APPENDIX A
Air Quality Analysis

WORLD OIL GAS STATION AIR QUALITY & GREENHOUSE GAS ASSESSMENT

Morgan Hill, California

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Introduction

The purpose of this report is to address air quality, community health risk, and greenhouse gas (GHG) impacts associated with the World Oil Gas Station project located at 16720 Monterey Road in Morgan Hill, California. The air quality impacts and GHG emissions would be associated with the demolition of the existing land uses at the site, construction of new gas station and infrastructure, and operation of the project. Air pollutant and GHG emissions associated with the construction and operation of the project were predicted using appropriate computer models. In addition, the potential project health risk impact (includes construction and operation) and the impacts of existing toxic air contaminant (TAC) sources affecting the nearby sensitive receptors were evaluated. This analysis addresses those issues following the guidance provided by the Bay Area Air Quality Management District (BAAQMD).[1]

Project Description

The 0.48-acre project site is developed with paved surfaces and an existing gas station with four pump stations (eight gas dispensers), an underground storage tank (UST) system, a fuel canopy, and an 880 square foot (sf) retail/convenience store. The project proposes demolish the existing uses and develop the site with six pump stations (12 gas dispensers), a new UST system, a new canopy, a 2,114-sf retail store, and 11 parking spaces. The proposed gas station and store would operate 24 hours per day, seven days per week.

Setting

The project is located in Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the State and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$).

Air Pollutants of Concern

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to reduce ozone levels. The highest ozone levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources. High ozone levels aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels

[1] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2017.

aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Toxic Air Contaminants

TACs are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level.

Diesel Particulate Matter (DPM)

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to the California Air Resources Board (CARB), diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens either under the State's Proposition 65 or under the Federal Hazardous Air Pollutants programs. The most recent Office of Environmental Health Hazard Assessment (OEHHA) risk assessment guidelines were published in February of 2015.[2] See *Attachment 1* for a detailed description of the community risk modeling methodology used in this assessment.

Non-Diesel Total Organic Gases

Gasoline-powered vehicles, particularly light-duty autos and trucks, emit TACs mostly in the form of total organic gases (TOG). TOG emissions associated with these types of vehicles occur primarily in two forms: running exhaust and evaporative running losses. Additional TOG emissions occur when starting a vehicle, especially cold vehicles. Mobile source TOG includes TACs such as benzene, 1,3-Butadiene, and formaldehyde. Emissions of these TACs are controlled through requirements of motor vehicle exhaust systems and the formulation of gasoline by the U.S. EPA and CARB

Benzene

Benzene is a fundamental component of gasoline and diesel fuel as well as vehicle exhaust. Benzene is emitted through the evaporation of gasoline vapors. Since it is known to cause cancer in humans, benzene was classified as a TAC in 1984 by CARB. Benzene emissions from fuel use are regulated in numerous ways that include standards for the formulation of gasoline, vehicle

[2] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.

emission standards, and vapor control systems for storage, fuel dispensing facilities and vehicle on-board fuel systems.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools. For cancer risk assessments, infants and children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include infants and small children.

The closest sensitive receptors to the project site are the residents in the adjacent townhouses to the east of the site. There are also single- and multi-family residences to the north, west, and south of the site at further distances. This project would also introduce new sensitive receptors (residents).

Regulatory Setting

Federal Regulations

The United States Environmental Protection Agency (EPA) sets nationwide emission standards for mobile sources, which include on-road (highway) motor vehicles such trucks, buses, and automobiles, and non-road (off-road) vehicles and equipment used in construction, agricultural, industrial, and mining activities (such as bulldozers and loaders). The EPA also sets nationwide fuel standards. California also has the ability to set motor vehicle emission standards and standards for fuel used in California, as long as they are the same or more stringent than the Federal standards.

In the past decade the EPA has established a number of emission standards for on- and non-road heavy-duty diesel engines used in trucks and other equipment. This was done in part because diesel engines are a significant source of nitrogen oxides, or NO_X, and particulate matter (PM_{10} and $PM_{2.5}$) and because the EPA has identified diesel particulate matter as a probable carcinogen. Implementation of the heavy-duty diesel on-road vehicle standards and the non-road diesel engine standards are estimated to reduce PM and NO_X emissions from diesel engines up to 95 percent in 2030 when the heavy-duty vehicle fleet is completely replaced with newer heavy-duty vehicles that comply with these emission standards.[3]

In concert with the diesel engine emission standards, the EPA has also substantially reduced the amount of sulfur allowed in diesel fuels. The sulfur contained in diesel fuel is a significant contributor to the formation of particulate matter in diesel-fueled engine exhaust. The new standards reduced the amount of sulfur allowed by 97 percent for highway diesel fuel (from 500

[3] USEPA, 2000. *Regulatory Announcement, Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements*. EPA420-F-00-057. December.

parts per million by weight [ppmw] to 15 ppmw), and by 99 percent for off-highway diesel fuel (from about 3,000 ppmw to 15 ppmw). The low sulfur highway fuel (15 ppmw sulfur), also called ultra-low sulfur diesel (ULSD) is currently required for use by all vehicles in the U.S.

All of the above Federal diesel engine and diesel fuel requirements have been adopted by California, in some cases with modifications making the requirements more stringent or the implementation dates sooner.

State Regulations

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles[4]. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, a significant component of the plan involves application of emission control strategies to existing diesel vehicles and equipment. Many of the measures of the Diesel Risk Reduction Plan have been approved and adopted, including the Federal on-road and non-road diesel engine emission standards for new engines, as well as adoption of regulations for low sulfur fuel in California.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of DPM. Several of these regulatory programs affect medium and heavy-duty diesel trucks that represent the bulk of DPM emissions from California highways. CARB regulations require on-road diesel trucks to be retrofitted with particulate matter controls or replaced to meet 2010 or later engine standards that have much lower DPM and $PM_{2.5}$ emissions. This regulation will substantially reduce these emissions between 2013 and 2023. While new trucks and buses will meet strict federal standards, this measure is intended to accelerate the rate at which the fleet either turns over so there are more cleaner vehicles on the road or is retrofitted to meet similar standards. With this regulation, older, more polluting trucks would be removed from the roads sooner.

CARB has also adopted and implemented regulations to reduce DPM and NO_X emissions from in-use (existing) and new off-road heavy-duty diesel vehicles (e.g., loaders, tractors, bulldozers, backhoes, off-highway trucks, etc.). The regulations apply to diesel-powered off-road vehicles with engines 25 horsepower (hp) or greater. The regulations are intended to reduce particulate matter and NO_X exhaust emissions by requiring owners to turn over their fleet (replace older equipment with newer equipment) or retrofit existing equipment in order to achieve specified fleet-averaged emission rates. Implementation of this regulation, in conjunction with stringent Federal off-road equipment engine emission limits for new vehicles, will significantly reduce emissions of DPM and NO_X.

[4] California Air Resources Board, 2000. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

Bay Area Air Quality Management District (BAAQMD)

BAAQMD has jurisdiction over an approximately 5,600-square mile area, commonly referred to as the San Francisco Bay Area (Bay Area). The District's boundary encompasses the nine San Francisco Bay Area counties, including Alameda County, Contra Costa County, Marin County, San Francisco County, San Mateo County, Santa Clara County, Napa County, southwestern Solano County and southern Sonoma County.

BAAQMD is the lead agency in developing plans to address attainment and maintenance of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The District also has permit authority over most types of stationary equipment utilized for the proposed project. The BAAQMD is responsible for permitting and inspection of stationary sources; enforcement of regulations, including setting fees, levying fines, and enforcement actions; and ensuring that public nuisances are minimized.

BAAQMD's Community Air Risk Evaluation (CARE) program was initiated in 2004 to evaluate and reduce health risks associated with exposures to outdoor TACs in the Bay Area.[5] The program examines TAC emissions from point sources, area sources, and on-road and off-road mobile sources with an emphasis on diesel exhaust, which is a major contributor to airborne health risk in California. The CARE program is an on-going program that encourages community involvement and input. The technical analysis portion of the CARE program is being implemented in three phases that includes an assessment of the sources of TAC emissions, modeling, and measurement programs to estimate concentrations of TAC, and an assessment of exposures and health risks. Throughout the program, information derived from the technical analyses will be used to focus emission reduction measures in areas with high TAC exposures and high density of sensitive populations. Risk reduction activities associated with the CARE program are focused on the most at-risk communities in the Bay Area. The BAAQMD has identified six communities as impacted: Concord, Richmond/San Pablo, Western Alameda County, San José, Redwood City/East Palo Alto, and Eastern San Francisco. The project site is not within an at-risk community area.

BAAQMD regulates the emissions of organic compounds (i.e., ROG) from gasoline dispensing stations through Regulation 8, Rule 7. This rule requires the facility to install enhanced vapor recovery (EVR systems. Since the facility would emit more than 10 pounds of ROG (i.e., volatile organic compounds or VOCs) in a single day, the Best Available Control Technology (BACT) requirement of Regulation 2-2-301 would be triggered. BACT for Gasoline Dispensing Facilities is considered the use of CARB-certified Phase-I and Phase-II vapor recovery equipment. A Health Risk Assessment (HRA) would be required by BAAQMD since the annual benzene emissions, a TAC, exceed the toxic air contaminant risk triggering level specified in Regulation 2-5.

The BAAQMD *California Environmental Quality Act (CEQA) Air Quality Guidelines*[6] were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process consistent with CEQA requirements including thresholds

[5] See BAAQMD: https://www.baaqmd.gov/community-health/community-health-protection-program/community-air-risk-evaluation-care-program , accessed 2/18/2021.
[6] Bay Area Air Quality Management District, 2011. *CEQA Air Quality Guidelines*. May. (Updated May 2017)

of significance, mitigation measures, and background air quality information. They also include assessment methodologies for air toxics, odors, and greenhouse gas emissions. *Attachment 1* includes detailed community risk modeling methodology.

Morgan Hill 2035 General Plan

Adopted July 27, 2016, the *Morgan Hill 2035 General Plan* includes goals, policies, and actions to improve air quality issues facing the City of Morgan Hill.[7] The following goals, policies, and actions are applicable to the proposed project:

Goal NRE-10: *Reduced air pollution emissions.*

Policy NRE-10.1 **Regional and Subregional Cooperation**. Cooperate with regional agencies in developing and implementing air quality management plans. Support subregional coordination with other cities, counties, and agencies in the Santa Clara Valley and adjacent areas to address land use, jobs/housing balance, and transportation planning issues as a means of improving air quality.

Policy NRE-10.2 **State and Federal Regulation**. Encourage effective regulation of mobile and stationary sources of air pollution and support State and federal regulations to improve automobile emission controls.

Policy NRE-10.3 **Automobile Emissions**. Encourage the use of and infrastructure for alternative fuel, hybrid, and electric vehicles. Encourage new and existing public and private development to include electric vehicle charging stations.

Policy NRE-10.4 **Reduced Automobile Use**. To reduce air pollution the frequency and length of automobile trips and the amount of traffic congestion by controlling sprawl, promoting infill development, and encouraging mixed uses and higher density development near transit. Support the expansion and improvement of alternative modes of transportation. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that reduce vehicle trips.

Goal NRE-11: *Minimized exposure of people to toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter.*

Policy NRE-11.1 **TACs and Proposed Sensitive Use**s. Require modeling for sensitive land uses, such as residential development, proposed near sources of pollution such as freeways and industrial uses. Require new residential development

[7] City of Morgan Hill, California (2016). "Chapter 8 Natural Resources and Environment". *City of Morgan Hill General Plan 2035.* https://www.morgan-hill.ca.gov/DocumentCenter/View/22839/MH2035-General-Plan---December-2017?bidId=

and projects categorized as sensitive receptors to incorporate effective mitigation measures into project designs or be located adequate distances from sources of toxic air contaminants (TACs) to avoid significant risk to health and safety.

Policy NRE-11.2 **TACs and Existing Sensitive Uses**. Encourage the installation of appropriate air filtration mechanisms at existing schools, residences, and other sensitive receptors adversely affected by existing or proposed pollution sources.

Policy NRE-11.3 **Health Risk Assessments.** For proposed development that emits toxic air contaminants, require project proponents to prepare health risk assessments in accordance with Bay Area Air Quality Management District procedures as part of environmental review and implement effective mitigation measures to reduce potential health risks to less-than-significant levels. Alternatively, require these projects to be located an adequate distance from residences and other sensitive receptors to avoid health risks. Consult with the Bay Area Air Quality Management District to identify stationary and mobile toxic air contaminant sources and determine the need for and requirements of a health risk assessment for proposed developments

Policy NRE-11.4 **Truck Routes**. For development projects generating significant heavy-duty truck traffic, designate truck routes that minimize exposure of sensitive receptors to toxic air contaminants and particulate matter.

Policy NRE-11.5 **Truck Idling**. For development projects generating significant truck traffic, require signage to remind drivers that the State truck idling law limits truck idling to five (5) minutes.

Policy NRE-11.6 **Vegetation Buffers**. Encourage the use of pollution-absorbing trees and vegetation in buffer areas between substantial sources of toxic air contaminants and sensitive receptors.

Goal NRE-12: *Minimized air pollutant emissions from demolition and construction activities.*

Policy NRE-12.1: **Best Practices.** Requirement that development projects implement best management practices to reduce air pollutant emissions associated with construction and operation of the project.

Policy NRE-12.2 **Conditions of Approvals.** Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At a minimum, conditions shall conform to construction mitigation measures recommended in the current Bay Area Air Quality Management District CEQA Guidelines.

Policy NRE-12.3 **Control Measures.** Require construction and demolition projects that have the potential to disturb asbestos (from soil or building material) to comply with all the requirements of the California Air Resource Board's air toxics control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.

Policy NRE-12.4 **Grading**. Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas.

- Action NRE-12.A Standard Measures for Demolition and Grading. Adopt and periodically update dust, particulate matter, and exhaust control standard measures for demolition, grading, and construction activities to include on project plans mitigation measures as conditions of approval based Bay Area Air Quality Management District CEQA Guidelines. Include measures to prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.
- Action NRE-12.B Grading Ordinance. Revise the grading ordinance and condition grading permits to require that graded areas be stabilized from the completion of grading to commencement and construction.

Significance Thresholds

In June 2010, BAAQMD adopted thresholds of significance to assist in the review of projects under CEQA and these significance thresholds were contained in the District's 2011 *CEQA Air Quality Guidelines*. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The thresholds were challenged through a series of court challenges and were mostly upheld. BAAQMD updated the *CEQA Air Quality Guidelines* in 2017 to include the latest significance thresholds that were used in this analysis are summarized in Table 1. Community risks are considered significant if they exceed these levels.

Table 1. BAAQMD CEQA Significance Thresholds

Criteria Air Pollutant	Construction Thresholds	Operational Thresholds	
	Average Daily Emissions (lbs./day)	**Average Daily Emissions (lbs./day)**	**Annual Average Emissions (tons/year)**
ROG	54	54	10
NO_x	54	54	10
PM_{10}	82 (Exhaust)	82	15
$PM_{2.5}$	54 (Exhaust)	54	10
CO	Not Applicable	9.0 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	None	
Health Risks and Hazards	**Single Sources Within 1,000-foot Zone of Influence**	**Combined Sources (Cumulative from all sources within 1000-foot zone of influence)**	
Excess Cancer Risk	10 per one million	100 per one million	
Hazard Index	1.0	10.0	
Incremental annual $PM_{2.5}$	0.3 µg/m^3	0.8 µg/m^3	
Greenhouse Gas Emissions			
Land Use Projects – direct and indirect emissions	Compliance with a Qualified GHG Reduction Strategy OR 1,100 metric tons annually or 4.6 metric tons per capita (for 2020) *		

Note: ROG = reactive organic gases, NOx = nitrogen oxides, PM_{10} = course particulate matter or particulates with an aerodynamic diameter of 10 micrometers (µm) or less, $PM_{2.5}$ = fine particulate matter or particulates with an aerodynamic diameter of 2.5µm or less. GHG = greenhouse gases.

*BAAQMD does not have a recommended post-2020 GHG threshold.

Source: Bay Area Air Quality Management District, 2017

AIR QUALITY IMPACTS AND MITIGATION MEASURES

Impact AIR-1: Conflict with or obstruct implementation of the applicable air quality plan?

BAAQMD is the regional agency responsible for overseeing compliance with State and Federal laws, regulations, and programs within the San Francisco Bay Area Air Basin (SFBAAB). BAAQMD, with assistance from the Association of Bay Area Governments (ABAG) and Metropolitan Transportation Commission (MTC), prepares and implements specific plans to meet the applicable laws, regulations, and programs. The most recent and comprehensive of which is the *Bay Area 2017 Clean Air Plan*.[8] The primary goals of the Clean Air Plan are to attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions and protect the climate. The BAAQMD has also developed CEQA guidelines to assist lead agencies in evaluating the significance of air quality and GHG impacts. In formulating compliance strategies, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel, which, in turn, affects region-wide emissions of air pollutants and GHGs.

The 2017 Clean Air Plan, adopted by BAAQMD in April 2017, includes control measures that are intended to reduce air pollutant emissions in the Bay Area either directly or indirectly. Plans must show consistency with the control measures listed within the Clean Air Plan. At the project-level, there are no consistency measures or thresholds. The proposed project would not conflict with the latest Clean Air planning efforts since 1) project would have emissions below the BAAQMD thresholds (see Impact below) and 2) the project would be considered urban infill.

Impact AIR-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The Bay Area is considered a non-attainment area for ground-level O_3 and $PM_{2.5}$ under both the Federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for PM_{10} under the California Clean Air Act, but not the federal act. The area has attained both State and Federal ambient air quality standards for carbon monoxide. As part of an effort to attain and maintain ambient air quality standards for O_3, $PM_{2.5}$ and PM_{10}, the BAAQMD has established thresholds of significance for these air pollutants and their precursors. These thresholds are for O_3 precursor pollutants (ROG and NOx), PM_{10}, and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Construction Period Emissions

The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate emissions from on-site construction activity, construction vehicle trips, and evaporative emissions. The project land use types and size, and anticipated construction schedule were input to CalEEMod. The CARB EMission FACtors 2021 (EMFAC2021) model was used to predict emissions from construction traffic, which includes worker travel, vendor trucks, and haul trucks.[9]

[8] Bay Area Air Quality Management District (BAAQMD), 2017. *Final 2017 Clean Air Plan.*
[9] See CARB's EMFAC2021 Emissions Inventory at https://arb.ca.gov/emfac/emissions-inventory

The CalEEMod model output along with construction inputs are included in *Attachment 2* and EMFAC2021 vehicle emissions modeling outputs are included in *Attachment 3*.

CalEEMod Inputs

Land Use Inputs

The proposed project land uses were entered into CalEEMod as described in Table 2.

Table 1. Summary of Project Land Use Inputs

Project Land Uses	Size	Units	Square Feet (sf)	Acreage
Convenience Market with Gas Pumps*	6	Pumps	2,114	0.48
Parking Lot	11	Parking Spaces	14,878	

* Proposed gas station would include 6 pump stations with 12 dispenser positions.

Construction Inputs

CalEEMod computes annual emissions for construction that are based on the project type, size, and acreage. The model provides emission estimates for both on-site and off-site construction activities. On-site activities are primarily made up of construction equipment emissions, while off-site activity includes worker, hauling, and vendor traffic. The construction build-out scenario, including equipment list and schedule, were based on construction information provided by the project applicant.

The CalEEMod construction equipment worksheet provided by the applicant included the schedule for each phase. Within each phase, the quantity of equipment to be used along with the average hours per day and total number of workdays was provided. Since different equipment would have different estimates of the working days per phase, the hours per day for each phase was computed by dividing the total number of hours that the equipment would be used by the total number of days in that phase. The construction schedule assumed that the earliest possible start date would be January 2022 and the project would be built out over a period of 8 months, or 165 construction workdays. The first year of full operation was assumed to be 2023.

Construction Truck Traffic Emissions

Construction would produce traffic in the form of worker trips and truck traffic. The traffic-related emissions are based on worker and vendor trip estimates produced by CalEEMod and haul trips that were computed based on the estimate of demolition material to be exported, soil material imported and/or exported to the site, and the estimate of cement and asphalt truck trips. CalEEMod provides daily estimates of worker and vendor trips for each applicable phase. The total trips for those were computed by multiplying the daily trip rate by the number of days in that phase. Haul trips for demolition and grading were estimated from the provided demolition and grading volumes by assuming each truck could carry 10 tons per load. The number of cement and asphalt total round haul trips were provided for the project and converted to total one-way trips, assuming two trips per round-trip delivery.

The latest version of the CalEEMod model is based on the older version of the CARB EMFAC2017 motor vehicle emission factor model. This model has been superseded by the EMFAC2021 model; however, CalEEMod has not been updated to include EMFAC2021. The construction traffic information was combined with EMFAC2021 motor vehicle emissions factors. EMFAC2021 provides aggregate emission rates in grams per mile for each vehicle type. The vehicle mix for this study was based on CalEEMod default assumptions, where worker trips are assumed to be comprised of light-duty autos (EMFAC category LDA) and light duty trucks (EMFAC category LDT1and LDT2). Vendor trips are comprised of delivery and large trucks (EMFAC category MHDT and HHDT) and haul trips, including cement trucks, are comprised of large trucks (EMFAC category HHDT). Travel distances are based on CalEEMod default lengths, which are 10.8 miles for worker travel, 7.3 miles for vendor trips, and 20 miles for hauling (demolition material export and soil import/export). Since CalEEMod does not address cement or asphalt trucks, these were treated as vendor travel distances. Each trip was assumed to include an idle time of 5 minutes. Emissions associated with vehicle starts were also included. On-road emission rates in Santa Clara County for the year 2022 were used. Table 3 provides the traffic inputs that were combined with the EMFAC2021 emission factors to compute vehicle emissions.

Table 3. Construction Traffic Data Used for EMFAC2021 Model Runs

CalEEMod Run/Land Uses and Construction Phase	Trips by Trip Type			Notes
	Total Worker Trips[1]	Total Vendor Trips[1]	Total Haul Trips[2]	
Vehicle mix[1]	50% LDA 25% LDT1 25% LDT2	50% MHDT 50% HHDT	100% HHDT	
Trip Length (miles)	10.8	7.3	20.0 (Demo/Soil) 7.3 (Cement/Asphalt)	CalEEMod default distance with 5-min truck idle time.
Demolition	30	-	34	880-sf existing building demolition. CalEEMod default worker trips.
Site Preparation	16	-	-	CalEEMod default worker trips.
Grading	24	-	62	500-cy soil export. CalEEMod default worker trips.
Trenching	9	-	-	CalEEMod default worker trips.
Building Construction	973	417	24	12 cement truck round trips. CalEEMod default worker and vendor trips.
Architectural Coating	15	-	-	CalEEMod default worker trips.
Paving	24	-	23	95-cy of asphalt. CalEEMod default worker trips.

Notes: [1] Based on 2022 EMFAC2021 light-duty vehicle fleet mix for Santa Clara County.
[2] Includes demolition and grading trips estimated by CalEEMod based on amount of material to be removed. Cement and asphalt trips estimated based on estimated building and pavement areas.

Summary of Computed Construction Period Emissions

Average daily emissions were annualized for each year of construction by dividing the annual construction emissions by the number of active workdays during that year. Table 4 shows the annualized average daily construction emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust

during construction of the project. As indicated in Table 4, predicted annualized project construction emissions would not exceed the BAAQMD significance thresholds during any year of construction.

Table 4. Construction Period Emissions

Year	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
Construction Emissions Per Year (Tons)				
2022	0.03	0.14	0.01	0.01
Annualized Daily Construction Emissions (pounds/day)				
2022 (165 construction workdays)	0.35	1.74	0.09	0.07
BAAQMD Thresholds (pounds per day)	*54* lbs./day	*54* lbs./day	*82* lbs./day	*54* lbs./day
Exceed Threshold?	No	No	No	No

Construction activities, particularly during site preparation and grading, would temporarily generate fugitive dust in the form of PM_{10} and $PM_{2.5}$. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less-than-significant if best management practices are implemented to reduce these emissions. *Mitigation Measure AQ-1 would implement BAAQMD-recommended best management practices.*

Mitigation Measure AQ-1: **Include measures to control dust and exhaust during construction.**

During any construction period ground disturbance, the applicant shall ensure that the project contractor implement measures to control dust and exhaust. Implementation of the measures recommended by BAAQMD and listed below would reduce the air quality impacts associated with grading and new construction to a less-than-significant level. Additional measures are identified to reduce construction equipment exhaust emissions. The contractor shall implement the following best management practices that are required of all projects:

1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.

2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.

3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Effectiveness of Mitigation Measure AQ-1

The measures above are consistent with BAAQMD-recommended basic control measures for reducing fugitive particulate matter that are contained in the BAAQMD CEQA Air Quality Guidelines.

Operational Period Emissions

Operational air emissions from the project would be generated primarily from autos driven by future customers. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. CalEEMod was used to estimate emissions from operation of the proposed project assuming full build-out.

CalEEMod Inputs

Land Uses

The project land uses were input to CalEEMod as described above for the construction period modeling.

Model Year

Emissions associated with vehicle travel depend on the year of analysis because emission control technology requirements are phased-in over time. Therefore, the earlier the year analyzed in the model, the higher the emission rates utilized by CalEEMod. The earliest year of full operation would be 2023 if construction begins in 2022. Emissions associated with build-out later than 2023 would be lower.

Traffic Information

CalEEMod allows the user to enter specific vehicle trip generation rates. Therefore, the project-

specific daily trip generation rate provided by the traffic consultant was entered into the model.[10] The Saturday and Sunday trip rates were adjusted by multiplying the ratio of the CalEEMod default rates for Saturday and Sunday trips to the default weekday rate with the project-specific daily weekday trip rate. The project would produce 286 net daily trips. Since the traffic analysis considered passby trips, CalEEMod's trip type was changed to 100 percent primary trips. The default trip lengths specified by CalEEMod were used.

EMFAC2021 Adjustment to CalEEMod

The vehicle emission factors and fleet mix used in CalEEMod are based on EMFAC2017, which is an older CARB emission inventory for on road and off road mobile sources. Since the release of CalEEMod Version 2020.4.0, new emission factors have been produced by CARB. EMFAC2021 became available for use in January 2021. It includes the latest data on California's car and truck fleets and travel activity. The CalEEMod vehicle emission factors and fleet mix were updated with the emission rates and fleet mix from EMFAC2021, which were adjusted with the CARB EMFAC off-model adjustment factors. On road emission rates from 2022 Sonoma County were used (See *Attachment 3*). More details about the updates in emissions calculation methodologies and data are available in the EMFAC2021 Technical Support Document.[11]

Energy

CalEEMod defaults for energy use were used, which include the 2019 Title 24 Building Standards. GHG emissions modeling includes those indirect emissions from electricity consumption. The model has a default rate of 2 pounds of CO_2 per megawatt of electricity produced, which is based on Silicon Valley Clean Energy (SVCE) 2019 emissions rate. SVCE is the official electricity provider for Morgan Hill. SVCE purchases carbon-free electricity and partners with PG&E to deliver this electricity over existing power lines that they maintain. SVCE provides 100-percent carbon-free energy and customers in the City of Morgan Hill are automatically enrolled in the SVCE GreenStart default program, which offers electricity that is carbon-free and with 50 percent of the power from renewable sources.[12]

Other Inputs

Default model assumptions for emissions associated with solid waste generation use were applied to the project. Water/wastewater use were changed to 100% aerobic conditions to represent wastewater treatment plant conditions since the project site would not send wastewater to septic tanks or facultative lagoons.

Existing Uses

The site is currently developed with an existing gas station with four pump stations (eight gas

[10] Email correspondence with Maria Kisyova, Associate Project Manager, David J. Powers & Associates, Inc., May 26, 2021, Attachment: *World Oil Gas Trip Gen and Volumes 05-26-21.xlsx.*
[11] See CARB 2021: https://ww2.arb.ca.gov/our-work/programs/mobile-source-emissions-inventory/road-documentation/msei-modeling-tools-emfac
[12] See: https://www.svcleanenergy.org/choices/

pumps) and an 880-sf retail/convenience store. Therefore, a CalEEMod model run was developed to compute emissions from the existing land uses as if they were operating in 2023. Existing land uses were input as 4 pumps and 880-sf of "Convenience Market with Gas Pumps." The existing trip generation rates provided by the traffic consultant and other inputs were applied to the existing modeling in the same manner described for the proposed project. Historical energy data for this land use was used.

Gasoline Dispensing Facility

The project would include a six-pump gasoline station with 12 dispenser positions. According to the project applicant, the maximum throughput for this gas station would be 2,000,000 gallons per year. The applicant also provided the maximum throughput of the existing four-pump, eight dispenser gas station of 1,280,982 gallons in 2020. CalEEMod does not compute evaporative ROG emissions from gasoline dispensing facilities (GDF). Therefore, these emissions were computed outside the model. The transfer and storage of gasoline results in emissions of organic compounds, considered in this assessment as ROG. Emissions of ROG and benzene, which is a TAC, were computed based on projected annual throughput of gasoline using emission factors developed by CARB.[13] The emission factors are based on annual gasoline throughput and account for emissions from fuel storage tank loading and pressure driven (breathing) losses, motor vehicle refueling, spillage while refueling, and minor emissions from vapor permeation through gasoline dispensing hoses. The fueling emission factors include the effects of vehicles equipped with onboard refueling vapor recovery (ORVR) systems. ORVR systems were phased in beginning with 1998 model year passenger vehicles, and are now installed on all passenger, light-duty, and medium-duty vehicles manufactured since the 2006 model year. Emissions of benzene were computed assuming that benzene makes up 0.3% of gasoline vapor and 1% of liquid gasoline.[14] These computations are provided in Attachment 2.

Summary of Computed Operational Period Emissions

Annual emissions were predicted using CalEEMod and daily emissions were calculated assuming 365 days of operation. Table 5 shows average daily emissions of ROG, NO_X, total PM_{10}, and total $PM_{2.5}$ during operation of the project. The operational period emissions would not exceed the BAAQMD significance thresholds.

[13] CARB. 2013. *Revised Emissions Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities.* December 23, 2013.

[14] CAPCOA. 1997. *Air Toxics "Hot Spots" Program, Gasoline Service Station Industrywide Risk Assessment Guidelines*, November 1997

Table 5. Operational Period Emissions

Scenario	ROG	NOx	PM_{10}	$PM_{2.5}$
2023 Project Operational Emissions (*tons/year*)				
Emissions from CalEEMod (*tons/year*)	0.67	0.68	0.99	0.25
GDF Evaporative Emissions (*tons/year*)	0.52	--	--	--
Project Total (*tons/year*)	1.19	0.68	0.99	0.25
2023 Existing Site Operational Emissions (*tons/year*)				
Emissions from CalEEMod (*tons/year*)	0.49	0.50	0.73	0.18
GDF Evaporative Emissions (*tons/year*)	0.33	--	--	--
Existing Total (*tons/year*)	0.82	0.50	0.73	0.18
Net Annual Emissions Total (*tons/year*)	0.37	0.18	0.26	0.07
BAAQMD Thresholds (tons /year)	*10 tons*	*10 tons*	*15 tons*	*10 tons*
Exceed Threshold?	No	No	No	No
2023 Project Operational Emissions (*lbs./day*)[1]	2.01	0.98	1.44	0.41
BAAQMD Thresholds (lbs./day)	*54 lbs.*	*54 lbs.*	*82 lbs.*	*54 lbs.*
Exceed Threshold?	No	No	No	No

Notes: [1] Assumes 365-day operation.

Impact AIR-3: Expose sensitive receptors to substantial pollutant concentrations?

Project impacts related to increased community risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. This project would introduce new sources of TACs during construction (i.e., on-site construction and truck hauling emissions) and operation (i.e., mobile sources and stationary sources).

Project construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. The project would site a new gas station within 1,000 feet of sensitive receptors. The project would not include the installation of any emergency generators powered by a diesel engine but would generate some traffic consisting of mostly light-duty gasoline-powered vehicles, which would produce TAC and air pollutant emissions.

Project impacts to existing sensitive receptors were addressed for temporary construction activities and long-term operational conditions. There are also several sources of existing TACs and localized air pollutants in the vicinity of the project. The impact of the existing sources of TAC was also assessed in terms of the cumulative risk that includes the project contribution.

Community Risk Methodology for Construction and Operation

Community risk impacts were addressed by predicting increased cancer risk, the increase in annual $PM_{2.5}$ concentrations and computing the Hazard Index (HI) for non-cancer health risks. The risk impacts from the project are the combination of risks from construction and operation sources. These sources include on-site construction activity, construction truck hauling, and increased traffic from the project. To evaluate the increased cancer risks from the project, a 30-year exposure

period was used, per BAAQMD guidance,[15] with the sensitive receptors being exposed to both project construction and operation emissions during this timeframe.

The project increased cancer risk is computed by summing the project construction cancer risk and operation cancer risk contributions. Unlike, the increased maximum cancer risk, the annual $PM_{2.5}$ concentration and HI values are not additive but based on the annual maximum values for the entirety of the project. The project maximally exposed individual (MEI) is identified as the sensitive receptor that is most impacted by the project's construction and operation.

The methodology for computing community risks impacts is contained in *Attachment 1*. This involved the calculation of TAC and $PM_{2.5}$ emissions, dispersion modeling of these emissions, and computations of cancer risk and non-cancer health effects.

Modeled Sensitive Receptors

Receptors for this assessment included locations where sensitive populations would be present for extended periods of time (i.e., chronic exposures). This includes the existing adjacent residences to the east of the site and other residences at further distances, as shown in Figure 1. Residential receptors and receptors at the health center were assumed to include all receptor groups (i.e., third trimester, infants, children, and adults) with almost continuous exposure to project emissions.

Community Health Risk from Project Construction

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. These exhaust air pollutant emissions would not be considered to contribute substantially to existing or projected air quality violations. Construction exhaust emissions may still pose health risks for sensitive receptors such as surrounding residents. The primary community risk impact issue associated with construction emissions are cancer risk and exposure to $PM_{2.5}$. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. A health risk assessment of the project construction activities was conducted that evaluated potential health effects to nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$.[16] This assessment included dispersion modeling to predict the offsite and onsite concentrations resulting from project construction, so that lifetime cancer risks and non-cancer health effects could be evaluated.

Construction Emissions

The CalEEMod and EMFAC2021 models provided total annual PM_{10} exhaust emissions (assumed to be DPM) for the off-road construction equipment and for exhaust emissions from on-road vehicles, with total emissions from all construction stages as 0.01 tons (12 pounds). The on-road emissions are a result of haul truck travel during demolition and grading activities, worker travel, and vendor deliveries during construction. A trip length of half a mile was used to represent vehicle travel while at or near the construction site. It was assumed that these emissions from on-road

[15] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines.* December 2016.

[16] DPM is identified by California as a toxic air contaminant due to the potential to cause cancer.

vehicles traveling at or near the site would occur at the construction site. Fugitive $PM_{2.5}$ dust emissions were calculated by CalEEMod and EMFAC2021 as 0.01 tons (14 pounds) for the overall construction period.

Dispersion Modeling

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ concentrations at sensitive receptors (residences, daycare, and high school) in the vicinity of the project construction area. The AERMOD dispersion model is a BAAQMD-recommended model for use in modeling analysis of these types of emission activities for CEQA projects.[17] Emission sources for the construction site were grouped into two categories: exhaust emissions of DPM and fugitive $PM_{2.5}$ dust emissions.

Construction Sources

To represent the construction equipment exhaust emissions, an area source emission release height of 20 feet (6 meters) was used for the area sources.[18] The release height incorporates both the physical release height from the construction equipment (i.e., the height of the exhaust pipe) and plume rise after it leaves the exhaust pipe. Plume rise is due to both the high temperature of the exhaust and the high velocity of the exhaust gas. It should be noted that when modeling an area source, plume rise is not calculated by the AERMOD dispersion model as it would do for a point source (exhaust stack). Therefore, the release height from an area source used to represent emissions from sources with plume rise, such as construction equipment, should be based on the height the exhaust plume is expected to achieve, not just the height of the top of the exhaust pipe.

For modeling fugitive $PM_{2.5}$ emissions, a near-ground level release height of 7 feet (2 meters) was used for the area source. Fugitive dust emissions at construction sites come from a variety of sources, including truck and equipment travel, grading activities, truck loading (with loaders) and unloading (rear or bottom dumping), loaders and excavators moving and transferring soil and other materials, etc. All of these activities result in fugitive dust emissions at various heights at the point(s) of generation. Once generated, the dust plume will tend to rise as it moves downwind across the site and exit the site at a higher elevation than when it was generated. For all these reasons, a 7-foot release height was used as the average release height across the construction site. Emissions from the construction equipment and on-road vehicle travel were distributed throughout the modeled area sources.

AERMOD Inputs and Meteorological Data

The modeling used a five-year data set (2013-2017) of hourly meteorological data from the San Martin Airport that was prepared for use with the AERMOD model by BAAQMD. Construction emissions computed by CalEEMod were modeled as occurring daily between 7:00 a.m. to 4:00 p.m. This is when most of the construction activity would occur, according to the project applicant.

[17] Bay Area Air Quality Management District (BAAQMD), 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May.
[18] California Air Resource Board, 2007. *Proposed Regulation for In-Use Off-Road Diesel Vehicles, Appendix D: Health Risk Methodology.* April. Web: https://ww3.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm

Annual DPM and $PM_{2.5}$ concentrations from construction activities during the 2022 period were calculated using the model. DPM and $PM_{2.5}$ concentrations were calculated at nearby sensitive receptors. Receptor heights of 5 feet (1.5 meters) and 15 feet (4.5 meters) were used to represent the breathing heights on the first and second floors of nearby single- and multi-family residences.[19]

Summary of Construction Community Risk Impacts

The increased cancer risk calculations were based on applying the BAAQMD recommended age sensitivity factors to the TAC concentrations, as described in *Attachment 1*. Age-sensitivity factors reflect the greater sensitivity of infants and small children to cancer causing TACs. The range of infant through adult exposures were assumed to occur at all residences. Infant exposure at residences was used as a worst-case assumption, while child and adult exposures would be less.

The maximum modeled annual $PM_{2.5}$ concentration was calculated based on combined exhaust and fugitive concentrations. The maximum computed HI values was based on the ratio of the maximum DPM concentration modeled and the chronic inhalation reference exposure level of 5 $\mu g/m^3$.

The maximum modeled annual DPM and $PM_{2.5}$ concentrations, which include both the DPM and fugitive $PM_{2.5}$ concentrations, were identified at nearby sensitive receptors to find the MEI. Results of this assessment indicated that the construction MEIs were located in two places. The cancer risk MEI was located at a residence on the first floor (5 feet above ground) to the north of the project site. The $PM_{2.5}$ concentration MEI was located at the adjacent residence on the first floor (5 feet above ground) to the east of the project site. The locations of the MEIs and nearby sensitive receptors are shown in Figure 1. Table 6 summarizes the maximum cancer risks, $PM_{2.5}$ concentrations, and health hazard indexes for project related construction activities. *Attachment 4* to this report includes the emission calculations used for the construction modeling and the cancer risk calculations.

[19] Bay Area Air Quality Management District, 2012, Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0. May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

Figure 1. Project Construction Site, Locations of Off-Site Sensitive Receptors and Maximum TAC Impact Locations (MEI)

Community Risks from Project Operation – Traffic and Gasoline Transfer and Storage

Operation of the project would have long-term emissions from mobile sources (i.e., traffic). Per BAAQMD recommended risks and methodology, a road with less than 10,000 total vehicles per day is considered a low-impact source of TACs.[20] This project would generate 286 net daily trips[21] dispersed on the roadway systems with a majority of the trips being from light-duty vehicles (i.e., passenger automobiles), which is a fraction of 10,000 daily vehicles. Therefore, emissions from project traffic are considered negligible and not included within this analysis.

As described above in the project description, the project would expand a GDF from four to six pumps or 12 fueling positions that would operate 24-hours per day. According to the project applicant, the maximum throughput for the proposed gas station would be 2,000,000 gallons per

[20] Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

[21] Email correspondence with Maria Kisyova, Associate Project Manager, David J. Powers & Associates, Inc., May 26, 2021, Attachment: *World Oil Gas Trip Gen and Volumes 05-26-21.xlsx.*

year. The existing throughput of the existing four-pump, eight dispenser gas station was reported at 1,280,982 gallons in 2020.

Annual TAC emissions (benzene, ethylbenzene, hexane, toluene, and xylene) from the proposed and existing gas stations were computed following methods recommended by CARB, as described under *Impact AIR-2*.[22] The pounds per day emission rates were then put into the *BAAQMD Health Risk Calculator* to screen the risks and hazards from the gas station. The BAAQMD's *Gasoline Dispensing Facility Distance Multiplier Tool* was used with the project MEIs being approximately 30 feet (5 meters) away from the source. The net increase to community risks caused by the proposed gas station was calculated and combined with the project's construction risks. This provides the increase in risk caused by the proposed station over the existing conditions. Note that use of the *BAAQMD Health Risk Calculator* provides conservative estimates of cancer risks since it does not consider third trimester fetus and infant exposure, while those exposures were considered for construction cancer risk computations. In other words, this is a conservative calculation of cancer risks caused by the project. The community risks from the proposed gas station would likely be less had a refined health risk assessment been conducted. The results are provided in Table 6. The emissions and health risk calculations for the proposed GDF are included in *Attachment 4*.

Summary of Project-Related Community Risks at the Off-site Project MEI

For this project, the sensitive receptors identified in Figure 1 as the construction MEIs are also the project MEIs. The cancer risks from construction and operation of the project were summed together. The annual $PM_{2.5}$ concentration and HI values are based on an annual maximum risk for the entirety of the project, so they were not summed. As shown in Table 6, the unmitigated maximum cancer risks, $PM_{2.5}$ concentration, and HI from construction activities at the MEI locations would not exceed the BAAQMD single-source significance thresholds.

Table 6. Construction and Operation Risk Impacts at the Off-Site Receptors

Source	Cancer Risk* (per million)	Annual $PM_{2.5}$* ($\mu g/m^3$)	Hazard Index
Project Construction Unmitigated	4.60 (infant)	0.07	0.01
Operational Gas Station (2,000,000 gallon/year maximum throughput)	1.74	-	0.01
Unmitigated Total/Maximum Project Risks	6.34 (infant)	0.07	0.01
BAAQMD Single-Source Threshold	***>10.0***	***>0.3***	***>1.0***
Exceed Threshold? Unmitigated	*No*	*No*	*No*

* Maximum cancer risk and maximum $PM_{2.5}$ concentration occur at different locations.

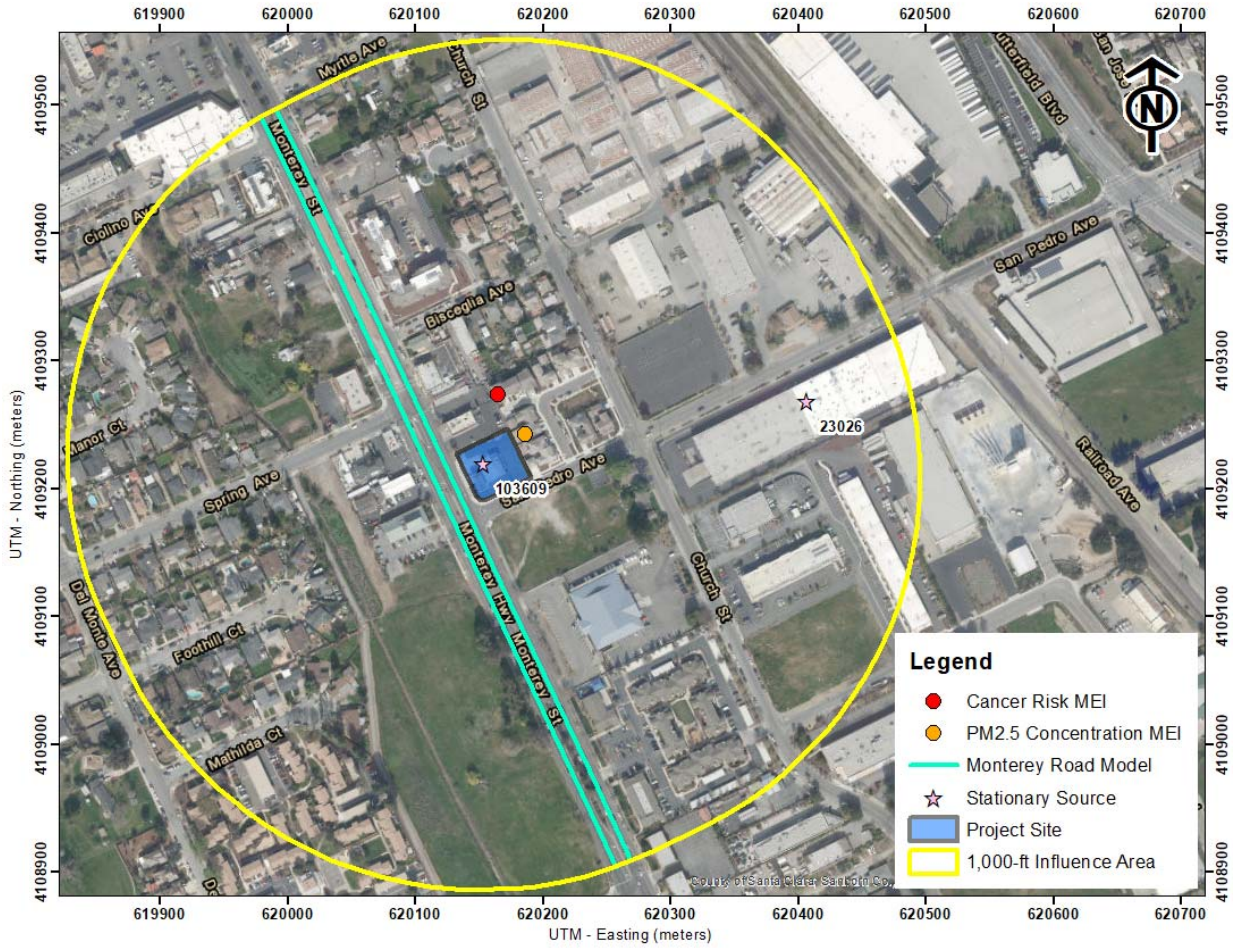
[22] CARB. 2013. *Revised Emissions Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities.* December 23, 2013.

Combined Impact of All TAC Sources on the Off-Site Construction MEIs

Community health risk assessments typically look at all substantial sources of TACs that can affect sensitive receptors that are located within 1,000 feet of the project site (i.e., influence area). These sources include rail lines, freeways or highways, busy surface streets, and stationary sources identified by BAAQMD.

A review of the project area and provided traffic information indicates that traffic on Monterey Road has an average daily traffic (ADT) of over 10,000 vehicles. All other roadways within the area are assumed to have an ADT that is less than 10,000 vehicles. Two stationary sources were identified within the 1,000-foot influence area using the BAAQMD's stationary source geographic information systems (GIS) map tool.[23] Figure 2 shows the sources affecting the MEsI. Community risk impacts from these sources upon the MEIs are reported in Table 7. Details of the modeling and community risk calculations are included in *Attachment 5*.

Figure 2. Project Site, MEIs, and Nearby TAC and $PM_{2.5}$ Sources



[23] BAAQMD, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65

Local Roadways – Monterey Road

A refined analysis of potential health impacts from vehicle traffic on Monterey Road was conducted. The refined analysis involved predicting emissions for the traffic volume and mix of vehicle types on the roadway near the project site and using an atmospheric dispersion model to predict exposure to TACs. The associated cancer risks are then computed based on the modeled exposures. *Attachment 1* includes a description of how community risk impacts, including cancer risk are computed.

Emission Rates

This analysis involved the development of DPM, organic TACs, and $PM_{2.5}$ emissions for traffic on both roadways using the Caltrans version of the EMFAC2017 emissions model, known as CT-EMFAC2017. CT-EMFAC2017 provides emission factors for mobile source criteria pollutants and TACs, including DPM. Emission processes modeled include running exhaust for DPM, $PM_{2.5}$ and total organic compounds (e.g., TOG), running evaporative losses for TOG, and tire and brake wear and fugitive road dust for $PM_{2.5}$. All $PM_{2.5}$ emissions from all vehicles were used, rather than just the $PM_{2.5}$ fraction from diesel powered vehicles, because all vehicle types (i.e., gasoline and diesel powered) produce $PM_{2.5}$. Additionally, $PM_{2.5}$ emissions from vehicle tire and brake wear and from re-entrained roadway dust were included in these emissions. DPM emissions are projected to decrease in the future and are reflected in the CT-EMFAC2017 emissions data. Inputs to the model include region (i.e., Santa Clara County), type of road (i.e., major/collector), truck percentage for non-state highways in Santa Clara County (3.51 percent),[24] traffic mix assigned by CT-EMFAC2017 for the county, year of analysis (2022 – construction start year), and season (annual).

The average daily traffic (ADT) for Monterey Road based on AM and PM peak-hour cumulative plus project traffic volumes for the nearby roadways provided by the project's traffic consultant.[25] The calculated ADT on Monterey Road was 21,965 vehicles. Average hourly traffic distributions for Santa Clara County roadways were developed using the EMFAC model,[26] which were then applied to the ADT volumes to obtain estimated hourly traffic volumes and emissions for the roadway. An average travel speed of 35 miles per hour (mph) on Monterey Road was used for all hours of the day based on posted speed limit signs on the roadway.

In order to estimate TAC and $PM_{2.5}$ emissions over the 30-year exposure period used for calculating the increased cancer risks for sensitive receptors at the MEI and project site, the CT-EMFAC2017 model was used to develop vehicle emission factors for the year 2022 (project construction year). Year 2022 emissions were conservatively assumed as being representative of future conditions over the time period that cancer risks are evaluated.

[24] Bay Area Air Quality Management District, 2012, *Recommended Methods for Screening and Modeling Local Risks and Hazards, Version 3.0.* May. Web: https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/risk-modeling-approach-may-2012.pdf?la=en

[25] Email correspondence with Maria Kisyova, Associate Project Manager, David J. Powers & Associates, Inc., May 26, 2021, Attachment: *World Oil Gas Trip Gen and Volumes 05-26-21.xlsx*.

[26] The Burden output from EMFAC2007, a previous version of CARB's EMFAC model, was used for this since the current web-based version of EMFAC2021 does not include Burden type output with hour by hour traffic volume information.

Dispersion Modeling

Dispersion modeling of TAC and $PM_{2.5}$ emissions was conducted using the EPA AERMOD air quality dispersion model, which is recommended by the BAAQMD for this type of analysis.[27] TAC and $PM_{2.5}$ emissions from traffic on Monterey Road within 1,000 feet of the project site were evaluated. Vehicle traffic on the roadway was modeled using line-area sources (a series of adjacent area sources along a line), with line segments used for the northbound and southbound travel directions on Monterey Road. The same meteorological data and off-site MEI sensitive receptors used in the previous dispersion modeling were used in the roadway modeling. Other inputs to the model included road geometry, hourly traffic emissions, and receptor locations. Annual TAC and $PM_{2.5}$ concentrations for 2022 from traffic on Monterey Road were calculated using the model. Concentrations were calculated at the project MEIs with receptor heights of 5 feet (1.5 meters) to represent the breathing heights of residents in the adjacent townhomes.

Figure 2 shows the roadway segments modeled and residential receptor locations used in the modeling. Table 7 lists the risks and hazards from the roadway. The emission rates and roadway calculations used in the analysis are shown in *Attachment 5*.

BAAQMD Permitted Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Permitted Stationary Sources 2018* GIS website,[28] which identifies the location of nearby stationary sources and their estimated risk and hazard impacts, including emissions and adjustments to account for new OEHHA guidance. Two sources, a gas dispensing facility and generic equipment, were identified using this tool. A Stationary Source Information Form (SSIF) containing the identified sources was prepared and submitted to BAAQMD. BAAQMD provided input and clarification about the stationary sources.[29] After further review, source #103609 is the project gas station, so it was removed from the cumulative analysis as its net risk impacts were included in the project's impacts.

The screening level risks and hazards provided by BAAQMD for the stationary source was adjusted for distance using BAAQMD's *Distance Adjustment Multiplier Tool for Generic Equipment*. Community risk impacts from the stationary sources upon the MEIs are reported in Table 7.

Summary of Cumulative Risks at Off-Site Project MEIs

Table 7 reports both the project and cumulative community risk impacts at the sensitive receptors most affected by the project (i.e., MEIs). The project's community risk from project construction activities would not exceed the single-source maximum increased cancer risk, $PM_{2.5}$ concentration,

[27] BAAQMD. *Recommended Methods for Screening and Modeling Local Risks and Hazards*. May 2012
[28] BAAQMD, https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65
[29] Correspondence with Matthew Hanson, Environmental Planner, BAAQMD, July 13, 2021.

or HI thresholds. In addition, the combined cancer risk, $PM_{2.5}$ concentration, and HI values would not exceed their respective cumulative thresholds.

Table 7. Cumulative Community Risk Impacts from Combined TAC Sources at MEIs

Source		Cancer Risk* (per million)	Annual $PM_{2.5}$* ($\mu g/m^3$)	Hazard Index
Project Impacts				
Proposed Project (Construction and Operation)	Unmitigated	6.34 (infant)	0.07	0.01
BAAQMD Single-Source Threshold		***>10.0***	***>0.3***	***>1.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*
Cumulative Sources				
Monterey Road, ADT 21,965		2.05 (infant)	0.14	<0.01
Airtronics Metal Products (Facility ID #23026, Spray booths, Ovens), MEIs at 650 feet		<0.01	0.01	-
Combined Sources	*Unmitigated*	<8.40 (infant)	0.22	<0.02
BAAQMD Cumulative Source Threshold		***>100***	***>0.8***	***>10.0***
Exceed Threshold?	Unmitigated	*No*	*No*	*No*

Greenhouse Gas Emissions

Setting

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2, CH_4, and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of CO_2 equivalents (CO_2e).

An expanding body of scientific research supports the theory that global climate change is currently affecting changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Recent Regulatory Actions for California GHG Emissions

Executive Order S-3-05 – California GHG Reduction Targets

Executive Order (EO) S-3-05 was signed by Governor Arnold Schwarzenegger in 2005 to set GHG emission reduction targets for California. The three targets established by this EO are as follows: (1) reduce California's GHG emissions to 2000 levels by 2010, (2) reduce California's GHG emissions to 1990 levels by 2020, and (3) reduce California's GHG emissions by 80 percent below 1990 levels by 2050.

Assembly Bill 32 (AB 32), California Global Warming Solutions Act (2006)

AB 32, the Global Warming Solutions Act of 2006, codified the State's GHG emissions target by directing CARB to reduce the State's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, the CARB, CEC, California Public Utilities Commission (CPUC), and Building Standards Commission have all been developing regulations that will help meet the goals of AB 32 and Executive Order S-3-05.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State's main strategies to reduce GHGs from business-as-usual emissions projected in 2020 back down to 1990 levels. Business-as-usual (BAU) is the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 million metric tons (MMT) of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. CARB updated the future 2020 BAU annual emissions forecast, in light of the economic downturn, to 545 MMT of CO_2e. Two GHG emissions reduction measures currently enacted that were not previously included in the 2008 Scoping Plan baseline inventory were included, further reducing the baseline inventory to 507 MMT of CO_2e. Thus, an estimated reduction of 80 MMT of CO_2e is necessary to reduce statewide emissions to meet the AB 32 target by 2020.

Executive Order B-30-15 & Senate Bill 32 GHG Reduction Targets – 2030 GHG Reduction Target

In April 2015, Governor Brown signed Executive Order which extended the goals of AB 32, setting a greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed SB 32, which legislatively established the GHG reduction target of 40 percent of 1990 levels by 2030. In November 2017, CARB issued *California's 2017 Climate Change Scoping Plan*. While the State is on track to exceed the AB 32 scoping plan 2020 targets, this plan is an update to reflect the enacted SB 32 reduction target.

SB 32 was passed in 2016, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels. CARB is currently working on a second update to the Scoping Plan to reflect the 2030 target set by Executive Order B-30-15 and codified by SB 32. The proposed Scoping Plan Update was published on January 20, 2017 as directed by SB 32 companion legislation AB 197. The mid-term 2030 target is considered critical by CARB on the path to obtaining an even deeper GHG emissions target of 80 percent below 1990 levels by 2050, as directed in Executive Order S-3-05. The Scoping Plan outlines the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure, providing a blueprint to continue driving down GHG emissions and obtain the statewide goals.

The new Scoping Plan establishes a strategy that will reduce GHG emissions in California to meet the 2030 target (note that the AB 32 Scoping Plan only addressed 2020 targets and a long-term goal). Key features of this plan are:

- Cap and Trade program places a firm limit on 80 percent of the State's emissions;
- Achieving a 50-percent Renewable Portfolio Standard by 2030 (currently at about 29 percent statewide);
- Increase energy efficiency in existing buildings;
- Develop fuels with an 18-percent reduction in carbon intensity;
- Develop more high-density, transit-oriented housing;
- Develop walkable and bikeable communities;
- Increase the number of electric vehicles on the road and reduce oil demand in half;
- Increase zero-emissions transit so that 100 percent of new buses are zero emissions;
- Reduce freight-related emissions by transitioning to zero emissions where feasible and near-zero emissions with renewable fuels everywhere else; and
- Reduce "super pollutants" by reducing methane and HFCs by 40 percent.

In the updated Scoping Plan, CARB recommends statewide targets of no more than 6 metric tons CO_2e per capita (statewide) by 2030 and no more than 2 metric tons CO_2e per capita by 2050. The statewide per capita targets account for all emissions sectors, statewide population forecasts, and the statewide reductions necessary to achieve the 2030 statewide target under SB 32 and the longer-term State emissions reduction goal of 80 percent below 1990 levels by 2050.

Executive Order B-55-18 – Carbon Neutrality

In 2018, a new statewide goal was established to achieve carbon neutrality as soon as possible, but no later than 2045, and to maintain net negative emissions thereafter. CARB and other relevant state agencies are tasked with establishing sequestration targets and create policies/programs that would meet this goal.

Senate Bill 375, California's Regional Transportation and Land Use Planning Efforts (2008)

California enacted legislation (SB 375) to expand the efforts of AB 32 by controlling indirect GHG emissions caused by urban sprawl. SB 375 provides incentives for local governments and applicants to implement new conscientiously planned growth patterns. This includes incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The legislation also allows applicants to bypass certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. Development of more alternative transportation options that would reduce vehicle trips and miles traveled, along with traffic congestion, would be encouraged. SB 375 enhances CARB's ability to reach the AB 32 goals by directing the agency in developing regional GHG emission reduction targets to be achieved from the transportation sector for 2020 and 2035. CARB works with the metropolitan planning organizations (e.g. Association of Bay Area Governments [ABAG] and Metropolitan Transportation Commission [MTC]) to align their regional transportation, housing, and land use plans to reduce vehicle miles traveled and demonstrate the region's ability to attain its GHG

reduction targets. A similar process is used to reduce transportation emissions of ozone precursor pollutants in the Bay Area.

SB 350 Renewable Portfolio Standards

In September 2015, the California Legislature passed SB 350, which increases the states Renewables Portfolio Standard (RPS) for content of electrical generation from the 33 percent target for 2020 to a 50 percent renewables target by 2030.

Senate Bill 100 – Current Renewable Portfolio Standards

In September 2018, SB 100 was signed by Governor Brown to revise California's RPS program goals, furthering California's focus on using renewable energy and carbon-free power sources for its energy needs. The bill would require all California utilities to supply a specific percentage of their retail sales from renewable resources by certain target years. By December 31, 2024, 44 percent of the retails sales would need to be from renewable energy sources, by December 31, 2026 the target would be 40 percent, by December 31, 2017 the target would be 52 percent, and by December 31, 2030 the target would be 60 percent. By December 31, 2045, all California utilities would be required to supply retail electricity that is 100 percent carbon-free and sourced from eligible renewable energy resource to all California end-use customers.

California Building Standards Code – Title 24 Part 11 & Part 6

The California Green Building Standards Code (CALGreen Code) is part of the California Building Standards Code under Title 24, Part 11.[30] The CALGreen Code encourages sustainable construction standards that involve planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code (2019 California Building Standard Code) was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the California Energy Commission (CEC). This code includes design requirements to conserve energy in new residential and non-residential developments, while being cost effective for homeowners. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1,2020. Under the 2019 standards, single-family homes are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For nonresidential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.[31]

[30] See: https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020.
[31] See: https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

Federal and Statewide GHG Emissions

The U.S. EPA reported that in 2018, total gross nationwide GHG emissions were 6,676.6 million metric tons (MMT) carbon dioxide equivalent (CO_2e).[32] These emissions were lower than peak levels of 7,416 MMT that were emitted in 2007. CARB updates the statewide GHG emission inventory on an annual basis where the latest inventory includes 2000 through 2017 emissions.[33] In 2017, GHG emissions from statewide emitting activities were 424 MMT. The 2017 emissions have decreased by 14 percent since peak levels in 2004 and are 7 MMT below the 1990 emissions level and the State's 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.1 MT per person to 10.7 MT per person in 2017. The most recent Bay Area emission inventory was computed for the year 2011.[34] The Bay Area GHG emission were 87 MMT. As a point of comparison, statewide emissions were about 444 MMT in 2011

Morgan Hill 2035 General Plan

The Climate Change section of the Natural Resources and Environment chapter of the Morgan Hill 2035 General Plan contains goals, policies and implementing actions that pertain to GHG emissions. Applicable General Plan policies are listed below:

Goal NRE-15 An adaptive and resilient community that responds to climate change.

Policy NRE-15.1 **Greenhouse Gas Emission Reduction Targets**. Maintain a greenhouse gas reduction trajectory that is consistent with the greenhouse gas reduction targets of Executive Orders B-30-15 (40 percent below 1990 levels by 2030) and S-03-05 (80 percent below 1990 levels by 2050) to ensure the City is consistent with statewide efforts to reduce greenhouse gas emissions.

Policy NRE-15.2 **Linking Land Use and Transportation**. Encourage land use and transportation patterns that reduce dependence on automobiles.

Policy NRE-15.3 **Climate Action Plan**. Utilize policies in this General Plan denoted with the green leaf symbol as the City's greenhouse gas emissions reduction strategy.

Policy NRE-15.4 **Sustainable Land Use**. Promote land use patterns that reduce the number and length of motor vehicle trips.

Policy NRE-15.5 **Jobs Housing Balance**. To the extent feasible, encourage a balance and match between jobs and housing.

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[32] United States Environmental Protection Agency, 2020. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018*. April. Web: https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf.

[33] CARB. 2019. *2019 Edition, California Greenhouse Gas Emission Inventory: 2000 – 2017*. Web: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf.

[34] BAAQMD. 2015. *Bay Area Emissions Inventory Summary Report: Greenhouse Gases Base Year 2011*. January. Web: http://www.baaqmd.gov/~/media/files/planning-and-research/emission-inventory/by2011_ghgsummary.pdf.

Policy NRE-15.6 **Residential Near Transit**. Encourage higher density residential and mixed-use development adjacent to commercial centers and transit corridors – the land along or within walking distance of a street served by transit.

Policy NRE-15.7 **Mix of Uses in Employment Centers**. Encourage employment areas to include a mix of support services to minimize the number of employee trips.

Policy NRE-15.8 **Walkable City**. Encourage retail and office areas to be located within walking and biking distance of existing and proposed residential developments.

Policy NRE-15.9 **Urban Forest**. Support development and maintenance of a healthy, vibrant urban forest through outreach, incentives, and strategic leadership.

Policy NRE-15.10 **VMT Reduction**. Continue to work with the Santa Clara Valley Transportation Authority on regional transportation solutions that will reduce vehicle miles traveled and greenhouse gas emissions.

Policy NRE-15.11 **Green Building**. Promote green building practices in new development.

The General Plan's Energy Efficiency section contains policies that indirectly reduce GHG emissions:

Goal NRE-16 Conservation of energy resources.

Policy NRE-16.1 **Energy Standards for New Development**. New development, including public buildings, should be designed to exceed State standards for the use of energy.

Policy NRE-16.2 **Energy Conservation**. Promote energy conservation techniques and energy efficiency in building design, orientation, and construction.

Policy NRE-16.3 **Energy Use Data and Analysis**. Provide information to increase building owner, tenant, and operator knowledge about how, when, and where building energy is used.

Policy NRE-16.5 **Energy Efficiency**. Encourage development project designs that protect and improve air quality and minimize direct and indirect air pollutant emissions by including components that promote energy efficiency.

Policy NRE-16.6 **Landscaping for Energy Conservation**. Encourage landscaping plans for new development to address the planting of trees and shrubs that will provide shade to reduce the need for cooling systems and allow for winter daylighting.

Policy NRE-16.7 **Renewable Energy**. Encourage new and existing development to incorporate renewable energy generating features, like solar panels and solar hot water heaters.

Policy NRE-16.8 **Residential Development Code**. Emphasize energy conservation building techniques for new residential construction through the implementation of Chapter 18.78 of the Municipal Code.

Policy NRE-16.9 **Subdivision Design**. In compliance with Section 66473.1 of the State Subdivision Map Act, promote subdivision design that provides for passive solar heating and natural cooling through the Development Review Committee subdivision review procedures.

However, the City does not have a CAP, a CAP Compliance Checklist, or a specific metric ton GHG threshold for project-level construction or operation. Therefore, the BAAQMD's CEQA Air Quality Guideline's thresholds are used.

BAAQMD GHG Significance Thresholds

The BAAQMD's CEQA Air Quality Guidelines do not use quantified thresholds for projects that are in a jurisdiction with a qualified GHG reductions plan (i.e., a Climate Action Plan). The plan has to address emissions associated with the period that the project would operate (e.g., beyond year 2020). For quantified emissions, the guidelines recommended a GHG threshold of 1,100 metric tons or 4.6 metric tons (MT) per capita. These thresholds were developed based on meeting the 2020 GHG targets set in the scoping plan that addressed AB 32. Development of the project would occur beyond 2020, so a threshold that addresses a future target is appropriate.

Although BAAQMD has not published a quantified threshold for 2030 yet, this assessment uses a "Substantial Progress" efficiency metric of 2.8 MT CO_2e/year/service population and a bright-line threshold of 660 MT CO_2e/year based on the GHG reduction goals of EO B-30-15. The service population metric of 2.8 is calculated for 2030 based on the 1990 inventory and the projected 2030 statewide population and employment levels.[35] The 2030 bright-line threshold is a 40 percent reduction of the 2020 1,100 MT CO_2e/year threshold. Evidence published by the State indicates the AB 32 goal of reducing statewide GHG emissions to 1990 levels was met prior to 2020. Current State plans are to further reduce emissions to 40% below 1990 levels by 2030. Assuming statewide emissions are at 1990 levels or lower in 2020, it would be logical to reduce the BAAQMD-recommended threshold for meeting the AB 32 threshold by 40% to develop a threshold for 2030.

Impact GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

GHG emissions associated with development of the proposed project would occur over the short-term from construction activities, consisting primarily of emissions from equipment exhaust and worker and vendor trips. There would also be long-term operational emissions associated with

[35] Bay Area Air Quality Management District, 2016. *CLE International 12th Annual Super-Conference CEQA Guidelines, Case Law and Policy Update*. December.

vehicular traffic within the project vicinity, energy and water usage, and solid waste disposal. Emissions for the proposed project are discussed below and were analyzed using the methodology recommended in the BAAQMD CEQA Air Quality Guidelines.

CalEEMod Modeling

CalEEMod was used to predict GHG emissions from operation of the site assuming full build-out of the project. The project land use types and size and other project-specific information were input to the model, as described above within the operational period emissions. CalEEMod output is included in *Attachment 2*.

Service Population Emissions

The project service population efficiency rate is based on the number of future employees. According to the project applicant, there would be three full time employees working at the proposed gas station. This total service population was used to calculate the per capita emissions.

Construction Emissions

GHG emissions associated with construction were computed to be 30 MT of CO_2e for the total construction period. These are the emissions from on-site operation of construction equipment, vendor and hauling truck trips, and worker trips. Neither the City nor BAAQMD have an adopted threshold of significance for construction-related GHG emissions, though BAAQMD recommends quantifying emissions and disclosing that GHG emissions would occur during construction. BAAQMD also encourages the incorporation of best management practices to reduce GHG emissions during construction where feasible and applicable.

Operational Emissions

The CalEEMod model, along with the project vehicle trip generation rates, was used to estimate daily emissions associated with operation of the fully developed site under the proposed project. As shown in Table 8, the net annual emissions resulting from operation of the proposed project are predicted to be 289 MT of CO_2e in 2023 and 252 MT of CO_2e in 2030. The service population emission for the year 2023 and 2030 are predicted to be 365.4 and 319.5 MT/CO_2e/year/service population, respectively.

To be considered an exceedance, the project must have emissions above both the GHG significance threshold in metric tons per year and the service population significance threshold in the future year of 2030. As shown in Table 8, the project would not exceed the annual emissions bright-line threshold of 660 MT CO_2e/year in 2030. Therefore, the project would not exceed thresholds for GHG emissions.

Table 8. Annual Project GHG Emissions (CO_2e) in Metric Tons and Per Capita

Source Category	Existing Land Use		Proposed Project	
	2023	**2030**	**2023**	**2030**
Area	0	0	0	0
Energy Consumption	1	1	1	1
Mobile	806	705	1,095	957
Solid Waste Generation	0	0	0	0
Water Usage	0	0	0	0
Total (MT CO_{2e}/year)	807	706	1,096	958
Net Emissions			289 MT CO_{2e}/year	252 MT CO_{2e}/year
Significance Threshold				***660 MT CO_2e/year***
Service Population Emissions (MT CO_{2e}/year/service population)			**365.4**	**319.5**
Significance Threshold				***2.8 in 2030***
Exceeds both thresholds?				*No*

Supporting Documentation

Attachment 1 is the methodology used to compute community risk impacts, including the methods to compute lifetime cancer risk from exposure to project emissions.

Attachment 2 includes the CalEEMod output for project construction and operational criteria air pollutant and GHG emissions. The operational outputs for existing and 2030 uses are also included in this attachment. Also included are any modeling assumptions.

Attachment 3 includes the EMFAC2021 emissions modeling. The input files for these calculations are voluminous and are available upon request in digital format.

Attachment 4 is the construction health risk assessment. AERMOD dispersion modeling files for these assessments, which are quite voluminous, are available upon request and would be provided in digital format.

Attachment 5 includes the cumulative community risk calculations, modeling results, and health risk calculations from sources affecting the construction MEIs.

Attachment 1: Health Risk Calculation Methodology

A health risk assessment (HRA) for exposure to Toxic Air Contaminates (TACs) requires the application of a risk characterization model to the results from the air dispersion model to estimate potential health risk at each sensitive receptor location. The State of California Office of Environmental Health Hazard Assessment (OEHHA) and California Air Resources Board (CARB) develop recommended methods for conducting health risk assessments. The most recent OEHHA risk assessment guidelines were published in February of 2015.[36] These guidelines incorporate substantial changes designed to provide for enhanced protection of children, as required by State law, compared to previous published risk assessment guidelines. CARB has provided additional guidance on implementing OEHHA's recommended methods.[37] This HRA used the 2015 OEHHA risk assessment guidelines and CARB guidance. The BAAQMD has adopted recommended procedures for applying the newest OEHHA guidelines as part of Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants.[38] Exposure parameters from the OEHHA guidelines and the recent BAAQMD HRA Guidelines were used in this evaluation.

Cancer Risk

Potential increased cancer risk from inhalation of TACs is calculated based on the TAC concentration over the period of exposure, inhalation dose, the TAC cancer potency factor, and an age sensitivity factor to reflect the greater sensitivity of infants and children to cancer causing TACs. The inhalation dose depends on a person's breathing rate, exposure time and frequency and duration of exposure. These parameters vary depending on the age, or age range, of the persons being exposed and whether the exposure is considered to occur at a residential location or other sensitive receptor location.

The current OEHHA guidance recommends that cancer risk be calculated by age groups to account for different breathing rates and sensitivity to TACs. Specifically, they recommend evaluating risks for the third trimester of pregnancy to age zero, ages zero to less than two (infant exposure), ages two to less than 16 (child exposure), and ages 16 to 70 (adult exposure). Age sensitivity factors (ASFs) associated with the different types of exposure are an ASF of 10 for the third trimester and infant exposures, an ASF of 3 for a child exposure, and an ASF of 1 for an adult exposure. Also associated with each exposure type are different breathing rates, expressed as liters per kilogram of body weight per day (L/kg-day) or liters per kilogram of body weight per 8-hour period for the case of worker or school child exposures. As recommended by the BAAQMD for residential exposures, 95th percentile breathing rates are used for the third trimester and infant exposures, and 80th percentile breathing rates for child and adult exposures. For children at schools and daycare facilities, BAAQMD recommends using the 95th percentile 8-hour breathing rates. Additionally, CARB and the BAAQMD recommend the use of a residential exposure duration of

[36] OEHHA, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. Office of Environmental Health Hazard Assessment. February.
[37] CARB, 2015. *Risk Management Guidance for Stationary Sources of Air Toxics*. July 23.
[38] BAAQMD, 2016. *BAAQMD Air Toxics NSR Program Health Risk Assessment (HRA) Guidelines*. December 2016.

30 years for sources with long-term emissions (e.g., roadways). For workers, assumed to be adults, a 25-year exposure period is recommended by the BAAQMD. For school children a 9-year exposure period is recommended by the BAAQMD.

Under previous OEHHA and BAAQMD HRA guidance, residential receptors are assumed to be at their home 24 hours a day, or 100 percent of the time. In the 2015 Risk Assessment Guidance, OEHHA includes adjustments to exposure duration to account for the fraction of time at home (FAH), which can be less than 100 percent of the time, based on updated population and activity statistics. The FAH factors are age-specific and are: 0.85 for third trimester of pregnancy to less than 2 years old, 0.72 for ages 2 to less than 16 years, and 0.73 for ages 16 to 70 years. Use of the FAH factors is allowed by the BAAQMD if there are no schools in the project vicinity have a cancer risk of one in a million or greater assuming 100 percent exposure (FAH = 1.0).

Functionally, cancer risk is calculated using the following parameters and formulas:

Cancer Risk (per million) = $CPF \times Inhalation\ Dose \times ASF \times ED/AT \times FAH \times 10^6$

Where:

CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = $C_{air} \times DBR^* \times A \times (EF/365) \times 10^{-6}$

Where:

C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
8HrBR = 8-hour breathing rate (L/kg body weight-8 hours)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

* An 8-hour breathing rate (8HrBR) is used for worker and school child exposures.

The health risk parameters used in this evaluation are summarized as follows:

Parameter	*Exposure Type* →	Infant		Child	Adult
	Age Range →	3rd Trimester	0<2	2 < 16	16 - 30
DPM Cancer Potency Factor $(mg/kg\text{-}day)^{-1}$		1.10E+00	1.10E+00	1.10E+00	1.10E+00
Daily Breathing Rate (L/kg-day) 80th Percentile Rate		273	758	572	261
Daily Breathing Rate (L/kg-day) 95th Percentile Rate		361	1,090	745	335
8-hour Breathing Rate (L/kg-8 hours) 95th Percentile Rate		-	1,200	520	240
Inhalation Absorption Factor		1	1	1	1
Averaging Time (years)		70	70	70	70
Exposure Duration (years)		0.25	2	14	14*
Exposure Frequency (days/year)		350	350	350	350*
Age Sensitivity Factor		10	10	3	1
Fraction of Time at Home (FAH)		0.85-1.0	0.85-1.0	0.72-1.0	0.73*

Non-Cancer Hazards

Non-cancer health risk is usually determined by comparing the predicted level of exposure to a chemical to the level of exposure that is not expected to cause any adverse effects (reference exposure level), even to the most susceptible people. Potential non-cancer health hazards from TAC exposure are expressed in terms of a hazard index (HI), which is the ratio of the TAC concentration to a reference exposure level (REL). OEHHA has defined acceptable concentration levels for contaminants that pose non-cancer health hazards. TAC concentrations below the REL are not expected to cause adverse health impacts, even for sensitive individuals. The total HI is calculated as the sum of the HIs for each TAC evaluated and the total HI is compared to the BAAQMD significance thresholds to determine whether a significant non-cancer health impact from a project would occur.

Typically, for residential projects located near roadways with substantial TAC emissions, the primary TAC of concern with non-cancer health effects is diesel particulate matter (DPM). For DPM, the chronic inhalation REL is 5 micrograms per cubic meter ($\mu g/m^3$).

Annual $PM_{2.5}$ Concentrations

While not a TAC, fine particulate matter ($PM_{2.5}$) has been identified by the BAAQMD as a pollutant with potential non-cancer health effects that should be included when evaluating potential community health impacts under the California Environmental Quality Act (CEQA). The thresholds of significance for $PM_{2.5}$ (project level and cumulative) are in terms of an increase in the annual average concentration. When considering $PM_{2.5}$ impacts, the contribution from all sources of $PM_{2.5}$ emissions should be included. For projects with potential impacts from nearby local roadways, the $PM_{2.5}$ impacts should include those from vehicle exhaust emissions, $PM_{2.5}$ generated from vehicle tire and brake wear, and fugitive emissions from re-suspended dust on the roads.

Attachment 2: CalEEMod Modeling Inputs and Outputs

Air Quality/Noise Construction Information Data Request

Project Name: WOF052-Morgan Hill

Complete ALL Portions in Yellow

See Equipment Type TAB for type, horsepower and load factor

Project Size

	Dwelling Units	21,003 SF (0.48 AC) total project acres disturbed
	s.f. residential	
	s.f. retail	
	s.f. office/commercial	
2,114	s.f. other, specify:	Gasoline Station building
	s.f. parking garage	spaces
14,878	s.f. parking lot	11 spaces

Construction Hours 7:00 am to 4:00 pm

Pile Driving? Y/N? (N)

Project include OPERATIONAL GENERATOR OR FIRE PUMP on-site? Y/N? (N)

IF YES (if BOTH separate values) -->

Kilowatts/Horsepower: _____

Fuel Type: _____

Location in project (Plans Desired if Available):

DO NOT MULTIPLY EQUIPMENT HOURS/DAY BY THE QUANTITY OF EQUIPMENT

Quantity	Description	HP	Load Factor	Hours/day	Total Work Days	Avg. Hours per day	Annual Hours	Comments
	Demolition	**Start Date:**	**1/3/2022**	**Total phase:**	**3**			**Overall Import/Export Volumes**
		End Date:	**1/5/2022**					
1	Concrete/Industrial Saws	81	0.73	6	2	4	12	**Demolition Volume**
1	Excavators	158	0.38	8	2	5.333333333	16	Square footage of buildings to be demolished
1	Rubber-Tired Dozers	247	0.4	8	3	8	24	(*or* total tons to be hauled)
1	Tractors/Loaders/Backhoes	97	0.37	8	3	8	24	**880** square feet *or*
								? Hauling volume (tons)
								Any pavement demolished and hauled? **150 tons**
	Site Preparation	**Start Date:**	**1/6/2022**	**Total phase:**	**2**			
		End Date:	**1/7/2022**					
1	Graders	187	0.41	8	2	8	16	
1	Rubber Tired Dozers	247	0.4	8	2	8	16	
1	Tractors/Loaders/Backhoes	97	0.37	8	2	8	16	
	Grading / Excavation	**Start Date:**	**1/10/2022**	**Total phase:**	**3**			
		End Date:	**1/12/2022**					**Soil Hauling Volume**
0	Excavators	158	0.38	0	0	0	0	Export volume = **500** cubic yards?
1	Graders	187	0.41	8	2	5.333333333	16	Import volume = **0** cubic yards?
1	Rubber Tired Dozers	247	0.4	8	2	5.333333333	16	
0	Concrete/Industrial Saws	81	0.73	0	0	0	0	
1	Tractors/Loaders/Backhoes	97	0.37	8	2	5.333333333	16	
	Other Equipment?							
	Trenching/Foundation	**Start Date:**	**1/13/2022**	**Total phase:**	**3**			
		End Date:	**1/17/2022**					
1	Tractor/Loader/Backhoe	97	0.37	8	2	5.333333333	16	
0	Excavators	158	0.38	0		0	0	
	Other Equipment?							
	Building - Exterior	**Start Date:**	**1/18/2022**	**Total phase:**	**139**			**Cement Trucks? 12 Total Round-Trips**
		End Date:	**7/30/2022**					
1	Cranes	231	0.29	8	14	0.805755396	112	Electric? (Y/N) **Y** Otherwise assumed diesel
1	Forklifts	89	0.2	8	21	1.208633094	168	Liquid Propane (LPG)? (Y/N) **N** Otherwise Assumed diesel
	Generator Sets	84	0.74			0	0	Or temporary line power? (Y/N) **Y**
1	Tractors/Loaders/Backhoes	97	0.37	8	14	0.805755396	112	
	Welders	46	0.45			0	0	
	Other Equipment?					0		
	Building - Interior/Architectural Coating	**Start Date:**	**8/1/2022**	**Total phase:**	**15**			
		End Date:	**8/15/2022**					
2	Air Compressors	78	0.48	8	7	3.733333333	112	
2	Aerial Lift	62	0.31	8	7	3.733333333	112	
	Other Equipment?							
	Paving	**Start Date:**	**8/16/2022**	**Total phase:**	**3**			
		Start Date:	**8/18/2022**					
	Cement and Mortar Mixers	9	0.56			0	0	
	Pavers	130	0.42			0	0	**Asphalt? _95__ cubic yards or ____ round trips?**
1	Paving Equipment	132	0.36	8	2	5.333333333	16	
1	Rollers	80	0.38	8	2	5.333333333	16	
1	Tractors/Loaders/Backhoes	97	0.37	8	2	5.333333333	16	
	Other Equipment?							
	Additional Phases	**Start Date:**		**Total phase:**				
		Start Date:						

Equipment types listed in "Equipment Types" worksheet tab.

Equipment listed in this sheet is to provide an example of inputs

It is assumed that water trucks would be used during grading

Add or subtract phases and equipment, as appropriate

Modify horepower or load factor, as appropriate

Complete one sheet for each project component

Traffic Consultant Trip Gen						CalEEMod Default		
Land Use	Size		Daily Trips	New Trips	Weekday Trip Gen	Weekday	Sat	Sun
Gasoline/Service Station with Convenience Market	Pumps	6	2464	1084	***180.67***	322.5	322.5	322.5
Pass-by Reduction	56%		*-1380*			*Rev*	***180.67***	***180.67***
Existing								
Gasoline/Service Station	Pumps	4	1376	798	***199.50***	322.5	322.5	322.5
Pass-by Reduction	42%		*-578*			*Rev*	***199.50***	***199.50***

World Oil Trip Generation Estimates

Land Use	ITE Land Use Code [1]	Size	Daily Rate	Daily Trip	AM Peak Hour Pk-Hr Rate	AM Peak Hour Trip In	AM Peak Hour Trip Out	AM Peak Hour Trip Total	PM Peak Hour Pk-Hr Rate	PM Peak Hour Trip In	PM Peak Hour Trip Out	PM Peak Hour Trip Total
Proposed Land Use												
Gasoline/Service Station with Convenience Market	945	12 Vehicle Fueling Positions	205.36	2,464	12.47	77	73	150	13.99	86	82	168
Pass-by Reduction[2]			56%	-1,380	62%	-48	-45	-93	56%	-48	-46	-94
Sub-Total				*1,084*		*29*	*28*	*57*		*38*	*36*	*74*
Existing Land Use Credit												
Gasoline/Service Station	944	8 Vehicle Fueling Positions	172.01	-1,376	10.28	-41	-41	-82	14.03	-57	-56	-113
Pass-by Reduction[2]			42%	578	58%	24	24	48	42%	24	24	48
Sub-Total				*-798*		*-17*	*-17*	*-34*		*-33*	*-32*	*-65*
Total Net Project Trips				**286**		**12**	**11**	**23**		**5**	**4**	**9**

Notes:

[1] Source: ITE *Trip Generation Manual*, 10th Edition 2017.

[2] AM and PM peak-hour passerby reduction rates obtained from the ITE Trip Generation Handbook, Third Edition. Daily peak-hour pass-by reductions are assumed to be the same as their PM peak-hour pass-by rate.

Construction Criteria Air Pollutants						
Unmitigated	ROG	NOX	PM10 Exhaust	PM2.5 Exhaust	**CO2e**	
Year	Tons				MT	
Construction Equipment						
2022	0.03	0.13	0.01	0.01	17.03	
EMFAC						
2022	0.003	0.02	0.001	0.0004	12.65	
Total Construction Emissions by Year						
2022	0.03	0.14	0.01	0.01	29.68	
	Total Construction Emissions					
Tons	0.03	0.14	0.01	0.01	29.68	
Pounds/Workdays	*Average Daily Emissions*				Workdays	
2022	0.35	1.74	0.09	0.07		**165**
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Operational Criteria Air Pollutants						
Unmitigated	ROG	NOX	Total PM10	Total PM2.5		
Year	Tons					
CalEEMod Total	0.67	0.68	0.99	0.25		
GDF Evap Total	0.52	0.00	0.00	0.00		
Total	1.19	0.68	0.99	0.25		
	Existing Use Emissions					
CalEEMod Total	0.49	0.50	0.73	0.18		
GDF Evap Total	0.33	0.00	0.00	0.00		
Total	0.82	0.50	0.73	0.18		
	Net Annual Operational Emissions					
Tons/year	0.37	0.18	0.26	0.07		
Threshold - Tons/year	**10.0**	**10.0**	**15.0**	**10.0**		
	Average Daily Emissions					
Pounds Per Day	2.01	0.98	1.44	0.41		
Threshold - lbs/day	**54.0**	**54.0**	**82.0**	**54.0**		

Category	**CO2e**			
	Project	Existing	Project 2030	Existing
Area	0.0003	0.0001	0.0003	0.0001
Energy	1.22	1.15	1.22	1.15
Mobile	1095.05	806.12	957.28	704.70
Waste	0.00	0.00	0.00	0.00
Water	0.04	0.09	0.04	0.09
TOTAL	1096.31	807.36	958.54	705.94
Net GHG Emissions		288.95		252.60
Service Population	3.00			
Per Capita Emissions		365.44		319.51

	0	units
CA DOF 1920 =	0	pphh

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	6.00	Pump	0.48	2,114.00	0
Parking Lot	11.00	Space	0.00	14,878.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	3			**Operational Year**	2023
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MWhr)	2	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CalEEMod SVCE

Land Use - Provided land uses - construction worksheet

Construction Phase - Provided construction schedule

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Grading - grading = 500cy export

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Demolition - existing building demo = 880-sf

Trips and VMT - EMFAC2021 0 Trips in CalEEMod, pavement demo = 150 tons, building const = 12 cement truck round trips, paving = 98-cy asphalt

Vehicle Trips - Trip gen provided by traffic and adjusted for different land uses, 100% primary to capture traffic passby reduction

Vehicle Emission Factors - EMFAC2021 Santa Clara County Vehicle Emissions Factors 2023

Fleet Mix - EMFAC2021 Santa Clara County Fleet Mix 2023

Water And Wastewater - Wastewater Treatment 100% Aerobic, no septic tanks of lagoons

Construction Off-road Equipment Mitigation - BMPs, Teri 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

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tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	100.00	139.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	2.00	3.00
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	PhaseEndDate	6/22/2022	8/19/2022
tblConstructionPhase	PhaseEndDate	6/8/2022	7/29/2022
tblConstructionPhase	PhaseEndDate	1/14/2022	1/5/2022
tblConstructionPhase	PhaseEndDate	1/19/2022	1/12/2022
tblConstructionPhase	PhaseEndDate	6/15/2022	8/18/2022
tblConstructionPhase	PhaseEndDate	1/17/2022	1/7/2022
tblConstructionPhase	PhaseStartDate	6/16/2022	8/1/2022
tblConstructionPhase	PhaseStartDate	1/20/2022	1/18/2022
tblConstructionPhase	PhaseStartDate	1/18/2022	1/10/2022
tblConstructionPhase	PhaseStartDate	6/9/2022	8/16/2022
tblConstructionPhase	PhaseStartDate	1/15/2022	1/6/2022
tblFleetMix	HHD	6.3620e-003	0.02
tblFleetMix	HHD	6.3620e-003	0.02
tblFleetMix	LDA	0.57	0.55
tblFleetMix	LDA	0.57	0.55
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.19	0.22

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tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.0410e-003	5.7850e-003
tblFleetMix	LHD2	5.0410e-003	5.7850e-003
tblFleetMix	MCY	0.02	3.5660e-003
tblFleetMix	MCY	0.02	3.5660e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	2.8380e-003	6.9000e-004
tblFleetMix	MH	2.8380e-003	6.9000e-004
tblFleetMix	MHD	7.8170e-003	0.01
tblFleetMix	MHD	7.8170e-003	0.01
tblFleetMix	OBUS	9.1200e-004	1.7920e-003
tblFleetMix	OBUS	9.1200e-004	1.7920e-003
tblFleetMix	SBUS	9.2700e-004	5.2500e-004
tblFleetMix	SBUS	9.2700e-004	5.2500e-004
tblFleetMix	UBUS	3.8900e-004	1.2680e-003
tblFleetMix	UBUS	3.8900e-004	1.2680e-003
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	847.05	2,114.00
tblLandUse	LandUseSquareFeet	4,400.00	14,878.00
tblLandUse	LotAcreage	0.02	0.48
tblLandUse	LotAcreage	0.10	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.37	0.37

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tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	3.70
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	4.00	0.80
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	6.00	5.30
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	7.00	5.30
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	5.30
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	5.30
tblOffRoadEquipment	UsageHours	7.00	5.30
tblTripsAndVMT	HaulingTripNumber	4.00	0.00
tblTripsAndVMT	HaulingTripNumber	63.00	0.00
tblTripsAndVMT	VendorTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	7.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblVehicleEF	HHD	0.02	0.24
tblVehicleEF	HHD	0.05	0.13
tblVehicleEF	HHD	6.34	5.21
tblVehicleEF	HHD	0.40	0.79
tblVehicleEF	HHD	5.9190e-003	5.5500e-004
tblVehicleEF	HHD	1,065.38	850.51
tblVehicleEF	HHD	1,436.68	1,643.05
tblVehicleEF	HHD	0.05	0.03
tblVehicleEF	HHD	0.17	0.14
tblVehicleEF	HHD	0.23	0.26
tblVehicleEF	HHD	9.0000e-006	2.5000e-005
tblVehicleEF	HHD	5.44	4.16
tblVehicleEF	HHD	2.68	1.93
tblVehicleEF	HHD	2.32	2.69
tblVehicleEF	HHD	2.6700e-003	2.2830e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	2.5550e-003	2.1790e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8780e-003	8.7810e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-006	2.8800e-004

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tblVehicleEF	HHD	1.1600e-004	8.6000e-005
tblVehicleEF	HHD	0.43	0.33
tblVehicleEF	HHD	1.0000e-006	2.8800e-004
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	5.1000e-005	7.7100e-004
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	HHD	9.9140e-003	7.4610e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	3.0000e-006	2.8800e-004
tblVehicleEF	HHD	1.1600e-004	8.6000e-005
tblVehicleEF	HHD	0.49	0.60
tblVehicleEF	HHD	1.0000e-006	2.8800e-004
tblVehicleEF	HHD	0.08	0.15
tblVehicleEF	HHD	5.1000e-005	7.7100e-004
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	LDA	1.9580e-003	2.3090e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.56	0.70
tblVehicleEF	LDA	2.16	3.09
tblVehicleEF	LDA	245.26	253.36
tblVehicleEF	LDA	52.02	65.50
tblVehicleEF	LDA	4.2270e-003	4.4990e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.18	0.24
tblVehicleEF	LDA	0.04	7.2000e-003
tblVehicleEF	LDA	1.3550e-003	1.2280e-003
tblVehicleEF	LDA	1.7500e-003	1.9820e-003
tblVehicleEF	LDA	0.02	2.5200e-003

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tblVehicleEF	LDA	1.2480e-003	1.1310e-003
tblVehicleEF	LDA	1.6090e-003	1.8220e-003
tblVehicleEF	LDA	0.04	0.29
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.29
tblVehicleEF	LDA	7.4590e-003	9.0570e-003
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.21	0.32
tblVehicleEF	LDA	2.3960e-003	2.5050e-003
tblVehicleEF	LDA	5.0800e-004	6.4800e-004
tblVehicleEF	LDA	0.04	0.29
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.29
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.23	0.35
tblVehicleEF	LDT1	4.1630e-003	6.9520e-003
tblVehicleEF	LDT1	0.06	0.11
tblVehicleEF	LDT1	0.95	1.55
tblVehicleEF	LDT1	2.35	5.63
tblVehicleEF	LDT1	292.91	332.08
tblVehicleEF	LDT1	62.87	88.11
tblVehicleEF	LDT1	6.4270e-003	0.01
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.08	0.14
tblVehicleEF	LDT1	0.23	0.40
tblVehicleEF	LDT1	0.04	9.2280e-003
tblVehicleEF	LDT1	1.7660e-003	2.0570e-003
tblVehicleEF	LDT1	2.2510e-003	3.0710e-003

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tblVehicleEF	LDT1	0.02	3.2300e-003
tblVehicleEF	LDT1	1.6250e-003	1.8940e-003
tblVehicleEF	LDT1	2.0700e-003	2.8240e-003
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.16	0.17
tblVehicleEF	LDT1	0.07	0.63
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.08	0.50
tblVehicleEF	LDT1	0.31	0.58
tblVehicleEF	LDT1	2.8620e-003	3.2830e-003
tblVehicleEF	LDT1	6.1400e-004	8.7100e-004
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.16	0.17
tblVehicleEF	LDT1	0.07	0.63
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.08	0.50
tblVehicleEF	LDT1	0.34	0.64
tblVehicleEF	LDT2	3.2450e-003	3.0800e-003
tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.79	0.89
tblVehicleEF	LDT2	2.79	3.85
tblVehicleEF	LDT2	316.74	348.05
tblVehicleEF	LDT2	68.58	89.31
tblVehicleEF	LDT2	6.1340e-003	6.4690e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	0.27	0.35
tblVehicleEF	LDT2	0.04	8.8740e-003
tblVehicleEF	LDT2	1.3890e-003	1.3790e-003

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tblVehicleEF	LDT2	1.7510e-003	2.1600e-003
tblVehicleEF	LDT2	0.02	3.1060e-003
tblVehicleEF	LDT2	1.2790e-003	1.2690e-003
tblVehicleEF	LDT2	1.6100e-003	1.9860e-003
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.22
tblVehicleEF	LDT2	0.31	0.41
tblVehicleEF	LDT2	3.0950e-003	3.4400e-003
tblVehicleEF	LDT2	6.7000e-004	8.8300e-004
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.22
tblVehicleEF	LDT2	0.34	0.44
tblVehicleEF	LHD1	5.1620e-003	5.5430e-003
tblVehicleEF	LHD1	8.5450e-003	9.1830e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.19	0.20
tblVehicleEF	LHD1	0.77	0.98
tblVehicleEF	LHD1	1.08	2.15
tblVehicleEF	LHD1	8.94	8.82
tblVehicleEF	LHD1	794.16	800.55
tblVehicleEF	LHD1	11.83	18.05
tblVehicleEF	LHD1	7.4000e-004	6.4300e-004
tblVehicleEF	LHD1	0.04	0.04

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.73	0.75
tblVehicleEF	LHD1	0.32	0.46
tblVehicleEF	LHD1	8.2500e-004	6.7600e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.7470e-003	9.4030e-003
tblVehicleEF	LHD1	0.01	0.02
tblVehicleEF	LHD1	2.5800e-004	2.4900e-004
tblVehicleEF	LHD1	7.9000e-004	6.4700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4370e-003	2.3510e-003
tblVehicleEF	LHD1	9.7200e-003	0.01
tblVehicleEF	LHD1	2.3700e-004	2.2900e-004
tblVehicleEF	LHD1	2.0240e-003	0.14
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0320e-003	0.14
tblVehicleEF	LHD1	0.09	0.10
tblVehicleEF	LHD1	0.20	0.19
tblVehicleEF	LHD1	0.08	0.12
tblVehicleEF	LHD1	8.7000e-005	8.6000e-005
tblVehicleEF	LHD1	7.7550e-003	7.8230e-003
tblVehicleEF	LHD1	1.1700e-004	1.7800e-004
tblVehicleEF	LHD1	2.0240e-003	0.14
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.0320e-003	0.14
tblVehicleEF	LHD1	0.11	0.12

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD1	0.20	0.19
tblVehicleEF	LHD1	0.08	0.13
tblVehicleEF	LHD2	3.1550e-003	3.3000e-003
tblVehicleEF	LHD2	7.0600e-003	7.5700e-003
tblVehicleEF	LHD2	8.4310e-003	0.01
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.62	0.62
tblVehicleEF	LHD2	0.63	1.24
tblVehicleEF	LHD2	14.00	13.86
tblVehicleEF	LHD2	768.73	843.53
tblVehicleEF	LHD2	7.83	10.22
tblVehicleEF	LHD2	1.7410e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.88	1.00
tblVehicleEF	LHD2	0.18	0.26
tblVehicleEF	LHD2	1.4230e-003	1.3530e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.3300e-004	1.1300e-004
tblVehicleEF	LHD2	1.3610e-003	1.2950e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.6880e-003	2.6610e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.2300e-004	1.0300e-004
tblVehicleEF	LHD2	1.0700e-003	0.07
tblVehicleEF	LHD2	0.04	0.02

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.4700e-004	0.07
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.04	0.07
tblVehicleEF	LHD2	1.3400e-004	1.3300e-004
tblVehicleEF	LHD2	7.4240e-003	8.1320e-003
tblVehicleEF	LHD2	7.8000e-005	1.0100e-004
tblVehicleEF	LHD2	1.0700e-003	0.07
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.4700e-004	0.07
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.05	0.07
tblVehicleEF	MCY	0.33	0.17
tblVehicleEF	MCY	0.26	0.19
tblVehicleEF	MCY	18.87	13.09
tblVehicleEF	MCY	9.03	8.05
tblVehicleEF	MCY	210.17	188.31
tblVehicleEF	MCY	61.04	49.60
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	8.3790e-003
tblVehicleEF	MCY	1.15	0.59
tblVehicleEF	MCY	0.27	0.14
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	1.9690e-003	1.8990e-003
tblVehicleEF	MCY	3.0390e-003	3.6260e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MCY	1.8400e-003	1.7780e-003
tblVehicleEF	MCY	2.8590e-003	3.4130e-003
tblVehicleEF	MCY	0.90	3.95
tblVehicleEF	MCY	0.69	3.56
tblVehicleEF	MCY	0.49	3.95
tblVehicleEF	MCY	2.21	1.11
tblVehicleEF	MCY	0.55	3.75
tblVehicleEF	MCY	1.94	1.39
tblVehicleEF	MCY	2.0800e-003	1.8620e-003
tblVehicleEF	MCY	6.0400e-004	4.9000e-004
tblVehicleEF	MCY	0.90	0.09
tblVehicleEF	MCY	0.69	3.56
tblVehicleEF	MCY	0.49	0.09
tblVehicleEF	MCY	2.74	1.32
tblVehicleEF	MCY	0.55	3.75
tblVehicleEF	MCY	2.11	1.51
tblVehicleEF	MDV	3.9100e-003	4.2830e-003
tblVehicleEF	MDV	0.08	0.11
tblVehicleEF	MDV	0.87	1.04
tblVehicleEF	MDV	3.13	4.22
tblVehicleEF	MDV	383.28	420.63
tblVehicleEF	MDV	82.02	107.09
tblVehicleEF	MDV	8.3160e-003	9.2480e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.08	0.11
tblVehicleEF	MDV	0.32	0.46
tblVehicleEF	MDV	0.04	9.0320e-003
tblVehicleEF	MDV	1.5100e-003	1.4490e-003
tblVehicleEF	MDV	1.9150e-003	2.2770e-003

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MDV	0.02	3.1610e-003
tblVehicleEF	MDV	1.3930e-003	1.3360e-003
tblVehicleEF	MDV	1.7610e-003	2.0940e-003
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.38	0.54
tblVehicleEF	MDV	3.7430e-003	4.1560e-003
tblVehicleEF	MDV	8.0200e-004	1.0590e-003
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.42	0.60
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.11	1.61
tblVehicleEF	MH	2.13	2.63
tblVehicleEF	MH	1,532.75	1,694.25
tblVehicleEF	MH	18.68	23.10
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.36	1.59
tblVehicleEF	MH	0.25	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.7400e-004	3.3700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2750e-003	3.2930e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.5200e-004	3.1000e-004
tblVehicleEF	MH	0.71	34.58
tblVehicleEF	MH	0.06	9.45
tblVehicleEF	MH	0.25	34.58
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.10	0.12
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.8500e-004	2.2800e-004
tblVehicleEF	MH	0.71	34.58
tblVehicleEF	MH	0.06	9.45
tblVehicleEF	MH	0.25	34.58
tblVehicleEF	MH	0.09	0.13
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.11	0.13
tblVehicleEF	MHD	3.5450e-003	0.01
tblVehicleEF	MHD	1.9320e-003	9.9070e-003
tblVehicleEF	MHD	9.4870e-003	9.2450e-003
tblVehicleEF	MHD	0.39	0.67
tblVehicleEF	MHD	0.26	0.40
tblVehicleEF	MHD	1.14	1.15
tblVehicleEF	MHD	73.35	161.34
tblVehicleEF	MHD	1,095.06	1,239.60
tblVehicleEF	MHD	9.38	8.84

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.14	0.16
tblVehicleEF	MHD	7.2170e-003	6.0970e-003
tblVehicleEF	MHD	0.43	0.92
tblVehicleEF	MHD	1.44	1.22
tblVehicleEF	MHD	1.70	1.40
tblVehicleEF	MHD	4.2700e-004	2.5420e-003
tblVehicleEF	MHD	0.13	0.05
tblVehicleEF	MHD	6.9550e-003	0.01
tblVehicleEF	MHD	1.1900e-004	1.1300e-004
tblVehicleEF	MHD	4.0900e-004	2.4310e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.6480e-003	0.01
tblVehicleEF	MHD	1.1000e-004	1.0400e-004
tblVehicleEF	MHD	4.1700e-004	0.03
tblVehicleEF	MHD	0.02	6.9620e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	2.1100e-004	0.03
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	6.9600e-004	1.5020e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.3000e-005	8.7000e-005
tblVehicleEF	MHD	4.1700e-004	0.03
tblVehicleEF	MHD	0.02	6.9620e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	2.1100e-004	0.03
tblVehicleEF	MHD	0.02	0.06

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	OBUS	7.0630e-003	7.4000e-003
tblVehicleEF	OBUS	4.0130e-003	9.2780e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.57	0.51
tblVehicleEF	OBUS	0.47	0.57
tblVehicleEF	OBUS	1.90	2.06
tblVehicleEF	OBUS	91.93	84.55
tblVehicleEF	OBUS	1,341.74	1,407.27
tblVehicleEF	OBUS	15.48	16.14
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.37	0.36
tblVehicleEF	OBUS	1.44	1.03
tblVehicleEF	OBUS	1.09	0.96
tblVehicleEF	OBUS	1.2000e-004	4.3400e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.0290e-003	0.02
tblVehicleEF	OBUS	1.4200e-004	1.4500e-004
tblVehicleEF	OBUS	1.1500e-004	4.1500e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	6.7120e-003	0.02
tblVehicleEF	OBUS	1.3000e-004	1.3300e-004
tblVehicleEF	OBUS	1.0840e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8000e-004	0.07

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.10
tblVehicleEF	OBUS	8.7300e-004	8.0100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.5300e-004	1.6000e-004
tblVehicleEF	OBUS	1.0840e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8000e-004	0.07
tblVehicleEF	OBUS	0.03	0.07
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.10	0.11
tblVehicleEF	SBUS	0.05	0.07
tblVehicleEF	SBUS	6.3560e-003	0.09
tblVehicleEF	SBUS	4.7830e-003	4.6890e-003
tblVehicleEF	SBUS	2.18	1.62
tblVehicleEF	SBUS	0.52	0.91
tblVehicleEF	SBUS	0.70	0.66
tblVehicleEF	SBUS	347.39	189.53
tblVehicleEF	SBUS	1,060.99	1,037.35
tblVehicleEF	SBUS	3.98	3.67
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.14	0.13
tblVehicleEF	SBUS	4.4930e-003	4.0620e-003
tblVehicleEF	SBUS	3.53	1.43
tblVehicleEF	SBUS	4.87	2.74
tblVehicleEF	SBUS	0.81	0.47
tblVehicleEF	SBUS	3.9050e-003	1.4150e-003

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	4.6000e-005	3.8000e-005
tblVehicleEF	SBUS	3.7360e-003	1.3530e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	4.2000e-005	3.5000e-005
tblVehicleEF	SBUS	5.3700e-004	0.02
tblVehicleEF	SBUS	5.2210e-003	7.0230e-003
tblVehicleEF	SBUS	0.24	0.18
tblVehicleEF	SBUS	2.2700e-004	0.02
tblVehicleEF	SBUS	0.09	0.06
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3060e-003	1.7270e-003
tblVehicleEF	SBUS	0.01	9.6440e-003
tblVehicleEF	SBUS	3.9000e-005	3.6000e-005
tblVehicleEF	SBUS	5.3700e-004	0.02
tblVehicleEF	SBUS	5.2210e-003	7.0230e-003
tblVehicleEF	SBUS	0.35	0.29
tblVehicleEF	SBUS	2.2700e-004	0.02
tblVehicleEF	SBUS	0.10	0.16
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	UBUS	1.35	0.35
tblVehicleEF	UBUS	1.4170e-003	3.6170e-003
tblVehicleEF	UBUS	10.12	4.15

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	UBUS	0.14	0.53
tblVehicleEF	UBUS	1,597.13	1,099.26
tblVehicleEF	UBUS	1.39	3.19
tblVehicleEF	UBUS	0.26	0.17
tblVehicleEF	UBUS	1.0490e-003	6.0820e-003
tblVehicleEF	UBUS	0.73	0.33
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.11
tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	5.3280e-003	6.2360e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	8.1180e-003
tblVehicleEF	UBUS	5.0960e-003	5.9630e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	1.9000e-005	9.9020e-003
tblVehicleEF	UBUS	1.3300e-004	3.3070e-003
tblVehicleEF	UBUS	8.0000e-006	9.9020e-003
tblVehicleEF	UBUS	0.02	0.06
tblVehicleEF	UBUS	2.1000e-005	7.9870e-003
tblVehicleEF	UBUS	5.8830e-003	0.01
tblVehicleEF	UBUS	0.01	9.4340e-003
tblVehicleEF	UBUS	1.4000e-005	3.2000e-005
tblVehicleEF	UBUS	1.9000e-005	9.9020e-003
tblVehicleEF	UBUS	1.3300e-004	3.3070e-003
tblVehicleEF	UBUS	8.0000e-006	9.9020e-003
tblVehicleEF	UBUS	1.38	0.42
tblVehicleEF	UBUS	2.1000e-005	7.9870e-003
tblVehicleEF	UBUS	6.4410e-003	0.01

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	322.50	180.67
tblVehicleTrips	SU_TR	322.50	180.67
tblVehicleTrips	WD_TR	322.50	180.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0266	0.1262	0.1036	1.9000e-004	0.0146	6.0500e-003	0.0206	6.9000e-003	5.6400e-003	0.0125	0.0000	16.9072	16.9072	4.7500e-003	0.0000	17.0260
Maximum	**0.0266**	**0.1262**	**0.1036**	**1.9000e-004**	**0.0146**	**6.0500e-003**	**0.0206**	**6.9000e-003**	**5.6400e-003**	**0.0125**	**0.0000**	**16.9072**	**16.9072**	**4.7500e-003**	**0.0000**	**17.0260**

Mitigated Construction

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
Year	tons/yr										MT/yr					
2022	0.0178	0.0689	0.1229	1.9000e-004	6.5600e-003	5.5000e-004	7.1200e-003	3.1000e-003	5.5000e-004	3.6600e-003	0.0000	16.9072	16.9072	4.7500e-003	0.0000	17.0259
Maximum	**0.0178**	**0.0689**	**0.1229**	**1.9000e-004**	**6.5600e-003**	**5.5000e-004**	**7.1200e-003**	**3.1000e-003**	**5.5000e-004**	**3.6600e-003**	**0.0000**	**16.9072**	**16.9072**	**4.7500e-003**	**0.0000**	**17.0259**

	ROG	NOx	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	**33.33**	**45.40**	**-18.68**	**0.00**	**55.01**	**90.91**	**65.49**	**55.07**	**90.25**	**70.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-3-2022	4-2-2022	0.0637	0.0277
2	4-3-2022	7-2-2022	0.0265	0.0133
3	7-3-2022	9-30-2022	0.0419	0.0354
		Highest	0.0637	0.0354

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0107	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

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Energy	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.2168	1.2168	2.0000e-005	2.0000e-005	1.2240
Mobile	0.6610	0.6763	4.2858	0.0116	0.9837	9.0100e-003	0.9927	0.2457	8.4500e-003	0.2542	0.0000	1,076.2830	1,076.2830	0.0525	0.0586	1,095.0499
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0222	4.3000e-004	0.0226	8.0000e-005	5.0000e-005	0.0389
Total	**0.6717**	**0.6774**	**4.2868**	**0.0116**	**0.9837**	**9.0900e-003**	**0.9928**	**0.2457**	**8.5300e-003**	**0.2542**	**0.0222**	**1,077.5006**	**1,077.5228**	**0.0526**	**0.0586**	**1,096.3131**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0107	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Energy	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.2168	1.2168	2.0000e-005	2.0000e-005	1.2240
Mobile	0.6610	0.6763	4.2858	0.0116	0.9837	9.0100e-003	0.9927	0.2457	8.4500e-003	0.2542	0.0000	1,076.2830	1,076.2830	0.0525	0.0586	1,095.0499
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0222	4.3000e-004	0.0226	8.0000e-005	5.0000e-005	0.0389
Total	**0.6717**	**0.6774**	**4.2868**	**0.0116**	**0.9837**	**9.0900e-003**	**0.9928**	**0.2457**	**8.5300e-003**	**0.2542**	**0.0222**	**1,077.5006**	**1,077.5228**	**0.0526**	**0.0586**	**1,096.3131**

	ROG	NOx	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**

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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/5/2022	5	3	
2	Site Preparation	Site Preparation	1/6/2022	1/7/2022	5	2	
3	Grading	Grading	1/10/2022	1/12/2022	5	3	
4	Building Construction	Building Construction	1/18/2022	7/29/2022	5	139	
5	Paving	Paving	8/16/2022	8/18/2022	5	3	
6	Architectural Coating	Architectural Coating	8/1/2022	8/19/2022	5	15	
7	Trenching	Trenching	1/13/2022	1/17/2022	5	3	

Acres of Grading (Site Preparation Phase): 2

Acres of Grading (Grading Phase): 1.99

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 3,171; Non-Residential Outdoor: 1,057; Striped Parking Area: 893 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	2	3.70	78	0.48
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Demolition	Concrete/Industrial Saws	1	4.00	81	0.73
Building Construction	Cranes	1	0.80	231	0.29
Building Construction	Forklifts	1	1.20	89	0.20
Grading	Graders	1	5.30	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	0	0.00	130	0.42

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Paving	Rollers	1	5.30	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	5.30	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	0.80	97	0.37
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	5.30	97	0.37
Paving	Tractors/Loaders/Backhoes	1	5.30	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Excavators	1	5.30	158	0.38
Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Paving	Paving Equipment	1	5.30	132	0.36
Architectural Coating	Aerial Lifts	2	3.70	63	0.31
Trenching	Tractors/Loaders/Backhoes	1	5.30	97	0.37

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
Demolition	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	3	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	4	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Trenching	1	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

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Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 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					4.3000e-004	0.0000	4.3000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9700e-003	0.0196	0.0147	3.0000e-005		9.6000e-004	9.6000e-004		8.9000e-004	8.9000e-004	0.0000	2.3916	2.3916	6.7000e-004	0.0000	2.4082
Total	**1.9700e-003**	**0.0196**	**0.0147**	**3.0000e-005**	**4.3000e-004**	**9.6000e-004**	**1.3900e-003**	**7.0000e-005**	**8.9000e-004**	**9.6000e-004**	**0.0000**	**2.3916**	**2.3916**	**6.7000e-004**	**0.0000**	**2.4082**

Unmitigated Construction Off-Site

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

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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					1.9000e-004	0.0000	1.9000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6000e-004	9.3500e-003	0.0171	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.3916	2.3916	6.7000e-004	0.0000	2.4082
Total	**4.6000e-004**	**9.3500e-003**	**0.0171**	**3.0000e-005**	**1.9000e-004**	**4.0000e-005**	**2.3000e-004**	**3.0000e-005**	**4.0000e-005**	**7.0000e-005**	**0.0000**	**2.3916**	**2.3916**	**6.7000e-004**	**0.0000**	**2.4082**

Mitigated Construction Off-Site

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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 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					7.0800e-003	0.0000	7.0800e-003	3.4200e-003	0.0000	3.4200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4100e-003	0.0156	7.5000e-003	2.0000e-005		6.7000e-004	6.7000e-004		6.2000e-004	6.2000e-004	0.0000	1.5965	1.5965	5.2000e-004	0.0000	1.6094
Total	**1.4100e-003**	**0.0156**	**7.5000e-003**	**2.0000e-005**	**7.0800e-003**	**6.7000e-004**	**7.7500e-003**	**3.4200e-003**	**6.2000e-004**	**4.0400e-003**	**0.0000**	**1.5965**	**1.5965**	**5.2000e-004**	**0.0000**	**1.6094**

Unmitigated Construction Off-Site

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

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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					3.1900e-003	0.0000	3.1900e-003	1.5400e-003	0.0000	1.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	5.3200e-003	0.0103	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.5965	1.5965	5.2000e-004	0.0000	1.6094
Total	**3.2000e-004**	**5.3200e-003**	**0.0103**	**2.0000e-005**	**3.1900e-003**	**3.0000e-005**	**3.2200e-003**	**1.5400e-003**	**3.0000e-005**	**1.5700e-003**	**0.0000**	**1.5965**	**1.5965**	**5.2000e-004**	**0.0000**	**1.6094**

Mitigated Construction Off-Site

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

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3.4 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					7.0700e-003	0.0000	7.0700e-003	3.4100e-003	0.0000	3.4100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.4100e-003	0.0156	7.4900e-003	2.0000e-005		6.7000e-004	6.7000e-004		6.2000e-004	6.2000e-004	0.0000	1.5953	1.5953	5.2000e-004	0.0000	1.6082
Total	**1.4100e-003**	**0.0156**	**7.4900e-003**	**2.0000e-005**	**7.0700e-003**	**6.7000e-004**	**7.7400e-003**	**3.4100e-003**	**6.2000e-004**	**4.0300e-003**	**0.0000**	**1.5953**	**1.5953**	**5.2000e-004**	**0.0000**	**1.6082**

Unmitigated Construction Off-Site

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

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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					3.1800e-003	0.0000	3.1800e-003	1.5300e-003	0.0000	1.5300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2000e-004	5.3100e-003	0.0103	2.0000e-005		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.5953	1.5953	5.2000e-004	0.0000	1.6082
Total	**3.2000e-004**	**5.3100e-003**	**0.0103**	**2.0000e-005**	**3.1800e-003**	**3.0000e-005**	**3.2100e-003**	**1.5300e-003**	**3.0000e-005**	**1.5600e-003**	**0.0000**	**1.5953**	**1.5953**	**5.2000e-004**	**0.0000**	**1.6082**

Mitigated Construction Off-Site

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

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.9200e-003	0.0517	0.0407	8.0000e-005		2.5600e-003	2.5600e-003		2.3600e-003	2.3600e-003	0.0000	6.8227	6.8227	2.2100e-003	0.0000	6.8778
Total	**4.9200e-003**	**0.0517**	**0.0407**	**8.0000e-005**		**2.5600e-003**	**2.5600e-003**		**2.3600e-003**	**2.3600e-003**	**0.0000**	**6.8227**	**6.8227**	**2.2100e-003**	**0.0000**	**6.8778**

Unmitigated Construction Off-Site

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

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.5000e-003	0.0270	0.0497	8.0000e-005		1.3000e-004	1.3000e-004		1.3000e-004	1.3000e-004	0.0000	6.8227	6.8227	2.2100e-003	0.0000	6.8778
Total	**1.5000e-003**	**0.0270**	**0.0497**	**8.0000e-005**		**1.3000e-004**	**1.3000e-004**		**1.3000e-004**	**1.3000e-004**	**0.0000**	**6.8227**	**6.8227**	**2.2100e-003**	**0.0000**	**6.8778**

Mitigated Construction Off-Site

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

3.6 Paving - 2022

Unmitigated Construction On-Site

Date: 7/29/2021 12:58 PM

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Off-Road	5.0000e-004	5.0800e-003	6.5700e-003	1.0000e-005		2.7000e-004	2.7000e-004		2.5000e-004	2.5000e-004	0.0000	0.8514	0.8514	2.8000e-004	0.0000	0.8583
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.0000e-004**	**5.0800e-003**	**6.5700e-003**	**1.0000e-005**		**2.7000e-004**	**2.7000e-004**		**2.5000e-004**	**2.5000e-004**	**0.0000**	**0.8514**	**0.8514**	**2.8000e-004**	**0.0000**	**0.8583**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Off-Road	1.8000e-004	4.2500e-003	7.3400e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.8514	0.8514	2.8000e-004	0.0000	0.8583
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.8000e-004**	**4.2500e-003**	**7.3400e-003**	**1.0000e-005**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.8514**	**0.8514**	**2.8000e-004**	**0.0000**	**0.8583**

Mitigated Construction Off-Site

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

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

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World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Archit. Coating	0.0141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1400e-003	0.0169	0.0243	4.0000e-005		8.3000e-004	8.3000e-004		8.2000e-004	8.2000e-004	0.0000	3.3793	3.3793	4.8000e-004	0.0000	3.3914
Total	**0.0163**	**0.0169**	**0.0243**	**4.0000e-005**		**8.3000e-004**	**8.3000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**3.3793**	**3.3793**	**4.8000e-004**	**0.0000**	**3.3914**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Archit. Coating	0.0141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.9000e-004	0.0163	0.0257	4.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	3.3793	3.3793	4.8000e-004	0.0000	3.3914
Total	**0.0149**	**0.0163**	**0.0257**	**4.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**3.3793**	**3.3793**	**4.8000e-004**	**0.0000**	**3.3914**

Mitigated Construction Off-Site

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

3.8 Trenching - 2022

Unmitigated Construction On-Site

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World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Off-Road	1.6000e-004	1.6600e-003	2.2100e-003	0.0000		9.0000e-005	9.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.2705	0.2705	9.0000e-005	0.0000	0.2727
Total	**1.6000e-004**	**1.6600e-003**	**2.2100e-003**	**0.0000**		**9.0000e-005**	**9.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.2705**	**0.2705**	**9.0000e-005**	**0.0000**	**0.2727**

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Off-Road	7.0000e-005	1.3400e-003	2.3200e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2705	0.2705	9.0000e-005	0.0000	0.2727
Total	**7.0000e-005**	**1.3400e-003**	**2.3200e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.2705**	**0.2705**	**9.0000e-005**	**0.0000**	**0.2727**

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6610	0.6763	4.2858	0.0116	0.9837	9.0100e-003	0.9927	0.2457	8.4500e-003	0.2542	0.0000	1,076.2830	1,076.2830	0.0525	0.0586	1,095.0499
Unmitigated	0.6610	0.6763	4.2858	0.0116	0.9837	9.0100e-003	0.9927	0.2457	8.4500e-003	0.2542	0.0000	1,076.2830	1,076.2830	0.0525	0.0586	1,095.0499

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	1,084.02	1,084.02	1084.02	2,887,403	2,887,403
Parking Lot	0.00	0.00	0.00		
Total	1,084.02	1,084.02	1,084.02	2,887,403	2,887,403

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
Convenience Market with Gas Pumps	9.50	7.30	7.30	0.80	80.20	19.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with Gas Pumps	0.549120	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525	0.000690
Parking Lot	0.549120	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525	0.000690

5.0 Energy Detail

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0199	0.0199	0.0000	0.0000	0.0199
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0199	0.0199	0.0000	0.0000	0.0199
NaturalGas Mitigated	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
NaturalGas Unmitigated	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040

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					
Convenience Market with Gas Pumps	22429.5	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
Parking Lot	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

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Total		**1.2000e-004**	**1.1000e-003**	**9.2000e-004**	**1.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**1.1969**	**1.1969**	**2.0000e-005**	**2.0000e-005**	**1.2040**

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					
Convenience Market with Gas Pumps	22429.5	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.2000e-004**	**1.1000e-003**	**9.2000e-004**	**1.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**1.1969**	**1.1969**	**2.0000e-005**	**2.0000e-005**	**1.2040**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas Pumps	16742.9	0.0152	0.0000	0.0000	0.0152
Parking Lot	5207.3	4.7200e-003	0.0000	0.0000	4.7200e-003
Total		**0.0199**	**0.0000**	**0.0000**	**0.0199**

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Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas Pumps	16742.9	0.0152	0.0000	0.0000	0.0152
Parking Lot	5207.3	4.7200e-003	0.0000	0.0000	4.7200e-003
Total		**0.0199**	**0.0000**	**0.0000**	**0.0199**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0107	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Unmitigated	0.0107	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

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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	1.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Total	**0.0106**	**0.0000**	**1.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-004**	**3.0000e-004**	**0.0000**	**0.0000**	**3.2000e-004**

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	1.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

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Total	**0.0106**	**0.0000**	**1.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-004**	**3.0000e-004**	**0.0000**	**0.0000**	**3.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0226	8.0000e-005	5.0000e-005	0.0389
Unmitigated	0.0226	8.0000e-005	5.0000e-005	0.0389

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0627431 / 0.0384554	0.0226	8.0000e-005	5.0000e-005	0.0389
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000

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Total	**0.0226**	**8.0000e-005**	**5.0000e-005**	**0.0389**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas Pumps	0.0627431 / 0.000155	0.0226	8.0000e-005	5.0000e-005	0.0389
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0226**	**8.0000e-005**	**5.0000e-005**	**0.0389**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000

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Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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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

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	4.00	Pump	0.48	880.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	3			**Operational Year**	2023
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Provided land uses - project description

Construction Phase - Existing Use - No Construction

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Existing Use - No Construction

Grading - Existing Use - No Construction

Demolition -

Trips and VMT -

Vehicle Trips - Trip gen provided by traffic and adjusted for different land uses, 100% primary to capture traffic passby reduction

Vehicle Emission Factors - EMFAC2021 Santa Clara County Vehicle Emissions Factors 2023

Fleet Mix - EMFAC2021 Santa Clara County Fleet Mix 2023

Water And Wastewater -

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Construction Off-road Equipment Mitigation -

Energy Use - Historical energy data

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	LightingElect	4.53	3.71
tblEnergyUse	T24E	2.77	1.91
tblEnergyUse	T24NG	10.42	8.53
tblFleetMix	HHD	6.3620e-003	0.02
tblFleetMix	LDA	0.57	0.55
tblFleetMix	LDT1	0.06	0.04
tblFleetMix	LDT2	0.19	0.22
tblFleetMix	LHD1	0.02	0.02
tblFleetMix	LHD2	5.0410e-003	5.7850e-003
tblFleetMix	MCY	0.02	3.5660e-003
tblFleetMix	MDV	0.12	0.12
tblFleetMix	MH	2.8380e-003	6.9000e-004
tblFleetMix	MHD	7.8170e-003	0.01
tblFleetMix	OBUS	9.1200e-004	1.7920e-003
tblFleetMix	SBUS	9.2700e-004	5.2500e-004
tblFleetMix	UBUS	3.8900e-004	1.2680e-003
tblLandUse	LandUseSquareFeet	564.70	880.00
tblLandUse	LotAcreage	0.01	0.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblVehicleEF	HHD	0.02	0.24
tblVehicleEF	HHD	0.05	0.13

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tblVehicleEF	HHD	6.34	5.21
tblVehicleEF	HHD	0.40	0.79
tblVehicleEF	HHD	5.9190e-003	5.5500e-004
tblVehicleEF	HHD	1,065.38	850.51
tblVehicleEF	HHD	1,436.68	1,643.05
tblVehicleEF	HHD	0.05	0.03
tblVehicleEF	HHD	0.17	0.14
tblVehicleEF	HHD	0.23	0.26
tblVehicleEF	HHD	9.0000e-006	2.5000e-005
tblVehicleEF	HHD	5.44	4.16
tblVehicleEF	HHD	2.68	1.93
tblVehicleEF	HHD	2.32	2.69
tblVehicleEF	HHD	2.6700e-003	2.2830e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.03
tblVehicleEF	HHD	2.5550e-003	2.1790e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8780e-003	8.7810e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	3.0000e-006	2.8800e-004
tblVehicleEF	HHD	1.1600e-004	8.6000e-005
tblVehicleEF	HHD	0.43	0.33
tblVehicleEF	HHD	1.0000e-006	2.8800e-004
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	5.1000e-005	7.7100e-004
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	HHD	9.9140e-003	7.4610e-003
tblVehicleEF	HHD	0.01	0.01

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tblVehicleEF	HHD	3.0000e-006	2.8800e-004
tblVehicleEF	HHD	1.1600e-004	8.6000e-005
tblVehicleEF	HHD	0.49	0.60
tblVehicleEF	HHD	1.0000e-006	2.8800e-004
tblVehicleEF	HHD	0.08	0.15
tblVehicleEF	HHD	5.1000e-005	7.7100e-004
tblVehicleEF	HHD	3.0000e-006	1.0000e-006
tblVehicleEF	LDA	1.9580e-003	2.3090e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.56	0.70
tblVehicleEF	LDA	2.16	3.09
tblVehicleEF	LDA	245.26	253.36
tblVehicleEF	LDA	52.02	65.50
tblVehicleEF	LDA	4.2270e-003	4.4990e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.18	0.24
tblVehicleEF	LDA	0.04	7.2000e-003
tblVehicleEF	LDA	1.3550e-003	1.2280e-003
tblVehicleEF	LDA	1.7500e-003	1.9820e-003
tblVehicleEF	LDA	0.02	2.5200e-003
tblVehicleEF	LDA	1.2480e-003	1.1310e-003
tblVehicleEF	LDA	1.6090e-003	1.8220e-003
tblVehicleEF	LDA	0.04	0.29
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.29
tblVehicleEF	LDA	7.4590e-003	9.0570e-003
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.21	0.32

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tblVehicleEF	LDA	2.3960e-003	2.5050e-003
tblVehicleEF	LDA	5.0800e-004	6.4800e-004
tblVehicleEF	LDA	0.04	0.29
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.29
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.22
tblVehicleEF	LDA	0.23	0.35
tblVehicleEF	LDT1	4.1630e-003	6.9520e-003
tblVehicleEF	LDT1	0.06	0.11
tblVehicleEF	LDT1	0.95	1.55
tblVehicleEF	LDT1	2.35	5.63
tblVehicleEF	LDT1	292.91	332.08
tblVehicleEF	LDT1	62.87	88.11
tblVehicleEF	LDT1	6.4270e-003	0.01
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.08	0.14
tblVehicleEF	LDT1	0.23	0.40
tblVehicleEF	LDT1	0.04	9.2280e-003
tblVehicleEF	LDT1	1.7660e-003	2.0570e-003
tblVehicleEF	LDT1	2.2510e-003	3.0710e-003
tblVehicleEF	LDT1	0.02	3.2300e-003
tblVehicleEF	LDT1	1.6250e-003	1.8940e-003
tblVehicleEF	LDT1	2.0700e-003	2.8240e-003
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.16	0.17
tblVehicleEF	LDT1	0.07	0.63
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.08	0.50

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tblVehicleEF	LDT1	0.31	0.58
tblVehicleEF	LDT1	2.8620e-003	3.2830e-003
tblVehicleEF	LDT1	6.1400e-004	8.7100e-004
tblVehicleEF	LDT1	0.08	0.63
tblVehicleEF	LDT1	0.16	0.17
tblVehicleEF	LDT1	0.07	0.63
tblVehicleEF	LDT1	0.03	0.05
tblVehicleEF	LDT1	0.08	0.50
tblVehicleEF	LDT1	0.34	0.64
tblVehicleEF	LDT2	3.2450e-003	3.0800e-003
tblVehicleEF	LDT2	0.07	0.09
tblVehicleEF	LDT2	0.79	0.89
tblVehicleEF	LDT2	2.79	3.85
tblVehicleEF	LDT2	316.74	348.05
tblVehicleEF	LDT2	68.58	89.31
tblVehicleEF	LDT2	6.1340e-003	6.4690e-003
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	0.27	0.35
tblVehicleEF	LDT2	0.04	8.8740e-003
tblVehicleEF	LDT2	1.3890e-003	1.3790e-003
tblVehicleEF	LDT2	1.7510e-003	2.1600e-003
tblVehicleEF	LDT2	0.02	3.1060e-003
tblVehicleEF	LDT2	1.2790e-003	1.2690e-003
tblVehicleEF	LDT2	1.6100e-003	1.9860e-003
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.01	0.01

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tblVehicleEF	LDT2	0.06	0.22
tblVehicleEF	LDT2	0.31	0.41
tblVehicleEF	LDT2	3.0950e-003	3.4400e-003
tblVehicleEF	LDT2	6.7000e-004	8.8300e-004
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.12	0.08
tblVehicleEF	LDT2	0.06	0.30
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.22
tblVehicleEF	LDT2	0.34	0.44
tblVehicleEF	LHD1	5.1620e-003	5.5430e-003
tblVehicleEF	LHD1	8.5450e-003	9.1830e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.19	0.20
tblVehicleEF	LHD1	0.77	0.98
tblVehicleEF	LHD1	1.08	2.15
tblVehicleEF	LHD1	8.94	8.82
tblVehicleEF	LHD1	794.16	800.55
tblVehicleEF	LHD1	11.83	18.05
tblVehicleEF	LHD1	7.4000e-004	6.4300e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.03	0.04
tblVehicleEF	LHD1	0.06	0.05
tblVehicleEF	LHD1	0.73	0.75
tblVehicleEF	LHD1	0.32	0.46
tblVehicleEF	LHD1	8.2500e-004	6.7600e-004
tblVehicleEF	LHD1	0.08	0.08
tblVehicleEF	LHD1	9.7470e-003	9.4030e-003
tblVehicleEF	LHD1	0.01	0.02

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tblVehicleEF	LHD1	2.5800e-004	2.4900e-004
tblVehicleEF	LHD1	7.9000e-004	6.4700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4370e-003	2.3510e-003
tblVehicleEF	LHD1	9.7200e-003	0.01
tblVehicleEF	LHD1	2.3700e-004	2.2900e-004
tblVehicleEF	LHD1	2.0240e-003	0.14
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.0320e-003	0.14
tblVehicleEF	LHD1	0.09	0.10
tblVehicleEF	LHD1	0.20	0.19
tblVehicleEF	LHD1	0.08	0.12
tblVehicleEF	LHD1	8.7000e-005	8.6000e-005
tblVehicleEF	LHD1	7.7550e-003	7.8230e-003
tblVehicleEF	LHD1	1.1700e-004	1.7800e-004
tblVehicleEF	LHD1	2.0240e-003	0.14
tblVehicleEF	LHD1	0.08	0.04
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	1.0320e-003	0.14
tblVehicleEF	LHD1	0.11	0.12
tblVehicleEF	LHD1	0.20	0.19
tblVehicleEF	LHD1	0.08	0.13
tblVehicleEF	LHD2	3.1550e-003	3.3000e-003
tblVehicleEF	LHD2	7.0600e-003	7.5700e-003
tblVehicleEF	LHD2	8.4310e-003	0.01
tblVehicleEF	LHD2	0.14	0.14
tblVehicleEF	LHD2	0.62	0.62
tblVehicleEF	LHD2	0.63	1.24

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	LHD2	14.00	13.86
tblVehicleEF	LHD2	768.73	843.53
tblVehicleEF	LHD2	7.83	10.22
tblVehicleEF	LHD2	1.7410e-003	1.6800e-003
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.88	1.00
tblVehicleEF	LHD2	0.18	0.26
tblVehicleEF	LHD2	1.4230e-003	1.3530e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.3300e-004	1.1300e-004
tblVehicleEF	LHD2	1.3610e-003	1.2950e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.6880e-003	2.6610e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.2300e-004	1.0300e-004
tblVehicleEF	LHD2	1.0700e-003	0.07
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.4700e-004	0.07
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.04	0.07
tblVehicleEF	LHD2	1.3400e-004	1.3300e-004
tblVehicleEF	LHD2	7.4240e-003	8.1320e-003
tblVehicleEF	LHD2	7.8000e-005	1.0100e-004

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tblVehicleEF	LHD2	1.0700e-003	0.07
tblVehicleEF	LHD2	0.04	0.02
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.4700e-004	0.07
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.10	0.10
tblVehicleEF	LHD2	0.05	0.07
tblVehicleEF	MCY	0.33	0.17
tblVehicleEF	MCY	0.26	0.19
tblVehicleEF	MCY	18.87	13.09
tblVehicleEF	MCY	9.03	8.05
tblVehicleEF	MCY	210.17	188.31
tblVehicleEF	MCY	61.04	49.60
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	8.3790e-003
tblVehicleEF	MCY	1.15	0.59
tblVehicleEF	MCY	0.27	0.14
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	1.9690e-003	1.8990e-003
tblVehicleEF	MCY	3.0390e-003	3.6260e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.8400e-003	1.7780e-003
tblVehicleEF	MCY	2.8590e-003	3.4130e-003
tblVehicleEF	MCY	0.90	3.95
tblVehicleEF	MCY	0.69	3.56
tblVehicleEF	MCY	0.49	3.95
tblVehicleEF	MCY	2.21	1.11
tblVehicleEF	MCY	0.55	3.75
tblVehicleEF	MCY	1.94	1.39

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tblVehicleEF	MCY	2.0800e-003	1.8620e-003
tblVehicleEF	MCY	6.0400e-004	4.9000e-004
tblVehicleEF	MCY	0.90	0.09
tblVehicleEF	MCY	0.69	3.56
tblVehicleEF	MCY	0.49	0.09
tblVehicleEF	MCY	2.74	1.32
tblVehicleEF	MCY	0.55	3.75
tblVehicleEF	MCY	2.11	1.51
tblVehicleEF	MDV	3.9100e-003	4.2830e-003
tblVehicleEF	MDV	0.08	0.11
tblVehicleEF	MDV	0.87	1.04
tblVehicleEF	MDV	3.13	4.22
tblVehicleEF	MDV	383.28	420.63
tblVehicleEF	MDV	82.02	107.09
tblVehicleEF	MDV	8.3160e-003	9.2480e-003
tblVehicleEF	MDV	0.03	0.04
tblVehicleEF	MDV	0.08	0.11
tblVehicleEF	MDV	0.32	0.46
tblVehicleEF	MDV	0.04	9.0320e-003
tblVehicleEF	MDV	1.5100e-003	1.4490e-003
tblVehicleEF	MDV	1.9150e-003	2.2770e-003
tblVehicleEF	MDV	0.02	3.1610e-003
tblVehicleEF	MDV	1.3930e-003	1.3360e-003
tblVehicleEF	MDV	1.7610e-003	2.0940e-003
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.06	0.28

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tblVehicleEF	MDV	0.38	0.54
tblVehicleEF	MDV	3.7430e-003	4.1560e-003
tblVehicleEF	MDV	8.0200e-004	1.0590e-003
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.14	0.10
tblVehicleEF	MDV	0.07	0.36
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.42	0.60
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	1.11	1.61
tblVehicleEF	MH	2.13	2.63
tblVehicleEF	MH	1,532.75	1,694.25
tblVehicleEF	MH	18.68	23.10
tblVehicleEF	MH	0.06	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.36	1.59
tblVehicleEF	MH	0.25	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.7400e-004	3.3700e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2750e-003	3.2930e-003
tblVehicleEF	MH	0.02	0.03
tblVehicleEF	MH	2.5200e-004	3.1000e-004
tblVehicleEF	MH	0.71	34.58
tblVehicleEF	MH	0.06	9.45

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tblVehicleEF	MH	0.25	34.58
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.10	0.12
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.8500e-004	2.2800e-004
tblVehicleEF	MH	0.71	34.58
tblVehicleEF	MH	0.06	9.45
tblVehicleEF	MH	0.25	34.58
tblVehicleEF	MH	0.09	0.13
tblVehicleEF	MH	0.02	0.22
tblVehicleEF	MH	0.11	0.13
tblVehicleEF	MHD	3.5450e-003	0.01
tblVehicleEF	MHD	1.9320e-003	9.9070e-003
tblVehicleEF	MHD	9.4870e-003	9.2450e-003
tblVehicleEF	MHD	0.39	0.67
tblVehicleEF	MHD	0.26	0.40
tblVehicleEF	MHD	1.14	1.15
tblVehicleEF	MHD	73.35	161.34
tblVehicleEF	MHD	1,095.06	1,239.60
tblVehicleEF	MHD	9.38	8.84
tblVehicleEF	MHD	0.01	0.02
tblVehicleEF	MHD	0.14	0.16
tblVehicleEF	MHD	7.2170e-003	6.0970e-003
tblVehicleEF	MHD	0.43	0.92
tblVehicleEF	MHD	1.44	1.22
tblVehicleEF	MHD	1.70	1.40
tblVehicleEF	MHD	4.2700e-004	2.5420e-003
tblVehicleEF	MHD	0.13	0.05

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tblVehicleEF	MHD	6.9550e-003	0.01
tblVehicleEF	MHD	1.1900e-004	1.1300e-004
tblVehicleEF	MHD	4.0900e-004	2.4310e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.6480e-003	0.01
tblVehicleEF	MHD	1.1000e-004	1.0400e-004
tblVehicleEF	MHD	4.1700e-004	0.03
tblVehicleEF	MHD	0.02	6.9620e-003
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	2.1100e-004	0.03
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.05	0.05
tblVehicleEF	MHD	6.9600e-004	1.5020e-003
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	9.3000e-005	8.7000e-005
tblVehicleEF	MHD	4.1700e-004	0.03
tblVehicleEF	MHD	0.02	6.9620e-003
tblVehicleEF	MHD	0.02	0.04
tblVehicleEF	MHD	2.1100e-004	0.03
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.02	0.06
tblVehicleEF	MHD	0.06	0.06
tblVehicleEF	OBUS	7.0630e-003	7.4000e-003
tblVehicleEF	OBUS	4.0130e-003	9.2780e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.57	0.51
tblVehicleEF	OBUS	0.47	0.57
tblVehicleEF	OBUS	1.90	2.06

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tblVehicleEF	OBUS	91.93	84.55
tblVehicleEF	OBUS	1,341.74	1,407.27
tblVehicleEF	OBUS	15.48	16.14
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.13	0.16
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.37	0.36
tblVehicleEF	OBUS	1.44	1.03
tblVehicleEF	OBUS	1.09	0.96
tblVehicleEF	OBUS	1.2000e-004	4.3400e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.0290e-003	0.02
tblVehicleEF	OBUS	1.4200e-004	1.4500e-004
tblVehicleEF	OBUS	1.1500e-004	4.1500e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	6.7120e-003	0.02
tblVehicleEF	OBUS	1.3000e-004	1.3300e-004
tblVehicleEF	OBUS	1.0840e-003	0.07
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8000e-004	0.07
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.09	0.10
tblVehicleEF	OBUS	8.7300e-004	8.0100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.5300e-004	1.6000e-004
tblVehicleEF	OBUS	1.0840e-003	0.07
tblVehicleEF	OBUS	0.02	0.02

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tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8000e-004	0.07
tblVehicleEF	OBUS	0.03	0.07
tblVehicleEF	OBUS	0.04	0.08
tblVehicleEF	OBUS	0.10	0.11
tblVehicleEF	SBUS	0.05	0.07
tblVehicleEF	SBUS	6.3560e-003	0.09
tblVehicleEF	SBUS	4.7830e-003	4.6890e-003
tblVehicleEF	SBUS	2.18	1.62
tblVehicleEF	SBUS	0.52	0.91
tblVehicleEF	SBUS	0.70	0.66
tblVehicleEF	SBUS	347.39	189.53
tblVehicleEF	SBUS	1,060.99	1,037.35
tblVehicleEF	SBUS	3.98	3.67
tblVehicleEF	SBUS	0.05	0.03
tblVehicleEF	SBUS	0.14	0.13
tblVehicleEF	SBUS	4.4930e-003	4.0620e-003
tblVehicleEF	SBUS	3.53	1.43
tblVehicleEF	SBUS	4.87	2.74
tblVehicleEF	SBUS	0.81	0.47
tblVehicleEF	SBUS	3.9050e-003	1.4150e-003
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	4.6000e-005	3.8000e-005
tblVehicleEF	SBUS	3.7360e-003	1.3530e-003
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.7270e-003	2.6580e-003
tblVehicleEF	SBUS	0.03	0.01

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tblVehicleEF	SBUS	4.2000e-005	3.5000e-005
tblVehicleEF	SBUS	5.3700e-004	0.02
tblVehicleEF	SBUS	5.2210e-003	7.0230e-003
tblVehicleEF	SBUS	0.24	0.18
tblVehicleEF	SBUS	2.2700e-004	0.02
tblVehicleEF	SBUS	0.09	0.06
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	3.3060e-003	1.7270e-003
tblVehicleEF	SBUS	0.01	9.6440e-003
tblVehicleEF	SBUS	3.9000e-005	3.6000e-005
tblVehicleEF	SBUS	5.3700e-004	0.02
tblVehicleEF	SBUS	5.2210e-003	7.0230e-003
tblVehicleEF	SBUS	0.35	0.29
tblVehicleEF	SBUS	2.2700e-004	0.02
tblVehicleEF	SBUS	0.10	0.16
tblVehicleEF	SBUS	0.01	0.02
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	UBUS	1.35	0.35
tblVehicleEF	UBUS	1.4170e-003	3.6170e-003
tblVehicleEF	UBUS	10.12	4.15
tblVehicleEF	UBUS	0.14	0.53
tblVehicleEF	UBUS	1,597.13	1,099.26
tblVehicleEF	UBUS	1.39	3.19
tblVehicleEF	UBUS	0.26	0.17
tblVehicleEF	UBUS	1.0490e-003	6.0820e-003
tblVehicleEF	UBUS	0.73	0.33
tblVehicleEF	UBUS	0.01	0.04
tblVehicleEF	UBUS	0.07	0.11

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tblVehicleEF	UBUS	0.03	0.03
tblVehicleEF	UBUS	5.3280e-003	6.2360e-003
tblVehicleEF	UBUS	1.5000e-005	1.2000e-005
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	8.3320e-003	8.1180e-003
tblVehicleEF	UBUS	5.0960e-003	5.9630e-003
tblVehicleEF	UBUS	1.4000e-005	1.1000e-005
tblVehicleEF	UBUS	1.9000e-005	9.9020e-003
tblVehicleEF	UBUS	1.3300e-004	3.3070e-003
tblVehicleEF	UBUS	8.0000e-006	9.9020e-003
tblVehicleEF	UBUS	0.02	0.06
tblVehicleEF	UBUS	2.1000e-005	7.9870e-003
tblVehicleEF	UBUS	5.8830e-003	0.01
tblVehicleEF	UBUS	0.01	9.4340e-003
tblVehicleEF	UBUS	1.4000e-005	3.2000e-005
tblVehicleEF	UBUS	1.9000e-005	9.9020e-003
tblVehicleEF	UBUS	1.3300e-004	3.3070e-003
tblVehicleEF	UBUS	8.0000e-006	9.9020e-003
tblVehicleEF	UBUS	1.38	0.42
tblVehicleEF	UBUS	2.1000e-005	7.9870e-003
tblVehicleEF	UBUS	6.4410e-003	0.01
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	322.50	199.50
tblVehicleTrips	SU_TR	322.50	199.50
tblVehicleTrips	WD_TR	322.50	199.50

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.1431	1.1431	1.1000e-004	2.0000e-005	1.1524
Mobile	0.4866	0.4978	3.1550	8.5300e-003	0.7242	6.6400e-003	0.7308	0.1809	6.2200e-003	0.1871	0.0000	792.3044	792.3044	0.0386	0.0431	806.1196
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0133	0.0292	0.0425	1.3700e-003	3.0000e-005	0.0865
Total	**0.4905**	**0.4983**	**3.1554**	**8.5300e-003**	**0.7242**	**6.6700e-003**	**0.7308**	**0.1809**	**6.2500e-003**	**0.1871**	**0.0133**	**793.4768**	**793.4901**	**0.0401**	**0.0432**	**807.3586**

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	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.1431	1.1431	1.1000e-004	2.0000e-005	1.1524
Mobile	0.4866	0.4978	3.1550	8.5300e-003	0.7242	6.6400e-003	0.7308	0.1809	6.2200e-003	0.1871	0.0000	792.3044	792.3044	0.0386	0.0431	806.1196

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Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0133	0.0292	0.0425	1.3700e-003	3.0000e-005	0.0865
Total	**0.4905**	**0.4983**	**3.1554**	**8.5300e-003**	**0.7242**	**6.6700e-003**	**0.7308**	**0.1809**	**6.2500e-003**	**0.1871**	**0.0133**	**793.4768**	**793.4901**	**0.0401**	**0.0432**	**807.3586**

	ROG	NOx	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**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4866	0.4978	3.1550	8.5300e-003	0.7242	6.6400e-003	0.7308	0.1809	6.2200e-003	0.1871	0.0000	792.3044	792.3044	0.0386	0.0431	806.1196
Unmitigated	0.4866	0.4978	3.1550	8.5300e-003	0.7242	6.6400e-003	0.7308	0.1809	6.2200e-003	0.1871	0.0000	792.3044	792.3044	0.0386	0.0431	806.1196

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Convenience Market with Gas Pumps	798.00	798.00	798.00	2,125,558	2,125,558
Total	798.00	798.00	798.00	2,125,558	2,125,558

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
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with Gas Pumps	0.549120	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525	0.000690

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.6449	0.6449	1.0000e-004	1.0000e-005	0.6512
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.6449	0.6449	1.0000e-004	1.0000e-005	0.6512
NaturalGas Mitigated	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
NaturalGas Unmitigated	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Convenience Market with Gas P...	9336.8	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
Total		**5.0000e-005**	**4.6000e-004**	**3.8000e-004**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.4983**	**0.4983**	**1.0000e-005**	**1.0000e-005**	**0.5012**

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					
Convenience Market with Gas P...	9336.8	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
Total		**5.0000e-005**	**4.6000e-004**	**3.8000e-004**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.4983**	**0.4983**	**1.0000e-005**	**1.0000e-005**	**0.5012**

5.3 Energy by Land Use - Electricity

Unmitigated

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	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas P...	6969.6	0.6449	1.0000e-004	1.0000e-005	0.6512
Total		**0.6449**	**1.0000e-004**	**1.0000e-005**	**0.6512**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas P...	6969.6	0.6449	1.0000e-004	1.0000e-005	0.6512
Total		**0.6449**	**1.0000e-004**	**1.0000e-005**	**0.6512**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Unmitigated	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	**3.9000e-003**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**8.0000e-005**

Mitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	**3.9000e-003**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**8.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0425	1.3700e-003	3.0000e-005	0.0865
Unmitigated	0.0425	1.3700e-003	3.0000e-005	0.0865

7.2 Water by Land Use

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0418287 / 0.025637	0.0425	1.3700e-003	3.0000e-005	0.0865
Total		**0.0425**	**1.3700e-003**	**3.0000e-005**	**0.0865**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0418287 / 0.025637	0.0425	1.3700e-003	3.0000e-005	0.0865
Total		**0.0425**	**1.3700e-003**	**3.0000e-005**	**0.0865**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

Date: 7/29/2021 1:03 PM

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - 2030

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	6.00	Pump	0.48	2,114.00	0
Parking Lot	11.00	Space	0.00	14,878.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	3			**Operational Year**	2030
Utility Company	Silicon Valley Clean Energy				
CO2 Intensity (lb/MWhr)	2	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CalEEMod SVCE

Land Use - Provided land uses - construction worksheet

Construction Phase - Provided construction schedule

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Provided equip amount & use

Grading - grading = 500cy export

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Demolition - existing building demo = 880-sf

Trips and VMT - EMFAC2021 0 Trips in CalEEMod, pavement demo = 150 tons, building const = 12 cement truck round trips, paving = 98-cy asphalt

Vehicle Trips - Trip gen provided by traffic and adjusted for different land uses, 100% primary to capture traffic passby reduction

Vehicle Emission Factors - EMFAC2021 Santa Clara County Vehicle Emissions Factors 2030

Fleet Mix - EMFAC2021 Santa Clara County Fleet Mix 2030

Water And Wastewater - Wastewater Treatment 100% Aerobic, no septic tanks of lagoons

Construction Off-road Equipment Mitigation - BMPs, Teri 4 interim mitigation

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	5.00	15.00
tblConstructionPhase	NumDays	100.00	139.00
tblConstructionPhase	NumDays	10.00	3.00
tblConstructionPhase	NumDays	2.00	3.00
tblConstructionPhase	NumDays	5.00	3.00
tblConstructionPhase	NumDays	1.00	2.00
tblConstructionPhase	PhaseEndDate	6/22/2022	8/19/2022
tblConstructionPhase	PhaseEndDate	6/8/2022	7/29/2022
tblConstructionPhase	PhaseEndDate	1/14/2022	1/5/2022
tblConstructionPhase	PhaseEndDate	1/19/2022	1/12/2022
tblConstructionPhase	PhaseEndDate	6/15/2022	8/18/2022
tblConstructionPhase	PhaseEndDate	1/17/2022	1/7/2022
tblConstructionPhase	PhaseStartDate	6/16/2022	8/1/2022
tblConstructionPhase	PhaseStartDate	1/20/2022	1/18/2022
tblConstructionPhase	PhaseStartDate	1/18/2022	1/10/2022
tblConstructionPhase	PhaseStartDate	6/9/2022	8/16/2022
tblConstructionPhase	PhaseStartDate	1/15/2022	1/6/2022
tblFleetMix	HHD	6.1320e-003	0.02
tblFleetMix	HHD	6.1320e-003	0.02
tblFleetMix	LDA	0.58	0.53
tblFleetMix	LDA	0.58	0.53
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT2	0.18	0.23

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tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD2	5.3980e-003	6.4490e-003
tblFleetMix	LHD2	5.3980e-003	6.4490e-003
tblFleetMix	MCY	0.02	3.4770e-003
tblFleetMix	MCY	0.02	3.4770e-003
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	2.5260e-003	6.1500e-004
tblFleetMix	MH	2.5260e-003	6.1500e-004
tblFleetMix	MHD	8.2190e-003	0.01
tblFleetMix	MHD	8.2190e-003	0.01
tblFleetMix	OBUS	8.5200e-004	1.6730e-003
tblFleetMix	OBUS	8.5200e-004	1.6730e-003
tblFleetMix	SBUS	8.3700e-004	5.3600e-004
tblFleetMix	SBUS	8.3700e-004	5.3600e-004
tblFleetMix	UBUS	3.3500e-004	1.2240e-003
tblFleetMix	UBUS	3.3500e-004	1.2240e-003
tblGrading	MaterialExported	0.00	500.00
tblLandUse	LandUseSquareFeet	847.05	2,114.00
tblLandUse	LandUseSquareFeet	4,400.00	14,878.00
tblLandUse	LotAcreage	0.02	0.48
tblLandUse	LotAcreage	0.10	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.31	0.31
tblOffRoadEquipment	LoadFactor	0.37	0.37

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tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
tblOffRoadEquipment	OffRoadEquipmentType		Tractors/Loaders/Backhoes
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	6.00	3.70
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	4.00	0.80
tblOffRoadEquipment	UsageHours	6.00	1.20
tblOffRoadEquipment	UsageHours	6.00	5.30
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	7.00	5.30
tblOffRoadEquipment	UsageHours	1.00	8.00
tblOffRoadEquipment	UsageHours	6.00	5.30
tblOffRoadEquipment	UsageHours	8.00	0.80
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	5.30
tblOffRoadEquipment	UsageHours	7.00	5.30
tblTripsAndVMT	HaulingTripNumber	4.00	0.00
tblTripsAndVMT	HaulingTripNumber	63.00	0.00
tblTripsAndVMT	VendorTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00

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tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	7.00	0.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblVehicleEF	HHD	0.02	0.20
tblVehicleEF	HHD	0.05	0.09
tblVehicleEF	HHD	6.28	5.00
tblVehicleEF	HHD	0.41	0.63
tblVehicleEF	HHD	6.6850e-003	8.7300e-004
tblVehicleEF	HHD	930.05	719.71
tblVehicleEF	HHD	1,226.35	1,395.93
tblVehicleEF	HHD	0.05	9.4370e-003
tblVehicleEF	HHD	0.15	0.12
tblVehicleEF	HHD	0.19	0.22
tblVehicleEF	HHD	2.0000e-006	4.0000e-006
tblVehicleEF	HHD	5.20	3.81
tblVehicleEF	HHD	2.52	1.45
tblVehicleEF	HHD	2.31	2.60
tblVehicleEF	HHD	2.1460e-003	1.7380e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	2.0530e-003	1.6560e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9050e-003	8.7860e-003
tblVehicleEF	HHD	0.02	0.02

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tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	5.8000e-005	1.3000e-005
tblVehicleEF	HHD	0.42	0.31
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	2.5000e-005	1.1400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	HHD	8.6530e-003	6.2150e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	0.00
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	5.8000e-005	1.3000e-005
tblVehicleEF	HHD	0.49	0.54
tblVehicleEF	HHD	1.0000e-006	4.0000e-005
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	2.5000e-005	1.1400e-004
tblVehicleEF	HHD	2.0000e-006	0.00
tblVehicleEF	LDA	9.5900e-004	1.2510e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.41	0.48
tblVehicleEF	LDA	1.72	2.09
tblVehicleEF	LDA	213.76	218.64
tblVehicleEF	LDA	45.13	55.99
tblVehicleEF	LDA	3.1760e-003	3.1650e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.13	0.18
tblVehicleEF	LDA	0.04	7.0780e-003

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tblVehicleEF	LDA	9.2900e-004	8.3800e-004
tblVehicleEF	LDA	1.2930e-003	1.4820e-003
tblVehicleEF	LDA	0.02	2.4770e-003
tblVehicleEF	LDA	8.5500e-004	7.7100e-004
tblVehicleEF	LDA	1.1890e-003	1.3620e-003
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	3.2460e-003	4.3400e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.12	0.20
tblVehicleEF	LDA	1.9770e-003	2.1610e-003
tblVehicleEF	LDA	4.1700e-004	5.5400e-004
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	4.7160e-003	6.3290e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.13	0.22
tblVehicleEF	LDT1	1.6710e-003	3.2730e-003
tblVehicleEF	LDT1	0.04	0.07
tblVehicleEF	LDT1	0.54	0.90
tblVehicleEF	LDT1	1.85	3.41
tblVehicleEF	LDT1	258.40	296.02
tblVehicleEF	LDT1	55.17	76.24
tblVehicleEF	LDT1	3.7700e-003	5.8700e-003
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.07
tblVehicleEF	LDT1	0.15	0.27

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tblVehicleEF	LDT1	0.04	9.1380e-003
tblVehicleEF	LDT1	1.0700e-003	1.2600e-003
tblVehicleEF	LDT1	1.4820e-003	2.0740e-003
tblVehicleEF	LDT1	0.02	3.1980e-003
tblVehicleEF	LDT1	9.8400e-004	1.1590e-003
tblVehicleEF	LDT1	1.3630e-003	1.9070e-003
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.47
tblVehicleEF	LDT1	6.5000e-003	0.01
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.15	0.34
tblVehicleEF	LDT1	2.3890e-003	2.9260e-003
tblVehicleEF	LDT1	5.1000e-004	7.5400e-004
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.47
tblVehicleEF	LDT1	9.4830e-003	0.02
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.17	0.37
tblVehicleEF	LDT2	1.7260e-003	1.8780e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.56	0.64
tblVehicleEF	LDT2	2.29	2.73
tblVehicleEF	LDT2	267.19	304.99
tblVehicleEF	LDT2	57.57	77.16
tblVehicleEF	LDT2	4.0490e-003	4.5010e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.03	0.04

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tblVehicleEF	LDT2	0.17	0.25
tblVehicleEF	LDT2	0.04	8.8380e-003
tblVehicleEF	LDT2	1.0240e-003	9.8900e-004
tblVehicleEF	LDT2	1.3590e-003	1.6580e-003
tblVehicleEF	LDT2	0.02	3.0930e-003
tblVehicleEF	LDT2	9.4300e-004	9.1000e-004
tblVehicleEF	LDT2	1.2500e-003	1.5240e-003
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	6.5530e-003	6.8650e-003
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.18	0.27
tblVehicleEF	LDT2	2.4710e-003	3.0150e-003
tblVehicleEF	LDT2	5.3200e-004	7.6300e-004
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	9.5240e-003	0.01
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.20	0.29
tblVehicleEF	LHD1	4.1480e-003	4.3350e-003
tblVehicleEF	LHD1	5.1950e-003	4.0280e-003
tblVehicleEF	LHD1	9.0230e-003	0.02
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	0.47	0.54
tblVehicleEF	LHD1	0.89	2.05
tblVehicleEF	LHD1	8.25	7.81
tblVehicleEF	LHD1	698.55	665.93

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tblVehicleEF	LHD1	10.09	15.88
tblVehicleEF	LHD1	7.2900e-004	5.8900e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.30	0.31
tblVehicleEF	LHD1	0.23	0.33
tblVehicleEF	LHD1	9.1500e-004	6.6600e-004
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	9.9010e-003	9.3430e-003
tblVehicleEF	LHD1	7.0190e-003	9.1890e-003
tblVehicleEF	LHD1	2.1000e-004	1.3400e-004
tblVehicleEF	LHD1	8.7500e-004	6.3700e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4750e-003	2.3360e-003
tblVehicleEF	LHD1	6.6710e-003	8.7610e-003
tblVehicleEF	LHD1	1.9300e-004	1.2300e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.7200e-004	0.09
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.04	0.08
tblVehicleEF	LHD1	8.0000e-005	7.6000e-005
tblVehicleEF	LHD1	6.8120e-003	6.4980e-003
tblVehicleEF	LHD1	1.0000e-004	1.5700e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02

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tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.7200e-004	0.09
tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.05	0.09
tblVehicleEF	LHD2	2.5050e-003	2.5080e-003
tblVehicleEF	LHD2	5.3390e-003	4.4570e-003
tblVehicleEF	LHD2	4.8110e-003	8.7200e-003
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.49	0.38
tblVehicleEF	LHD2	0.48	1.11
tblVehicleEF	LHD2	13.00	13.36
tblVehicleEF	LHD2	679.81	713.03
tblVehicleEF	LHD2	6.44	8.54
tblVehicleEF	LHD2	1.6660e-003	1.6800e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.38	0.50
tblVehicleEF	LHD2	0.12	0.18
tblVehicleEF	LHD2	1.5020e-003	1.4560e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0600e-004	5.7000e-005
tblVehicleEF	LHD2	1.4370e-003	1.3930e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7110e-003	2.6340e-003
tblVehicleEF	LHD2	0.01	0.02

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tblVehicleEF	LHD2	9.8000e-005	5.2000e-005
tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.7400e-004	0.05
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	1.2400e-004	1.2800e-004
tblVehicleEF	LHD2	6.5570e-003	6.8600e-003
tblVehicleEF	LHD2	6.4000e-005	8.4000e-005
tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.7400e-004	0.05
tblVehicleEF	LHD2	0.11	0.10
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.05
tblVehicleEF	MCY	0.32	0.14
tblVehicleEF	MCY	0.25	0.16
tblVehicleEF	MCY	17.61	11.05
tblVehicleEF	MCY	9.20	7.83
tblVehicleEF	MCY	209.76	185.58
tblVehicleEF	MCY	59.23	42.83
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	6.3410e-003
tblVehicleEF	MCY	1.14	0.51
tblVehicleEF	MCY	0.27	0.10
tblVehicleEF	MCY	0.01	0.01

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tblVehicleEF	MCY	2.1380e-003	1.9970e-003
tblVehicleEF	MCY	2.8620e-003	3.4160e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9940e-003	1.8640e-003
tblVehicleEF	MCY	2.6760e-003	3.1970e-003
tblVehicleEF	MCY	0.89	3.68
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	3.68
tblVehicleEF	MCY	2.13	0.89
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.88	1.13
tblVehicleEF	MCY	2.0760e-003	1.8350e-003
tblVehicleEF	MCY	5.8600e-004	4.2300e-004
tblVehicleEF	MCY	0.89	0.08
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	0.08
tblVehicleEF	MCY	2.67	1.09
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	2.04	1.23
tblVehicleEF	MDV	1.7720e-003	2.0970e-003
tblVehicleEF	MDV	0.04	0.07
tblVehicleEF	MDV	0.55	0.66
tblVehicleEF	MDV	2.32	2.78
tblVehicleEF	MDV	321.60	364.04
tblVehicleEF	MDV	67.92	91.48
tblVehicleEF	MDV	5.2660e-003	5.4050e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.18	0.27

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tblVehicleEF	MDV	0.04	8.8920e-003
tblVehicleEF	MDV	1.0330e-003	9.7100e-004
tblVehicleEF	MDV	1.3630e-003	1.6080e-003
tblVehicleEF	MDV	0.02	3.1120e-003
tblVehicleEF	MDV	9.5300e-004	8.9400e-004
tblVehicleEF	MDV	1.2530e-003	1.4780e-003
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	6.8860e-003	8.0910e-003
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.20	0.30
tblVehicleEF	MDV	2.9760e-003	3.5970e-003
tblVehicleEF	MDV	6.2800e-004	9.0400e-004
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	9.9820e-003	0.01
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.22	0.33
tblVehicleEF	MH	5.0270e-003	6.0740e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.31	0.37
tblVehicleEF	MH	1.64	1.92
tblVehicleEF	MH	1,350.27	1,656.25
tblVehicleEF	MH	15.54	20.13
tblVehicleEF	MH	0.05	0.07
tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.06	1.28

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tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1200e-004	2.3300e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2970e-003	3.3360e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.9500e-004	2.1400e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	20.30
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.5400e-004	1.9900e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	20.30
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MHD	3.8320e-003	0.02
tblVehicleEF	MHD	1.0340e-003	9.4650e-003
tblVehicleEF	MHD	8.3830e-003	6.5780e-003
tblVehicleEF	MHD	0.41	0.63
tblVehicleEF	MHD	0.15	0.16
tblVehicleEF	MHD	0.87	0.72

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tblVehicleEF	MHD	65.10	143.38
tblVehicleEF	MHD	993.45	1,074.54
tblVehicleEF	MHD	8.55	6.79
tblVehicleEF	MHD	9.3710e-003	0.02
tblVehicleEF	MHD	0.12	0.14
tblVehicleEF	MHD	7.7400e-003	4.7600e-003
tblVehicleEF	MHD	0.34	0.73
tblVehicleEF	MHD	1.43	0.58
tblVehicleEF	MHD	1.69	1.22
tblVehicleEF	MHD	1.6200e-004	6.5500e-004
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	7.0060e-003	5.4200e-003
tblVehicleEF	MHD	1.1200e-004	8.2000e-005
tblVehicleEF	MHD	1.5500e-004	6.2600e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	6.6960e-003	5.1780e-003
tblVehicleEF	MHD	1.0300e-004	7.6000e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4200e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.6800e-004	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.1800e-004	1.3200e-003
tblVehicleEF	MHD	9.4800e-003	0.01
tblVehicleEF	MHD	8.5000e-005	6.7000e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4200e-003

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tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	1.6800e-004	0.01
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0980e-003	7.5210e-003
tblVehicleEF	OBUS	2.1970e-003	0.01
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.64	0.55
tblVehicleEF	OBUS	0.26	0.29
tblVehicleEF	OBUS	1.58	1.46
tblVehicleEF	OBUS	97.36	89.81
tblVehicleEF	OBUS	1,210.85	1,245.37
tblVehicleEF	OBUS	13.46	12.02
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.12	0.15
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.43	0.33
tblVehicleEF	OBUS	1.45	0.83
tblVehicleEF	OBUS	1.13	0.93
tblVehicleEF	OBUS	1.4200e-004	3.1100e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	7.8820e-003	0.01
tblVehicleEF	OBUS	1.5600e-004	1.1800e-004
tblVehicleEF	OBUS	1.3600e-004	2.9700e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	7.5260e-003	0.01
tblVehicleEF	OBUS	1.4400e-004	1.0900e-004
tblVehicleEF	OBUS	1.0620e-003	0.07

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tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8700e-004	0.07
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	9.2400e-004	8.4600e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3300e-004	1.1900e-004
tblVehicleEF	OBUS	1.0620e-003	0.07
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8700e-004	0.07
tblVehicleEF	OBUS	0.02	0.05
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	4.4040e-003	0.09
tblVehicleEF	SBUS	6.3380e-003	5.2160e-003
tblVehicleEF	SBUS	2.93	1.82
tblVehicleEF	SBUS	0.37	0.72
tblVehicleEF	SBUS	0.86	0.67
tblVehicleEF	SBUS	337.48	181.81
tblVehicleEF	SBUS	970.50	941.81
tblVehicleEF	SBUS	5.06	3.93
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	6.4910e-003	4.8480e-003
tblVehicleEF	SBUS	2.71	1.09

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tblVehicleEF	SBUS	3.09	1.57
tblVehicleEF	SBUS	1.18	0.52
tblVehicleEF	SBUS	2.0480e-003	7.4600e-004
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	8.5750e-003
tblVehicleEF	SBUS	6.8000e-005	4.6000e-005
tblVehicleEF	SBUS	1.9600e-003	7.1300e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6690e-003	2.6100e-003
tblVehicleEF	SBUS	0.02	8.1870e-003
tblVehicleEF	SBUS	6.2000e-005	4.2000e-005
tblVehicleEF	SBUS	8.7000e-004	0.04
tblVehicleEF	SBUS	8.3040e-003	9.3350e-003
tblVehicleEF	SBUS	0.32	0.20
tblVehicleEF	SBUS	4.1400e-004	0.04
tblVehicleEF	SBUS	0.06	0.04
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	3.2190e-003	1.6390e-003
tblVehicleEF	SBUS	9.2880e-003	8.7390e-003
tblVehicleEF	SBUS	5.0000e-005	3.9000e-005
tblVehicleEF	SBUS	8.7000e-004	0.04
tblVehicleEF	SBUS	8.3040e-003	9.3350e-003
tblVehicleEF	SBUS	0.46	0.32
tblVehicleEF	SBUS	4.1400e-004	0.04
tblVehicleEF	SBUS	0.07	0.13
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03

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tblVehicleEF	UBUS	1.86	0.63
tblVehicleEF	UBUS	2.1860e-003	2.5020e-003
tblVehicleEF	UBUS	14.11	7.38
tblVehicleEF	UBUS	0.14	0.53
tblVehicleEF	UBUS	1,668.67	969.99
tblVehicleEF	UBUS	1.40	3.03
tblVehicleEF	UBUS	0.28	0.15
tblVehicleEF	UBUS	1.2560e-003	4.5820e-003
tblVehicleEF	UBUS	0.71	0.26
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.07	0.15
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	5.1160e-003	4.8220e-003
tblVehicleEF	UBUS	1.5000e-005	1.3000e-005
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.8930e-003	4.6090e-003
tblVehicleEF	UBUS	1.4000e-005	1.2000e-005
tblVehicleEF	UBUS	6.1000e-005	7.0380e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	7.0380e-003
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.7600e-004	7.8780e-003
tblVehicleEF	UBUS	9.2610e-003	8.3780e-003
tblVehicleEF	UBUS	0.01	7.3890e-003
tblVehicleEF	UBUS	1.4000e-005	3.0000e-005
tblVehicleEF	UBUS	6.1000e-005	7.0380e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	7.0380e-003

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tblVehicleEF	UBUS	1.90	0.69
tblVehicleEF	UBUS	1.7600e-004	7.8780e-003
tblVehicleEF	UBUS	0.01	9.1730e-003
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	322.50	180.67
tblVehicleTrips	SU_TR	322.50	180.67
tblVehicleTrips	WD_TR	322.50	180.67
tblWater	AerobicPercent	87.46	100.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Energy	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.2168	1.2168	2.0000e-005	2.0000e-005	1.2240
Mobile	0.4751	0.4418	2.9761	0.0101	0.9842	6.5400e-003	0.9908	0.2459	6.1300e-003	0.2520	0.0000	942.1815	942.1815	0.0365	0.0476	957.2765

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Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0222	4.3000e-004	0.0226	8.0000e-005	5.0000e-005	0.0389
Total	**0.4859**	**0.4429**	**2.9771**	**0.0101**	**0.9842**	**6.6200e-003**	**0.9908**	**0.2459**	**6.2100e-003**	**0.2521**	**0.0222**	**943.3991**	**943.4213**	**0.0366**	**0.0477**	**958.5397**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Energy	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.2168	1.2168	2.0000e-005	2.0000e-005	1.2240
Mobile	0.4751	0.4418	2.9761	0.0101	0.9842	6.5400e-003	0.9908	0.2459	6.1300e-003	0.2520	0.0000	942.1815	942.1815	0.0365	0.0476	957.2765
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0222	4.3000e-004	0.0226	8.0000e-005	5.0000e-005	0.0389
Total	**0.4859**	**0.4429**	**2.9771**	**0.0101**	**0.9842**	**6.6200e-003**	**0.9908**	**0.2459**	**6.2100e-003**	**0.2521**	**0.0222**	**943.3991**	**943.4213**	**0.0366**	**0.0477**	**958.5397**

	ROG	NOx	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**

4.0 Operational Detail - Mobile

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4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4751	0.4418	2.9761	0.0101	0.9842	6.5400e-003	0.9908	0.2459	6.1300e-003	0.2520	0.0000	942.1815	942.1815	0.0365	0.0476	957.2765
Unmitigated	0.4751	0.4418	2.9761	0.0101	0.9842	6.5400e-003	0.9908	0.2459	6.1300e-003	0.2520	0.0000	942.1815	942.1815	0.0365	0.0476	957.2765

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	1,084.02	1,084.02	1084.02	2,887,403	2,887,403
Parking Lot	0.00	0.00	0.00		
Total	1,084.02	1,084.02	1,084.02	2,887,403	2,887,403

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
Convenience Market with Gas Pumps	9.50	7.30	7.30	0.80	80.20	19.00	100	0	0
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with Gas Pumps	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.000536	0.000615
Parking Lot	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.000536	0.000615

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0199	0.0199	0.0000	0.0000	0.0199
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0199	0.0199	0.0000	0.0000	0.0199
NaturalGas Mitigated	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
NaturalGas Unmitigated	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040

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					
Convenience Market with Gas Pumps	22429.5	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040

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Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.2000e-004**	**1.1000e-003**	**9.2000e-004**	**1.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**1.1969**	**1.1969**	**2.0000e-005**	**2.0000e-005**	**1.2040**

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					
Convenience Market with Gas	22429.5	1.2000e-004	1.1000e-003	9.2000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1969	1.1969	2.0000e-005	2.0000e-005	1.2040
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.2000e-004**	**1.1000e-003**	**9.2000e-004**	**1.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**1.1969**	**1.1969**	**2.0000e-005**	**2.0000e-005**	**1.2040**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas	16742.9	0.0152	0.0000	0.0000	0.0152
Parking Lot	5207.3	4.7200e-003	0.0000	0.0000	4.7200e-003

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Total		**0.0199**	**0.0000**	**0.0000**	**0.0199**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas Pumps	16742.9	0.0152	0.0000	0.0000	0.0152
Parking Lot	5207.3	4.7200e-003	0.0000	0.0000	4.7200e-003
Total		**0.0199**	**0.0000**	**0.0000**	**0.0199**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

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Unmitigated	0.0106	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Total	**0.0106**	**0.0000**	**1.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-004**	**3.0000e-004**	**0.0000**	**0.0000**	**3.2000e-004**

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	1.4100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.2200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Landscaping	1.0000e-005	0.0000	1.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.0000e-004	3.0000e-004	0.0000	0.0000	3.2000e-004
Total	**0.0106**	**0.0000**	**1.6000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.0000e-004**	**3.0000e-004**	**0.0000**	**0.0000**	**3.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0226	8.0000e-005	5.0000e-005	0.0389
Unmitigated	0.0226	8.0000e-005	5.0000e-005	0.0389

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas Pumps	0.0627431 / 0.000154	0.0226	8.0000e-005	5.0000e-005	0.0389

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Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0226**	**8.0000e-005**	**5.0000e-005**	**0.0389**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0627431 / [illegible]	0.0226	8.0000e-005	5.0000e-005	0.0389
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0226**	**8.0000e-005**	**5.0000e-005**	**0.0389**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market with Gas Pumps	4.00	Pump	0.48	880.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	3			**Operational Year**	2030
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Provided land uses - project description

Construction Phase - Existing Use - No Construction

Off-road Equipment - Provided equip amount & use

Off-road Equipment - Existing Use - No Construction

Grading - Existing Use - No Construction

Demolition -

Trips and VMT -

Vehicle Trips - Trip gen provided by traffic and adjusted for different land uses, 100% primary to capture traffic passby reduction

Vehicle Emission Factors - EMFAC2021 Santa Clara County Vehicle Emissions Factors 2030

Fleet Mix - EMFAC2021 Santa Clara County Fleet Mix 2030

Water And Wastewater -

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Construction Off-road Equipment Mitigation -

Energy Use - Historical energy data

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	LightingElect	4.53	3.71
tblEnergyUse	T24E	2.77	1.91
tblEnergyUse	T24NG	10.42	8.53
tblFleetMix	HHD	6.1320e-003	0.02
tblFleetMix	LDA	0.58	0.53
tblFleetMix	LDT1	0.06	0.03
tblFleetMix	LDT2	0.18	0.23
tblFleetMix	LHD1	0.02	0.03
tblFleetMix	LHD2	5.3980e-003	6.4488e-003
tblFleetMix	MCY	0.02	3.4772e-003
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	2.5260e-003	6.1470e-004
tblFleetMix	MHD	8.2190e-003	0.01
tblFleetMix	OBUS	8.5200e-004	1.6732e-003
tblFleetMix	SBUS	8.3700e-004	5.3567e-004
tblFleetMix	UBUS	3.3500e-004	1.2242e-003
tblLandUse	LandUseSquareFeet	564.70	880.00
tblLandUse	LotAcreage	0.01	0.48
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblVehicleEF	HHD	0.02	0.20
tblVehicleEF	HHD	0.05	0.09

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tblVehicleEF	HHD	0.00	4.4009e-008
tblVehicleEF	HHD	6.28	5.00
tblVehicleEF	HHD	0.41	0.63
tblVehicleEF	HHD	6.6850e-003	8.7263e-004
tblVehicleEF	HHD	930.05	719.71
tblVehicleEF	HHD	1,226.35	1,395.93
tblVehicleEF	HHD	0.05	9.4375e-003
tblVehicleEF	HHD	0.15	0.12
tblVehicleEF	HHD	0.19	0.22
tblVehicleEF	HHD	2.0000e-006	3.7716e-006
tblVehicleEF	HHD	5.20	3.81
tblVehicleEF	HHD	2.52	1.45
tblVehicleEF	HHD	2.31	2.60
tblVehicleEF	HHD	2.1460e-003	1.7376e-003
tblVehicleEF	HHD	0.06	0.08
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	1.4395e-007
tblVehicleEF	HHD	2.0530e-003	1.6556e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.9050e-003	8.7863e-003
tblVehicleEF	HHD	0.02	0.02
tblVehicleEF	HHD	1.0000e-006	1.3236e-007
tblVehicleEF	HHD	1.0000e-006	4.0228e-005
tblVehicleEF	HHD	5.8000e-005	1.2695e-005
tblVehicleEF	HHD	0.42	0.31
tblVehicleEF	HHD	1.0000e-006	4.0228e-005
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	2.5000e-005	1.1399e-004

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tblVehicleEF	HHD	2.0000e-006	2.3855e-007
tblVehicleEF	HHD	8.6530e-003	6.2147e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.0000e-006	9.3299e-008
tblVehicleEF	HHD	1.0000e-006	4.0228e-005
tblVehicleEF	HHD	5.8000e-005	1.2695e-005
tblVehicleEF	HHD	0.49	0.54
tblVehicleEF	HHD	1.0000e-006	4.0228e-005
tblVehicleEF	HHD	0.07	0.10
tblVehicleEF	HHD	2.5000e-005	1.1399e-004
tblVehicleEF	HHD	2.0000e-006	2.6119e-007
tblVehicleEF	LDA	9.5900e-004	1.2508e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.41	0.48
tblVehicleEF	LDA	1.72	2.09
tblVehicleEF	LDA	213.76	218.64
tblVehicleEF	LDA	45.13	55.99
tblVehicleEF	LDA	3.1760e-003	3.1649e-003
tblVehicleEF	LDA	0.02	0.03
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.13	0.18
tblVehicleEF	LDA	0.04	7.0779e-003
tblVehicleEF	LDA	8.0000e-003	8.0000e-003
tblVehicleEF	LDA	9.2900e-004	8.3824e-004
tblVehicleEF	LDA	1.2930e-003	1.4817e-003
tblVehicleEF	LDA	0.02	2.4773e-003
tblVehicleEF	LDA	2.0000e-003	2.0000e-003
tblVehicleEF	LDA	8.5500e-004	7.7101e-004
tblVehicleEF	LDA	1.1890e-003	1.3623e-003

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tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	3.2460e-003	4.3404e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.12	0.20
tblVehicleEF	LDA	1.9770e-003	2.1614e-003
tblVehicleEF	LDA	4.1700e-004	5.5354e-004
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	0.06	0.06
tblVehicleEF	LDA	0.02	0.23
tblVehicleEF	LDA	4.7160e-003	6.3287e-003
tblVehicleEF	LDA	0.02	0.17
tblVehicleEF	LDA	0.13	0.22
tblVehicleEF	LDT1	1.6710e-003	3.2732e-003
tblVehicleEF	LDT1	0.04	0.07
tblVehicleEF	LDT1	0.54	0.90
tblVehicleEF	LDT1	1.85	3.41
tblVehicleEF	LDT1	258.40	296.02
tblVehicleEF	LDT1	55.17	76.24
tblVehicleEF	LDT1	3.7700e-003	5.8697e-003
tblVehicleEF	LDT1	0.02	0.03
tblVehicleEF	LDT1	0.03	0.07
tblVehicleEF	LDT1	0.15	0.27
tblVehicleEF	LDT1	0.04	9.1380e-003
tblVehicleEF	LDT1	8.0000e-003	8.0000e-003
tblVehicleEF	LDT1	1.0700e-003	1.2601e-003
tblVehicleEF	LDT1	1.4820e-003	2.0739e-003
tblVehicleEF	LDT1	0.02	3.1983e-003

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tblVehicleEF	LDT1	2.0000e-003	2.0000e-003
tblVehicleEF	LDT1	9.8400e-004	1.1586e-003
tblVehicleEF	LDT1	1.3630e-003	1.9069e-003
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.47
tblVehicleEF	LDT1	6.5000e-003	0.01
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.15	0.34
tblVehicleEF	LDT1	2.3890e-003	2.9265e-003
tblVehicleEF	LDT1	5.1000e-004	7.5371e-004
tblVehicleEF	LDT1	0.05	0.47
tblVehicleEF	LDT1	0.09	0.12
tblVehicleEF	LDT1	0.04	0.47
tblVehicleEF	LDT1	9.4830e-003	0.02
tblVehicleEF	LDT1	0.06	0.36
tblVehicleEF	LDT1	0.17	0.37
tblVehicleEF	LDT2	1.7260e-003	1.8780e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.56	0.64
tblVehicleEF	LDT2	2.29	2.73
tblVehicleEF	LDT2	267.19	304.99
tblVehicleEF	LDT2	57.57	77.16
tblVehicleEF	LDT2	4.0490e-003	4.5006e-003
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.03	0.04
tblVehicleEF	LDT2	0.17	0.25
tblVehicleEF	LDT2	0.04	8.8377e-003
tblVehicleEF	LDT2	8.0000e-003	8.0000e-003

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tblVehicleEF	LDT2	1.0240e-003	9.8896e-004
tblVehicleEF	LDT2	1.3590e-003	1.6579e-003
tblVehicleEF	LDT2	0.02	3.0932e-003
tblVehicleEF	LDT2	2.0000e-003	2.0000e-003
tblVehicleEF	LDT2	9.4300e-004	9.0987e-004
tblVehicleEF	LDT2	1.2500e-003	1.5244e-003
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	6.5530e-003	6.8652e-003
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.18	0.27
tblVehicleEF	LDT2	2.4710e-003	3.0147e-003
tblVehicleEF	LDT2	5.3200e-004	7.6281e-004
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	0.09	0.06
tblVehicleEF	LDT2	0.05	0.25
tblVehicleEF	LDT2	9.5240e-003	0.01
tblVehicleEF	LDT2	0.05	0.19
tblVehicleEF	LDT2	0.20	0.29
tblVehicleEF	LHD1	4.1480e-003	4.3354e-003
tblVehicleEF	LHD1	5.1950e-003	4.0282e-003
tblVehicleEF	LHD1	9.0230e-003	0.02
tblVehicleEF	LHD1	0.18	0.18
tblVehicleEF	LHD1	0.47	0.54
tblVehicleEF	LHD1	0.89	2.05
tblVehicleEF	LHD1	8.25	7.81
tblVehicleEF	LHD1	698.55	665.93
tblVehicleEF	LHD1	10.09	15.88

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tblVehicleEF	LHD1	7.2900e-004	5.8852e-004
tblVehicleEF	LHD1	0.04	0.04
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	0.05	0.04
tblVehicleEF	LHD1	0.30	0.31
tblVehicleEF	LHD1	0.23	0.33
tblVehicleEF	LHD1	9.1500e-004	6.6564e-004
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	9.9010e-003	9.3434e-003
tblVehicleEF	LHD1	7.0190e-003	9.1889e-003
tblVehicleEF	LHD1	2.1000e-004	1.3386e-004
tblVehicleEF	LHD1	8.7500e-004	6.3684e-004
tblVehicleEF	LHD1	0.03	0.03
tblVehicleEF	LHD1	2.4750e-003	2.3359e-003
tblVehicleEF	LHD1	6.6710e-003	8.7606e-003
tblVehicleEF	LHD1	1.9300e-004	1.2308e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	7.7200e-004	0.09
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.04	0.08
tblVehicleEF	LHD1	8.0000e-005	7.5971e-005
tblVehicleEF	LHD1	6.8120e-003	6.4983e-003
tblVehicleEF	LHD1	1.0000e-004	1.5704e-004
tblVehicleEF	LHD1	1.4030e-003	0.09
tblVehicleEF	LHD1	0.05	0.02
tblVehicleEF	LHD1	0.02	0.02

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tblVehicleEF	LHD1	7.7200e-004	0.09
tblVehicleEF	LHD1	0.09	0.06
tblVehicleEF	LHD1	0.18	0.12
tblVehicleEF	LHD1	0.05	0.09
tblVehicleEF	LHD2	2.5050e-003	2.5083e-003
tblVehicleEF	LHD2	5.3390e-003	4.4567e-003
tblVehicleEF	LHD2	4.8110e-003	8.7205e-003
tblVehicleEF	LHD2	0.13	0.14
tblVehicleEF	LHD2	0.49	0.38
tblVehicleEF	LHD2	0.48	1.11
tblVehicleEF	LHD2	13.00	13.36
tblVehicleEF	LHD2	679.81	713.03
tblVehicleEF	LHD2	6.44	8.54
tblVehicleEF	LHD2	1.6660e-003	1.6805e-003
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	0.07	0.08
tblVehicleEF	LHD2	0.38	0.50
tblVehicleEF	LHD2	0.12	0.18
tblVehicleEF	LHD2	1.5020e-003	1.4561e-003
tblVehicleEF	LHD2	0.09	0.09
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.0600e-004	5.6720e-005
tblVehicleEF	LHD2	1.4370e-003	1.3932e-003
tblVehicleEF	LHD2	0.04	0.03
tblVehicleEF	LHD2	2.7110e-003	2.6336e-003
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	9.8000e-005	5.2152e-005

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tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.7400e-004	0.05
tblVehicleEF	LHD2	0.10	0.08
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.04
tblVehicleEF	LHD2	1.2400e-004	1.2789e-004
tblVehicleEF	LHD2	6.5570e-003	6.8595e-003
tblVehicleEF	LHD2	6.4000e-005	8.4474e-005
tblVehicleEF	LHD2	6.4200e-004	0.05
tblVehicleEF	LHD2	0.02	0.01
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	3.7400e-004	0.05
tblVehicleEF	LHD2	0.11	0.10
tblVehicleEF	LHD2	0.06	0.07
tblVehicleEF	LHD2	0.02	0.05
tblVehicleEF	MCY	0.32	0.14
tblVehicleEF	MCY	0.25	0.16
tblVehicleEF	MCY	17.61	11.05
tblVehicleEF	MCY	9.20	7.83
tblVehicleEF	MCY	209.76	185.58
tblVehicleEF	MCY	59.23	42.83
tblVehicleEF	MCY	0.07	0.04
tblVehicleEF	MCY	0.02	6.3407e-003
tblVehicleEF	MCY	1.14	0.51
tblVehicleEF	MCY	0.27	0.10
tblVehicleEF	MCY	0.01	0.01
tblVehicleEF	MCY	4.0000e-003	4.0000e-003

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tblVehicleEF	MCY	2.1380e-003	1.9967e-003
tblVehicleEF	MCY	2.8620e-003	3.4163e-003
tblVehicleEF	MCY	5.0400e-003	4.2000e-003
tblVehicleEF	MCY	1.9940e-003	1.8635e-003
tblVehicleEF	MCY	2.6760e-003	3.1969e-003
tblVehicleEF	MCY	0.89	3.68
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	3.68
tblVehicleEF	MCY	2.13	0.89
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	1.88	1.13
tblVehicleEF	MCY	2.0760e-003	1.8346e-003
tblVehicleEF	MCY	5.8600e-004	4.2344e-004
tblVehicleEF	MCY	0.89	0.08
tblVehicleEF	MCY	0.63	3.56
tblVehicleEF	MCY	0.47	0.08
tblVehicleEF	MCY	2.67	1.09
tblVehicleEF	MCY	0.46	3.78
tblVehicleEF	MCY	2.04	1.23
tblVehicleEF	MDV	1.7720e-003	2.0971e-003
tblVehicleEF	MDV	0.04	0.07
tblVehicleEF	MDV	0.55	0.66
tblVehicleEF	MDV	2.32	2.78
tblVehicleEF	MDV	321.60	364.04
tblVehicleEF	MDV	67.92	91.48
tblVehicleEF	MDV	5.2660e-003	5.4054e-003
tblVehicleEF	MDV	0.02	0.03
tblVehicleEF	MDV	0.04	0.05
tblVehicleEF	MDV	0.18	0.27

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tblVehicleEF	MDV	0.04	8.8924e-003
tblVehicleEF	MDV	8.0000e-003	8.0000e-003
tblVehicleEF	MDV	1.0330e-003	9.7072e-004
tblVehicleEF	MDV	1.3630e-003	1.6079e-003
tblVehicleEF	MDV	0.02	3.1123e-003
tblVehicleEF	MDV	2.0000e-003	2.0000e-003
tblVehicleEF	MDV	9.5300e-004	8.9404e-004
tblVehicleEF	MDV	1.2530e-003	1.4784e-003
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	6.8860e-003	8.0915e-003
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.20	0.30
tblVehicleEF	MDV	2.9760e-003	3.5970e-003
tblVehicleEF	MDV	6.2800e-004	9.0434e-004
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.06	0.28
tblVehicleEF	MDV	9.9820e-003	0.01
tblVehicleEF	MDV	0.05	0.21
tblVehicleEF	MDV	0.22	0.33
tblVehicleEF	MH	5.0270e-003	6.0741e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	0.31	0.37
tblVehicleEF	MH	1.64	1.92
tblVehicleEF	MH	1,350.27	1,656.25
tblVehicleEF	MH	15.54	20.13
tblVehicleEF	MH	0.05	0.07

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tblVehicleEF	MH	0.03	0.03
tblVehicleEF	MH	1.06	1.28
tblVehicleEF	MH	0.24	0.30
tblVehicleEF	MH	0.13	0.04
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	2.1200e-004	2.3307e-004
tblVehicleEF	MH	0.06	0.02
tblVehicleEF	MH	3.2970e-003	3.3357e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.9500e-004	2.1430e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	20.30
tblVehicleEF	MH	0.04	0.05
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.07	0.09
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	1.5400e-004	1.9899e-004
tblVehicleEF	MH	0.35	20.30
tblVehicleEF	MH	0.03	4.90
tblVehicleEF	MH	0.14	20.30
tblVehicleEF	MH	0.05	0.06
tblVehicleEF	MH	5.8500e-003	0.12
tblVehicleEF	MH	0.08	0.10
tblVehicleEF	MHD	3.8320e-003	0.02
tblVehicleEF	MHD	1.0340e-003	9.4648e-003
tblVehicleEF	MHD	8.3830e-003	6.5780e-003
tblVehicleEF	MHD	0.41	0.63

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	MHD	0.15	0.16
tblVehicleEF	MHD	0.87	0.72
tblVehicleEF	MHD	65.10	143.38
tblVehicleEF	MHD	993.45	1,074.54
tblVehicleEF	MHD	8.55	6.79
tblVehicleEF	MHD	9.3710e-003	0.02
tblVehicleEF	MHD	0.12	0.14
tblVehicleEF	MHD	7.7400e-003	4.7598e-003
tblVehicleEF	MHD	0.34	0.73
tblVehicleEF	MHD	1.43	0.58
tblVehicleEF	MHD	1.69	1.22
tblVehicleEF	MHD	1.6200e-004	6.5479e-004
tblVehicleEF	MHD	0.13	0.04
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	7.0060e-003	5.4200e-003
tblVehicleEF	MHD	1.1200e-004	8.2251e-005
tblVehicleEF	MHD	1.5500e-004	6.2582e-004
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	3.0000e-003	3.0000e-003
tblVehicleEF	MHD	6.6960e-003	5.1779e-003
tblVehicleEF	MHD	1.0300e-004	7.5627e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4196e-003
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	1.6800e-004	0.01
tblVehicleEF	MHD	0.01	0.01
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.1800e-004	1.3196e-003

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tblVehicleEF	MHD	9.4800e-003	0.01
tblVehicleEF	MHD	8.5000e-005	6.7097e-005
tblVehicleEF	MHD	2.8900e-004	0.01
tblVehicleEF	MHD	0.01	3.4196e-003
tblVehicleEF	MHD	0.03	0.04
tblVehicleEF	MHD	1.6800e-004	0.01
tblVehicleEF	MHD	0.01	0.03
tblVehicleEF	MHD	0.02	0.03
tblVehicleEF	MHD	0.05	0.04
tblVehicleEF	OBUS	7.0980e-003	7.5210e-003
tblVehicleEF	OBUS	2.1970e-003	0.01
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.64	0.55
tblVehicleEF	OBUS	0.26	0.29
tblVehicleEF	OBUS	1.58	1.46
tblVehicleEF	OBUS	97.36	89.81
tblVehicleEF	OBUS	1,210.85	1,245.37
tblVehicleEF	OBUS	13.46	12.02
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.12	0.15
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	0.43	0.33
tblVehicleEF	OBUS	1.45	0.83
tblVehicleEF	OBUS	1.13	0.93
tblVehicleEF	OBUS	1.4200e-004	3.1074e-004
tblVehicleEF	OBUS	0.13	0.05
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.8820e-003	0.01
tblVehicleEF	OBUS	1.5600e-004	1.1806e-004

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	OBUS	1.3600e-004	2.9717e-004
tblVehicleEF	OBUS	0.06	0.02
tblVehicleEF	OBUS	3.0000e-003	3.0000e-003
tblVehicleEF	OBUS	7.5260e-003	0.01
tblVehicleEF	OBUS	1.4400e-004	1.0855e-004
tblVehicleEF	OBUS	1.0620e-003	0.07
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	4.8700e-004	0.07
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.07
tblVehicleEF	OBUS	9.2400e-004	8.4613e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	1.3300e-004	1.1882e-004
tblVehicleEF	OBUS	1.0620e-003	0.07
tblVehicleEF	OBUS	0.02	0.01
tblVehicleEF	OBUS	0.06	0.05
tblVehicleEF	OBUS	4.8700e-004	0.07
tblVehicleEF	OBUS	0.02	0.05
tblVehicleEF	OBUS	0.05	0.08
tblVehicleEF	OBUS	0.08	0.08
tblVehicleEF	SBUS	0.07	0.08
tblVehicleEF	SBUS	4.4040e-003	0.09
tblVehicleEF	SBUS	6.3380e-003	5.2156e-003
tblVehicleEF	SBUS	2.93	1.82
tblVehicleEF	SBUS	0.37	0.72
tblVehicleEF	SBUS	0.86	0.67
tblVehicleEF	SBUS	337.48	181.81

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tblVehicleEF	SBUS	970.50	941.81
tblVehicleEF	SBUS	5.06	3.93
tblVehicleEF	SBUS	0.04	0.02
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	6.4910e-003	4.8476e-003
tblVehicleEF	SBUS	2.71	1.09
tblVehicleEF	SBUS	3.09	1.57
tblVehicleEF	SBUS	1.18	0.52
tblVehicleEF	SBUS	2.0480e-003	7.4627e-004
tblVehicleEF	SBUS	0.74	0.04
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	8.5750e-003
tblVehicleEF	SBUS	6.8000e-005	4.5792e-005
tblVehicleEF	SBUS	1.9600e-003	7.1267e-004
tblVehicleEF	SBUS	0.32	0.02
tblVehicleEF	SBUS	2.6690e-003	2.6104e-003
tblVehicleEF	SBUS	0.02	8.1872e-003
tblVehicleEF	SBUS	6.2000e-005	4.2104e-005
tblVehicleEF	SBUS	8.7000e-004	0.04
tblVehicleEF	SBUS	8.3040e-003	9.3352e-003
tblVehicleEF	SBUS	0.32	0.20
tblVehicleEF	SBUS	4.1400e-004	0.04
tblVehicleEF	SBUS	0.06	0.04
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	SBUS	3.2190e-003	1.6395e-003
tblVehicleEF	SBUS	9.2880e-003	8.7391e-003
tblVehicleEF	SBUS	5.0000e-005	3.8847e-005
tblVehicleEF	SBUS	8.7000e-004	0.04

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleEF	SBUS	8.3040e-003	9.3352e-003
tblVehicleEF	SBUS	0.46	0.32
tblVehicleEF	SBUS	4.1400e-004	0.04
tblVehicleEF	SBUS	0.07	0.13
tblVehicleEF	SBUS	0.01	0.03
tblVehicleEF	SBUS	0.04	0.03
tblVehicleEF	UBUS	1.86	0.63
tblVehicleEF	UBUS	2.1860e-003	2.5024e-003
tblVehicleEF	UBUS	14.11	7.38
tblVehicleEF	UBUS	0.14	0.53
tblVehicleEF	UBUS	1,668.67	969.99
tblVehicleEF	UBUS	1.40	3.03
tblVehicleEF	UBUS	0.28	0.15
tblVehicleEF	UBUS	1.2560e-003	4.5820e-003
tblVehicleEF	UBUS	0.71	0.26
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.07	0.15
tblVehicleEF	UBUS	0.03	0.06
tblVehicleEF	UBUS	5.1160e-003	4.8221e-003
tblVehicleEF	UBUS	1.5000e-005	1.2612e-005
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	8.3320e-003	0.01
tblVehicleEF	UBUS	4.8930e-003	4.6095e-003
tblVehicleEF	UBUS	1.4000e-005	1.1596e-005
tblVehicleEF	UBUS	6.1000e-005	7.0381e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	7.0381e-003
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.7600e-004	7.8778e-003

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tblVehicleEF	UBUS	9.2610e-003	8.3785e-003
tblVehicleEF	UBUS	0.01	7.3894e-003
tblVehicleEF	UBUS	1.4000e-005	2.9915e-005
tblVehicleEF	UBUS	6.1000e-005	7.0381e-003
tblVehicleEF	UBUS	8.1400e-004	2.0980e-003
tblVehicleEF	UBUS	3.6000e-005	7.0381e-003
tblVehicleEF	UBUS	1.90	0.69
tblVehicleEF	UBUS	1.7600e-004	7.8778e-003
tblVehicleEF	UBUS	0.01	9.1734e-003
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	ST_TR	322.50	199.50
tblVehicleTrips	SU_TR	322.50	199.50
tblVehicleTrips	WD_TR	322.50	199.50

2.0 Emissions Summary

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	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.1431	1.1431	1.1000e-004	2.0000e-005	1.1524
Mobile	0.3498	0.3252	2.1908	7.4500e-003	0.7245	4.8100e-003	0.7293	0.1810	4.5100e-003	0.1855	0.0000	693.5862	693.5862	0.0268	0.0350	704.6983

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0133	0.0292	0.0425	1.3700e-003	3.0000e-005	0.0865
Total	**0.3537**	**0.3257**	**2.1913**	**7.4500e-003**	**0.7245**	**4.8400e-003**	**0.7294**	**0.1810**	**4.5400e-003**	**0.1855**	**0.0133**	**694.7586**	**694.7719**	**0.0283**	**0.0351**	**705.9373**

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	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Energy	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	1.1431	1.1431	1.1000e-004	2.0000e-005	1.1524
Mobile	0.3498	0.3252	2.1908	7.4500e-003	0.7245	4.8100e-003	0.7293	0.1810	4.5100e-003	0.1855	0.0000	693.5862	693.5862	0.0268	0.0350	704.6983
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0133	0.0292	0.0425	1.3700e-003	3.0000e-005	0.0865
Total	**0.3537**	**0.3257**	**2.1913**	**7.4500e-003**	**0.7245**	**4.8400e-003**	**0.7294**	**0.1810**	**4.5400e-003**	**0.1855**	**0.0133**	**694.7586**	**694.7719**	**0.0283**	**0.0351**	**705.9373**

	ROG	NOx	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**

4.0 Operational Detail - Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3498	0.3252	2.1908	7.4500e-003	0.7245	4.8100e-003	0.7293	0.1810	4.5100e-003	0.1855	0.0000	693.5862	693.5862	0.0268	0.0350	704.6983
Unmitigated	0.3498	0.3252	2.1908	7.4500e-003	0.7245	4.8100e-003	0.7293	0.1810	4.5100e-003	0.1855	0.0000	693.5862	693.5862	0.0268	0.0350	704.6983

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market with Gas Pumps	798.00	798.00	798.00	2,125,558	2,125,558
Total	798.00	798.00	798.00	2,125,558	2,125,558

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
Convenience Market with Gas	9.50	7.30	7.30	0.80	80.20	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with Gas Pumps	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.000536	0.000615

5.0 Energy Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.6449	0.6449	1.0000e-004	1.0000e-005	0.6512
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.6449	0.6449	1.0000e-004	1.0000e-005	0.6512
NaturalGas Mitigated	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
NaturalGas Unmitigated	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012

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					
Convenience Market with Gas P...	9336.8	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
Total		**5.0000e-005**	**4.6000e-004**	**3.8000e-004**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.4983**	**0.4983**	**1.0000e-005**	**1.0000e-005**	**0.5012**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
Convenience Market with Gas P...	9336.8	5.0000e-005	4.6000e-004	3.8000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4983	0.4983	1.0000e-005	1.0000e-005	0.5012
Total		**5.0000e-005**	**4.6000e-004**	**3.8000e-004**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.4983**	**0.4983**	**1.0000e-005**	**1.0000e-005**	**0.5012**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas P...	6969.6	0.6449	1.0000e-004	1.0000e-005	0.6512
Total		**0.6449**	**1.0000e-004**	**1.0000e-005**	**0.6512**

Mitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market with Gas P...	6969.6	0.6449	1.0000e-004	1.0000e-005	0.6512
Total		**0.6449**	**1.0000e-004**	**1.0000e-005**	**0.6512**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Unmitigated	3.9000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

6.2 Area by SubCategory

Unmitigated

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	**3.9000e-003**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**8.0000e-005**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.4400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	**3.9000e-003**	**0.0000**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**7.0000e-005**	**7.0000e-005**	**0.0000**	**0.0000**	**8.0000e-005**

7.0 Water Detail

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0425	1.3700e-003	3.0000e-005	0.0865
Unmitigated	0.0425	1.3700e-003	3.0000e-005	0.0865

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0418287 / 0.025637	0.0425	1.3700e-003	3.0000e-005	0.0865
Total		**0.0425**	**1.3700e-003**	**3.0000e-005**	**0.0865**

Mitigated

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market with Gas	0.0418287 / 0.025637	0.0425	1.3700e-003	3.0000e-005	0.0865
Total		**0.0425**	**1.3700e-003**	**3.0000e-005**	**0.0865**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

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

World Oil Gas Station, 16720 Monterey Rd, Morgan Hill - Existing - Santa Clara County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Attachment 3: EMFAC2021 Calculations

CalEEMod Construction Inputs

Phase	CalEEMod WORKER TRIPS	CalEEMod VENDOR TRIPS	Total Worker Trips	Total Vendor Trips	CalEEMod HAULING TRIPS	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class	*Worker VMT*	*Vendor VMT*	*Hauling VMT*
Demolition	10	0	30	0	34	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	324	0	680
Site Preparation	8	0	16	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	172.8	0	0
Grading	8	0	24	0	62	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	259.2	0	1240
Trenching	3	0	9	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	97.2	0	0
Building Construction	7	3	973	417	24	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	10508.4	3044.1	175.2
Architectural Coating	1	0	15	0	0	10.8	7.3	20	LD_Mix	HDT_Mix	HHDT	162	0	0
Paving	8	0	24	0	23	10.8	7.3	7.3	LD_Mix	HDT_Mix	HHDT	259.2	0	167.9

Number of Days Per Year					
2022	1/3/22	8/19/22	229	165	
			229	**165**	***Total Workdays***

Phase	Start Date	End Date	Days/Week	Workdays
Demolition	1/3/2022	1/5/2022	5	3
Site Preparation	1/6/2022	1/7/2022	5	2
Grading	1/10/2022	1/12/2022	5	3
Trenching	1/13/2022	1/17/2022	5	3
Building Construction	1/18/2022	7/29/2022	5	139
Architectural Coating	8/1/2022	8/19/2022	5	15
Paving	8/16/2022	8/18/2022	5	3

Summary of Construction Traffic Emissions (EMFAC2021)

Pollutants YEAR	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	NBio- CO2	CH4	N2O	CO2e
					Tons							*Metric Tons*		
Criteria Pollutants														
2022	0.0026	0.0174	0.0251	0.0001	0.0056	0.0010	0.0066	0.0008	0.0004	0.0013	12.2096	0.0007	0.0014	12.6535
Toxic Air Contaminants (0.5 Mile Trip Length)														
2022	0.0022	0.0043	0.0083	0.00001	0.0003	0.0001	0.0003	0.00004	0.00002	0.0001	1.0200	0.0002	0.0002	1.0736

CalEEMod EMFAC2021 Emission Factors Input — Year 2023

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.005543	0.0033	0.012943	0.235880982	0.0074	0	0	0.072953	0
A	CH4_RUNEX	0.002309	0.006952	0.00308	0.004283	0.009183	0.00757	0.009907	0.125647179	0.009278	0.352428219	0.167622	0.09139	0.014501
A	CH4_STREX	0.069078	0.112042	0.086838	0.107347	0.024108	0.013298	0.009245	9.74075E-08	0.018357	0.003616871	0.187482	0.004689	0.027555
A	CO_IDLEX	0	0	0	0	0.197776	0.143864	0.673566	5.211988223	0.508403	0	0	1.616318	0
A	CO_RUNEX	0.700599	1.545577	0.885507	1.03953	0.977428	0.617452	0.40377	0.794814833	0.568279	4.150838581	13.08956	0.909279	1.613326
A	CO_STREX	3.093262	5.633529	3.848359	4.215799	2.151466	1.239679	1.152494	0.000554916	2.060102	0.526628834	8.051197	0.661172	2.629883
A	CO2_NBIO_IDLEX	0	0	0	0	8.8243	13.864	161.3373	850.5103942	84.54536	0	0	189.5327	0
A	CO2_NBIO_RUNEX	253.3603	332.0777	348.0532	420.6276	800.552	843.5283	1239.598	1643.047907	1407.274	1099.257347	188.3093	1037.354	1694.252
A	CO2_NBIO_STREX	65.49895	88.11332	89.31449	107.0911	18.04818	10.22295	8.835974	0.026904766	16.13719	3.194751579	49.59811	3.671843	23.09757
A	NOX_IDLEX	0	0	0	0	0.050397	0.096708	0.924044	4.162978677	0.357592	0	0	1.426205	0
A	NOX_RUNEX	0.042384	0.142891	0.076248	0.114857	0.752921	0.999586	1.219275	1.930480649	1.034947	0.328578112	0.586927	2.743347	1.589794
A	NOX_STREX	0.244924	0.402457	0.354278	0.457198	0.460153	0.255168	1.396113	2.692504026	0.9621	0.03844891	0.142374	0.466956	0.298917
A	PM10_IDLEX	0	0	0	0	0.000676	0.001353	0.002542	0.002283218	0.000434	0	0	0.001415	0
A	PM10_PMBW	0.0072	0.009228	0.008874	0.009032	0.078	0.091	0.045469	0.081444361	0.049774	0.110338825	0.012	0.044914	0.044949
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009403	0.010643	0.012	0.03512271	0.012	0.032470639	0.004	0.010632	0.013172
A	PM10_RUNEX	0.001228	0.002057	0.001379	0.001449	0.015148	0.024134	0.014931	0.02583284	0.016048	0.006236291	0.001899	0.014252	0.031355
A	PM10_STREX	0.001982	0.003071	0.00216	0.002277	0.000249	0.000113	0.000113	9.98684E-07	0.000145	1.21051E-05	0.003626	3.81E-05	0.000337
A	PM25_IDLEX	0	0	0	0	0.000647	0.001295	0.002431	0.002178658	0.000415	0	0	0.001353	0
A	PM25_PMBW	0.00252	0.00323	0.003106	0.003161	0.0273	0.03185	0.015914	0.028505526	0.017421	0.038618589	0.0042	0.01572	0.015732
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002351	0.002661	0.003	0.008780678	0.003	0.00811766	0.001	0.002658	0.003293
A	PM25_RUNEX	0.001131	0.001894	0.001269	0.001336	0.014451	0.02307	0.014277	0.024711634	0.015344	0.005962722	0.001778	0.013621	0.029948
A	PM25_STREX	0.001822	0.002824	0.001986	0.002094	0.000229	0.000103	0.000104	9.18253E-07	0.000133	1.11302E-05	0.003413	3.5E-05	0.00031
A	ROG_DIURN	0.286612	0.62671	0.296555	0.362629	0.136604	0.071391	0.028425	0.000287604	0.069952	0.009901795	3.947874	0.0249	34.57635
A	ROG_HTSK	0.085368	0.173317	0.084146	0.099202	0.035317	0.018676	0.006962	8.55424E-05	0.01756	0.003307263	3.5601	0.007023	9.448812
A	ROG_IDLEX	0	0	0	0	0.022704	0.016516	0.02753	0.332404817	0.040107	0	0	0.177673	0
A	ROG_RESTL	0.286612	0.62671	0.296555	0.362629	0.136604	0.071391	0.028425	0.000287604	0.069952	0.009901795	3.947874	0.0249	34.57635
A	ROG_RUNEX	0.009057	0.031121	0.012293	0.01844	0.096052	0.122502	0.04435	0.019533335	0.051561	0.063067216	1.105923	0.05844	0.094137
A	ROG_RUNLS	0.215368	0.500663	0.22139	0.277716	0.193896	0.099741	0.056608	0.00077057	0.077935	0.007987303	3.745685	0.016228	0.219535
A	ROG_STREX	0.319184	0.580507	0.40628	0.544102	0.1203	0.065816	0.052337	5.28839E-07	0.097296	0.012818632	1.392636	0.026728	0.118676
A	SO2_IDLEX	0	0	0	0	8.59E-05	0.000133	0.001502	0.007460827	0.000801	0	0	0.001727	0
A	SO2_RUNEX	0.002505	0.003283	0.00344	0.004156	0.007823	0.008132	0.011768	0.01488345	0.013465	0.009433556	0.001862	0.009644	0.016619
A	SO2_STREX	0.000648	0.000871	0.000883	0.001059	0.000178	0.000101	8.74E-05	2.65981E-07	0.00016	3.15834E-05	0.00049	3.63E-05	0.000228
A	TOG_DIURN	0.286612	0.62671	0.296555	0.362629	0.136604	0.071391	0.028425	0.000287604	0.069952	0.009901795	0.087365	0.0249	34.57635
A	TOG_HTSK	0.085368	0.173317	0.084146	0.099202	0.035317	0.018676	0.006962	8.55424E-05	0.01756	0.003307263	3.5601	0.007023	9.448812
A	TOG_IDLEX	0	0	0	0	0.032285	0.022413	0.044141	0.599966232	0.053194	0	0	0.289688	0
A	TOG_RESTL	0.286612	0.62671	0.296555	0.362629	0.136604	0.071391	0.028425	0.000287604	0.069952	0.009901795	0.087365	0.0249	34.57635
A	TOG_RUNEX	0.013192	0.045377	0.017921	0.026821	0.119274	0.143057	0.060502	0.147692373	0.068837	0.423036462	1.324135	0.158821	0.125821
A	TOG_RUNLS	0.215368	0.500663	0.22139	0.277716	0.193896	0.099741	0.056608	0.00077057	0.077935	0.007987303	3.745685	0.016228	0.219535
A	TOG_STREX	0.349466	0.63558	0.444825	0.59572	0.131713	0.07206	0.057303	5.79012E-07	0.106527	0.014034789	1.513873	0.029263	0.129936
A	N2O_IDLEX	0	0	0	0	0.000643	0.00168	0.024829	0.136898066	0.01195	0	0	0.02521	0
A	N2O_RUNEX	0.004499	0.010217	0.006469	0.009248	0.042305	0.083298	0.159885	0.262148415	0.157888	0.166548434	0.040223	0.130452	0.069784
A	N2O_STREX	0.030882	0.039656	0.038251	0.041954	0.036245	0.020051	0.006097	2.46823E-05	0.015566	0.006082261	0.008379	0.004062	0.030902

CalEEMod EMFAC2021 Fleet Mix Input — Year 2023

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with	0.54912	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525	0.00069
Parking Lot	0.54912	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525	0.00069

CalEEMod EMFAC2021 Fleet Mix Input **Existing Year 2023**

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with	0.54912	0.037926	0.222589	0.119508	0.023681	0.005785	0.010952	0.022598	0.001792	0.001268	0.003566	0.000525467	0.00069

CalEEMod EMFAC2021 Emission Factors Input — Year 2030

Season	EmissionType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
A	CH4_IDLEX	0	0	0	0	0.004335	0.002508	0.015544	0.200689575	0.007521	0	0	0.081907	0
A	CH4_RUNEX	0.001251	0.003273	0.001878	0.002097	0.004028	0.004457	0.009465	0.087739612	0.010745	0.633168094	0.142987	0.08726	0.006074
A	CH4_STREX	0.045719	0.070684	0.060357	0.065129	0.016442	0.00872	0.006578	4.40093E-08	0.013432	0.002502449	0.157242	0.005216	0.022777
A	CO_IDLEX	0	0	0	0	0.182077	0.135546	0.628457	4.997868655	0.549826	0	0	1.823721	0
A	CO_RUNEX	0.484447	0.895501	0.639473	0.660784	0.544761	0.383737	0.155266	0.628349624	0.288528	7.378159276	11.04655	0.716417	0.371762
A	CO_STREX	2.08878	3.413929	2.729559	2.781248	2.051418	1.109837	0.71851	0.00087263	1.464305	0.531636543	7.830862	0.671301	1.918466
A	CO2_NBIO_IDLEX	0	0	0	0	7.808851	13.36322	143.3801	719.710734	89.80588	0	0	181.8136	0
A	CO2_NBIO_RUNEX	218.6415	296.0222	304.9904	364.0422	665.9344	713.025	1074.538	1395.928332	1245.372	969.9926525	185.5769	941.807	1656.25
A	CO2_NBIO_STREX	55.99265	76.24029	77.1602	91.4769	15.88489	8.544837	6.787068	0.009437452	12.01881	3.025945099	42.83228	3.929487	20.12804
A	NOX_IDLEX	0	0	0	0	0.036306	0.076255	0.72827	3.806064714	0.333548	0	0	1.088868	0
A	NOX_RUNEX	0.023158	0.066035	0.041164	0.048222	0.312391	0.495733	0.584719	1.446947564	0.825827	0.255958394	0.509869	1.567888	1.278466
A	NOX_STREX	0.178975	0.272625	0.247045	0.271696	0.32724	0.178285	1.220957	2.603954429	0.931305	0.025581732	0.103081	0.520702	0.298107
A	PM10_IDLEX	0	0	0	0	0.000666	0.001456	0.000655	0.001737607	0.000311	0	0	0.000746	0
A	PM10_PMBW	0.007078	0.009138	0.008838	0.008892	0.0744	0.086908	0.04333	0.082108579	0.049981	0.147119217	0.012	0.043749	0.04494
A	PM10_PMTW	0.008	0.008	0.008	0.008	0.009343	0.010534	0.012	0.035145225	0.012	0.05700071	0.004	0.010442	0.013343
A	PM10_RUNEX	0.000838	0.00126	0.000989	0.000971	0.009189	0.01687	0.00542	0.023402177	0.012621	0.004822062	0.001997	0.008575	0.022807
A	PM10_STREX	0.001482	0.002074	0.001658	0.001608	0.000134	5.67E-05	8.23E-05	1.43954E-07	0.000118	1.26121E-05	0.003416	4.58E-05	0.000233
A	PM25_IDLEX	0	0	0	0	0.000637	0.001393	0.000626	0.001655588	0.000297	0	0	0.000713	0
A	PM25_PMBW	0.002477	0.003198	0.003093	0.003112	0.02604	0.030418	0.015165	0.028738003	0.017493	0.051491726	0.0042	0.015312	0.015729
A	PM25_PMTW	0.002	0.002	0.002	0.002	0.002336	0.002634	0.003	0.008786306	0.003	0.014250178	0.001	0.00261	0.003336
A	PM25_RUNEX	0.000771	0.001159	0.00091	0.000894	0.008761	0.016127	0.005178	0.022386582	0.012067	0.00460949	0.001864	0.008187	0.021783
A	PM25_STREX	0.001362	0.001907	0.001524	0.001478	0.000123	5.22E-05	7.56E-05	1.3236E-07	0.000109	1.15963E-05	0.003197	4.21E-05	0.000214
A	ROG_DIURN	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	3.680755	0.041692	20.29626
A	ROG_HTSK	0.060745	0.120653	0.063468	0.068938	0.020831	0.011136	0.00342	1.26947E-05	0.014014	0.002098044	3.555147	0.009335	4.900484
A	ROG_IDLEX	0	0	0	0	0.01758	0.01365	0.020875	0.311156106	0.039789	0	0	0.197824	0
A	ROG_RESTL	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	3.680755	0.041692	20.29626
A	ROG_RUNEX	0.00434	0.013675	0.006865	0.008091	0.050519	0.082873	0.014952	0.014289903	0.031966	0.05310504	0.890508	0.040189	0.050568
A	ROG_RUNLS	0.170881	0.355945	0.18526	0.207423	0.123377	0.065349	0.028627	0.000113992	0.077263	0.007877766	3.783469	0.027699	0.119258
A	ROG_STREX	0.197184	0.337555	0.26551	0.301161	0.07823	0.041209	0.034167	2.38553E-07	0.071386	0.008378471	1.134366	0.029472	0.088942
A	SO2_IDLEX	0	0	0	0	7.6E-05	0.000128	0.00132	0.006214699	0.000846	0	0	0.001639	0
A	SO2_RUNEX	0.002161	0.002926	0.003015	0.003597	0.006498	0.00686	0.010167	0.012580529	0.011835	0.007389377	0.001835	0.008739	0.016224
A	SO2_STREX	0.000554	0.000754	0.000763	0.000904	0.000157	8.45E-05	6.71E-05	9.32988E-08	0.000119	2.99145E-05	0.000423	3.88E-05	0.000199
A	TOG_DIURN	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	0.080793	0.041692	20.29626
A	TOG_HTSK	0.060745	0.120653	0.063468	0.068938	0.020831	0.011136	0.00342	1.26947E-05	0.014014	0.002098044	3.555147	0.009335	4.900484
A	TOG_IDLEX	0	0	0	0	0.0248	0.018097	0.03926	0.541395418	0.052568	0	0	0.32342	0
A	TOG_RESTL	0.227323	0.469769	0.248439	0.276762	0.087274	0.048494	0.014918	4.02275E-05	0.069383	0.007038146	0.080793	0.041692	20.29626
A	TOG_RUNEX	0.006329	0.019954	0.010004	0.011775	0.060583	0.095343	0.026358	0.103810529	0.046832	0.694289379	1.091848	0.133799	0.062589
A	TOG_RUNLS	0.170881	0.355945	0.18526	0.207423	0.123377	0.065349	0.028627	0.000113992	0.077263	0.007877766	3.783469	0.027699	0.119258
A	TOG_STREX	0.215892	0.36958	0.2907	0.329734	0.085652	0.045119	0.037409	2.61185E-07	0.078158	0.009173371	1.234067	0.032269	0.097381
A	N2O_IDLEX	0	0	0	0	0.000589	0.00168	0.022195	0.116327365	0.013129	0	0	0.023481	0
A	N2O_RUNEX	0.003165	0.00587	0.004501	0.005405	0.035467	0.074134	0.137514	0.223022009	0.151496	0.151061958	0.036967	0.112558	0.068485
A	N2O_STREX	0.025397	0.032408	0.031653	0.032172	0.028461	0.015119	0.00476	3.77164E-06	0.011347	0.00458201	0.006341	0.004848	0.033159

CalEEMod EMFAC2021 Fleet Mix Input — Year 2030

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.000536	0.000615
Parking Lot	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.000536	0.000615

CalEEMod EMFAC2021 Fleet Mix Input **Existing Year** **2030**

FleetMixLandUseSubType	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market with	0.531238	0.031583	0.233465	0.129376	0.026017	0.006449	0.011093	0.023253	0.001673	0.001224	0.003477	0.00053567	0.000615

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2022
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_STR	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNI	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2022	HHDT	Aggregate	Aggregate	Gasoline	3.827367	105.1913	105.1913	0	76.57795	0	9.246272	0	1.235102	0.00578	0	0.001696	0.005	0.036521	0.006286	0	0.001845	0.02	0.104346	2407.176	0	49.64979	0.419155	0	0.000162	0.231899	0	0.038678	2.628217	0	0.000881	0.16301	1.46846	10.96573	3.835087	0	0.000965	0.16301	1.46846	10.96573	0.039703	94.77398	0	0.712144	0.023797	0	0.000491
Santa Clara	2022	HHDT	Aggregate	Aggregate	Diesel	8126.63	984491.3	984491.3	0	118998.6	0	2.444518	67.79787	2.544846	0.027272	0.034513	0	0.008769	0.027987	0.028505	0.036074	0	0.035077	0.079962	1677.544	12677.87	0	0.001458	0.236832	0	0.264298	1.997403	0	0.031398	5.098937	0	0	0	0	0.035744	5.804752	0	0	0	0	0	0.203666	0.125232	70.47019	0	0.015885	0.120052	0
Santa Clara	2022	HHDT	Aggregate	Natural Ga	Aggregate	660.7756	47681.36	47681.36	0	5809.397	0	1.356717	13.62116	0	0.001899	0.022358	0	0.009	0.047596	0.002065	0.024316	0	0.036	0.135989	1429.3	10316.77	0	2.688526	36.13158	0	0.291372	2.10314	0	0.062535	0.56302	0	0	0	0	2.77132	36.92822	0	0	0	0	0	0.851705	14.53027	73.87982	0	0	0	0
Santa Clara	2022	LDA	Aggregate	Aggregate	Gasoline	604047.8	22374250	22374250	0	2805661	0	0.053791	0	0.287921	0.00126	0	0.002062	0.002	0.002656	0.00137	0	0.002242	0.008	0.007588	287.1374	0	73.33113	0.002925	0	0.081262	0.005394	0	0.035089	0.011654	0	0.381731	0.098272	0.249754	1.530333	0.017001	0	0.417946	0.098272	0.249754	1.530333	0.032827	0.847106	0	3.666246	0.002839	0	0.000725
Santa Clara	2022	LDA	Aggregate	Aggregate	Diesel	1988.847	60930.09	60930.09	0	8564.495	0	0.263546	0	0	0.019976	0	0	0.002	0.00269	0.020879	0	0	0.008	0.007686	236.272	0	0	0.00151	0	0	0.037225	0	0	0.032513	0	0	0	0	0	0.037014	0	0	0	0	0	0	0.0031	0.352928	0	0	0.002239	0	0
Santa Clara	2022	LDA	Aggregate	Electricity	Aggregate	49768.56	2058456	0	2058456	294733.9	794733.9	0	0	0	0	0	0	0.002	0.001531	0	0	0	0.008	0.004374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	LDA	Aggregate	Aggregate	Plug-in Hyb	14080.33	626833.5	326494.8	300338.7	58222.18	90711.24	0.003418	0	0.11551	0.000718	0	0.002292	0.002	0.001368	0.000781	0	0.002492	0.008	0.003908	145.2228	0	67.22203	0.000469	0	0.042745	0.000623	0	0.021047	0.001478	0	0.173285	0.039673	0.035067	0.451466	0.002157	0	0.189725	0.039673	0.035067	0.451466	0.019838	0.224082	0	1.339893	0.001436	0	0.000665
Santa Clara	2022	LDT1	Aggregate	Aggregate	Gasoline	54974.08	1779154	1779154	0	245182.1	0	0.160037	0	0.042895	0.001971	0	0.003006	0.002	0.003236	0.002144	0	0.003269	0.008	0.009246	338.1243	0	90.32061	0.007798	0	0.120165	0.011179	0	0.040992	0.03517	0	0.630523	0.182138	0.532387	2.932213	0.035502	1.699209	0	6.111696	0.003343	0	0.000893
Santa Clara	2022	LDT1	Aggregate	Diesel	Aggregate	28.88602	444.5778	444.5778	0	84.95747	0	1.664076	0	0	0.241157	0	0	0.002	0.003731	0.252061	0	0	0.008	0.01066	415.6618	0	0	0.013984	0	0	0.065488	0	0	0.301058	0	0	0	0	0	0.342735	0	0	0	0	0	0	0.0031	1.609282	0	0	0.003939	0	0
Santa Clara	2022	LDT1	Aggregate	Aggregate	Electricity	182.9928	6367.047	0	6367.047	860.9347	2458.206	0	0	0	0	0	0	0.002	0.001541	0	0	0	0.008	0.004403	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	LDT1	Aggregate	Aggregate	Plug-in Hyb	24.31577	1158.953	555.2268	603.7259	100.5457	182.3432	0.003144	0	0.11551	0.00042	0	0.001472	0.002	0.001376	0.000457	0	0.001601	0.008	0.003931	133.572	0	73.48077	0.00043	0	0.042675	0.000571	0	0.020981	0.001359	0	0.173285	0.025111	0.023155	0.300675	0.020121	0.206104	0	1.339893	0.00132	0	0.000726
Santa Clara	2022	LDT2	Aggregate	Aggregate	Gasoline	274728.5	9911730	9911730	0	1286654	0	0.087216	0	0.387125	0.001308	0	0.002055	0.002	0.003124	0.001422	0	0.002235	0.008	0.008926	357.8859	0	92.09899	0.003418	0	0.092802	0.006919	0	0.046202	0.013801	0	0.439671	0.088088	0.231141	1.442564	0.020134	0	0.481384	0.088088	0.231141	1.442564	0.034673	0.960886	0	4.129331	0.003538	0	0.00091
Santa Clara	2022	LDT2	Aggregate	Aggregate	Diesel	933.788	35569.23	35569.23	0	4479.453	0	0.049482	0	0	0.005617	0	0	0.002	0.003089	0.005871	0	0	0.008	0.008825	319.8313	0	0	0.000662	0	0	0.05039	0	0	0.01425	0	0	0	0	0	0.016223	0	0	0	0	0	0	0.0031	0.132603	0	0	0.003031	0	0
Santa Clara	2022	LDT2	Aggregate	Aggregate	Electricity	669.3585	23693.95	0	23693.95	3436.204	9147.819	0	0	0	0	0	0	0.002	0.001524	0	0	0	0.008	0.004354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	LDT2	Aggregate	Aggregate	Plug-in Hyb	1256.28	57825.99	28723.51	29102.47	5194.718	8789.814	0.003259	0	0.11551	0.000565	0	0.001911	0.002	0.001372	0.000614	0	0.002078	0.008	0.00392	138.4921	0	79.93529	0.000446	0	0.042681	0.000592	0	0.020988	0.00141	0	0.173285	0.026873	0.02547	0.333582	0.020057	0	0.189725	0.026873	0.02547	0.333582	0.020799	0.213696	0	1.339893	0.001369	0	0.00079
Santa Clara	2022	LHDT1	Aggregate	Aggregate	Gasoline	19023.54	692949.2	692949.2	0	283422.4	0	0.22563	0.03858	0.680855	0.001666	0	0.000355	0.002	0.0273	0.001812	0	0.000386	0.008	0.078	910.666	121.4496	25.8752	0.010696	0.11838	0.036173	0.012587	0.003045	0.052713	0.053941	0.441903	0.181796	0.053097	0.287419	3.005479	0.078711	0.644824	0.189044	0.053097	0.287419	3.005479	0.044851	1.310703	3.750518	3.032062	0.009003	0.001201	0.000256
Santa Clara	2022	LHDT1	Aggregate	Diesel	Aggregate	9466.897	364941.3	364941.3	0	119081.7	0	2.046185	2.148991	0	0.042212	0.027161	0	0.003	0.0273	0.044121	0.028389	0	0.012	0.078	640.1321	134.8074	0	0.009365	0.005098	0	0.100853	0.021239	0	0.201618	0.10976	0	0	0	0	0.229529	0.124954	0	0	0	0	0	0.156672	0.574472	0.909745	0	0.006066	0.001277	0
Santa Clara	2022	LHDT2	Aggregate	Aggregate	Gasoline	2479.119	89333.8	89333.8	0	36935.18	0	0.214022	0.038116	0.662237	0.001522	0	0.000288	0.002	0.03185	0.001655	0	0.000313	0.008	0.091	1017.016	140.0339	25.93331	0.008303	0.117781	0.035049	0.012366	0.003023	0.05141	0.03933	0.436803	0.174741	0.049582	0.263161	2.773988	0.057391	0.637382	0.19132	0.049582	0.263161	2.773988	0.044954	1.055116	3.755463	3.106689	0.010054	0.001384	0.000256
Santa Clara	2022	LHDT2	Aggregate	Aggregate	Diesel	4276.175	167672	167672	0	53788.9	0	1.602621	2.114348	0	0.036809	0.027077	0	0.003	0.03185	0.038473	0.028302	0	0.012	0.091	773.4619	214.911	0	0.00832	0.005098	0	0.121859	0.033859	0	0.179126	0.10976	0	0	0	0	0.203923	0.124954	0	0	0	0	0	0.1727	0.476085	0.909745	0	0.007329	0.002036	0
Santa Clara	2022	MCY	Aggregate	Aggregate	Gasoline	27595.09	162924	162924	0	55190.18	0	0.60517	0	0.149724	0.001772	0	0.003556	0.001	0.0042	0.001891	0	0.003773	0.004	0.012	188.9834	0	50.90901	0.173457	0	0.19335	0.041009	0	0.008761	1.156556	0	1.442993	3.560376	3.734124	3.980024	1.378949	0	1.568432	3.560376	3.734124	3.980024	0.008705	13.58248	0	8.107621	0.001868	0	0.000503
Santa Clara	2022	MDV	Aggregate	Aggregate	Gasoline	150747.3	5216512	5216512	0	697659.3	0	0.136769	0	0.517519	0.001357	0	0.002255	0.002	0.003193	0.001475	0	0.002452	0.008	0.009123	434.2294	0	112.1929	0.005018	0	0.119363	0.009481	0	0.045397	0.021781	0	0.614579	0.106179	0.293735	1.762049	0.031733	0	0.672881	0.106179	0.293735	1.762049	0.034617	1.174347	0	4.66825	0.004293	0	0.001109
Santa Clara	2022	MDV	Aggregate	Aggregate	Diesel	2337.328	86668.85	86668.85	0	11158.46	0	0.05815	0	0	0.005454	0	0	0.002	0.003153	0.0057	0	0	0.008	0.009009	417.1884	0	0	0.000553	0	0	0.065728	0	0	0.011906	0	0	0	0	0	0.013554	0	0	0	0	0	0	0.0031	0.20344	0	0	0.003953	0	0
Santa Clara	2022	MDV	Aggregate	Electricity	Aggregate	623.6975	22215.8	0	22215.8	3205.616	8577.131	0	0	0	0	0	0	0.002	0.001523	0	0	0	0.008	0.004351	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	MDV	Aggregate	Plug-in Hyb	Aggregate	789.5612	33722.81	17285.18	16437.63	3264.836	4964.654	0.003363	0	0.11551	0.000723	0	0.002366	0.002	0.001369	0.000786	0	0.002574	0.008	0.003913	142.9094	0	99.86367	0.000458	0	0.042456	0.000605	0	0.020778	0.001454	0	0.173285	0.030414	0.029758	0.381921	0.002122	0	0.189725	0.030414	0.029758	0.381921	0.021528	0.220512	0	1.339893	0.001413	0	0.000987
Santa Clara	2022	MH	Aggregate	Aggregate	Gasoline	2642.084	23105.28	23105.28	0	264.3141	0	0.551445	0	0.40416	0.001917	0	0.000461	0.003	0.015756	0.002085	0	0.000502	0.012	0.045017	1949.266	0	32.13484	0.02167	0	0.038467	0.030967	0	0.041056	0.101032	0	0.168576	13.95792	0.32254	4.985527	0.147425	0	0.184569	13.95792	0.32254	4.985527	0.044583	2.705832	0	3.782453	0.01927	0	0.000318
Santa Clara	2022	MH	Aggregate	Aggregate	Diesel	940.8008	9155.21	9155.21	0	94.08008	0	4.438358	0	0	0.104654	0	0	0.004	0.015675	0.109386	0	0	0.016	0.044785	1080.89	0	0	0.005865	0	0	0.170295	0	0	0	0	0	0	0.126278	0	0	0	0.143759	0	0	0	0	0	0.143863	0.424501	0	0	0.010242	0	0
Santa Clara	2022	MHDT	Aggregate	Aggregate	Gasoline	1426.535	69284.18	69284.18	0	28542.11	0	0.686176	0.088062	0.462297	0.001432	0	0.000593	0.003	0.015756	0.001558	0	0.000645	0.012	0.045017	1819.358	542.4673	48.22005	0.022377	0.249961	0.051086	0.030967	0.006806	0.032093	0.113907	1.006391	0.293642	0.041091	0.336192	3.327263	0.166213	1.468523	0.321501	0.041091	0.336192	3.327263	0.044929	2.41434	15.04306	6.517433	0.017986	0.005363	0.000477
Santa Clara	2022	MHDT	Aggregate	Diesel	Aggregate	10189.55	428042.3	428042.3	0	121266.8	0	1.73167	15.28688	1.483339	0.020297	0.042841	0	0.003	0.015941	0.021215	0.044778	0	0.012	0.045546	1158.231	2324.123	0	0.002426	0.013407	0	0.18248	0.366167	0	0.052238	0.288656	0	0	0	0	0.05947	0.328613	0	0	0	0	0	0.196531	0.168917	7.277505	0	0.010968	0.022008	0
Santa Clara	2022	MHDT	Aggregate	Natural Ga	Aggregate	84.48052	3914.205	3914.205	0	796.8889	0	0.162027	6.474875	0	0.001029	0.016219	0	0.003	0.016011	0.001119	0.01764	0	0.012	0.045746	1002.329	5210.514	0	0.725882	17.91735	0	0.204331	1.062197	0	0.010371	0.256004	0	0	0	0	0.740815	18.28597	0	0	0	0	0	1.06	2.991509	30.51881	0	0	0	0
Santa Clara	2022	OBUS	Aggregate	Aggregate	Gasoline	470.9234	21653.3	21653.3	0	9422.235	0	0.596343	0.064966	0.407047	0.000863	0	0.000262	0.003	0.01568	0.000939	0	0.000285	0.012	0.044799	1804.41	384.2235	32.13915	0.017165	0.194553	0.036748	0.027969	0.005221	0.030733	0.084851	0.744858	0.194941	0.033671	0.142865	2.559429	0.123815	1.086895	0.213436	0.033671	0.142865	2.559429	0.044907	1.918016	5.766114	4.119591	0.017838	0.003798	0.000318
Santa Clara	2022	OBUS	Aggregate	Aggregate	Diesel	852.1679	61336.68	61336.68	0	8739.295	0	1.430263	8.186956	1.463102	0.021712	0.009363	0	0.003	0.01808	0.022694	0.009786	0	0.012	0.051656	1287.997	1601.524	0	0.002446	0.020931	0	0.202924	0.252321	0	0.052654	0.450629	0	0	0	0	0.059942	0.513007	0	0	0	0	0	0.209454	0.176751	7.212161	0	0.012197	0.015165	0
Santa Clara	2022	OBUS	Aggregate	Natural Ga	Aggregate	6.12419	392.3999	392.3599	0	54.50529	0	0.261572	1.567279	0	0.000722	0.003187	0	0.003	0.016148	0.000785	0.003466	0	0.012	0.046137	1035.05	1183.472	0	0.750937	4.605624	0	0.211002	0.241259	0	0.010729	0.065805	0	0	0	0	0.766387	4.700378	0	0	0	0	0	1.06	3.149633	5.746939	0	0	0	0
Santa Clara	2022	SBUS	Aggregate	Aggregate	Gasoline	160.4139	7959.43	7959.43	0	641.6556	0	0.527271	0.925562	0.689048	0.000853	0	0.000055	0.002	0.015721	0.000928	0	0.000599	0.008	0.044917	820.0467	2616.389	59.14656	0.01243	2.458676	0.074784	0.027982	0.086242	0.063619	0.060464	10.62737	0.42659	0.108472	0.246255	1.510943	0.088229	15.50744	0.467063	0.108472	0.246255	1.510943	0.045	1.548936	82.15497	10.71476	0.008107	0.025866	0.000585
Santa Clara	2022	SBUS	Aggregate	Diesel	Aggregate	662.5162	15413.71	15413.71	0	9593.235	0	4.235498	22.873	0.450634	0.022112	0.02288	0	0.003	0.015721	0.023112	0.023915	0	0.012	0.044917	1152.917	2246.353	0	0.002834	0.008182	0	0.181642	0.353914	0	0.061017	0.17615	0	0	0	0	0.069464	0.200533	0	0	0	0	0	0.140239	0.185604	4.488491	0	0.010917	0.021272	0
Santa Clara	2022	SBUS	Aggregate	Natural Ga	Aggregate	22.59677	578.3532	578.3532	0	327.2012	0	0.608852	5.295722	0	0.003378	0.010766	0	0.003	0.015721	0.003674	0.011708	0	0.012	0.044917	1281.922	4050.07	0	3.549889	15.56318	0	0.261328	0.825633	0	0.050721	0.222367	0	0	0	0	3.622922	15.88337	0	0	0	0	0	1.06	12.18179	19.41173	0	0	0	0
Santa Clara	2022	UBUS	Aggregate	Aggregate	Gasoline	45.81104	4784.037	4784.037	0	183.2442	0	0.03147	0	0.560776	0.000899	0	8.88E-05	0.002	0.03185	0.000978	0	9.66E-05	0.008	0.091	974.6428	0	38.21309	0.002303	0	0.053785	0.004696	0	0.082445	0.006534	0	0.197701	0.064874	0.125778	0.787098	0.009534	0	0.216458	0.064874	0.125778	0.787098	0.045	0.577943	0	5.5933	0.009635	0	0.000378
Santa Clara	2022	UBUS	Aggregate	Diesel	Aggregate	435.6475	48716.13	48716.13	0	1742.59	0	0.386257	0	0	0.007023	0	0	0.0083	0.0385	0.00734	0	0	0.0332	0.11	1100.743	0	0	0.003215	0	0	0.173422	0	0	0.069208	0	0	0	0	0	0.078788	0	0	0	0	0	0	0.187775	0.079368	0	0	0.01043	0	0
Santa Clara	2022	UBUS	Aggregate	Electricity	Aggregate	5.046757	199.0027	0	199.0027	20.18703	346.9103	0	0	0	0	0	0	0.009	0.01925	0	0	0	0.036	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2022	UBUS	Aggregate	Aggregate	Natural Ga	41.84875	4783.781	4783.781	0	167.395	0	0.058772	0	0	0.000282	0	0	0.008181	0.0385	0.000295	0	0	0.032723	0.11	1299.039	0	0	4.245393	0	0	0.264818	0	0	0.060658	0	0	0	0	0	4.332735	0	0	0	0	0	0	0.97	49.03622	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_ST	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PMI	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNI	ROG_IDLEX	ROG_STREX	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNEX	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2023	HHDT	Aggregate	Aggregate	Gasoline	3.454009	114.3093	114.3093	0	69.10781	0	8.107874	0	1.602501	0.00493	0	0.0017	0.005	0.035266	0.005362	0	0.001849	0.02	0.100759	2306.817	0	49.81185	0.340225	0	0.00018	0.208909	0	0.045697	2.104867	0	0.000979	0.158374	1.426645	10.65375	3.071416	0	0.001072	0.158374	1.426645	10.65375	0.040468	83.0074	0	1.02738	0.022805	0	0.000492
Santa Clara	2023	HHDT	Aggregate	Aggregate	Diesel	8235.059	991289	991289	0	120860.8	0	1.969368	63.40488	2.849455	0.025957	0.031631	0	0.008769	0.027531	0.027131	0.033061	0	0.035077	0.078661	1656.801	12241.32	0	0.000809	0.237446	0	0.26103	1.928625	0	0.017417	5.112156	0	0	0	0	0.019828	5.819801	0	0	0	0	0	0.214624	0.087393	74.20136	0	0.015689	0.115918	0
Santa Clara	2023	HHDT	Aggregate	Aggregate	Electricity	6.70171	411.5054	0	411.5054	103.2044	754.9233	0	0	0	0	0	0	0.00874	0.013383	0	0	0	0.03496	0.038238	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	HHDT	Aggregate	Aggregate	Natural Ga	753.7366	53295.97	53295.97	0	6914.034	0	1.208844	13.92832	0	0.001774	0.024237	0	0.009	0.046729	0.001929	0.02636	0	0.036	0.133512	1398.51	10630.2	0	2.44811	37.44665	0	0.285095	2.167036	0	0.054572	0.572265	0	0	0	0	0.860105	13.78246	74.03965	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	LDA	Aggregate	Aggregate	Gasoline	601938.3	22370251	22370251	0	2795479	0	0.047412	0	0.27189	0.001217	0	0.001992	0.002	0.002656	0.001323	0	0.002167	0.008	0.007588	282.586	0	71.87767	0.002603	0	0.076449	0.004995	0	0.034134	0.01016	0	0.353794	0.094758	0.240611	1.480552	0.014823	0	0.387359	0.094758	0.240611	1.480552	0.033781	0.787617	0	3.436611	0.002794	0	0.000711
Santa Clara	2023	LDA	Aggregate	Aggregate	Diesel	1871.125	56220.8	56220.8	0	8000.531	0	0.238318	0	0	0.018559	0	0	0.002	0.002698	0.019399	0	0	0.008	0.007709	234.6327	0	0	0.001413	0	0	0.036966	0	0	0.030417	0	0	0	0	0	0.034627	0	0	0	0	0	0.0031	0.342459	0	0	0.002223	0	0
Santa Clara	2023	LDA	Aggregate	Aggregate	Electricity	53751.15	2268185	0	2268185	265250.1	875706.7	0	0	0	0	0	0	0.002	0.001532	0	0	0	0.008	0.004377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	LDA	Aggregate	Aggregate	Plug-in Hyb	15805.32	700610.9	356649.7	343961.3	65355	103886.6	0.00334	0	0.11551	0.000664	0	0.002171	0.002	0.001373	0.000722	0	0.002361	0.008	0.003922	141.9339	0	66.50966	0.000457	0	0.042604	0.000605	0	0.020916	0.001444	0	0.173285	0.040642	0.036088	0.447056	0.002108	0	0.189725	0.040642	0.036088	0.447056	0.019705	0.219019	0	1.339893	0.001403	0	0.000658
Santa Clara	2023	LDT1	Aggregate	Aggregate	Gasoline	53782.25	1744480	1744480	0	239737.9	0	0.143293	0	0.404336	0.00185	0	0.002837	0.002	0.003239	0.002012	0	0.003085	0.008	0.009253	333.6435	0	88.48953	0.006987	0	0.112557	0.010257	0	0.039834	0.031222	0	0.583212	0.174145	0.503091	2.807011	0.045546	0	0.638542	0.174145	0.503091	2.807011	0.035775	1.553409	0	5.660037	0.003298	0	0.000875
Santa Clara	2023	LDT1	Aggregate	Aggregate	Diesel	26.04714	391.8698	391.8698	0	75.17737	0	1.659056	0	0	0.24041	0	0	0.002	0.003728	0.25128	0	0	0.008	0.010651	415.6155	0	0	0.013928	0	0	0.06548	0	0	0.299852	0	0	0	0	0	0.341362	0	0	0	0	0	0.0031	1.601395	0	0	0.003938	0	0
Santa Clara	2023	LDT1	Aggregate	Aggregate	Electricity	194.8941	7068.184	0	7068.184	916.4832	2728.903	0	0	0	0	0	0	0.002	0.00154	0	0	0	0.008	0.0044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	LDT1	Aggregate	Aggregate	Plug-in Hyb	43.27677	2048.369	944.1579	1104.211	178.9495	333.5047	0.003025	0	0.11551	0.000387	0	0.00141	0.002	0.001383	0.000421	0	0.001534	0.008	0.003951	128.5161	0	72.39136	0.000412	0	0.042439	0.000544	0	0.020762	0.001308	0	0.173285	0.024584	0.021781	0.285922	0.001909	0	0.189725	0.024584	0.021781	0.285922	0.019359	0.198314	0	1.339893	0.001271	0	0.000716
Santa Clara	2023	LDT2	Aggregate	Aggregate	Gasoline	280180.4	10140967	10140967	0	1311796	0	0.077207	0	0.358346	0.001265	0	0.002003	0.002	0.003125	0.001375	0	0.002179	0.008	0.008929	351.1382	0	90.07377	0.003121	0	0.087759	0.006381	0	0.038646	0.012417	0	0.410727	0.085119	0.224187	1.404898	0.018118	0	0.449694	0.085119	0.224187	1.404898	0.035545	0.896823	0	3.892097	0.003471	0	0.00089
Santa Clara	2023	LDT2	Aggregate	Aggregate	Diesel	978.4967	36936.87	36936.87	0	4673.401	0	0.046157	0	0	0.005431	0	0	0.002	0.003102	0.005677	0	0	0.008	0.008863	315.6668	0	0	0.00065	0	0	0.049733	0	0	0.013984	0	0	0	0	0	0.015919	0	0	0	0	0	0.0031	0.132099	0	0	0.002991	0	0
Santa Clara	2023	LDT2	Aggregate	Aggregate	Electricity	1105.879	38931.7	0	38931.7	5663.051	15030.85	0	0	0	0	0	0	0.002	0.001525	0	0	0	0.008	0.004357	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	LDT2	Aggregate	Aggregate	Plug-in Hyb	1696.55	77270.66	37142.68	40127.98	7015.234	12119.85	0.003154	0	0.11551	0.000504	0	0.001759	0.002	0.001378	0.000548	0	0.001913	0.008	0.003938	134.0231	0	78.93358	0.000429	0	0.042457	0.000568	0	0.020778	0.001364	0	0.173285	0.02624	0.024448	0.318232	0.00199	0	0.189725	0.02624	0.024448	0.318232	0.020144	0.206812	0	1.339893	0.001325	0	0.000778
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Gasoline	19180.96	711085.5	711085.5	0	285767.8	0	0.197814	0.037373	0.6588	0.001595	0	0.000328	0.002	0.0273	0.001734	0	0.000356	0.008	0.078	889.7424	120.2664	25.83956	0.009485	0.115635	0.034516	0.011082	0.003012	0.051891	0.047656	0.428153	0.172233	0.050564	0.277601	2.913784	0.069539	0.62476	0.188574	0.050564	0.277601	2.913784	0.044872	1.225109	3.753425	3.080251	0.008796	0.001189	0.000255
Santa Clara	2023	LHDT1	Aggregate	Aggregate	Diesel	9807.465	384084.8	384084.8	0	123365.6	0	1.780633	2.029274	0	0.038253	0.026974	0	0.003	0.0273	0.039983	0.028193	0	0.012	0.078	635.427	132.908	0	0.008623	0.005098	0	0.100112	0.02094	0	0.185652	0.10976	0	0	0	0	0.211352	0.124954	0	0	0	0	0.16551	0.518876	0.909745	0	0.006021	0.001259	0
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Gasoline	2494.382	90793.04	90793.04	0	37162.58	0	0.187016	0.036817	0.642061	0.001446	0	0.00026	0.002	0.03185	0.001572	0	0.000283	0.008	0.091	997.3845	138.7974	25.72325	0.007074	0.114568	0.033461	0.01097	0.002967	0.050452	0.033047	0.42203	0.165607	0.046993	0.25097	2.676301	0.048222	0.615826	0.181319	0.046993	0.25097	2.676301	0.044967	0.961891	3.759407	3.119312	0.00986	0.001372	0.000254
Santa Clara	2023	LHDT2	Aggregate	Aggregate	Diesel	4479.532	176769.2	176769.2	0	56346.87	0	1.416942	1.998258	0	0.034177	0.027026	0	0.003	0.03185	0.035723	0.028248	0	0.012	0.091	764.5039	212.1206	0	0.007824	0.005098	0	0.120448	0.03342	0	0.168448	0.10976	0	0	0	0	0.191767	0.124954	0	0	0	0	0.178982	0.44054	0.909745	0	0.007244	0.00201	0
Santa Clara	2023	MCY	Aggregate	Aggregate	Gasoline	27894.5	164894.5	164894.5	0	55788.99	0	0.586927	0	0.142374	0.001778	0	0.003413	0.001	0.0042	0.001899	0	0.003626	0.004	0.012	188.3093	0	49.59811	0.167622	0	0.187482	0.040223	0	0.008379	1.105923	0	1.392636	3.5601	3.745685	3.947874	1.324135	0	1.513873	3.5601	3.745685	3.947874	0.00876	13.08956	0	8.051197	0.001862	0	0.00049
Santa Clara	2023	MDV	Aggregate	Aggregate	Gasoline	153799.1	5358084	5358084	0	712433.9	0	0.117759	0	0.470106	0.001289	0	0.002144	0.002	0.003187	0.001402	0	0.002331	0.008	0.009106	426.0995	0	109.7064	0.004406	0	0.110292	0.008479	0	0.043081	0.018826	0	0.559259	0.101975	0.285798	1.72733	0.02744	0	0.612315	0.101975	0.285798	1.72733	0.035428	1.067328	0	4.333252	0.004212	0	0.001085
Santa Clara	2023	MDV	Aggregate	Aggregate	Diesel	2374.918	86834.44	86834.44	0	11267.05	0	0.053096	0	0	0.00515	0	0	0.002	0.003181	0.005383	0	0	0.008	0.00909	413.3141	0	0	0.000529	0	0	0.065118	0	0	0.011397	0	0	0	0	0	0.012975	0	0	0	0	0	0.0031	0.202592	0	0	0.003916	0	0
Santa Clara	2023	MDV	Aggregate	Aggregate	Electricity	1130.115	40073.7	0	40073.7	5799.833	15471.76	0	0	0	0	0	0	0.002	0.001524	0	0	0	0.008	0.004354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	MDV	Aggregate	Aggregate	Plug-in Hyb	986.0895	41899.14	20787.35	21111.79	4077.48	6376.389	0.003256	0	0.11551	0.000638	0	0.002151	0.002	0.001376	0.000693	0	0.002339	0.008	0.00393	138.3296	0	98.37574	0.000441	0	0.042261	0.000581	0	0.020595	0.001408	0	0.173285	0.02985	0.028058	0.359617	0.002054	0	0.189725	0.02985	0.028058	0.359617	0.020837	0.213457	0	1.339893	0.001368	0	0.000973
Santa Clara	2023	MH	Aggregate	Aggregate	Gasoline	2522.745	22546.87	22546.87	0	252.3754	0	0.479133	0	0.412521	0.001781	0	0.000428	0.003	0.015756	0.001937	0	0.000466	0.012	0.045017	1948.243	0	31.87585	0.018146	0	0.038028	0.02809	0	0.042647	0.082252	0	0.163779	13.03985	0.30297	4.773625	0.120022	0	0.179318	13.03985	0.30297	4.773625	0.044742	2.111943	0	3.629376	0.01926	0	0.000315
Santa Clara	2023	MH	Aggregate	Aggregate	Diesel	959.1578	9344.849	9344.849	0	95.91578	0	4.269554	0	0	0.097907	0	0	0.004	0.015675	0.102334	0	0	0.016	0.044785	1081.435	0	0	0.005704	0	0	0.17038	0	0	0.122812	0	0	0	0	0	0.139813	0	0	0	0	0	0.150005	0.410284	0	0	0.010247	0	0
Santa Clara	2023	MHDT	Aggregate	Aggregate	Gasoline	1418.703	70785.86	70785.86	0	28385.41	0	0.562864	0.088304	0.453053	0.001386	0	0.000555	0.003	0.015756	0.001507	0	0.000603	0.012	0.045017	1792.411	536.9661	47.19918	0.018074	0.254589	0.049387	0.026381	0.007064	0.032566	0.09086	1.010025	0.279571	0.037187	0.302385	3.037923	0.132583	1.473826	0.306095	0.037187	0.302385	3.037923	0.04497	1.909686	15.08517	6.156285	0.01772	0.005308	0.000467
Santa Clara	2023	MHDT	Aggregate	Aggregate	Diesel	10273.55	431550.4	431550.4	0	122418.2	0	1.337342	13.57242	1.624162	0.016518	0.035742	0	0.003	0.015941	0.017265	0.037358	0	0.012	0.045546	1151.562	2263.789	0	0.010721	0.012298	0	0.181429	0.356661	0	0.037048	0.26478	0	0	0	0	0.042176	0.301431	0	0	0	0	0.209014	0.132571	7.583386	0	0.010905	0.021437	0
Santa Clara	2023	MHDT	Aggregate	Aggregate	Electricity	4.749835	101.8022	0	101.8022	59.6458	108.685	0	0	0	0	0	0	0.003	0.00799	0	0	0	0.012	0.022828	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	MHDT	Aggregate	Aggregate	Natural Ga	83.841	4047.874	4047.874	0	762.81	0	0.141319	6.52743	0	0.001137	0.017647	0	0.003	0.016002	0.001236	0.019193	0	0.012	0.045721	989.385	5296.533	0	0.740055	17.59163	0	0.201693	1.079733	0	0.010574	0.25135	0	0	0	0	0.755281	17.95355	0	0	0	0	1.06	2.992708	33.64344	0	0	0	0
Santa Clara	2023	OBUS	Aggregate	Aggregate	Gasoline	458.8974	20830.08	20830.08	0	9181.619	0	0.553081	0.064991	0.405616	0.000893	0	0.000264	0.003	0.01568	0.000972	0	0.000287	0.012	0.044799	1784.092	381.8461	31.89445	0.015808	0.194938	0.036281	0.026177	0.005253	0.030766	0.078109	0.745234	0.192301	0.034706	0.154035	2.766253	0.113977	1.087444	0.210546	0.034706	0.154035	2.766253	0.044918	1.743956	5.768375	4.071703	0.017638	0.003775	0.000315
Santa Clara	2023	OBUS	Aggregate	Aggregate	Diesel	870.4209	61645.66	61645.66	0	8910.755	0	1.203188	7.410097	1.541404	0.020323	0.008632	0	0.003	0.018018	0.021242	0.009022	0	0.012	0.05148	1282.538	1552.949	0	0.001991	0.020568	0	0.202064	0.244668	0	0.04286	0.442828	0	0	0	0	0.048793	0.504126	0	0	0	0	0.215865	0.153454	7.510858	0	0.012145	0.014706	0
Santa Clara	2023	OBUS	Aggregate	Aggregate	Natural Ga	6.1456	409.5466	409.5466	0	54.69584	0	0.219315	1.549107	0	0.000923	0.00362	0	0.003	0.016148	0.001004	0.003937	0	0.012	0.046137	1017.405	1188.285	0	0.774069	4.381267	0	0.207405	0.24224	0	0.01106	0.0626	0	0	0	0	0.789994	4.471404	0	0	0	0	1.06	3.211954	6.724204	0	0	0	0
Santa Clara	2023	SBUS	Aggregate	Aggregate	Gasoline	166.9867	8309.308	8309.308	0	667.9468	0	0.519317	0.925703	0.7051	0.000862	0	0.000556	0.002	0.015721	0.000937	0	0.000609	0.008	0.044917	815.0909	2602.033	58.66947	0.011871	2.46208	0.074918	0.027733	0.086224	0.064904	0.057744	10.62943	0.427061	0.112221	0.259299	1.591441	0.084259	15.51043	0.467578	0.112221	0.259299	1.591441	0.045	1.469507	82.16746	10.56434	0.008058	0.025724	0.00058
Santa Clara	2023	SBUS	Aggregate	Aggregate	Diesel	667.1185	15392.68	15392.68	0	9659.876	0	4.028015	22.39863	0.467155	0.020908	0.02125	0	0.003	0.015721	0.021853	0.022211	0	0.012	0.044917	1148.524	2237.814	0	0.002748	0.008083	0	0.18095	0.352568	0	0.059161	0.174017	0	0	0	0	0.06735	0.198106	0	0	0	0	0.144154	0.181489	4.581854	0	0.010876	0.021191	0
Santa Clara	2023	SBUS	Aggregate	Aggregate	Electricity	0.302373	3.510494	0	3.510494	4.378365	3.69815	0	0	0	0	0	0	0.003	0.00786	0	0	0	0.012	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	SBUS	Aggregate	Aggregate	Natural Ga	23.50762	595.8705	595.8705	0	340.3903	0	0.587321	5.282702	0	0.003378	0.011076	0	0.003	0.015721	0.003674	0.012046	0	0.012	0.044917	1271.127	4058.811	0	3.490611	15.40242	0	0.259128	0.827415	0	0.049874	0.22007	0	0	0	0	0.562424	15.7193	0	0	0	0	1.06	11.90284	20.11199	0	0	0	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Gasoline	45.94709	4798.244	4798.244	0	183.7884	0	0.026807	0	0.443444	0.001143	0	0.000128	0.002	0.03185	0.001243	0	0.00014	0.008	0.091	926.2924	0	36.84613	0.002031	0	0.041715	0.004215	0	0.070149	0.005614	0	0.147842	0.038144	0.09212	0.456803	0.008192	0	0.161868	0.038144	0.09212	0.456803	0.045	0.571128	0	6.073786	0.009157	0	0.000364
Santa Clara	2023	UBUS	Aggregate	Aggregate	Diesel	436.6681	48829.71	48829.71	0	1746.672	0	0.386256	0	0	0.007022	0	0	0.0083	0.0385	0.00734	0	0	0.0332	0.11	1100.965	0	0	0.003215	0	0	0.173457	0	0	0.069208	0	0	0	0	0	0.078788	0	0	0	0	0	0.18785	0.079368	0	0	0.010432	0	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Electricity	5.046757	199.0027	0	199.0027	20.18703	346.9103	0	0	0	0	0	0	0.009	0.01925	0	0	0	0.036	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2023	UBUS	Aggregate	Aggregate	Natural Ga	42.26114	4829.673	4829.673	0	169.0446	0	0.05878	0	0	0.000282	0	0	0.008182	0.0385	0.000295	0	0	0.032727	0.11	1299.127	0	0	4.245742	0	0	0.264835	0	0	0.060663	0	0	0	0	0	4.333091	0	0	0	0	0	0.97	49.04231	0	0	0	0	0

Source: EMFAC2021 (v1.0.1) Emission Rates
Region Type: County
Region: Santa Clara
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HOTSOAK and RUNLOSS, g/vehicle/day for IDLEX and DIURN

Region	Calendar Y	Vehicle Cat	Model Yea	Speed	Fuel	Population	Total VMT	CVMT	EVMT	Trips	Energy Con	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RU	PM2.5_IDL	PM2.5_ST	PM2.5_PM	PM2.5_PM	PM10_RUN	PM10_IDLE	PM10_STR	PM10_PM	PM10_PM	CO2_RUNE	CO2_IDLEX	CO2_STREX	CH4_RUNE	CH4_IDLEX	CH4_STREX	N2O_RUNE	N2O_IDLEX	N2O_STRE	ROG_RUNI	ROG_IDLEX	ROG_STRE	ROG_HOTS	ROG_RUNI	ROG_DIUR	TOG_RUNE	TOG_IDLEX	TOG_STRE	TOG_HOTS	TOG_RUNI	TOG_DIUR	NH3_RUNE	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNE	SOx_IDLEX	SOx_STREX
Santa Clara	2030	HHDT	Aggregate	Aggregate	Gasoline	1.487616	172.8499	172.8499	0	29.76421	0	2.911619	0	0.534862	0.001674	0	0.000674	0.005	0.032468	0.00182	0	0.000733	0.02	0.092765	1924.768	0	48.04273	0.102337	0	0.000224	0.119593	0	0.0192	0.501241	0	0.001214	0.064624	0.580293	4.097317	0.731409	0	0.000133	0.064624	0.580293	4.097317	0.045	26.13927	0	4.442251	0.019028	0	0.000475
Santa Clara	2030	HHDT	Aggregate	Aggregate	Diesel	9231.234	1024357	1024357	0	136537.8	0	1.54454	61.29817	2.88955	0.024765	0.0244	0	0.008788	0.028144	0.025885	0.025504	0	0.035154	0.080413	1474.596	10772.22	0	0.000646	0.235119	0	0.232323	1.697167	0	0.013904	5.062058	0	0	0	0	0.015828	5.762768	0	0	0	0	0	0.217216	0.061916	74.26736	0	0.013964	0.102006	0
Santa Clara	2030	HHDT	Aggregate	Aggregate	Electricity	530.2501	54761.35	0	54761.35	6663.697	101036	0	0	0	0	0	0	0.008533	0.015514	0	0	0	0.03413	0.044327	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	HHDT	Aggregate	Aggregate	Natural Ga	938.2726	57937.93	57937.93	0	8287.795	0	0.731127	11.54643	0.001557	0.027291	0	0	0.009	0.05172	0.001694	0.029682	0	0.036	0.147772	1322.875	10241.21	0	1.710465	30.09558	0	0.269677	2.087739	0	0.033169	0.444488	0	0	0	0	1.755601	30.73125	0	0	0	0	0	0.811239	11.16082	76.40969	0	0	0	0
Santa Clara	2030	LDA	Aggregate	Aggregate	Gasoline	602124.6	21985013	21985013	0	2796634	0	0.027128	0	0.204379	0.000885	0	0.001532	0.002	0.002653	0.000962	0	0.001666	0.008	0.00758	252.5101	0	62.99349	0.00146	0	0.051774	0.003674	0	0.028877	0.005055	0	0.223494	0.069299	0.197319	1.209286	0.073776	0	0.244698	0.069299	0.197319	1.209286	0.039301	0.56355	0	0.385556	0.002496	0	0.000623
Santa Clara	2030	LDA	Aggregate	Aggregate	Diesel	966.5715	27899.12	27899.12	0	4169.431	0	0.084622	0	0	0.00656	0	0	0.002	0.002722	0.006857	0	0	0.008	0.007776	216.2434	0	0	0.000652	0	0	0.034069	0	0	0.014035	0	0	0	0	0	0.015978	0	0	0	0	0	0	0.00231	0.244061	0	0	0.002049	0	0
Santa Clara	2030	LDA	Aggregate	Aggregate	Electricity	74807.28	2981995	0	2981995	356618	1151296	0	0	0	0	0	0	0.002	0.001537	0	0	0	0.008	0.004391	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	LDA	Aggregate	Aggregate	Plug-in Hyb	2466.152	986083.3	441285.3	544798	101975.4	1645445.2	0.002937	0	0.11551	0.000402	0	0.001538	0.002	0.001398	0.000437	0	0.001673	0.008	0.003994	124.7883	0	62.09864	0.00039	0	0.041401	0.000504	0	0.019792	0.00127	0	0.173285	0.041078	0.050398	0.518869	0.018326	0.192609	0	1.339893	0.001234	0	0.000614																	
Santa Clara	2030	LDT1	Aggregate	Aggregate	Gasoline	47587.45	1511766	1511766	0	212019.3	0	0.06744	0	0.276451	0.001181	0	0.001933	0.002	0.003236	0.001284	0	0.002102	0.008	0.009245	301.4361	0	77.09479	0.003341	0	0.071607	0.005993	0	0.032827	0.01396	0	0.342108	0.122517	0.361736	2.125938	0.203571	0	0.374565	0.122517	0.361736	2.125938	0.038435	0.913385	0	3.462484	0.00298	0	0.000762																	
Santa Clara	2030	LDT1	Aggregate	Aggregate	Diesel	0.768467	17.0557	17.0557	0	2.625517	0	0.541325	0	0	0.080932	0	0	0.002	0.003285	0.084591	0	0	0.008	0.009386	366.951	0	0	0.006227	0	0	0.057813	0	0	0.134063	0	0	0	0	0	0.152622	0	0	0	0	0	0	0.00331	0.953187	0	0	0.003477	0	0
Santa Clara	2030	LDT1	Aggregate	Aggregate	Electricity	459.5988	19527.57	0	19527.57	2229.168	7539.252	0	0	0	0	0	0	0.002	0.001532	0	0	0	0.008	0.004379	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	LDT1	Aggregate	Aggregate	Plug-in Hyb	311.9596	13308.96	5503.171	7805.787	1289.953	2357.58	0.002713	0	0.11551	0.000237	0	0.000982	0.002	0.001404	0.000258	0	0.001068	0.008	0.004012	115.302	0	67.69965	0.00036	0	0.041331	0.000464	0	0.019726	0.001173	0	0.173285	0.023088	0.020052	0.277122	0.001712	0	0.189725	0.023088	0.020052	0.277122	0.017367	0.17796	0	1.339893	0.00114	0	0.000669																	
Santa Clara	2030	LDT2	Aggregate	Aggregate	Gasoline	315384	11011602	11011602	0	1467133	0	0.042522	0	0.254325	0.000923	0	0.001563	0.002	0.003147	0.001004	0	0.001699	0.008	0.008992	313.0844	0	78.91261	0.001939	0	0.061959	0.004491	0	0.03252	0.007052	0	0.272663	0.065379	0.191547	1.192189	0.010291	0	0.298532	0.065379	0.191547	1.192189	0.039832	0.659365	0	2.809133	0.003095	0	0.00078																	
Santa Clara	2030	LDT2	Aggregate	Aggregate	Diesel	1158.99	40906.35	40906.35	0	5439.347	0	0.030058	0	0	0.003988	0	0	0.002	0.003143	0.004169	0	0	0.008	0.008981	285.9943	0	0	0.000559	0	0	0.045059	0	0	0.012039	0	0	0	0	0	0.013706	0	0	0	0	0	0	0.0031	0.125642	0	0	0.00271	0	0
Santa Clara	2030	LDT2	Aggregate	Aggregate	Electricity	5453.194	171699	0	171699	27128.05	66289.98	0	0	0	0	0	0	0.002	0.001531	0	0	0	0.008	0.004374	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	LDT2	Aggregate	Aggregate	Plug-in Hyb	4846.712	193738.5	82854.31	110884.1	20041.15	33490.32	0.002806	0	0.11551	0.000301	0	0.001204	0.002	0.001402	0.000327	0	0.00131	0.008	0.004007	119.2524	0	74.25998	0.000371	0	0.041171	0.000476	0	0.019577	0.001214	0	0.173285	0.026751	0.026025	0.323076	0.017953	0.184065	0	1.339893	0.001179	0	0.000734																	
Santa Clara	2030	LHDT1	Aggregate	Aggregate	Gasoline	19753.02	727605.5	727605.5	0	294290.5	0	0.082552	0.030634	0.51718	0.001329	0	0.000195	0.002	0.0273	0.001446	0	0.000212	0.008	0.078	802.0575	113.4696	25.10498	0.003719	0.099174	0.025985	0.00491	0.002766	0.044981	0.016744	0.351327	0.123637	0.032922	0.194989	2.054962	0.024432	0.512656	0.135367	0.032922	0.194989	2.054962	0.045	0.768194	3.76818	3.242124	0.007929	0.001122	0.000248																	
Santa Clara	2030	LHDT1	Aggregate	Aggregate	Diesel	11269.28	427352.8	427352.8	0	141753.3	0	0.789576	1.444738	0	0.023821	0.026284	0	0.003	0.0273	0.024898	0.027472	0	0.012	0.078	617.2105	123.3953	0	0.005662	0.005098	0	0.097242	0.019441	0	0.121909	0.10976	0	0	0	0	0.138785	0.124954	0	0	0	0	0	0.199336	0.314077	0.909745	0	0.005848	0.001169	0	0
Santa Clara	2030	LHDT1	Aggregate	Aggregate	Electricity	2074.538	117461.4	0	117461.4	29061.96	76947.26	0	0	0	0	0	0	0.002	0.001365	0	0	0	0.008	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	LHDT2	Aggregate	Aggregate	Gasoline	2461.018	87198.4	87198.4	0	36665.5	0	0.076883	0.029634	0.510604	0.001202	0	0.000149	0.002	0.03185	0.001308	0	0.000162	0.008	0.091	909.7177	131.684	24.47216	0.00272	0.095769	0.024975	0.005151	0.002617	0.043301	0.011255	0.340122	0.118021	0.031894	0.187158	2.069204	0.016423	0.496305	0.129219	0.031894	0.187158	2.069204	0.045	0.659048	3.775132	3.178541	0.008993	0.001302	0.000242																	
Santa Clara	2030	LHDT2	Aggregate	Aggregate	Diesel	5433.248	199824.8	199824.8	0	68343.42	0	0.748874	1.460368	0	0.024929	0.026926	0	0.003	0.03185	0.026056	0.028143	0	0.012	0.091	728.4033	198.6254	0	0.005847	0.005098	0	0.11476	0.031294	0	0.125888	0.10976	0	0	0	0	0.143315	0.124954	0	0	0	0	0	0.202684	0.318068	0.909745	0	0.006902	0.001882	0	0
Santa Clara	2030	LHDT2	Aggregate	Aggregate	Electricity	523.4249	28364.01	0	28364.01	6941.368	18295.8	0	0	0	0	0	0	0.002	0.015925	0	0	0	0.008	0.0455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	MCY	Aggregate	Aggregate	Gasoline	29945.67	170059	170059	0	59891.34	0	0.509869	0	0.103081	0.001864	0	0.003197	0.001	0.0042	0.001997	0	0.003416	0.004	0.012	185.5769	0	42.83228	0.142987	0	0.157242	0.036967	0	0.006341	0.890508	0	1.134366	3.555147	3.783469	3.680755	1.091848	0	1.234067	3.555147	3.783469	3.680755	0.009004	11.04655	0	7.830862	0.001835	0	0.000423																	
Santa Clara	2030	MDV	Aggregate	Aggregate	Gasoline	174344	5962227	5962227	0	807535.9	0	0.050767	0	0.286849	0.000902	0	0.001551	0.002	0.003188	0.000981	0	0.001687	0.008	0.00911	378.9313	0	95.79397	0.002213	0	0.068559	0.004925	0	0.033878	0.008456	0	0.317272	0.072796	0.219895	1.355815	0.012339	0	0.347373	0.072796	0.219895	1.355815	0.03954	0.69525	0	2.93398	0.003746	0	0.000947																	
Santa Clara	2030	MDV	Aggregate	Aggregate	Diesel	2406.787	79682.09	79682.09	0	11072.82	0	0.026422	0	0	0.003049	0	0	0.002	0.00327	0.003187	0	0	0.008	0.009343	380.8057	0	0	0.000373	0	0	0.059996	0	0	0.008029	0	0	0	0	0	0.00914	0	0	0	0	0	0	0.0031	0.181562	0	0	0.003608	0	0
Santa Clara	2030	MDV	Aggregate	Aggregate	Electricity	5418.753	169876.9	0	169876.9	26922.58	65586.51	0	0	0	0	0	0	0.002	0.001532	0	0	0	0.008	0.004377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	MDV	Aggregate	Aggregate	Plug-in Hyb	2963.422	115546.2	49482.19	66063.98	12253.75	19953.29	0.00281	0	0.11551	0.000321	0	0.001277	0.002	0.001403	0.000349	0	0.001389	0.008	0.004008	119.4157	0	90.62083	0.00037	0	0.041054	0.000474	0	0.019467	0.001215	0	0.173285	0.028447	0.028695	0.345627	0.001773	0	0.189725	0.028447	0.028695	0.345627	0.017986	0.184317	0	1.339893	0.001181	0	0.000896																	
Santa Clara	2030	MH	Aggregate	Aggregate	Gasoline	2034.688	19970.26	19970.26	0	203.5502	0	0.205296	0	0.454071	0.001366	0	0.000326	0.003	0.015756	0.001486	0	0.000355	0.012	0.045017	1945.26	0	30.65867	0.006703	0	0.034694	0.016757	0	0.050507	0.023566	0	0.135475	7.46433	0.181652	3.092727	0.045	0.391655	0	2.922173	0.019231	0	0.000303																	
Santa Clara	2030	MH	Aggregate	Aggregate	Diesel	1064.938	10092.31	10092.31	0	106.4938	0	3.402012	0	0.062183	0	0	0	0.004	0.015675	0.064995	0	0	0.016	0.044785	1084.369	0	0	0.00483	0	0	0.170843	0	0	0.103997	0	0	0	0	0	0.118394	0	0	0	0	0	0	0.181066	0.332398	0	0	0.010275	0	0
Santa Clara	2030	MHDT	Aggregate	Aggregate	Gasoline	1369.784	69786.55	69786.55	0	27406.63	0	0.182504	0.074436	0.34723	0.001338	0	0.000467	0.003	0.015756	0.001455	0	0.000508	0.012	0.045017	1664.876	504.5675	41.89188	0.006139	0.269683	0.040602	0.011558	0.006658	0.029379	0.027836	1.022884	0.21089	0.021107	0.176695	1.842352	0.040618	1.49259	0.230898	0.021107	0.176695	1.842352	0.045	0.52486	15.23455	4.434866	0.016459	0.004988	0.000414																	
Santa Clara	2030	MHDT	Aggregate	Aggregate	Diesel	10679.13	4158333.4	415833.4	0	127641.8	0	0.730884	11.4465	1.543564	0.006512	0.00966	0	0.003	0.015941	0.006806	0.010097	0	0.012	0.045547	1109.144	2139.822	0	0.000682	0.00913	0	0.174746	0.33713	0	0.014684	0.196569	0	0	0	0	0.016716	0.223779	0	0	0	0	0	0.21635	0.072794	7.506963	0	0.010503	0.020263	0	0
Santa Clara	2030	MHDT	Aggregate	Aggregate	Electricity	991.1386	51102.91	0	51102.91	12793.33	55704.06	0	0	0	0	0	0	0.003	0.007951	0	0	0	0.012	0.022716	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	MHDT	Aggregate	Aggregate	Natural Ga	136.8437	5799.937	5799.937	0	1320.474	0	0.096762	6.249105	0	0.001362	0.019752	0	0.003	0.016004	0.001481	0.021482	0	0.012	0.045726	958.0225	5202.364	0	0.762569	15.80303	0	0.195299	1.060536	0	0.010896	0.225794	0	0	0	0	0.778258	16.12815	0	0	0	0	0	1.06	2.989146	38.55016	0	0	0	0
Santa Clara	2030	OBUS	Aggregate	Aggregate	Gasoline	373.8509	15017.96	15017.96	0	7480.008	0	0.303475	0.05759	0.379431	0.001075	0	0.000273	0.003	0.01568	0.001169	0	0.000296	0.012	0.044799	1659.483	366.2829	30.178	0.008294	0.194656	0.033726	0.01556	0.004647	0.028492	0.039512	0.74712	0.179242	0.035188	0.193999	3.485652	0.057656	1.090195	0.196247	0.035188	0.193999	3.485652	0.045	0.869951	5.779659	3.676722	0.016406	0.003621	0.000298																	
Santa Clara	2030	OBUS	Aggregate	Aggregate	Diesel	1041.415	64198.49	64198.49	0	10721.4	0	0.980356	5.976871	1.366725	0.015111	0.005302	0	0.003	0.018208	0.015794	0.005542	0	0.012	0.052023	1187.709	1474.191	0	0.001456	0.020843	0	0.187124	0.232259	0	0.031354	0.448735	0	0	0	0	0.035694	0.51085	0	0	0	0	0	0.217102	0.12266	7.728975	0	0.011247	0.01396	0	0
Santa Clara	2030	OBUS	Aggregate	Aggregate	Electricity	23.4704	1822.619	0	1822.619	469.5957	2019.183	0	0	0	0	0	0	0.003	0.00784	0	0	0	0.012	0.022399	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	OBUS	Aggregate	Aggregate	Natural Ga	12.4197	789.0472	789.0472	0	110.5354	0	0.10256	1.499304	0	0.00148	0.004808	0	0.003	0.016148	0.001609	0.005229	0	0.012	0.046137	931.8762	1168.573	0	0.837982	3.766358	0	0.189969	0.238221	0	0.011973	0.053814	0	0	0	0	0.855222	3.843845	0	0	0	0	0	1.06	3.384146	9.402647	0	0	0	0
Santa Clara	2030	SBUS	Aggregate	Aggregate	Gasoline	198.1997	9649.073	9649.073	0	792.7989	0	0.406238	0.82859	0.759705	0.000888	0	0.000598	0.002	0.015721	0.000966	0	0.00065	0.008	0.044917	789.8243	2529.341	55.78331	0.007921	2.470848	0.074041	0.023184	0.077325	0.068817	0.038133	10.64152	0.418393	0.132523	0.393216	2.367471	0.055643	15.52808	0.458087	0.132523	0.393216	2.367471	0.045	0.979717	82.24088	9.529837	0.007808	0.025005	0.000551																	
Santa Clara	2030	SBUS	Aggregate	Aggregate	Diesel	659.3029	14502.39	14502.39	0	9546.705	0	2.539504	18.10728	0.550768	0.01404	0.011608	0	0.003	0.015721	0.014674	0.012133	0	0.012	0.044917	1118.5	2161.652	0	0.002094	0.007833	0	0.17622	0.340569	0	0.04508	0.168645	0	0	0	0	0.051321	0.19199	0	0	0	0	0	0.171795	0.148382	5.367405	0	0.010592	0.02047	0	0
Santa Clara	2030	SBUS	Aggregate	Aggregate	Electricity	42.27556	1362.719	0	1362.719	492.3385	1435.564	0	0	0	0	0	0	0.002	0.002592	0.00786	0	0	0	0.010366	0.022459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	SBUS	Aggregate	Aggregate	Natural Ga	29.19835	683.5221	683.5221	0	422.7921	0	0.477489	5.21952	0	0.003378	0.012583	0	0.003	0.015721	0.003674	0.013685	0	0.012	0.044917	1216.036	4101.156	0	3.18823	14.62233	0	0.247897	0.836047	0	0.045554	0.208924	0	0	0	0	3.253822	14.92316	0	0	0	0	0	1.06	10.47986	23.50992	0	0	0	0
Santa Clara	2030	UBUS	Aggregate	Aggregate	Gasoline	46.8994	4897.693	4897.693	0	187.5976	0	0.01748	0	0.295043	0.001197	0	0.000134	0.002	0.03185	0.001302	0	0.000145	0.008	0.091	850.5412	0	34.89923	0.001406	0	0.028862	0.003131	0	0.052846	0.003661	0	0.096632	0.024197	0.090857	0.324693	0.005342	0	0.1058	0.024197	0.090857	0.324693	0.045	0.587543	0	6.131541	0.008408	0	0.000345																	
Santa Clara	2030	UBUS	Aggregate	Aggregate	Diesel	338.5092	37119.08	37119.08	0	1354.037	0	0.396482	0	0	0.007209	0	0	0.008494	0.0385	0.007535	0	0	0.033977	0.11	1140.779	0	0	0.003281	0	0	0.17973	0	0	0.070632	0	0	0	0	0	0.080409	0	0	0	0	0	0	0.22	0.081446	0	0	0.010809	0	0
Santa Clara	2030	UBUS	Aggregate	Aggregate	Electricity	78.67225	8935.028	0	8935.028	314.689	15575.94	0	0	0	0	0	0	0.007594	0.01925	0	0	0	0.030375	0.055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Santa Clara	2030	UBUS	Aggregate	Aggregate	Natural Ga	76.82557	8920.557	8920.557	0	307.3023	0	0.058538	0	0	0.000282	0	0	0.00815	0.0385	0.000294	0	0	0.032599	0.11	1296.487	0	0	4.23523	0	0	0.264297	0	0	0.060513	0	0	0	0	0	4.322362	0	0	0	0	0	0	0.97	48.85872	0	0	0	0	0

Attachment 4: Project Construction and Operational Emissions and Health Risk Calculations

Construction Health Risk Assessment and Calculations

World Oil Gas Station, Morgan Hill, CA

Year	Unmitigated DPM	DPM EMFAC2021	Unmitigated Emissions	Unmitigated Fug PM2.5	Fug PM2.5 EMFAC2021	Unmitigated Emissions
2022	0.0061	0.0001	0.0061	0.0069	0.00004	0.0069

World Oil Gas Station, Morgan Hill, CA

DPM Emissions and Modeling Emission Rates - Unmitigated

Construction Year	Activity	DPM (ton/year)	Area Source	DPM Emissions (lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	DPM Emission Rate ($g/s/m^2$)
2022	Construction	0.0061	CON_DPM	12.2	0.00372	4.68E-04	1919	2.44E-07

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

World Oil Gas Station, Morgan Hill, CA

PM2.5 Fugitive Dust Emissions for Modeling - Unmitigated

Construction Year	Activity	Area Source	PM2.5 Emissions (ton/year)	(lb/yr)	(lb/hr)	(g/s)	Modeled Area (m^2)	PM2.5 Emission Rate $g/s/m^2$
2022	Construction	CON_FUG	0.0069	13.9	0.00423	5.32E-04	1,919	2.77E-07

Construction Hours

hr/day =	9	(7am - 4pm)
days/yr =	365	
hours/year =	3285	

World Oil Gas Station, Morgan Hill, CA - Construction Health Impact Summary

Maximum Impacts at MEI Residential Location - Without Mitigation

Emissions Year	Maximum Concentrations: Exhaust PM10/DPM ($\mu g/m^3$)	Maximum Concentrations: Fugitive PM2.5 ($\mu g/m^3$)	Cancer Risk* (per million): Infant/Child	Cancer Risk* (per million): Adult	Hazard Index (-)	Maximum Annual PM2.5 Concentration* ($\mu g/m^3$)
2022	0.0259	0.0491	**4.60**	**0.07**	**0.01**	**0.07**

* Maximum cancer risk and maximum PM2.5 concentration occur at different locations.

World Oil Gas Station, Morgan Hill, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location -1.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information			Infant/Child	Adult - Exposure Information			Adult	Maximum		
			DPM Conc (ug/m3)		Age	Cancer	Modeled DPM Conc (ug/m3)		Age	Cancer			
Exposure Year	Exposure Duration (years)	Age	Year	Annual	Sensitivity Factor	Risk (per million)	Year	Annual	Sensitivity Factor	Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2022	0.0259	10	0.35	2022	0.0259	-	-			
1	1	0 - 1	2022	0.0259	10	4.25	2022	0.0259	1	0.07	0.01	0.05	0.07
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00			
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**4.60**				**0.07**			

* Third trimester of pregnancy

World Oil Gas Station, Morgan Hill, CA - Construction Impacts - Without Mitigation
Maximum DPM Cancer Risk and PM2.5 Calculations From Construction
Impacts at Off-Site MEI Location - 4.5 meter receptor height

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air ($\mu g/m^3$)
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Values

	Infant/Child			Adult
Age -->	**3rd Trimester**	**0 - 2**	**2 - 16**	**16 - 30**
Parameter				
ASF =	10	10	3	1
CPF =	1.10E+00	1.10E+00	1.10E+00	1.10E+00
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	1.00	1.00	1.00	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

			Infant/Child - Exposure Information				Adult - Exposure Information				Maximum		
			DPM Conc (ug/m3)		Age	Infant/Child	Modeled DPM Conc (ug/m3)		Age	Adult			
Exposure Year	Exposure Duration (years)	Age	Year	Annual	Sensitivity Factor	Cancer Risk (per million)	Year	Annual	Sensitivity Factor	Cancer Risk (per million)	Hazard Index	Fugitive PM2.5	Total PM2.5
0	0.25	-0.25 - 0*	2022	0.0109	10	0.15	2022	0.0109	-	-			
1	1	0 - 1	2022	0.0109	10	1.79	2022	0.0109	1	0.03	0.002	0.01	0.02
2	1	1 - 2		0.0000	10	0.00		0.0000	1	0.00			
3	1	2 - 3		0.0000	3	0.00		0.0000	1	0.00			
4	1	3 - 4		0.0000	3	0.00		0.0000	1	0.00			
5	1	4 - 5		0.0000	3	0.00		0.0000	1	0.00			
6	1	5 - 6		0.0000	3	0.00		0.0000	1	0.00			
7	1	6 - 7		0.0000	3	0.00		0.0000	1	0.00			
8	1	7 - 8		0.0000	3	0.00		0.0000	1	0.00			
9	1	8 - 9		0.0000	3	0.00		0.0000	1	0.00			
10	1	9 - 10		0.0000	3	0.00		0.0000	1	0.00			
11	1	10 - 11		0.0000	3	0.00		0.0000	1	0.00			
12	1	11 - 12		0.0000	3	0.00		0.0000	1	0.00			
13	1	12 - 13		0.0000	3	0.00		0.0000	1	0.00			
14	1	13 - 14		0.0000	3	0.00		0.0000	1	0.00			
15	1	14 - 15		0.0000	3	0.00		0.0000	1	0.00			
16	1	15 - 16		0.0000	3	0.00		0.0000	1	0.00			
17	1	16-17		0.0000	1	0.00		0.0000	1	0.00			
18	1	17-18		0.0000	1	0.00		0.0000	1	0.00			
19	1	18-19		0.0000	1	0.00		0.0000	1	0.00			
20	1	19-20		0.0000	1	0.00		0.0000	1	0.00			
21	1	20-21		0.0000	1	0.00		0.0000	1	0.00			
22	1	21-22		0.0000	1	0.00		0.0000	1	0.00			
23	1	22-23		0.0000	1	0.00		0.0000	1	0.00			
24	1	23-24		0.0000	1	0.00		0.0000	1	0.00			
25	1	24-25		0.0000	1	0.00		0.0000	1	0.00			
26	1	25-26		0.0000	1	0.00		0.0000	1	0.00			
27	1	26-27		0.0000	1	0.00		0.0000	1	0.00			
28	1	27-28		0.0000	1	0.00		0.0000	1	0.00			
29	1	28-29		0.0000	1	0.00		0.0000	1	0.00			
30	1	29-30		0.0000	1	0.00		0.0000	1	0.00			
Total Increased Cancer Risk						**1.94**				**0.03**			

* Third trimester of pregnancy

GDF Health Risk Assessment and Calculations

Gasoline Station Calculator

New Project GDF

2,000,000 gallons/year

BAAQMD Evaluation

Controlled Rate (for all activities) = 0.516 lbs/10^3 gal throughput

Estimated Project Throughput	2,000	10^3 gal/year

Annual Precursor Organic Compound Emissions	1,032	pounds/year	2.9	pounds/day
	0.52	tons/year		

Annual Fuel (gal)	Source	CARB TOG EF (lb/1000 gal)[1]	CARB TOG (lbs/year)
2,000,000			
	Fueling; Non-ORVR & ORVR[2]	0.42	109.20
		0.021	36.54
	Tank Filling	0.15	300
	Tank breathing	0.024	48
	Spillage	0.24	480
	Fueling	0.009	18
		TOTAL	991.74
			0.49587

			Benzene[3]		Ethyl Benzene[4]		Toluene[4]		Xylenes[4]	
	TOG (lbs/year)	Operation (hours/day)	% of TOG	lbs/day	% of TOG	lbs/day	% of TOG	lbs/day	% of TOG	lbs/day
Refuel	163.74	17	0.3	0.0013458	1.6	0.007178	8	0.0358882	2.4	0.010766
Spill	480.00	17	1	0.0131507	1.6	0.021041	8	0.1052055	2.4	0.031562
UST Fill	300.00	24	0.3	0.0024658	1.6	0.013151	8	0.0657534	2.4	0.019726
UTS Breath	48.00	24	0.3	0.0003945	1.6	0.002104	8	0.0105205	2.4	0.003156
TOTAL				0.0173568		0.043474		0.2173677		0.06521

1. Emission factors from CARB "Revised Emissions Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities". December 23, 2013 (CARB, 2013). Assumes use of enhanced vapor recovery systems.
2. Fueling emissions based on CARB data for 2020 of 87% of vehicles use ORVR (CARB, 2013).
3. CAPCOA Air Toxics "Hot Spots" Program, Gasoline Service Station Industrywide Risk Assessment Guidelines, November 1997.
4. Emission factors are derived from SJAPCD Gasoline Dispensing Operations VOC Calculator and Appendix A in the 1997 CAPCOA Air Toxics "Hot Spots" Program document, Gasoline Service Station Industrywide Risk Asessment Guidelines.

Step 1:

Plant Name	New World Oil Gas Station
Plant No.	Proposed Gas Station

Step 4: Specify Source Type

Does facility have only diesel backup generators?	no
Is this analysis for a gas station?	yes

Note: Default generic distance multiplier used if source is not a generator or gas station.

Step 2: Estimate Distance

What is the distance (m) from the facility boundary to the MEI?	5

Step 5: Read Estimates

Total Cancer Risk	2.703	per 1,000,000
Total Chronic Hazard	0.013	
Total PM2.5 Concentration	0.000	µg/m^3

Step 3: Enter Emissions Data

Chemical Name	CAS No. (dashes removed)	Emission (lb/day)	Cancer (# / 1,000,000)	Chronic (index)	Concentration (µg/m3)
Fine Particulate Matter (PM2.5)					
1,1,1-Trichloroethane	71556	0.00E+00			
1,1,2,2-Tetrachloroethane	79345	0.00E+00			
1,1,2-Trichloroethane	79005	0.00E+00			
1,1-Dichloroethane	75343	0.00E+00			
1,1-Dichloroethylene	75354	0.00E+00			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268879	0.00E+00			
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001020	0.00E+00			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822469	0.00E+00			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562394	0.00E+00			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673897	0.00E+00			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227286	0.00E+00			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269	0.00E+00			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653857	0.00E+00			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449	0.00E+00			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408743	0.00E+00			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219	0.00E+00			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321764	0.00E+00			
1,2,3,7,8-Pentachlorodibenzofuran	57117416	0.00E+00			
1,2-Dibromo-3-chloropropane	96128	0.00E+00			
1,2-Dibromoethane	106934	0.00E+00			
1,2-Dichloroethane	107062	0.00E+00			
1,2-Epoxybutane	106887	0.00E+00			
1,3-Butadiene	106990	0.00E+00			
1,3-Propane sultone	1120714	0.00E+00			
1,4-Dichlorobenzene	106467	0.00E+00			
1,4-Dioxane	123911	0.00E+00			
1,6-Dinitropyrene	42397648	0.00E+00			
1,8-Dinitropyrene	42397659	0.00E+00			
1-Nitropyrene	5522430	0.00E+00			
2',3,4,4',5-PeCB	65510443	0.00E+00			
2,3',4,4',5,5'-HxCB	52663726	0.00E+00			
2,3',4,4',5-PeCB	31508006	0.00E+00			
2,3,3',4,4',5'-HxCB	69782907	0.00E+00			
2,3,3',4,4',5,5'-HpCB	39635319	0.00E+00			
2,3,3',4,4',5-HxCB	38380084	0.00E+00			
2,3,3',4,4'-PeCB	32598144	0.00E+00			
2,3,4,4',5-PeCB	74472370	0.00E+00			
2,3,4,6,7,8-hexachlorodibenzofuran	60851345	0.00E+00			
2,3,4,7,8-Pentachlorodibenzofuran	57117314	0.00E+00			
2,3,7,8-Tetrachlorodibenzo-p-dioxin and related comp	1746016	0.00E+00			
2,3,7,8-Tetrachlorodibenzofuran	51207319	0.00E+00			
2,4,6-Trichlorophenol	88062	0.00E+00			
2,4-Diaminoanisole	615054	0.00E+00			
2,4-Diaminotoluene	95807	0.00E+00			
2,4-Dinitrotoluene	121142	0.00E+00			
2-Aminoanthraquinone	117793	0.00E+00			
2-Nitrofluorene	607578	0.00E+00			
3,3',4,4',5,5'-HxCB	32774166	0.00E+00			
3,3',4,4',5-PeCB	57465288	0.00E+00			
3,3',4,4'-TCB	32598133	0.00E+00			
3,3-Dichlorobenzidine	91941	0.00E+00			
3,4,4'5-TCB	70362504	0.00E+00			
3-Methylcholanthrene	56495	0.00E+00			
4,4-Methylene bis(2-chloroaniline)	101144	0.00E+00			
4,4-Methylenedianiline	101779	0.00E+00			
4-Chloro-ortho-phenylenediamine	95830	0.00E+00			
4-Dimethylaminoazobenzene	60117	0.00E+00			
4-Nitropyrene	57835924	0.00E+00			
5-Methylchrysene	3697243	0.00E+00			

5-Nitroacenaphthene	602879	0.00E+00		
6-Nitrochrysene	7496028	0.00E+00		
7,12-Dimethylbenz(a)anthracene	57976	0.00E+00		
7H-dibenzo(c,g)carbazole	194592	0.00E+00		
Acetaldehyde	75070	0.00E+00		
Acetamide	60355	0.00E+00		
Acrolein	107028	0.00E+00		
Acrylamide	79061	0.00E+00		
Acrylic Acid	79107	0.00E+00		
Acrylonitrile	107131	0.00E+00		
Allyl chloride	107051	0.00E+00		
Ammonia	7664417	0.00E+00		
Aniline	62533	0.00E+00		
Arsenic	7440382	0.00E+00		
Arsine	7784421	0.00E+00		
Asbestos [1/(100 PCM fibers/m^3)]^-1	1332214	0.00E+00		
Benz(a)anthracene	56553	0.00E+00		
Benzene	71432	1.74E-02	2.22E+00	1.09E-02
Benzidine	92875	0.00E+00		
Benzo(a)pyrene	50328	0.00E+00		
Benzo(b)fluoranthene	205992	0.00E+00		
Benzo(j)fluoranthene	205823	0.00E+00		
Benzo(k)fluoranthene	207089	0.00E+00		
Benzyl Chloride	100447	0.00E+00		
Beryllium	7440417	0.00E+00		
Bis(2-chloroethyl) Ether	111444	0.00E+00		
Bis(2-chloromethyl) Ether	542881	0.00E+00		
Cadmium	7440439	0.00E+00		
Caprolactam	105602	0.00E+00		
Carbon Disulfide	75150	0.00E+00		
Carbon Monoxide	630080	0.00E+00		
Carbon Tetrachloride	56235	0.00E+00		
Carbonyl Sulfide	463581	0.00E+00		
Chlorinated paraffins (Avg. chain length C12; approx. 6	108171262	0.00E+00		
Chlorine	7782505	0.00E+00		
Chlorine Dioxide	10049044	0.00E+00		
Chlorite	7758192	0.00E+00		
Chlorobenzene	108907	0.00E+00		
Chlorodibromomethane	124481	0.00E+00		
Chloroethane (Ethyl Chloride)	75003	0.00E+00		
Chloroform	67663	0.00E+00		
Chloropicrin	76062	0.00E+00		
Chromic Trioxide	1333820	0.00E+00		
Chromium-hexavalent	18540299	0.00E+00		
Barium chromate2	10294403	0.00E+00		
Calcium chromate2	13765190	0.00E+00		
Lead chromate2	7758976	0.00E+00		
Sodium dichromate2	10588019	0.00E+00		
Strontium chromate2	7789062	0.00E+00		
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00		
Chrysene	218019	0.00E+00		
Copper	7440508	0.00E+00		
Copper and Copper Compounds	7440508	0.00E+00		
Cresol Mixtures	1319773	0.00E+00		
Cupferron	135206	0.00E+00		
Cyanide	57125	0.00E+00		
Di(2-ethylhexyl)phthalate	117817	0.00E+00		
Dibenz(a-h)acridine	226368	0.00E+00		
Dibenz(a-h)anthracene	53703	0.00E+00		
Dibenz(a-j)acridine	224420	0.00E+00		
Dibenzo(a-e)pyrene	192654	0.00E+00		
Dibenzo(a-h)pyrene	189640	0.00E+00		
Dibenzo(a-i)pyrene	189559	0.00E+00		
Dibenzo(a-l)pyrene	191300	0.00E+00		
Diesel Exhaust Particulate	85105	0.00E+00		
Diethanolamine	111422	0.00E+00		
Dimethylformamide	68122	0.00E+00		
Direct Black 38 (Technical Grade)	1937377	0.00E+00		
Direct Blue 6 (Technical Grade)	2602462	0.00E+00		
Direct Brown 95 (Technical Grade)	16071866	0.00E+00		
Epichlorohydrin	106898	0.00E+00		
Ethylbenzene	100414	4.35E-02	4.84E-01	4.11E-05
Ethylene Glycol	107211	0.00E+00		
Ethylene Glycol Monobutyl Ether	111762	0.00E+00		
Ethylene Glycol Monoethyl Ether	110805	0.00E+00		
Ethylene Glycol Monoethyl Ether Acetate	111159	0.00E+00		
Ethylene Glycol Monomethyl Ether	109864	0.00E+00		
Ethylene Glycol Monomethyl Ether Acetate	110496	0.00E+00		
Ethylene Oxide	75218	0.00E+00		

Ethylene Thiourea	96457	0.00E+00
Fluorides	1101	0.00E+00
Formaldehyde (gas)	50000	0.00E+00
Glutaraldehyde	111308	0.00E+00
Hexachlorobenzene	118741	0.00E+00
Hexachlorocyclohexane (Technical Grade)	608731	0.00E+00
Hexachlorocyclohexane- Alpha Isomer	319846	0.00E+00
Hexachlorocyclohexane- Beta Isomer	319857	0.00E+00
Hexachlorocyclohexane- Gamma Isomer	58899	0.00E+00
Hydrazine	302012	0.00E+00
Hydrogen Chloride	7647010	0.00E+00
Hydrogen Cyanide	74908	0.00E+00
Hydrogen Fluoride	7664393	0.00E+00
Hydrogen Selenide	7783075	0.00E+00
Hydrogen Sulfide	7783064	0.00E+00
Indeno(1-2-3-c-d)pyrene	193395	0.00E+00
Isophorone	78591	0.00E+00
Isopropyl Alcohol	67630	0.00E+00
Lead Acetate	301042	0.00E+00
Lead and Lead Compounds	7439921	0.00E+00
Lead Phosphate	7446277	0.00E+00
Lead Subacetate	1335326	0.00E+00
m-CRESOL	108394	0.00E+00
m-XYLENE	108383	0.00E+00
Maleic Anhydride	108316	0.00E+00
Manganese & Manganese Compounds	7439965	0.00E+00
Mercury (Inorganic)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
Methanol	67561	0.00E+00
Methyl Bromide	74839	0.00E+00
Methyl Ethyl Ketone	78933	0.00E+00
Methyl Isocyanate	624839	0.00E+00
Methyl Tertiary Butyl Ether	1634044	0.00E+00
Methylene Chloride (Dichloromethane)	75092	0.00E+00
Methylene Diphenyl Isocyanate (MDI)	101688	0.00E+00
Michlers Ketone	90948	0.00E+00
n-Hexane	110543	0.00E+00
n-Nitroso-n-methylethylamine	10595956	0.00E+00
n-Nitrosodi-n-Butylamine	924163	0.00E+00
n-Nitrosodi-n-Propylamine	621647	0.00E+00
n-Nitrosodiethylamine	55185	0.00E+00
n-Nitrosodimethylamine	62759	0.00E+00
n-Nitrosodiphenylamine	86306	0.00E+00
n-Nitrosomorpholine	59892	0.00E+00
n-Nitrosopiperidine	100754	0.00E+00
n-Nitrosopyrrolidine	930552	0.00E+00
Naphthalene	91203	0.00E+00
Nickel and Nickel Compounds	7440020	0.00E+00
Nickel acetate	373024	0.00E+00
Nickel carbonate	3333673	0.00E+00
Nickel carbonyl	13463393	0.00E+00
Nickel hydroxide	12054487	0.00E+00
Nickelocene	1271289	0.00E+00
Nickel Oxide	1313991	0.00E+00
Nickel Refinery Dust	1146	0.00E+00
Nickel Subsulfide	12035722	0.00E+00
Nitric Acid	7697372	0.00E+00
Nitrogen Dioxide	10102440	0.00E+00
o-CRESOL	95487	0.00E+00
o-XYLENE	95476	0.00E+00
Oleum	8014957	0.00E+00
Ozone	10028156	0.00E+00
p-Chloro-o-toluidine	95692	0.00E+00
p-Cresidine	120718	0.00E+00
p-CRESOL	106445	0.00E+00
p-Nitrosodiphenylamine	156105	0.00E+00
p-XYLENE	106423	0.00E+00
Pentachlorophenol	87865	0.00E+00
Perchloroethylene	127184	0.00E+00
Phenol	108952	0.00E+00
Phosgene	75445	0.00E+00
Phosphine	7803512	0.00E+00
Phosphoric Acid	7664382	0.00E+00
Phthalic Anhydride	85449	0.00E+00
Polychlorinated Biphenyls	1336363	0.00E+00
Potassium Bromate	7758012	0.00E+00
Propylene	115071	0.00E+00

Propylene Glycol Monomethyl Ether	107982	0.00E+00			
Propylene oxide	75569	0.00E+00			
Selenium	7782492	0.00E+00			
Selenium sulfide	7446346	0.00E+00			
Silica (crystalline, respirable)	7631869	0.00E+00			
Sodium hydroxide	1310732	0.00E+00			
Styrene	100425	0.00E+00			
Sulfates	9960	0.00E+00			
Sulfur Dioxide	7446095	0.00E+00			
Sulfuric Acid	7664939	0.00E+00			
Sulfur Trioxide	7446719	0.00E+00			
Tertiary-butyl acetate	540885	0.00E+00			
Tetrachloroethylene	127184	0.00E+00			
Thioacetamide	62555	0.00E+00			
Toluene	108883	2.17E-01		1.37E-03	
Toluene Diisocyanates	26471625	0.00E+00			
Toluene Diisocyanates (2,4 and 2, 6)	584849	0.00E+00			
Toluene Diisocyanates (2,4 and 2, 6)	91087	0.00E+00			
Trichloroethylene	79016	0.00E+00			
Triethylamine	121448	0.00E+00			
Urethane	51796	0.00E+00			
Vanadium pentoxide	1314621	0.00E+00			
Vinyl acetate	108054	0.00E+00			
Vinyl chloride	75014	0.00E+00			
Xylenes (technical mixture of m, o, p-isomers)	1330207	6.52E-02		1.76E-04	
Vanadium	7440622	0.00E+00			
	TOTAL UNADJUSTED Risk Values		**2.703**	**0.013**	**0.000**

Gasoline Station Calculator

Existing GDF

1,280,982 gallons/year

BAAQMD Evaluation

Controlled Rate (for all activities) = 0.516 lbs/10^3 gal throughput

Estimated Project Throughput: 1,281 10^3 gal/year

Annual Precursor Organic Compound Emissions			
	661	pounds/year	1.8 pounds/day
	0.33	tons/year	

Annual Fuel (gal)	Source	CARB TOG EF (lb/1000 gal)[1]	CARB TOG (lbs/year)
1,280,982			
	Fueling; Non-ORVR & ORVR[2]	0.42	69.94
		0.021	23.40
	Tank Filling	0.15	192
	Tank breathing	0.024	30.743568
	Spillage	0.24	307.43568
	Fueling	0.009	11.528838
		TOTAL	635.20054
			0.3176003

			Benzene[3]		Ethyl Benzene[4]		Toluene[4]		Xylenes[4]	
	TOG (lbs/year)	Operation (hours/day)	% of TOG	lbs/day	% of TOG	lbs/day	% of TOG	lbs/day	% of TOG	lbs/day
Refuel	104.87	17	0.3	0.000862	1.6	0.004597	8	0.0229861	2.4	0.006896
Spill	307.44	17	1	0.0084229	1.6	0.013477	8	0.0673832	2.4	0.020215
UST Fill	192.15	24	0.3	0.0015793	1.6	0.008423	8	0.0421145	2.4	0.012634
UTS Breath	30.74	24	0.3	0.0002527	1.6	0.001348	8	0.0067383	2.4	0.002021
TOTAL				0.0111169		0.027844		0.139222		0.041767

1. Emission factors from CARB "Revised Emissions Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities". December 23, 2013 (CARB, 2013). Assumes use of enhanced vapor recovery systems.
2. Fueling emissions based on CARB data for 2020 of 87% of vehicles use ORVR (CARB, 2013).
3. CAPCOA Air Toxics "Hot Spots" Program, Gasoline Service Station Industrywide Risk Assessment Guidelines, November 1997.
4. Emission factors are derived from SJAPCD Gasoline Dispensing Operations VOC Calculator and Appendix A in the 1997 CAPCOA Air Toxics "Hot Spots" Program document, Gasoline Service Station Industrywide Risk Asessment Guidelines.

Step 1:

Plant Name	New World Oil Gas Station
Plant No.	Existing Gas Station

Step 4: Specify Source Type

Does facility have only diesel backup generators?	no
Is this analysis for a gas station?	yes

Note: Default generic distance multiplier used if source is not a generator or gas station.

Step 2: Estimate Distance

What is the distance (m) from the facility boundary to the MEI?	30

Step 5: Read Estimates

Total Cancer Risk	0.968	per 1,000,000
Total Chronic Hazard	0.004	
Total PM2.5 Concentration	0.000	µg/m^3

Step 3: Enter Emissions Data

Chemical Name	CAS No. (dashes removed)	Emission (lb/day)	Cancer (# / 1,000,000)	Chronic (index)	Concentration (µg/m3)
Fine Particulate Matter (PM2.5)					
1,1,1-Trichloroethane	71556	0.00E+00			
1,1,2,2-Tetrachloroethane	79345	0.00E+00			
1,1,2-Trichloroethane	79005	0.00E+00			
1,1-Dichloroethane	75343	0.00E+00			
1,1-Dichloroethylene	75354	0.00E+00			
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268879	0.00E+00			
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001020	0.00E+00			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822469	0.00E+00			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562394	0.00E+00			
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673897	0.00E+00			
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227286	0.00E+00			
1,2,3,4,7,8-Hexachlorodibenzofuran	70648269	0.00E+00			
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653857	0.00E+00			
1,2,3,6,7,8-Hexachlorodibenzofuran	57117449	0.00E+00			
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408743	0.00E+00			
1,2,3,7,8,9-Hexachlorodibenzofuran	72918219	0.00E+00			
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321764	0.00E+00			
1,2,3,7,8-Pentachlorodibenzofuran	57117416	0.00E+00			
1,2-Dibromo-3-chloropropane	96128	0.00E+00			
1,2-Dibromoethane	106934	0.00E+00			
1,2-Dichloroethane	107062	0.00E+00			
1,2-Epoxybutane	106887	0.00E+00			
1,3-Butadiene	106990	0.00E+00			
1,3-Propane sultone	1120714	0.00E+00			
1,4-Dichlorobenzene	106467	0.00E+00			
1,4-Dioxane	123911	0.00E+00			
1,6-Dinitropyrene	42397648	0.00E+00			
1,8-Dinitropyrene	42397659	0.00E+00			
1-Nitropyrene	5522430	0.00E+00			
2',3,4,4',5-PeCB	65510443	0.00E+00			
2,3',4,4',5,5'-HxCB	52663726	0.00E+00			
2,3',4,4',5-PeCB	31508006	0.00E+00			
2,3,3',4,4',5'-HxCB	69782907	0.00E+00			
2,3,3',4,4',5,5'-HpCB	39635319	0.00E+00			
2,3,3',4,4',5-HxCB	38380084	0.00E+00			
2,3,3',4,4'-PeCB	32598144	0.00E+00			
2,3,4,4',5-PeCB	74472370	0.00E+00			
2,3,4,6,7,8-hexachlorodibenzofuran	60851345	0.00E+00			
2,3,4,7,8-Pentachlorodibenzofuran	57117314	0.00E+00			
2,3,7,8-Tetrachlorodibenzo-p-dioxin and related comp	1746016	0.00E+00			
2,3,7,8-Tetrachlorodibenzofuran	51207319	0.00E+00			
2,4,6-Trichlorophenol	88062	0.00E+00			
2,4-Diaminoanisole	615054	0.00E+00			
2,4-Diaminotoluene	95807	0.00E+00			
2,4-Dinitrotoluene	121142	0.00E+00			
2-Aminoanthraquinone	117793	0.00E+00			
2-Nitrofluorene	607578	0.00E+00			
3,3',4,4',5,5'-HxCB	32774166	0.00E+00			
3,3',4,4',5-PeCB	57465288	0.00E+00			
3,3',4,4'-TCB	32598133	0.00E+00			
3,3-Dichlorobenzidine	91941	0.00E+00			
3,4,4'5-TCB	70362504	0.00E+00			
3-Methylcholanthrene	56495	0.00E+00			
4,4-Methylene bis(2-chloroaniline)	101144	0.00E+00			
4,4-Methylenedianiline	101779	0.00E+00			
4-Chloro-ortho-phenylenediamine	95830	0.00E+00			
4-Dimethylaminoazobenzene	60117	0.00E+00			
4-Nitropyrene	57835924	0.00E+00			
5-Methylchrysene	3697243	0.00E+00			

5-Nitroacenaphthene	602879	0.00E+00				
6-Nitrochrysene	7496028	0.00E+00				
7,12-Dimethylbenz(a)anthracene	57976	0.00E+00				
7H-dibenzo(c,g)carbazole	194592	0.00E+00				
Acetaldehyde	75070	0.00E+00				
Acetamide	60355	0.00E+00				
Acrolein	107028	0.00E+00				
Acrylamide	79061	0.00E+00				
Acrylic Acid	79107	0.00E+00				
Acrylonitrile	107131	0.00E+00				
Allyl chloride	107051	0.00E+00				
Ammonia	7664417	0.00E+00				
Aniline	62533	0.00E+00				
Arsenic	7440382	0.00E+00				
Arsine	7784421	0.00E+00				
Asbestos [1/(100 PCM fibers/m^3)]^-1	1332214	0.00E+00				
Benz(a)anthracene	56553	0.00E+00				
Benzene	71432	1.11E-02	1.42E+00	7.00E-03		
Benzidine	92875	0.00E+00				
Benzo(a)pyrene	50328	0.00E+00				
Benzo(b)fluoranthene	205992	0.00E+00				
Benzo(j)fluoranthene	205823	0.00E+00				
Benzo(k)fluoranthene	207089	0.00E+00				
Benzyl Chloride	100447	0.00E+00				
Beryllium	7440417	0.00E+00				
Bis(2-chloroethyl) Ether	111444	0.00E+00				
Bis(2-chloromethyl) Ether	542881	0.00E+00				
Cadmium	7440439	0.00E+00				
Caprolactam	105602	0.00E+00				
Carbon Disulfide	75150	0.00E+00				
Carbon Monoxide	630080	0.00E+00				
Carbon Tetrachloride	56235	0.00E+00				
Carbonyl Sulfide	463581	0.00E+00				
Chlorinated paraffins (Avg. chain length C12; approx. 6	108171262	0.00E+00				
Chlorine	7782505	0.00E+00				
Chlorine Dioxide	10049044	0.00E+00				
Chlorite	7758192	0.00E+00				
Chlorobenzene	108907	0.00E+00				
Chlorodibromomethane	124481	0.00E+00				
Chloroethane (Ethyl Chloride)	75003	0.00E+00				
Chloroform	67663	0.00E+00				
Chloropicrin	76062	0.00E+00				
Chromic Trioxide	1333820	0.00E+00				
Chromium-hexavalent	18540299	0.00E+00				
Barium chromate2	10294403	0.00E+00				
Calcium chromate2	13765190	0.00E+00				
Lead chromate2	7758976	0.00E+00				
Sodium dichromate2	10588019	0.00E+00				
Strontium chromate2	7789062	0.00E+00				
CHROMIC TRIOXIDE (as chromic acid mist)	1333820	0.00E+00				
Chrysene	218019	0.00E+00				
Copper	7440508	0.00E+00				
Copper and Copper Compounds	7440508	0.00E+00				
Cresol Mixtures	1319773	0.00E+00				
Cupferron	135206	0.00E+00				
Cyanide	57125	0.00E+00				
Di(2-ethylhexyl)phthalate	117817	0.00E+00				
Dibenz(a-h)acridine	226368	0.00E+00				
Dibenz(a-h)anthracene	53703	0.00E+00				
Dibenz(a-j)acridine	224420	0.00E+00				
Dibenzo(a-e)pyrene	192654	0.00E+00				
Dibenzo(a-h)pyrene	189640	0.00E+00				
Dibenzo(a-i)pyrene	189559	0.00E+00				
Dibenzo(a-l)pyrene	191300	0.00E+00				
Diesel Exhaust Particulate	85105	0.00E+00				
Diethanolamine	111422	0.00E+00				
Dimethylformamide	68122	0.00E+00				
Direct Black 38 (Technical Grade)	1937377	0.00E+00				
Direct Blue 6 (Technical Grade)	2602462	0.00E+00				
Direct Brown 95 (Technical Grade)	16071866	0.00E+00				
Epichlorohydrin	106898	0.00E+00				
Ethylbenzene	100414	2.78E-02	3.10E-01	2.63E-05		
Ethylene Glycol	107211	0.00E+00				
Ethylene Glycol Monobutyl Ether	111762	0.00E+00				
Ethylene Glycol Monoethyl Ether	110805	0.00E+00				
Ethylene Glycol Monoethyl Ether Acetate	111159	0.00E+00				
Ethylene Glycol Monomethyl Ether	109864	0.00E+00				
Ethylene Glycol Monomethyl Ether Acetate	110496	0.00E+00				
Ethylene Oxide	75218	0.00E+00				

Ethylene Thiourea	96457	0.00E+00
Fluorides	1101	0.00E+00
Formaldehyde (gas)	50000	0.00E+00
Glutaraldehyde	111308	0.00E+00
Hexachlorobenzene	118741	0.00E+00
Hexachlorocyclohexane (Technical Grade)	608731	0.00E+00
Hexachlorocyclohexane- Alpha Isomer	319846	0.00E+00
Hexachlorocyclohexane- Beta Isomer	319857	0.00E+00
Hexachlorocyclohexane- Gamma Isomer	58899	0.00E+00
Hydrazine	302012	0.00E+00
Hydrogen Chloride	7647010	0.00E+00
Hydrogen Cyanide	74908	0.00E+00
Hydrogen Fluoride	7664393	0.00E+00
Hydrogen Selenide	7783075	0.00E+00
Hydrogen Sulfide	7783064	0.00E+00
Indeno(1-2-3-c-d)pyrene	193395	0.00E+00
Isophorone	78591	0.00E+00
Isopropyl Alcohol	67630	0.00E+00
Lead Acetate	301042	0.00E+00
Lead and Lead Compounds	7439921	0.00E+00
Lead Phosphate	7446277	0.00E+00
Lead Subacetate	1335326	0.00E+00
m-CRESOL	108394	0.00E+00
m-XYLENE	108383	0.00E+00
Maleic Anhydride	108316	0.00E+00
Manganese & Manganese Compounds	7439965	0.00E+00
Mercury (Inorganic)	7439976	0.00E+00
Mercuric chloride	7487947	0.00E+00
Methanol	67561	0.00E+00
Methyl Bromide	74839	0.00E+00
Methyl Ethyl Ketone	78933	0.00E+00
Methyl Isocyanate	624839	0.00E+00
Methyl Tertiary Butyl Ether	1634044	0.00E+00
Methylene Chloride (Dichloromethane)	75092	0.00E+00
Methylene Diphenyl Isocyanate (MDI)	101688	0.00E+00
Michlers Ketone	90948	0.00E+00
n-Hexane	110543	0.00E+00
n-Nitroso-n-methylethylamine	10595956	0.00E+00
n-Nitrosodi-n-Butylamine	924163	0.00E+00
n-Nitrosodi-n-Propylamine	621647	0.00E+00
n-Nitrosodiethylamine	55185	0.00E+00
n-Nitrosodimethylamine	62759	0.00E+00
n-Nitrosodiphenylamine	86306	0.00E+00
n-Nitrosomorpholine	59892	0.00E+00
n-Nitrosopiperidine	100754	0.00E+00
n-Nitrosopyrrolidine	930552	0.00E+00
Naphthalene	91203	0.00E+00
Nickel and Nickel Compounds	7440020	0.00E+00
Nickel acetate	373024	0.00E+00
Nickel carbonate	3333673	0.00E+00
Nickel carbonyl	13463393	0.00E+00
Nickel hydroxide	12054487	0.00E+00
Nickelocene	1271289	0.00E+00
Nickel Oxide	1313991	0.00E+00
Nickel Refinery Dust	1146	0.00E+00
Nickel Subsulfide	12035722	0.00E+00
Nitric Acid	7697372	0.00E+00
Nitrogen Dioxide	10102440	0.00E+00
o-CRESOL	95487	0.00E+00
o-XYLENE	95476	0.00E+00
Oleum	8014957	0.00E+00
Ozone	10028156	0.00E+00
p-Chloro-o-toluidine	95692	0.00E+00
p-Cresidine	120718	0.00E+00
p-CRESOL	106445	0.00E+00
p-Nitrosodiphenylamine	156105	0.00E+00
p-XYLENE	106423	0.00E+00
Pentachlorophenol	87865	0.00E+00
Perchloroethylene	127184	0.00E+00
Phenol	108952	0.00E+00
Phosgene	75445	0.00E+00
Phosphine	7803512	0.00E+00
Phosphoric Acid	7664382	0.00E+00
Phthalic Anhydride	85449	0.00E+00
Polychlorinated Biphenyls	1336363	0.00E+00
Potassium Bromate	7758012	0.00E+00
Propylene	115071	0.00E+00

Propylene Glycol Monomethyl Ether	107982	0.00E+00			
Propylene oxide	75569	0.00E+00			
Selenium	7782492	0.00E+00			
Selenium sulfide	7446346	0.00E+00			
Silica (crystalline, respirable)	7631869	0.00E+00			
Sodium hydroxide	1310732	0.00E+00			
Styrene	100425	0.00E+00			
Sulfates	9960	0.00E+00			
Sulfur Dioxide	7446095	0.00E+00			
Sulfuric Acid	7664939	0.00E+00			
Sulfur Trioxide	7446719	0.00E+00			
Tertiary-butyl acetate	540885	0.00E+00			
Tetrachloroethylene	127184	0.00E+00			
Thioacetamide	62555	0.00E+00			
Toluene	108883	1.39E-01		8.77E-04	
Toluene Diisocyanates	26471625	0.00E+00			
Toluene Diisocyanates (2,4 and 2, 6)	584849	0.00E+00			
Toluene Diisocyanates (2,4 and 2, 6)	91087	0.00E+00			
Trichloroethylene	79016	0.00E+00			
Triethylamine	121448	0.00E+00			
Urethane	51796	0.00E+00			
Vanadium pentoxide	1314621	0.00E+00			
Vinyl acetate	108054	0.00E+00			
Vinyl chloride	75014	0.00E+00			
Xylenes (technical mixture of m, o, p-isomers)	1330207	4.18E-02		1.13E-04	
Vanadium	7440622	0.00E+00			
	TOTAL UNADJUSTED Risk Values		**1.731**	**0.008**	**0.000**

Attachment 5: Community Risk Modeling Information and Calculations

CT-EMFAC2017 Emissions Factors for Monterey Road 2022

File Name: Monterey Rd - World Oil - Santa Clara (SF) - 2022 - Annual.EF
CT-EMFAC2017 Version: 1.0.2.27401
Run Date: 8/2/2021 15:00
Area: Santa Clara (SF)
Analysis Year: 2022
Season: Annual

Vehicle Category	VMT Fraction Across Category	Diesel VMT Fraction Within Category	Gas VMT Fraction Within Category
Truck 1	0.015	0.478	0.522
Truck 2	0.02	0.94	0.046
Non-Truck	0.965	0.014	0.961

Road Type: Major/Collector
Silt Loading Factor: CARB 0.032 g/m2
Precipitation Correction: CARB P = 64 days N = 365 days

Fleet Average Running Exhaust Emission Factors (grams/veh-mile)

Pollutant Name	<= 5 mph	10 mph	15 mph	20 mph	25 mph	30 mph	35 mph	40 mph
PM2.5	0.010417	0.006915	0.004735	0.003408	0.002622	0.002145	0.001861	0.001715
TOG	0.220898	0.145348	0.097291	0.068555	0.051819	0.041294	0.034513	0.030252
Diesel PM	0.001756	0.001459	0.001108	0.000865	0.000743	0.000683	0.000662	0.000677

Fleet Average Running Loss Emission Factors (grams/veh-hour)

Pollutant Name	Emission Factor
TOG	1.418515

Fleet Average Tire Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.002108

Fleet Average Brake Wear Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.016811

Fleet Average Road Dust Factors (grams/veh-mile)

Pollutant Name	Emission Factor
PM2.5	0.014871

==========END==========

Monterey Road Emissions and Health Risk Calculations

World Oil Gas Station, Morgan Hill, CA - Offsite Residential Roadway Modeling
Cumulative Operation - Monterey Road
DPM Modeling - Roadway Links, Traffic Volumes, and DPM Emissions
Year = **2022** 13.315

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
DPM_MON	Monterey Road Northbound	NB	2	651.9	0.41	13.3	43.7	3.4	35	10,983	8,680	93,433	3.927E-09	2.895E-09	6.8	3.16
DPM_MON	Monterey Road Southbound	SB	2	649.2	0.40	13.3	43.7	3.4	35	10,983	8,644	93,046	3.927E-09	2.895E-09	6.8	3.16
									Total	21,965						

Emission Factors - DPM

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.00066			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and DPM Emissions - DPM_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	3.91%	429	3.20E-05	9	6.44%	707	5.27E-05	17	5.52%	606	4.52E-05
2	2.59%	284	2.12E-05	10	7.25%	796	5.93E-05	18	3.34%	367	2.73E-05
3	2.82%	310	2.31E-05	11	6.33%	695	5.18E-05	19	2.42%	266	1.98E-05
4	3.39%	372	2.77E-05	12	6.90%	758	5.64E-05	20	0.92%	101	7.53E-06
5	2.19%	241	1.79E-05	13	6.27%	689	5.13E-05	21	2.99%	328	2.45E-05
6	3.39%	372	2.77E-05	14	6.15%	675	5.03E-05	22	4.14%	455	3.39E-05
7	6.10%	670	4.99E-05	15	5.12%	562	4.19E-05	23	2.47%	271	2.02E-05
8	4.66%	512	3.81E-05	16	3.85%	423	3.15E-05	24	0.86%	94	7.04E-06
								Total		10,985	

2022 Hourly Traffic Volumes Per Direction and DPM Emissions - DPM_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	3.91%	429	3.19E-05	9	6.44%	707	5.25E-05	17	5.52%	606	4.50E-05
2	2.59%	284	2.11E-05	10	7.25%	796	5.91E-05	18	3.34%	367	2.72E-05
3	2.82%	310	2.30E-05	11	6.33%	695	5.16E-05	19	2.42%	266	1.97E-05
4	3.39%	372	2.76E-05	12	6.90%	758	5.62E-05	20	0.92%	101	7.50E-06
5	2.19%	241	1.78E-05	13	6.27%	689	5.11E-05	21	2.99%	328	2.44E-05
6	3.39%	372	2.76E-05	14	6.15%	675	5.01E-05	22	4.14%	455	3.37E-05
7	6.10%	670	4.97E-05	15	5.12%	562	4.17E-05	23	2.47%	271	2.01E-05
8	4.66%	512	3.80E-05	16	3.85%	423	3.14E-05	24	0.86%	94	7.01E-06
								Total		10,985	

World Oil Gas Station, Morgan Hill, CA - Offsite Residential Roadway Modeling
Cumulative Operation - Monterey Road
PM2.5 Modeling - Roadway Links, Traffic Volumes, and PM2.5 Emissions
Year = 2022

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
PM25_MON	Monterey Road Northbound	NB	2	651.9	0.41	13.3	44	1.3	35	10,983	8,680	93,433	1.104E-08	8.139E-09	2.6	1.21
PM25_MON	Monterey Road Southbound	SB	2	649.2	0.40	13.3	44	1.3	35	10,983	8,644	93,046	1.104E-08	8.139E-09	2.6	1.21
									Total	21,965						

Emission Factors - PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.001861			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and PM2.5 Emissions - PM25_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	126	2.64E-05	9	7.11%	781	1.64E-04	17	7.39%	812	1.70E-04
2	0.42%	46	9.66E-06	10	4.39%	482	1.01E-04	18	8.17%	897	1.88E-04
3	0.41%	45	9.43E-06	11	4.67%	513	1.07E-04	19	5.70%	626	1.31E-04
4	0.27%	30	6.21E-06	12	5.89%	647	1.35E-04	20	4.27%	469	9.82E-05
5	0.50%	55	1.15E-05	13	6.15%	675	1.41E-04	21	3.26%	358	7.50E-05
6	0.91%	100	2.09E-05	14	6.03%	662	1.39E-04	22	3.30%	362	7.59E-05
7	3.79%	416	8.72E-05	15	7.01%	770	1.61E-04	23	2.46%	270	5.66E-05
8	7.76%	852	1.78E-04	16	7.13%	783	1.64E-04	24	1.86%	204	4.28E-05
								Total		10,983	

2022 Hourly Traffic Volumes Per Direction and PM2.5 Emissions - PM25_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	126	2.63E-05	9	7.11%	781	1.63E-04	17	7.39%	812	1.69E-04
2	0.42%	46	9.62E-06	10	4.39%	482	1.01E-04	18	8.17%	897	1.87E-04
3	0.41%	45	9.39E-06	11	4.67%	513	1.07E-04	19	5.70%	626	1.31E-04
4	0.27%	30	6.18E-06	12	5.89%	647	1.35E-04	20	4.27%	469	9.78E-05
5	0.50%	55	1.15E-05	13	6.15%	675	1.41E-04	21	3.26%	358	7.47E-05
6	0.91%	100	2.08E-05	14	6.03%	662	1.38E-04	22	3.30%	362	7.56E-05
7	3.79%	416	8.68E-05	15	7.01%	770	1.61E-04	23	2.46%	270	5.63E-05
8	7.76%	852	1.78E-04	16	7.13%	783	1.63E-04	24	1.86%	204	4.26E-05
								Total		10,983	

World Oil Gas Station, Morgan Hill, CA - Offsite Residential Roadway Modeling
Cumulative Operation - Monterey Road
TOG Exhaust Modeling - Roadway Links, Traffic Volumes, and TOG Exhaust Emissions
Year = 2022

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEXH_MON	Monterey Road Northbound	NB	2	651.9	0.41	13.3	44	1.3	35	10,983	8,680	93,433	2.047E-07	1.509E-07	2.6	1.21
TEXH_MON	Monterey Road Southbound	SB	2	649.2	0.40	13.3	44	1.3	35	10,983	8,644	93,046	2.047E-07	1.509E-07	2.6	1.21
									Total	21,965						

Emission Factors - TOG Exhaust

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle (g/VMT)	0.03451			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Exhaust Emissions - TEXH_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	126	4.90E-04	9	7.11%	781	3.03E-03	17	7.39%	812	3.15E-03
2	0.42%	46	1.79E-04	10	4.39%	482	1.87E-03	18	8.17%	897	3.48E-03
3	0.41%	45	1.75E-04	11	4.67%	513	1.99E-03	19	5.70%	626	2.43E-03
4	0.27%	30	1.15E-04	12	5.89%	647	2.51E-03	20	4.27%	469	1.82E-03
5	0.50%	55	2.13E-04	13	6.15%	675	2.62E-03	21	3.26%	358	1.39E-03
6	0.91%	100	3.88E-04	14	6.03%	662	2.57E-03	22	3.30%	362	1.41E-03
7	3.79%	416	1.62E-03	15	7.01%	770	2.99E-03	23	2.46%	270	1.05E-03
8	7.76%	852	3.31E-03	16	7.13%	783	3.04E-03	24	1.86%	204	7.93E-04
								Total		10,983	

2022 Hourly Traffic Volumes Per Direction and TOG Exhaust Emissions - TEXH_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	126	4.88E-04	9	7.11%	781	3.02E-03	17	7.39%	812	3.14E-03
2	0.42%	46	1.78E-04	10	4.39%	482	1.86E-03	18	8.17%	897	3.47E-03
3	0.41%	45	1.74E-04	11	4.67%	513	1.98E-03	19	5.70%	626	2.42E-03
4	0.27%	30	1.15E-04	12	5.89%	647	2.50E-03	20	4.27%	469	1.81E-03
5	0.50%	55	2.12E-04	13	6.15%	675	2.61E-03	21	3.26%	358	1.38E-03
6	0.91%	100	3.87E-04	14	6.03%	662	2.56E-03	22	3.30%	362	1.40E-03
7	3.79%	416	1.61E-03	15	7.01%	770	2.98E-03	23	2.46%	270	1.04E-03
8	7.76%	852	3.30E-03	16	7.13%	783	3.03E-03	24	1.86%	204	7.90E-04
								Total		10,983	

World Oil Gas Station, Morgan Hill, CA - Offsite Residential Roadway Modeling
Cumulative Operation - Monterey Road
TOG Evaporative Emissions Modeling - Roadway Links, Traffic Volumes, and TOG Evaporative Emissions
Year = 2022

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height	(Sigma z) Initial Vertical Dimension
TEVAP_MON	Monterey Road Northbound	NB	2	651.9	0.41	13.3	44	1.3	35	10,983	8,680	93,433	2.404E-07	1.773E-07	2.6	1.21
TEVAP_MON	Monterey Road Southbound	SB	2	649.2	0.40	13.3	44	1.3	35	10,983	8,644	93,046	2.404E-07	1.773E-07	2.6	1.21
									Total	21,965						

Emission Factors - PM2.5 - Evaporative TOG

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Emissions per Vehicle per Hour (g/hour)	1.41852			
Emissions per Vehicle per Mile (g/VMT)	0.04053			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and TOG Evaporative Emissions - TEVAP_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	126	5.76E-04	9	7.11%	781	3.56E-03	17	7.39%	812	3.70E-03
2	0.42%	46	2.10E-04	10	4.39%	482	2.20E-03	18	8.17%	897	4.09E-03
3	0.41%	45	2.05E-04	11	4.67%	513	2.34E-03	19	5.70%	626	2.85E-03
4	0.27%	30	1.35E-04	12	5.89%	647	2.95E-03	20	4.27%	469	2.14E-03
5	0.50%	55	2.50E-04	13	6.15%	675	3.08E-03	21	3.26%	358	1.63E-03
6	0.91%	100	4.56E-04	14	6.03%	662	3.02E-03	22	3.30%	362	1.65E-03
7	3.79%	416	1.90E-03	15	7.01%	770	3.51E-03	23	2.46%	270	1.23E-03
8	7.76%	852	3.89E-03	16	7.13%	783	3.57E-03	24	1.86%	204	9.32E-04
								Total		10,983	

2022 Hourly Traffic Volumes Per Direction and TOG Evaporative Emissions - TEVAP_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	126	5.74E-04	9	7.11%	781	3.55E-03	17	7.39%	812	3.69E-03
2	0.42%	46	2.09E-04	10	4.39%	482	2.19E-03	18	8.17%	897	4.07E-03
3	0.41%	45	2.04E-04	11	4.67%	513	2.33E-03	19	5.70%	626	2.84E-03
4	0.27%	30	1.35E-04	12	5.89%	647	2.94E-03	20	4.27%	469	2.13E-03
5	0.50%	55	2.49E-04	13	6.15%	675	3.07E-03	21	3.26%	358	1.63E-03
6	0.91%	100	4.54E-04	14	6.03%	662	3.01E-03	22	3.30%	362	1.65E-03
7	3.79%	416	1.89E-03	15	7.01%	770	3.50E-03	23	2.46%	270	1.23E-03
8	7.76%	852	3.87E-03	16	7.13%	783	3.56E-03	24	1.86%	204	9.28E-04
								Total		10,983	

World Oil Gas Station, Morgan Hill, CA - Offsite Residential Roadway Modeling
Cumulative Operation - Monterey Road
Fugitive Road PM2.5 Modeling - Roadway Links, Traffic Volumes, and Fugitive Road PM2.5 Emissions
Year = 2022

											Line Area					
Road Link	Description	Direction	No. Lanes	Link Length (m)	Link Length (mi)	Link Width (m)	Link Width (ft)	Release Height (m)	Average Speed (mph)	Average Vehicles per Day	Area (sq m)	Area (sq ft)	Emission (g/s/m2)	Emission (lb/hr/ft2)	Initial Vertical height (m)	(Sigma z) Initial Vertical Dimension
FUG_MON	Monterey Road Northbound	NB	2	651.9	0.41	13.3	44	1.3	35	10,983	8,680	93,433	2.004E-07	1.478E-07	2.6	1.21
FUG_MON	Monterey Road Southbound	SB	2	649.2	0.40	13.3	44	1.3	35	10,983	8,644	93,046	2.004E-07	1.478E-07	2.6	1.21
									Total	21,965						

Emission Factors - Fugitive PM2.5

Speed Category	1	2	3	4
Travel Speed (mph)	35			
Tire Wear - Emissions per Vehicle (g/VMT)	0.00211			
Brake Wear - Emissions per Vehicle (g/VMT)	0.01681			
Road Dust - Emissions per Vehicle (g/VMT)	0.01487			
Total Fugitive PM2.5 - Emissions per Vehicle (g/VMT)	0.03379			

Emisson Factors from CT-EMFAC2017

2022 Hourly Traffic Volumes and Fugitive PM2.5 Emissions - FUG_MON

Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s	Hour	% Per Hour	VPH	g/s
1	1.15%	126	4.80E-04	9	7.11%	781	2.97E-03	17	7.39%	812	3.09E-03
2	0.42%	46	1.75E-04	10	4.39%	482	1.83E-03	18	8.17%	897	3.41E-03
3	0.41%	45	1.71E-04	11	4.67%	513	1.95E-03	19	5.70%	626	2.38E-03
4	0.27%	30	1.13E-04	12	5.89%	647	2.46E-03	20	4.27%	469	1.78E-03
5	0.50%	55	2.09E-04	13	6.15%	675	2.57E-03	21	3.26%	358	1.36E-03
6	0.91%	100	3.80E-04	14	6.03%	662	2.52E-03	22	3.30%	362	1.38E-03
7	3.79%	416	1.58E-03	15	7.01%	770	2.93E-03	23	2.46%	270	1.03E-03
8	7.76%	852	3.24E-03	16	7.13%	783	2.98E-03	24	1.86%	204	7.77E-04
								Total		10,983	

2022 Hourly Traffic Volumes Per Direction and Fugitive PM2.5 Emissions - FUG_MON

Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile	Hour	% Per Hour	VPH	g/mile
1	1.15%	126	4.78E-04	9	7.11%	781	2.96E-03	17	7.39%	812	3.07E-03
2	0.42%	46	1.75E-04	10	4.39%	482	1.83E-03	18	8.17%	897	3.40E-03
3	0.41%	45	1.70E-04	11	4.67%	513	1.94E-03	19	5.70%	626	2.37E-03
4	0.27%	30	1.12E-04	12	5.89%	647	2.45E-03	20	4.27%	469	1.78E-03
5	0.50%	55	2.08E-04	13	6.15%	675	2.56E-03	21	3.26%	358	1.36E-03
6	0.91%	100	3.78E-04	14	6.03%	662	2.51E-03	22	3.30%	362	1.37E-03
7	3.79%	416	1.58E-03	15	7.01%	770	2.91E-03	23	2.46%	270	1.02E-03
8	7.76%	852	3.23E-03	16	7.13%	783	2.96E-03	24	1.86%	204	7.73E-04
								Total		10,983	

World Oil Gas Station, Mogan Hill, CA - Monterey Road Traffic - TACs & PM2.5
AERMOD Risk Modeling Parameters and Maximum Concentrations
at Construction Cancer Risk and PM2.5 MEI Receptors (1.5m receptor height)

Emission Year	2022
Receptor Information	Construction MEI receptors
Number of Receptors	2
Receptor Height	1.5 meters
Receptor Distances	At Construction MEI locations

Meteorological Conditions	
BAAQMD San Martin Airport Met Data	2013-2017
Land Use Classification	Urban
Wind Speed	Variable
Wind Direction	Variable

Construction MEI Cancer Risk Maximum Concentrations - Cancer Risk MEI Location

Meteorological Data Years	Concentration (µg/m3)		
	DPM	Exhaust TOG	Evaporative TOG
2013-2017	0.0027	0.1334	0.1566

Construction MEI PM2.5 Maximum Concentrations - PM2.5 MEI Location

Meteorological Data Years	PM2.5 Concentration (µg/m3)		
	Total PM2.5	Fugitive PM2.5	Vehicle PM2.5
2013-2017	0.13775	0.1306	0.0072

World Oil Gas Station, Mogan Hill, CA - Monterey Road Cancer Risk
Impacts at Construction MEIs - 1.5 meter receptor heights
30 Year Residential Exposure

Cancer Risk Calculation Method

Cancer Risk (per million) = CPF x Inhalation Dose x ASF x ED/AT x FAH x 1.0E6

Where: CPF = Cancer potency factor $(mg/kg\text{-}day)^{-1}$
ASF = Age sensitivity factor for specified age group
ED = Exposure duration (years)
AT = Averaging time for lifetime cancer risk (years)
FAH = Fraction of time spent at home (unitless)

Inhalation Dose = C_{air} x DBR x A x (EF/365) x 10^{-6}

Where: C_{air} = concentration in air $(\mu g/m^3)$
DBR = daily breathing rate (L/kg body weight-day)
A = Inhalation absorption factor
EF = Exposure frequency (days/year)
10^{-6} = Conversion factor

Cancer Potency Factors $(mg/kg\text{-}day)^{-1}$

TAC	CPF
DPM	1.10E+00
Vehicle TOG Exhaust	6.28E-03
Vehicle TOG Evaporative	3.70E-04

Values

	Infant/Child			Adult
Age -->	3rd Trimester	0 - 2	2 - 16	16 - 30
Parameter				
ASF =	10	10	3	1
DBR* =	361	1090	572	261
A =	1	1	1	1
EF =	350	350	350	350
AT =	70	70	70	70
FAH =	0.85	0.85	0.72	0.73

* 95th percentile breathing rates for infants and 80th percentile for children and adults

Construction Cancer Risk by Year - Maximum Impact Receptor Location

Maximum - Exposure Information					Concentration (ug/m3)			Cancer Risk (per million)			
Exposure Year	Exposure Duration (years)	Age	Year	Age Sensitivity Factor	DPM	Exhaust TOG	Evaporative TOG	DPM	Exhaust TOG	Evaporative TOG	TOTAL
0	0.25	-0.25 - 0*	2022	10	0.0027	0.1334	0.1566	0.031	0.009	0.0006	0.04
1	1	0 - 1	2022	10	0.0027	0.1334	0.1566	0.370	0.106	0.0074	0.48
2	1	1 - 2	2023	10	0.0027	0.1334	0.1566	0.370	0.106	0.0074	0.48
3	1	2 - 3	2024	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
4	1	3 - 4	2025	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
5	1	4 - 5	2026	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
6	1	5 - 6	2027	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
7	1	6 - 7	2028	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
8	1	7 - 8	2029	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
9	1	8 - 9	2030	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
10	1	9 - 10	2031	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
11	1	10 - 11	2032	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
12	1	11 - 12	2033	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
13	1	12 - 13	2034	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
14	1	13 - 14	2035	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
15	1	14 - 15	2036	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
16	1	15 - 16	2037	3	0.0027	0.1334	0.1566	0.049	0.014	0.0010	0.06
17	1	16-17	2038	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
18	1	17-18	2039	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
19	1	18-19	2040	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
20	1	19-20	2041	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
21	1	20-21	2042	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
22	1	21-22	2043	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
23	1	22-23	2044	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
24	1	23-24	2045	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
25	1	24-25	2046	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
26	1	25-26	2047	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
27	1	26-27	2048	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
28	1	27-28	2049	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
29	1	28-29	2050	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
30	1	29-30	2051	1	0.0027	0.1334	0.1566	0.008	0.002	0.0002	0.01
Total Increased Cancer Risk								1.57	0.450	0.031	**2.05**

Maximum Hazard Index	Maximum Fugitive PM2.5	Total PM2.5
0.001	0.13	0.14

* Third trimester of pregnancy

Bay Area Air Quality Management District

Risk & Hazard Stationary Source Inquiry Form

This form is required when users request stationary source data from BAAQMD

This form is to be used with the BAAQMD's Google Earth stationary source screening tables.

Click here for guidance on coducting risk & hazard screening, including roadways & freeways, refer to the District's Risk & Hazard Analysis flow chart.

Click here for District's Recommended Methods for Screening and Modeling Local Risks and Hazards document.

Table A: Requester Contact Information

Date of Request	**7/13/2021**
Contact Name	Casey Divine
Affiliation	Illingworth & Rodkin, Inc.
Phone	707-794-0400 x103
Email	cdivine@illingworthrodkin.com
Project Name	Worl Oil Gas Station
Address	16720 Monterey Road
City	Morgan Hill
County	Santa Clara
Type (residential, commercial, mixed use, industrial, etc.)	Gas Station
Project Size (# of units or building square feet)	6 Pumps

Comments:

For Air District assistance, the following steps must be completed:

1. Complete all the contact and project information requested in Table A crms will not be processed. Please include a project site map.

2. Download and install the free program Google Earth, **http://www.google.com/earth/download/ge/,** and then download the county specific Google Earth stationary source application files from the District's website, **http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx.** The small points on the map represent stationary sources permitted by the District (Map A on right). These permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc. Click on a point to view the source's Information Table, including the name, location, and preliminary estimated cancer risk, hazard index, and PM2.5 concentration.

3. Find the project site in Google Earth by inputting the site's address in the Google Earth search box.

4. Identify stationary sources within at least a 1000ft radius of project site. Verify that the location of the source on the map matches with the source's address in the Information Table, by using the Google Earth address search box to confirm the source's address location. Please report any mapping errors to the District.

5. List the stationary source information in Table B cnly.

6. Note that a small percentage of the stationary sources have Health Risk Screening Assessment (HRSA) data INSTEAD of screening level data. These sources will be noted by an asterisk next to the Plant Name (Map B on right). If HRSA values are presented, these values have already been modeled and cannot be adjusted further.

7. Email this completed form to District staff. District staff will provide the most recent risk, hazard, and PM2.5 data that are available for the source(s). If this information or data are not available, source emissions data will be provided. Staff will respond to inquiries within three weeks.

Note that a public records request received for the same stationary source information will cancel the processing of your SSIF request.

Submit forms, maps, and questions to Matthew Hanson at 415-749-8733, or mhanson@baaqmd.gov

Table B: Google Earth data

Construction MEI

Distance from Receptor (feet) or MEI[1]	Plant No.	Facility Name	Address	Cancer Risk[2]	Hazard Risk[2]	$PM_{2.5}$[2]	Source No.[3]	Type of Source[4]	Fuel Code[5]	Status/Comments	Distance Adjustment Multiplier	Adjusted Cancer Risk Estimate	Adjusted Hazard Risk	Adjusted PM2.5
650	23026	Airtronics Metal Products	140 San Pedro Avenue	0.01	--	0.02		3x Spraybooths, 2x Drying ovens		2018 Dataset	0.25	0.003	#VALUE!	0.01

Footnotes:

1. Maximally exposed individual
2. These Cancer Risk, Hazard Index, and PM2.5 columns represent the values in the Google Earth Plant Information Table.
3. Each plant may have multiple permits and sources.
4. Permitted sources include diesel back-up generators, gas stations, dry cleaners, boilers, printers, auto spray booths, etc.
5. Fuel codes: 98 = diesel, 189 = Natural Gas.
6. If a Health Risk Screening Assessment (HRSA) was completed for the source, the application number will be listed here.

7. The date that the HRSA was completed.
8. Engineer who completed the HRSA. For District purposes only.
9. All HRSA completed before 1/5/2010 need to be multiplied by an age sensitivity factor of 1.7.
10. The HRSA "Chronic Health" number represents the Hazard Index.
11. Further information about common sources:
    a. Sources that only include diesel internal combustion engines can be adjusted using the BAAQMD's Diesel Multiplier worksheet.
    b. The risk from natural gas boilers used for space heating when <25 MM BTU/hr would have an estimated cancer risk of one in a million or less, and a chronic hazard index of 0.003 or less. To be
    c. BAAQMD Reg 11 Rule 16 required that all co-residential (sharing a wall, floor, ceiling or is in the same building as a residential unit) dry cleaners cease use of perc on July 1, 2010.
    Therefore, there is no cancer risk, hazard or PM2.5 concentrations from co-residential dry cleaning businesses in the BAAQMD.
    d. Non co-residential dry cleaners must phase out use of perc by Jan. 1, 2023. Therefore, the risk from these dry cleaners does not need to be factored in over a 70-year period, but instead should reflect the number
    e. Gas stations can be adjusted using BAAQMD's Gas Station Distance Mulitplier worksheet.
    f. Unless otherwise noted, exempt sources are considered insignificant. See BAAQMD Reg 2 Rule 1 for a list of exempt sources.
    g. This spray booth is considered to be insignificant.

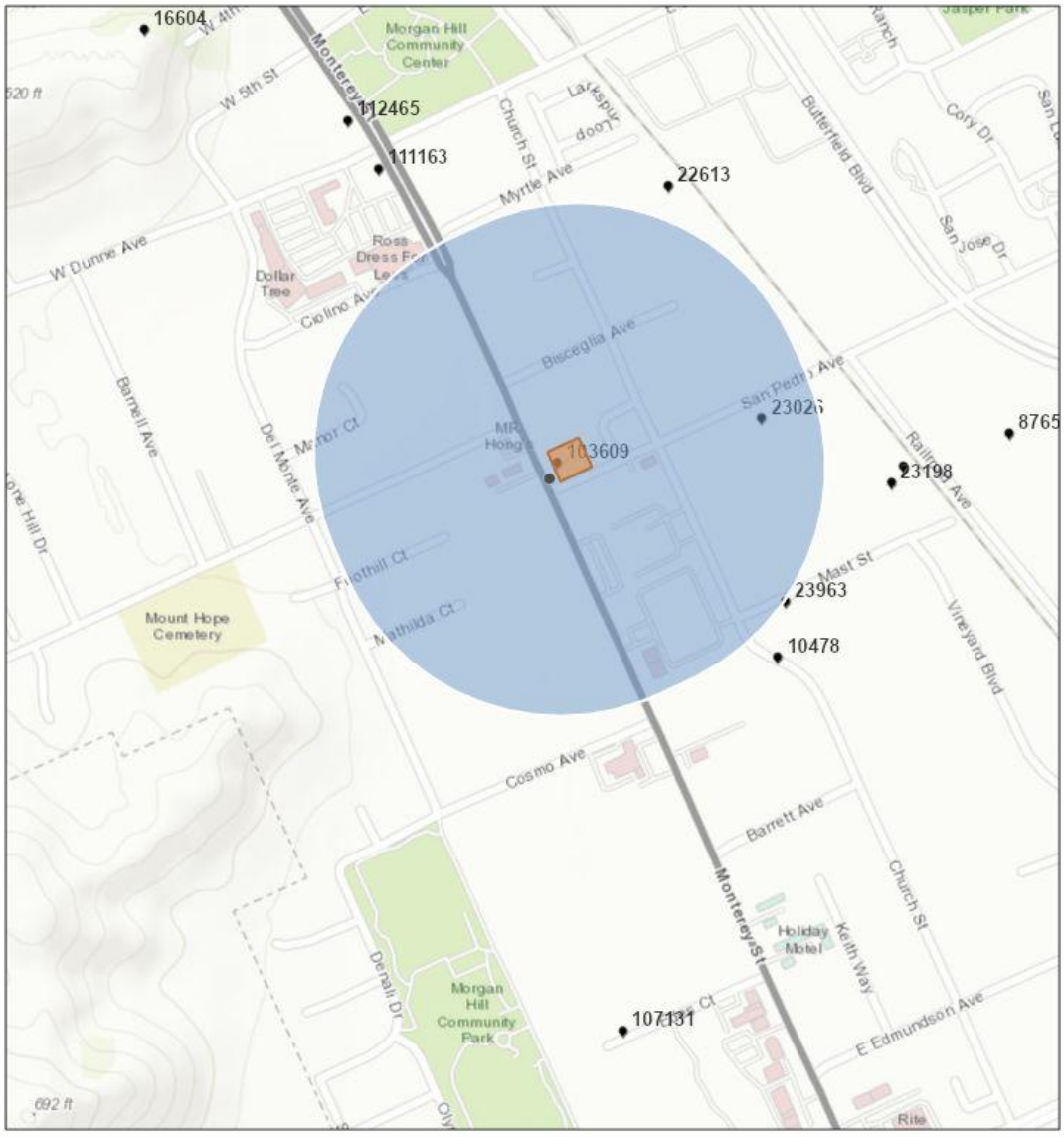
Date last updated:
03/13/2018

Stationary Source Risk & Hazards Screening Report

Area of Interest (AOI) Information

Area : 3,727,588.05 ft²

Jul 9 2021 9:29:07 Pacific Daylight Time



Summary

Name	Count	Area(ft²)	Length(ft)
Permitted Facilities 2018	2	N/A	N/A

Permitted Facilities 2018

#	FACID	Name	Address	City	St
1	23026	Airtronics Metal Products	140 San Pedro Avenue	Morgan Hill	CA
2	103609	World Oil Marketing Company #52	16720 Monterey St	Morgan Hill	CA

#	Zip	County	Cancer	Hazard	PM_25	Type	Count
1	95037	Santa Clara	0.010	0.000	0.020	Contact BAAQMD	1
2	95037	Santa Clara	20.540	0.090	0.000	Gas Dispensing Facility	1

Note: The estimated risk and hazard impacts from these sources would be expected to be substantially lower when site specific Health Risk Screening Assessments are conducted.

The screening level map is not recommended for evaluating sensitive land uses such as schools, senior centers, day cares, and health facilities.