., Daily Trips x percent of Vehicle Trips).

3. Daily Vehicle Miles Traveled (VMT) calculated by multiplying percent vehicle trips by total VMT (i.e., VMT x percent of Vehicle Trips).

4. Average fuel economy derived from the Department of Transportation.

5. Total Daily Fuel Consumption calculated by dividing the daily VMT by the average fuel economy (i.e., VMT/Average Fuel Economy).

6. Values may be slightly off due to rounding.

Source: Refer to CalEEMod outputs for assumptions used in this analysis.

TTM 20341 Housing Development
Energy Calculations

WORKER TRIPS

Phase	Phase Length (# days)	# Worker Trips	Worker Trip Length	Total VMT	Fuel Consumption Factor (Miles/Gallon/Day)	Total Fuel Consumption
Site Preparation	60	18	10.8	11664		468.38
Grading	155	20	10.8	33480		1344.42
Building Construction	609	529	10.8	3479339	**24.90284233**	139716.53
Paving	110	15	10.8	17820		715.58
Architectural Coating	110	106	10.8	125928		5056.77
						147301.69

VENDOR TRIPS

Phase	Phase Length (# days)	# Vendor Trips	Vendor Trip Length	Total VMT	Fuel Consumption Factor (Miles/Gallon/Day)	Total Fuel Consumption
Site Preparation	60	0	7.3	0		0.00
Grading	155	0	7.3	0		0.00
Building Construction	609	196	7.3	1431	**8.43886151**	169.55
Paving	110	0	7.3	0		0.00
Architectural Coating	110	0	7.3	0		0.00
						169.55

HAULING TRIPS

Phase	Phase Length (# days)	# Hauling Trips	Hauling Trip Length	Total VMT	Fuel Consumption Factor (Miles/Gallon/Day)	Total Fuel Consumption
Site Preparation	60	0	20	0		0.00
Grading	155	23184	20	463680		55538.11
Building Construction	609	0	20	0	**8.34886151**	0.00
Paving	110	0	20	0		0.00
Architectural Coating	110	0	20	0		0.00
						55538.11

TOTAL OFF-SITE MOBILE GALLONS CONSUMED DURING CONSTRUCTION	**203,009.35**

TTM 20341 Housing Development
Energy Calculations

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Fuel Consumption Rate (gallons per hour)	Duration (total hours/day)	# days	Total Fuel Consumption (gallons)
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40	3.952	24	60	5690.88
	Tractors/Loaders/Backhoes	4	8.00	97	0.37	1.4356	32	60	2756.35
Grading	Excavators	2	8.00	158	0.38	2.4016	16	155	5955.97
	Graders	1	8.00	187	0.41	3.0668	8	155	3802.83
	Rubber Tired Dozers	1	8.00	247	0.40	3.952	8	155	4900.48
	Scrapers	2	8.00	367	0.48	7.0464	16	155	17475.07
	Tractors/Loaders/Backhoes	2	8.00	97	0.37	1.4356	16	155	3560.29
Building Construction	Cranes	1	7.00	231	0.29	2.6796	7	609	11423.13
	Forklifts	3	8.00	89	0.20	0.712	24	609	10406.59
	Generator Sets	1	8.00	84	0.74	2.4864	8	609	12113.74
	Tractors/Loaders/Backhoes	3	7.00	97	0.37	1.4356	21	609	18359.89
	Welders	1	8.00	46	0.45	0.828	8	609	4034.02
Paving	Pavers	2	8.00	130	0.42	2.184	16	110	3843.84
	Paving Equipment	2	8.00	132	0.36	1.9008	16	110	3345.41
	Rollers	2	8.00	80	0.38	1.216	16	110	2140.16
Architectural Coating	Air Compressors	1	6.00	78	0.48	1.4976	6	110	988.42

	Total:	305,359
Notes:	Off-Site Mobile Construction Total:	203,009
Fuel Consumption Rate = Horsepower x Load Factor x Fuel Consumption Factor	**TOTAL:**	**508,369**
Where:	**Total/Year:**	**127,092**
Fuel Consumption Factor for a diesel engine is 0.04 gallons per horsepower per hour (gal/hp/hr) and a gasoline engine is 0.06 gal/hp/hr.		

Source: Refer to CalEEMod outputs for assumptions used in this analysis.