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MEMORANDUM

TO: Pete Richmond, Silverado Farming

FROM: Marcus Barrango, Senior Environmental Analyst

DATE: 11/10/2022

RE: Air Quality and Greenhouse Gas Analysis for the Miller Vineyard Project

This Air Quality and Greenhouse Gas Analysis for the proposed Miller Vineyard Project (Proposed Project) in Calistoga, CA, has been prepared using methods and assumptions recommended by the Bay Area Air Quality Management District (BAAQMD). This analysis includes a description of existing regulatory framework, an assessment of project construction and operation-period air quality and greenhouse gas (GHG) emissions, and an evaluation of the project's compliance with adopted plans related to the reduction of air quality and GHG emissions.

PROJECT DESCRIPTION

The Proposed Project includes the conversion of a total of 6 acres of mixed forest (Douglas-fir and oak woodland) to vineyard on an approximately 27.76-acre parcel (APN 021-030-006) located at 3906 Silverado Trail in Calistoga, California. An Erosion Control Plan and Approval (ECPA) application has been submitted to Napa County (County). The County has provided a preliminary identification of information necessary to initiate the environmental impact analysis required by the California Environmental Quality Act (CEQA).

ENVIRONMENTAL SETTING

Air Quality

The City of Calistoga is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the BAAQMD. This region of the SFBAAB is bordered on the east by the East Bay hills and on the west by the San Francisco Bay. This region is indirectly affected by marine air flow and sea breezes, although less so than regions closer to the Golden Gate Bridge. The climate is also affected by its close proximity to the San Francisco Bay. During warm weather, the San Francisco Bay cools the air it comes in contact with, while during cold weather the San Francisco Bay warms the air. The normal northwest wind pattern carries this air onshore during the daytime while bay breezes draw air from the land offshore at night. Wind speeds are moderate in this subregion with annual average wind speeds of approximately seven miles per hour (mph) close to the San Francisco Bay and approximately six mph

further inland. Air temperatures are moderated by the subregion's proximity to the Bay and to the sea breeze. Average maximum temperatures are in the mid-70 degrees Fahrenheit (°F) during the summer months and in the high 50°F to low 60°F during the winter months (BAAQMD 2017b).

Greenhouse Gases

“Global warming” and “climate change” are common terms used to describe the increase in the average temperature of the earth’s near-surface air and oceans since the mid-20th century. Natural processes and human actions have been identified as impacting climate. The Intergovernmental Panel on Climate Change (IPCC) has concluded that variations in natural phenomena such as solar radiation and volcanoes produced most of the warming from pre-industrial times to 1950 and had a small cooling effect afterward. Since the 19th century however, increasing greenhouse gas (GHG) concentrations resulting from human activity such as fossil fuel combustion, deforestation, and other activities are believed to be a major factor in climate change. GHGs in the atmosphere naturally trap heat by impeding the exit of solar radiation that has hit the earth and is reflected back into space—a phenomenon sometimes referred to as the “greenhouse effect.” Some GHGs occur naturally and are necessary for keeping the earth’s surface inhabitable. However, increases in the concentrations of these gases in the atmosphere during the last 100 years have trapped solar radiation and decreased the amount that is reflected back into space, intensifying the natural greenhouse effect and resulting in the increase of global average temperature.

Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆) are the principal GHGs. When concentrations of these gases exceed historical concentrations in the atmosphere, the greenhouse effect is intensified. CO₂, CH₄, and N₂O occur naturally and are also generated through human activity. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas CH₄ results from off-gassing, natural gas leaks from pipelines, and industrial processes and incomplete combustion associated with agricultural practices, landfills, energy providers, and other industrial facilities. Other human-generated GHGs include fluorinated gases such as HFCs, PFCs, and SF₆, which have much higher heat-absorption potential than CO₂, and are byproducts of certain industrial processes.

CO₂ is the reference gas for climate change, as it is the GHG emitted in the highest volume. The effect that each of the GHGs have on global warming is the product of the mass of their emissions and their global warming potential (GWP). GWP indicates how much a gas is predicted to contribute to global warming relative to how much warming would be predicted to be caused by the same mass of CO₂. For example, CH₄ and N₂O are substantially more potent GHGs than CO₂, with GWPs of approximately 30 and approximately 275 times, respectively, that of CO₂, which has a GWP of 1.

In emissions inventories, GHG emissions are typically reported as metric tons of carbon dioxide equivalent (CO₂e). CO₂e is calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH₄ and N₂O have much higher GWPs than CO₂, CO₂ is emitted in higher quantities and it accounts for the majority of GHG emissions in CO₂e, both from commercial developments and human activity in general.

Sensitive Receptors

Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality

because children, elderly people, and the infirm are more susceptible to respiratory distress and other air quality related health problems. Residential areas are considered sensitive to poor air quality, because people usually stay home for extended periods of time increasing the potential exposure to ambient air quality. Recreational uses are also considered sensitive due to the greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system.

The land surrounding the Project Site consists primarily of agricultural and rural-residential land uses. The nearest residences are single-family homes located immediately east and west of the project site. There are no schools or hospitals in the vicinity of the project site.

REGULATORY SETTING

Air Quality

Ambient Air Quality Standards

The U.S. Environmental Protection Agency (USEPA), under the Clean Air Act (CAA) establishes maximum ambient concentrations for the six criteria air pollutants (CAP), known as the National Ambient Air Quality Standards (NAAQS). The six CAPs are ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), carbon monoxide (CO), lead (Pb), and particulate matter 10 and 2.5 microns in size and smaller (PM₁₀ and PM_{2.5}, respectively).

The California CAA (CCAA) establishes maximum concentrations for the six CAPs, as well as four additional air pollutants in California (visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride). These maximum concentrations for the State are known as the California Ambient Air Quality Standards (CAAQS). Concentrations above these time-averaged limits are anticipated to cause adverse health effects to sensitive receptors.

The California Air Resources Board (CARB) is part of the California Environmental Protection Agency (Cal/EPA) and has jurisdiction over local air districts and has established their own standards and violation criteria for each CAP under the CAAQS. Refer to **Table 1** for the standards and violation criteria for the various averaging times for criteria pollutants of concern in the BAAQMD under the NAAQS and CAAQS.

TABLE 1. NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS AND VIOLATION CRITERIA

Pollutant	Averaging Time	Standard (parts per million)		Standard (micrograms per cubic meter)		Violation Criteria	
		CAAQS	NAAQS	CAAQS	NAAQS	CAAQS	NAAQS
Ozone (O ₃)	1 hour	0.09	N/A	180	N/A	If exceeded	N/A
	8 hours	0.070	0.070	137	137	N/A	If exceeded on more than 3 days in 3 years
Carbon Monoxide (CO)	8 hours	9	9	10,000	10,000	If exceeded	If exceeded on more than 1 day per year
	1 hour	20	35	23,000	40,000	If exceeded	If exceeded on more than 1 day per year
Nitrogen Dioxide (NO ₂)	Annual arithmetic mean	0.030	0.053	57	100	N/A	If exceeded
	1 hour	0.18	0.100	470	188	If exceeded	N/A
Sulfur Dioxide (SO ₂)	Annual arithmetic mean	N/A	0.030	N/A	N/A	N/A	If exceeded
	24 hours	0.04	0.14	105	N/A	If exceeded	If exceeded on more than 1 day per year
	1 hour (primary)	0.25	0.075	655	196	N/A	N/A
	3 hours (secondary)	N/A	0.5	N/A	N/A		If exceeded on more than 1 day per year
Respirable Particulate Matter (PM ₁₀)	Annual arithmetic mean	N/A	N/A	20	N/A	If exceeded	If exceeded
	24 hours	N/A	N/A	50	150	If exceeded	If exceeded on more than 1 day per year
Fine Particulate Matter (PM _{2.5})	Annual arithmetic mean (primary)	N/A	N/A	12	12	If exceeded	If exceeded
	Annual arithmetic mean (secondary)	N/A	N/A	N/A	15	If exceeded	If exceeded
	24 hours	N/A	N/A	N/A	35	If exceeded	If exceeded on more than 1 day per year
Lead (Pb)	30 day Average	N/A	N/A	1.5	N/A	If equaled or exceeded	N/A
	Rolling 3-month Average	N/A	N/A	N/A	0.15	N/A	If exceeded

Source: CARB, 2016.

NAAQS and CAAQS Attainment Designations

If the air quality in a geographic area meets or is cleaner than the state or national standard, it is called an

attainment area (designated “attainment/unclassifiable”) for that pollutant; areas that don't meet the national or state standard are called nonattainment areas. As shown in **Table 2**, the BAAQMD has been designated nonattainment for the federal and State O₃ standards, the State PM₁₀ standard, and the federal and State PM_{2.5} standards. The BAAQMD either meets the federal and California standards or is unclassifiable for all other CAPs.

California State Implementation Plan

California's State Implementation Plan (SIP) is comprised of the State's overall air quality attainment plans to meet the NAAQS, as well as the individual air quality attainment plans of each air quality management district (AQMD) and Air Pollution Control District (APCD). The items included in the California SIP are listed in 40 Code of Federal Regulations (CFR) Chapter I, Part 52, Subpart F § 52.220. The California SIP is a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), AQMD and APCD rules, State regulations, and federal controls for each air basin and California's overall air quality.

Due to the nonattainment designations, BAAQMD, along with the other air districts in the SFBAAB region, periodically prepare and update air quality plans that provide emission reduction strategies to achieve attainment of the NAAQS, including control strategies to reduce air pollutant emissions via regulations, incentive programs, public education, and partnerships with other agencies.

TABLE 2. BAAQMD ATTAINMENT STATUS

Pollutant	Averaging Time	CAAQS	NAAQS
Ozone (O ₃)	8 hour	Nonattainment	Nonattainment (marginal)
	1 hour	Nonattainment	Not Applicable
Carbon Monoxide (CO)	8 hour	Attainment	Attainment
	1 hour	Attainment	Attainment
Respirable Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	Nonattainment	Unclassifiable/Attainment
	24 Hour	Nonattainment	Unclassifiable/Attainment
Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	Nonattainment	Nonattainment (moderate)
	24 Hour	Not Applicable	Nonattainment
Nitrogen Dioxide (NO ₂)	1 hour	Attainment	Unclassifiable/Attainment
	Annual Arithmetic Mean	Not Applicable	Attainment
Sulfur Dioxide (SO ₂)	24 Hour	Attainment	Unclassifiable/Attainment
	1 Hour	Attainment	Unclassifiable/Attainment
Lead (Pb)	30 Day Average	Not Applicable	Attainment
	Calendar Quarter	Not Applicable	Attainment

Source: BAAQMD, 2019.

Toxic Air Contaminants

In addition to the above-listed California CAPs, Toxic Air Contaminants (TAC) are another group of

pollutants regulated under the CCAA. TACs are less pervasive in the urban atmosphere than the CAPs, but are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are 244 chemicals listed by the State as TACs with varying degrees of toxicity.

Sources of TACs include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), grading (asbestos), and diesel motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases. Health effects of TACs include cancer, birth defects, neurological damage, and death.

Ambient air quality standards have not been set for TACs. Instead, these pollutants are typically regulated through a technology-based approach for reducing TACs. This approach requires facilities to install Maximum Achievable Control Technology on emission sources.

Bay Area Air Quality Management District

The 2017 Clean Air Plan for the San Francisco Bay Area (Bay Area) is prepared with the cooperation of the BAAQMD, the Metropolitan Transportation Commission, and the Association of Bay Area Governments (ABAG). On April 19, 2017, the BAAQMD adopted the most recent revision to the Clean Air Plan, the Bay Area 2017 Clean Air Plan (BAAQMD, 2017). The Bay Area 2017 Clean Air Plan serves to:

- Update the most recent Bay Area ozone plan, the 2010 Clean Air Plan, pursuant to air quality planning requirements defined in the California Health & Safety Code;
- Include all feasible measures to reduce emissions of O₃ precursors (reactive organic gas [ROG] and nitrogen oxides [NO_x]) and reduce transport of O₃ and its precursors to neighboring air basins; and
- Build upon and enhance the BAAQMD's efforts to reduce emissions of fine particulate matter and toxic air contaminants.

The Bay Area 2017 Clean Air Plan includes a wide range of proposed “control measures,” or actions to reduce combustion-related activities, decrease fossil fuel combustion, improve energy efficiency, and decrease emissions of potent greenhouse gases (GHG). Numerous measures reduce multiple pollutants simultaneously: for example, O₃, particulate matter, air toxins, and GHGs. Others focus on a single type of pollutant, such as “super GHGs” – defined as those GHGs with very high global warming potential (GWP) such as methane (CH₄) – or are progressive actions to remove harmful particles in the air (BAAQMD, 2017).

BAAQMD CEQA Guidelines

On June 2, 2010, the BAAQMD Board of Directors unanimously adopted thresholds of significance to assist in the review of projects under CEQA. These thresholds are designed to establish the level at which the BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA. The current BAAQMD CEQA guidelines were approved and adopted in May 2017. While the BAAQMD is currently working on updating the CEQA *Guidelines* and thresholds of significance, no drafts have been released and therefore the 2017 version of the guidelines are the most recent available. Refer to **Table 3** for a summary of BAAQMD Air Quality CEQA Thresholds.

TABLE 3. BAAQMD CEQA THRESHOLDS OF SIGNIFICANCE

Pollutant Criteria Air Pollutants and Precursors (Regional)	Construction-Related	Operations-Related	
	Average Daily Emissions (lb/day)	Average Daily Emissions (lb/day)	Maximum Annual Emissions (tpy)
ROG	54	54	10
NO _x	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
PM ₁₀ /PM _{2.5} (fugitive dust)	Best Management Practices ¹	None	
Local CO	None	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
Accidental Release of Acutely Hazardous Air Pollutants*	None	Storage or use of acutely hazardous materials locating near receptors or new receptors locating near stored or used acutely hazardous materials considered significant	
Odors	None	5 confirmed complaints per year averaged over three years	

Notes: lb/day = pounds per day; ppm = parts per million; tpy = tons per year
 1) Fugitive dust emissions from construction-related activities are considered less than significant with incorporation of BAAQMD Best Management Practices.
 Source: BAAQMD, 2017b

Greenhouse Gases

Assembly Bill 1493

Signed by the California Governor in 2002, AB 1493 requires that CARB adopt regulations requiring a reduction in GHG emissions emitted by cars in the State. AB 1493 is intended to apply to 2009 and newer vehicles. On June 30, 2009, the USEPA granted a necessary CAA waiver for California to implement AB 1493.

Executive Order S-3-05

Executive Order (EO) S-3-05 was signed by the California Governor on June 1, 2005 and established the following statewide emission reduction targets:

- Reduce GHG emissions to 2000 levels by 2010,
- Reduce GHG emissions to 1990 levels by 2020, and
- Reduce GHG emissions to 80 percent below 1990 levels by 2050.

EO S-3-05 created a Climate Action Team (CAT) headed by the Cal/EPA that included several other State agencies. The CAT is tasked by EO S-3-05 with outlining the effects of climate change on California and recommending an adaptation plan, as well as creating a strategy to meet the emission reduction targets.

California Global Warming Solutions Act of 2006 (AB-32)

Signed by the California Governor on September 27, 2006, AB 32 codifies a key requirement of EO S-3-05, specifically the requirement to reduce GHG emissions in California to 1990 levels by 2020.

AB 32 tasks CARB with monitoring State sources of GHGs and designing emission reduction measures to comply with emission reduction requirements. However, AB 32 also continues the efforts of the CAT to meet the requirements of EO S-3-05 and states that the CAT should coordinate overall State climate policy.

To accelerate the implementation of emission reduction strategies, AB 32 requires that CARB identify a list of discrete early action measures that can be implemented relatively quickly. In October 2007, CARB published a list of early action measures that it estimated could be implemented and would serve to meet about 25 percent of the required 2020 emissions reductions (CARB, 2007). To assist CARB in identifying early action measures, the CAT published a report in April 2007 that updated their 2006 report and identified strategies for reducing GHG emissions (USEPA, 2007). In its October 2007 report, CARB cited the CAT strategies and other existing strategies that can be utilized to achieve the remainder of the emissions reductions (CARB, 2007). AB 32 requires that CARB prepare a comprehensive “scoping plan” that identifies all strategies necessary to fully achieve the required 2020 emissions reductions.

Consequently, in December 2008, CARB released its scoping plan to the public; the plan was approved by CARB on December 12, 2008. An update to the Climate Change Scoping Plan occurred on May 22, 2014, and included new strategies and recommendations to ensure reduction goals of near-term 2020 are met with consideration of current climate science.

A second update to the Climate Change Scoping Plan was adopted on December 14, 2017. The 2017 Scoping Plan Update addresses the 2030 target established by SB 32, as discussed below, and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG by 2030 compared to 1990 levels. The key programs that the 2017 Scoping Plan Update builds on include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, an increase in the use of renewable energy in the State, and a reduction of methane emissions from agricultural and other wastes (CARB, 2017).

Executive Order S-01-07

EO S-01-07 was signed by the California Governor on January 18, 2007. It mandates a State-wide goal to reduce the carbon intensity of transportation fuels by at least 10 percent by 2020. This target reduction was identified by CARB as one of the AB 32 early action measures in the October 2007 report (CARB, 2007).

Senate Bill 375

SB 375 was approved by the California Governor on September 30, 2008. SB 375 provides for the creation of a new regional planning document called a “Sustainable Communities Strategy” (SCS). An SCS is a blueprint for regional transportation infrastructure and development that is designed to reduce GHG emissions from cars and light trucks to target levels set by CARB for 18 regions throughout California. Each of the various metropolitan planning organizations must prepare an SCS that is included in their respective regional transportation plan. An SCS influences transportation, housing, and land use planning. CARB then determines whether the SCS will achieve regional GHG emissions reduction goals.

Senate Bill 605

On September 21, 2014, the California Governor signed SB 605 that requires CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the State no later than January 1, 2016. As defined in the statute, short-lived climate pollutant means “an agent that has a relatively short lifetime in the atmosphere, from a few days to a few decades, and a warming influence on the climate that is more potent than that of carbon dioxide.” SB 605, however, does not prescribe specific

compounds as short-lived climate pollutants or add to the list of GHGs regulated under AB 32. In developing the strategy, CARB completed an inventory of sources and emissions of short-lived climate pollutants in the State based on available data, identified research needs to address any data gaps, identified existing and potential new control measures to reduce emissions, and prioritized the development of new measures for short-lived climate pollutants that offer co-benefits by improving water quality or reducing other air pollutants that impact community health and benefit disadvantaged communities.

The final strategy released by CARB in March 2017 focuses on methane (CH₄), black carbon, and fluorinated gases, particularly hydrofluorocarbons (HFC), as important short-lived climate pollutants. The final strategy recognizes emission reduction efforts implemented under AB 32 (e.g., refrigerant management programs) and other regulatory programs (e.g., in-use diesel engines, solid waste diversion). The measures identified in the final strategy and their expected emission reductions will feed into the update to the CARB Scoping Plan.

Executive Order B-30-15

EO B-30-15 was signed by the California Governor on April 29, 2015. It sets interim GHG targets of 40 percent below 1990 by 2030, to ensure California will meet its 2050 targets set by EO S-3-05. It also directs CARB to update the Climate Change Scoping Plan. The 2030 Target Scoping Plan Concept Paper was released on June 17, 2016.

Senate Bill 350

SB 350 codifies the GHG targets for 2030 set by EO B-30-15. To meet these goals, SB 350 also raises the California RPS from 33 percent renewable generation by 2020 to 50 percent renewable generation by December 31, 2030.

Senate Bill 32

Additionally, SB 32, signed in 2016, further strengthens AB 32 with goals of reducing GHG emissions to 40 percent below 1990 levels by 2030. Based on GHG emissions inventory data compiled by CARB through 2017 and the emission limit of 431 million metric tons (MT) of CO₂e established in the IPCC Fourth Assessment Report, California emission reduction goals for near-term 2020 will be met.

California Renewable Portfolio Standards - SB 1078, SB 350, and SB 100

The California RPS program was established in 2002 by SB 1078 and requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide a certain percentage of their supply from renewable sources. The initial requirement was for at least 20 percent of electricity retail sales to be served by renewable resources by 2017. The RPS program was accelerated in 2015 with SB 350 which mandated a 50 percent RPS by 2030. In 2018, SB 100 was signed into law, which again increased the RPS to 60 percent by 2030 and requires all electricity in the State to come from carbon-free resources by 2045.

Title 20 Appliance Efficiency Regulations

California's Appliance Efficiency Regulations, CCR Title 20, contain standards for both federally regulated appliances and non-federally regulated appliances. The regulations are updated regularly to allow consideration of new energy efficiency technologies and methods. The current standards were adopted by the CEC in 2018. The standards outlined in the regulations apply to appliances that are sold or offered for sale in California. More than 23 different categories of appliances are regulated, including

refrigerators, freezers, water heaters, washing machines, dryers, air conditioners, pool equipment, and plumbing fittings.

California Energy Efficiency Standards (Title 24)

The State regulates energy consumption under Title 24 Building Standards Code, Part 6 of the CCR (also known as the California Energy Code). The Title 24 Building Energy Efficiency Standards were developed by the CEC and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The California Energy Code is updated every three years, with the most recent iteration (2016) effective as of January 1, 2017, and the next version (2019) planned to go into effect on January 1, 2020. The CEC's long-term vision is that future updates to the California Energy Code will support zero-net energy for all new single-family and low-rise residential buildings by 2020 and new high-rise residential and non-residential buildings by 2030.

California Green Building Standards Code

Title 24 Building Standards Code, Part 11 of the CCR is referred to as CALGreen. The purpose CALGreen is to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality.

CEQA Guidelines

Under CEQA, GHG impacts are exclusively cumulative impacts because no single project could, by itself, result in a substantial change in climate (CEQA *Guidelines* § 15064.4(b)). Therefore, the evaluation of cumulative GHG impacts presented below evaluates whether the Proposed Project would make a considerable contribution to cumulative climate change effects.

As described in the recently adopted *CEQA Thresholds Justification Report*, the BAAQMD developed the 2022 Thresholds for consistency with California's long-term climate goal of carbon neutrality by 2045. The BAAQMD determined that new land use development projects being built today need to incorporate the following design elements to do its "fair share" of implementing the goal of carbon neutrality by 2045:

Thresholds for Land Use Projects (Must Include A or B)

- A. Projects must include, at a minimum, the following project design elements:
 1. Buildings
 - a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
 - b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
 2. Transportation
 - a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping

Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:

- i. Residential projects: 15 percent below the existing VMT per capita
 - ii. Office projects: 15 percent below the existing VMT per employee
 - iii. Retail projects: no net increase in existing VMT
- b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of California Green Building Standards Code (CALGreen) Tier 2.

- B. Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

The BAAQMD's *CEQA Thresholds Justification Report* concludes that if a project is designed and built to incorporate these design elements, then it will contribute its portion of what is necessary to achieve California's long-term climate goals—its "fair share"—and an agency reviewing the project under CEQA can conclude that the project will not make a cumulatively considerable contribution to global climate change. If the project does not incorporate these design elements, then it should be found to make a significant climate impact because it will hinder California's efforts to address climate change.

Additionally, BAAQMD reaffirms that there is no proposed construction-related climate impact threshold. According to the BAAQMD *CEQA Thresholds Justification Report*, greenhouse gas emissions from construction represent a very small portion of a project's lifetime GHG emissions; and therefore, the proposed thresholds for land use projects are designed to address operational GHG emissions which represent the vast majority of project GHG emissions. Regardless, this project for transparency purposes includes an analysis of construction related GHG emissions to ensure that all emissions are accounted for and will not hinder California's efforts to address climate change.

DISCUSSION OF IMPACTS

Methodology

CalEEMod was used to estimate emissions from all construction and operational-related sources. CalEEMod provides default values when site-specific inputs are not available. The default values are provided in **Attachment 1**. The following site-specific inputs and assumptions were used for the purposes of air quality modeling:

- Emissions from construction were calculated based on all construction related activities, including but not limited to demolition, grading, use of construction equipment, material hauling, building, and site preparation.
- Construction would occur over a period of 6 months, starting in April 2023.
- Vehicle trips were estimated based on trips provided in the ECPA.
- The Proposed Project would comply with BAAQMD rules and regulations (i.e., low volatile organic compound cleaning supplies and paint).

The results of the CalEEMod modeling are discussed below and output files are provided in

Attachment 1. Resulting emission estimates are compared to applicable BAAQMD thresholds to evaluate the effects of construction and operational activities on regional air quality.

Air Quality

Construction

As stated above, the Project Site is under the jurisdiction of the BAAQMD. Emissions generated from grading and building construction activities resulting from the Proposed Project would be short-term, intermittent, and temporary in nature. Grading and construction activities associated with the Proposed Project would result in the generation of ROG, NO_x, PM₁₀, and PM_{2.5} emissions. PM is generally the direct result of site grading, excavation, road paving, and exhaust associated with construction equipment. PM emissions are largely dependent on the amount of ground disturbance associated with site preparation activities. Emissions of NO_x and ROG are generally associated with employee vehicle trips, delivery of materials, and construction equipment exhaust. **Table 5** shows emissions from construction activities and compares these to BAAQMD thresholds to determine if the construction emissions of the Proposed Project would have a significant impact on regional air quality, thereby conflicting with or obstructing BAAQMD air quality plans.

TABLE 5. CONSTRUCTION EMISSIONS

Year	Pollutants of Concern (pounds per day)			
	ROG	NO _x	PM ₁₀	PM _{2.5}
2023	1.15	10.64	0.46	0.37
<i>BAAQMD Thresholds</i>	<i>None</i>	<i>85</i>	<i>80</i>	<i>82</i>
Exceed BAAQMD Threshold	No	No	No	No

Source: **Attachment 1.**

As shown in **Table 5**, construction emissions of ROG, NO_x, and PM₁₀ would not exceed the BAAQMD applicable significance thresholds.

The BAAQMD’s approach to analysis of construction-related particulate impacts is to emphasize implementation of effective and comprehensive dust control measures rather than detailed quantification of emissions. The BAAQMD considers construction-related fugitive dust impacts of projects to be less than significant if a suite of recommended dust-control measures is implemented. Dust control measures are required by the BAAQMD for compliance with their Clean Air Plan. The absence of dust control measures during construction would conflict with the BAAQMD’s Clean Air Plan, which would be a potentially significant impact. Therefore, BAAQMD-identified Best Management Practices (BMP) for control of fugitive dust are included as **Mitigation Measure AQ-1**. With **Mitigation Measure AQ-1**, dust control measures would be implemented and the Proposed Project would not obstruct the implementation of an applicable air quality plan. Furthermore, construction of the Proposed Project would not result in a cumulatively considerable net increase of any CAP for which the Proposed Project region is in nonattainment under an applicable federal or State ambient air quality standard. Therefore, construction of the Proposed Project would have a less than significant impact on regional air quality with mitigation.

Operation

Operation of the Proposed Project would result in emissions from mobile and off-road sources. The primary operational emissions associated with new development projects include PM, and ozone precursors (ROG and NOx) that are emitted as vehicle exhaust. All operational emissions are summarized in **Table 6**.

TABLE 6. OPERATIONAL EMISSIONS

Source	Pollutants of Concern (pounds per day)			
	ROG	NOx	PM ₁₀	PM _{2.5}
Mobile	0.01	0.02	0.03	0.01
Off-road	0.49	4.46	0.17	0.15
Total	0.50	4.48	0.20	0.16
<i>BAAQMD Thresholds</i>	65	65	80	82
Exceed BAAQMD Threshold	No	No	No	No
Source: Attachment 1				

Table 6 shows that project emissions would be below BAAQMD thresholds of significance. Therefore, operation of the Proposed Project would have a less than significant impact on regional air quality and would not conflict with applicable air quality plans.

Greenhouse Gas Emissions

Construction

Given that the BAAQMD has not provided a construction-related climate impact threshold in the 2022 Thresholds, the nearest adopted numerical threshold will be used to determine significance, in accordance with the Newhall Ranch Decision. Consistent with the significance criteria used in the 2019 DEIR, the nearest jurisdiction with an adopted GHG significance threshold for construction is Sacramento Metropolitan Air Quality Management District (SMAQMD). On October 23, 2014, the SMAQMD adopted a 1,100 MT CO₂e per year GHG significance threshold for the construction phase of projects.

The SMAQMD adopted its most recent thresholds of significance for GHGs in April 2020. The SMAQMD report, *Greenhouse Gas Thresholds for Sacramento County*, established new operational thresholds for the air district but acknowledged that the report is not intended to replace SMAQMD's existing thresholds for construction emissions, as those thresholds were adopted by the SMAQMD with substantial evidence and documented through staff reports. Therefore, construction-related climate impacts of the Proposed Project will be evaluated according to the SMAQMD thresholds of 1,100 MT CO₂e per year.

As shown in **Table 7**, GHG emissions associated with construction of the Proposed Project are estimated to be approximately 348 MT of CO₂e. Construction GHG emissions are a one-time release and are typically considered separate from operational emissions, as global climate change is inherently a cumulative effect that occurs over a long period of time and is quantified on a yearly basis. As shown in **Table 7**, project construction emissions would be below the SMAQMD threshold of 1,100 MT of CO₂e per year. Therefore, construction-related GHG impacts are considered less than significant.

TABLE 7. GHG EMISSIONS

Source	GHG
	MT of CO ₂ e
Construction	
Construction Activities	241
Loss in Carbon Sequestration Capacity	107
Construction Total	348
Operation	
Mobile	5
Off-road	152
Water	0
Operational Total	157
Source: Attachment 1.	

Operation

As described above, the 2022 BAAQMD Thresholds establish operational project design elements that, if incorporated, allow a lead agency to conclude that the project will not make a cumulatively considerable contribution to global climate change.

Buildings

The project design elements related to buildings involve the exclusion of natural gas connections and a determination that the project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

The Proposed Project does not include any buildings or infrastructure involving the connection or use of natural gas appliances or plumbing. Additionally, there are no unusual characteristics that would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or State. As described in **Mitigation Measure AQ-1**, the Applicant shall maintain construction equipment in accordance with manufacturing specifications and limit construction equipment idling time to less than five minutes. These measures would further reduce fuel and energy use during all stages of construction and avoid the wasteful, inefficient, or unnecessary consumption of fuel energy. Therefore, construction and operation of the Proposed Project would not result in inefficient, wasteful, or unnecessary consumption of fuel energy or conflict with a State or local plan for renewable energy or energy efficiency.

Transportation

The project design elements related to transportation involve achieving consistency with locally adopted Senate Bill 743 VMT targets. Regarding operational emissions, as part of the statewide implementation of Senate Bill (SB) 743, the Governor's Office of Planning and Research (OPR) settled upon automobile vehicle miles of travel (VMT) as the preferred metric for assessing passenger vehicle-related impacts under CEQA and issued revised CEQA Guidelines in December 2018, along with a Technical Advisory on Evaluating Transportation Impacts in CEQA to assist practitioners in implementing the CEQA

Guidelines revisions. The CEQA Guidelines and the OPR Technical Advisory concluded that, absent substantial evidence otherwise, the addition of 110 or fewer daily trips could be presumed to have a less than significant VMT impact.

The County maintains a set of Transportation Impact Study Guidelines (TIS Guidelines) that define situations and project characteristics that trigger the need to prepare a TIS. The purpose of a TIS is to identify whether the project is likely to cause adverse physical or operational changes on a County roadway, bridge, bikeway or other transportation facility, to determine whether the project should be required to implement or contribute to improvement measures to address those changes, and to ensure that the project is developed consistent with the County's transportation plans and policies. Per the County's current TIS Guidelines, a project is required to prepare a TIS if it generates 110 or more net new daily vehicle trips (Napa County, 2022).

The TIS Guidelines also include VMT analysis requirements for projects based on trip generation, which includes a screening approach that provides a structure to determine what level of VMT analysis may be required for a given project. For a new project that would generate less than 110 net new daily vehicle and truck trips, not only is the project not required to prepare a TIS, it is also presumed to have a less than significant impact for VMT. However, applicants are encouraged to describe the measures they are taking and/or plan to take that would reduce the project's trip generation and/or VMT. Projects that generate more than 110 net new passenger vehicle trips must conduct a VMT analysis and identify feasible strategies to reduce the project's vehicular travel; if the feasible strategies would not reduce the project's VMT by at least 15%, the conclusion would be that the project would cause a significant environmental impact.

The Proposed Project is estimated to contribute 4 vehicle trips per day during peak seasons. Therefore, as the number of additional trips generated by the Proposed Project is below the 110-trip screening threshold for VMT impacts contained in the County's TIS, the Proposed Project can be assumed to cause a less-than-significant transportation impact related to vehicle miles traveled.

The 2022 BAAQMD Thresholds require projects to achieve compliance with the off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2. The 2019 CALGreen Tier 2 currently requires the installation of electric vehicle supply equipment (EVSE) in parking lots at the time of construction for commercial buildings. The Proposed Project does not include construction of commercial buildings or parking lots and would occur entirely on residential property. Therefore, the CALGreen Tier 2 electric vehicle requirements would not apply to the Proposed Project and no mitigation is required.

Accordingly, the Proposed Project would be consistent with operational project design elements required by the 2022 BAAQMD Thresholds; and therefore, the Proposed Project would have a less-than-significant cumulatively considerable contribution to global climate change.

Cumulative Impacts

Past, present, and future development projects contribute to a region's air quality conditions on a cumulative basis; therefore, by its very nature, air pollution is largely a cumulative impact. If a project's individual emissions contribute toward exceedance of the NAAQS or the CAAQS, then the project's cumulative impact on air quality would be significant. In developing attainment designations for criteria pollutants, the USEPA considers the region's past, present, and future emission levels.

AQMDs determine suitable significance thresholds based on an area's designated nonattainment status. These thresholds provide a tool by which the districts can achieve attainment for a particular criteria pollutant that is designated as nonattainment. Therefore, the BAAQMD's significance thresholds consider the region's past, present, and future emissions levels.

Implementation of the Proposed Project combined with future development within the project area could lead to cumulative impacts to air quality. Construction of the Proposed Project would result in the generation of CAPs that when combined with future growth within the Project area could lead to cumulative impacts to air quality. As discussed in detail above, emissions resulting from the Proposed Project would not exceed the BAAQMD's thresholds, and construction would be in conformance with the applicable SIP developed to address cumulative emissions of CAPs in the SFBAAB. Therefore, the Proposed Project would have a less-than-significant cumulative impact on local and regional air quality.

Mitigation Measures

AQ-1 Best Management Practices for Construction Emissions

The following BMPs will be implemented during construction.

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site will be covered.
- All visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads will be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved will be completed as soon as possible.
- Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of CCR). Clear signage will be provided for construction workers at all access points.
- All construction equipment will be maintained and properly tuned in accordance with manufacturer's specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- A publicly visible sign with the telephone number and name of the appropriate Applicant representative regarding dust complaints will be posted. This person will respond and take corrective action within 48 hours. The Air District's phone number will also be visible to ensure compliance with applicable regulations.

ATTACHMENTS

- **Attachment 1:** CalEEMod Output Tables

REFERENCES

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Miller Vineyard - Napa County, Annual

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

**Miller Vineyard
Napa County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	26.00	1000sqft	0.60	26,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	3.6	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2024
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 -
- Sequestration -
- Land Use Change -
- Construction Phase - 6 months construction
- Off-road Equipment - ECP construction equip
- Off-road Equipment - ECP construction equip
- Trips and VMT - ECP
- Vehicle Trips - ECP
- Energy Use - ECP
- Water And Wastewater - ECP
- Solid Waste - ECP

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

Operational Off-Road Equipment - ECP

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	90.00
tblConstructionPhase	NumDays	1.00	90.00
tblConstructionPhase	PhaseEndDate	4/19/2023	12/22/2023
tblConstructionPhase	PhaseEndDate	4/17/2023	8/18/2023
tblConstructionPhase	PhaseStartDate	4/18/2023	8/19/2023
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.70	0.00
tblEnergyUse	NT24NG	6.67	0.00
tblEnergyUse	T24E	1.32	0.00
tblEnergyUse	T24NG	19.51	0.00
tblOffRoadEquipment	HorsePower	100.00	187.00
tblOffRoadEquipment	LoadFactor	0.40	0.41
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType	Graders	Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.38	0.38
tblOperationalOffRoadEquipment	OperLoadFactor	0.40	0.40
tblOperationalOffRoadEquipment	OperLoadFactor	0.37	0.37
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00

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

tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSequestration	NumberOfNewTrees	0.00	-23.00
tblSequestration	NumberOfNewTrees	0.00	-118.00
tblSolidWaste	SolidWasteGenerationRate	32.24	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblVehicleTrips	ST_TR	1.99	0.15
tblVehicleTrips	SU_TR	5.00	0.15
tblVehicleTrips	WD_TR	4.96	0.15
tblWater	IndoorWaterUseRate	6,012,500.00	0.00
tblWater	OutdoorWaterUseRate	0.00	905,865.60

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 Not Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2023	6-30-2023	0.3244	0.3244
2	7-1-2023	9-30-2023	0.3678	0.3678
		Highest	0.3678	0.3678

2.2 Overall Operational
Unmitigated Operational

Category	tons/yr																MT/yr
	ROG	NOX	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Area	0.1151	0.0000	2.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	4.6000e-004	4.6000e-004	0.0000	0.0000	4.9000e-004	0.0000
Energy	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.3000e-003	4.1100e-003	0.0243	5.0000e-005	5.5900e-003	5.6300e-003	1.5000e-003	4.0000e-005	1.5400e-003	0.0000	5.0084	5.0084	2.9000e-004	2.6000e-004	5.0930	0.0000	0.0000
Offroad	0.0645	0.5813	0.8008	1.7200e-003	0.0218	0.0218	0.0201	0.0201	0.0201	0.0000	150.8757	150.8757	0.0488	0.0000	152.0956	0.0000	0.0000
Waste																	
Water																	
Total	0.1819	0.5854	0.8254	1.7700e-003	5.5900e-003	0.0219	0.0274	1.5000e-003	0.0201	0.0216	0.0000	156.1779	156.1779	0.0491	2.7000e-004	157.4854	0.0000

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

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	-107.1740
Vegetation Land Change	-666.0000
Total	-773.1740

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/15/2023	8/18/2023	5	90	
2	Grading	Grading	8/19/2023	12/22/2023	5	90	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

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

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rough Terrain Forklifts	2	8.00	100	0.40
Grading	Off-Highway Trucks	1	8.00	402	0.38
Site Preparation	Rough Terrain Forklifts	2	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	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
Site Preparation	5	10.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	10.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0504	0.4782	0.4693	1.4700e-003		0.0168	0.0168		0.0155	0.0155	0.0000	129.0690	129.0690	0.0417	0.0000	130.1126
Total	0.0504	0.4782	0.4693	1.4700e-003	0.0000	0.0168	0.0168	0.0000	0.0155	0.0155	0.0000	129.0690	129.0690	0.0417	0.0000	130.1126

Miller Vineyard - Napa County, Annual

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

3.2 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3600e-003	9.5000e-004	0.0112	3.0000e-005	3.5600e-003	2.0000e-005	3.5700e-003	9.5000e-004	2.0000e-005	9.6000e-004	0.0000	2.7651	2.7651	9.0000e-005	9.0000e-005	2.7932
Total	1.3600e-003	9.5000e-004	0.0112	3.0000e-005	3.5600e-003	2.0000e-005	3.5700e-003	9.5000e-004	2.0000e-005	9.6000e-004	0.0000	2.7651	2.7651	9.0000e-005	9.0000e-005	2.7932

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0504	0.4782	0.4693	1.4700e-003		0.0168	0.0168		0.0155	0.0155	0.0000	129.0689	129.0689	0.0417	0.0000	130.1124
Total	0.0504	0.4782	0.4693	1.4700e-003	0.0000	0.0168	0.0168	0.0000	0.0155	0.0155	0.0000	129.0689	129.0689	0.0417	0.0000	130.1124

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

3.2 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3600e-003	9.5000e-004	0.0112	3.0000e-005	3.5600e-003	2.0000e-005	3.5700e-003	9.5000e-004	2.0000e-005	9.6000e-004	0.0000	2.7651	2.7651	9.0000e-005	9.0000e-005	2.7932
Total	1.3600e-003	9.5000e-004	0.0112	3.0000e-005	3.5600e-003	2.0000e-005	3.5700e-003	9.5000e-004	2.0000e-005	9.6000e-004	0.0000	2.7651	2.7651	9.0000e-005	9.0000e-005	2.7932

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0458	0.4247	0.5547	1.1900e-003		0.0167	0.0167		0.0153	0.0153	0.0000	104.1259	104.1259	0.0337	0.0000	104.9678
Total	0.0458	0.4247	0.5547	1.1900e-003	0.0000	0.0167	0.0167	0.0000	0.0153	0.0153	0.0000	104.1259	104.1259	0.0337	0.0000	104.9678

Miller Vineyard - Napa County, Annual

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

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3600e-003	9.5000e-004	0.0112	3.0000e-005	3.5600e-003	2.0000e-005	3.5700e-003	9.5000e-004	2.0000e-005	9.6000e-004	0.0000	2.7651	2.7651	9.0000e-005	9.0000e-005	2.7932
Total	1.3600e-003	9.5000e-004	0.0112	3.0000e-005	3.5600e-003	2.0000e-005	3.5700e-003	9.5000e-004	2.0000e-005	9.6000e-004	0.0000	2.7651	2.7651	9.0000e-005	9.0000e-005	2.7932

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0458	0.4247	0.5547	1.1900e-003		0.0167	0.0167		0.0153	0.0153	0.0000	104.1258	104.1258	0.0337	0.0000	104.9677
Total	0.0458	0.4247	0.5547	1.1900e-003	0.0000	0.0167	0.0167	0.0000	0.0153	0.0153	0.0000	104.1258	104.1258	0.0337	0.0000	104.9677

Miller Vineyard - Napa County, Annual

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

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3600e-003	9.5000e-004	0.0112	3.0000e-005	3.5600e-003	2.0000e-005	3.5700e-003	9.5000e-004	2.0000e-005	9.6000e-004	0.0000	2.7651	2.7651	9.0000e-005	9.0000e-005	2.7932
Total	1.3600e-003	9.5000e-004	0.0112	3.0000e-005	3.5600e-003	2.0000e-005	3.5700e-003	9.5000e-004	2.0000e-005	9.6000e-004	0.0000	2.7651	2.7651	9.0000e-005	9.0000e-005	2.7932

Miller Vineyard - Napa County, Annual

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.3000e-003	4.1100e-003	0.0243	5.0000e-005	5.5900e-003	5.0000e-005	5.6300e-003	1.5000e-003	4.0000e-005	1.5400e-003	0.0000	5.0084	5.0084	2.9000e-004	2.6000e-004	5.0930
Unmitigated	2.3000e-003	4.1100e-003	0.0243	5.0000e-005	5.5900e-003	5.0000e-005	5.6300e-003	1.5000e-003	4.0000e-005	1.5400e-003	0.0000	5.0084	5.0084	2.9000e-004	2.6000e-004	5.0930

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3.90	3.90	3.90	15,068	15,068
Total	3.90	3.90	3.90	15,068	15,068

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.535449	0.056642	0.175177	0.133432	0.032505	0.007974	0.012804	0.010998	0.001732	0.000629	0.026564	0.001947	0.004147

Miller Vineyard - Napa County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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

5.3 Energy by Land Use - Electricity

Unmitigated

Electricity Use	Total CO2	CH4	N2O	CO2e
0	0.0000	0.0000	0.0000	0.0000
Land Use				0.0000
kWh/yr				0.0000
MT/yr				0.0000
General Light Industry	0	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000

Mitigated

Electricity Use	Total CO2	CH4	N2O	CO2e
0	0.0000	0.0000	0.0000	0.0000
Land Use				0.0000
kWh/yr				0.0000
MT/yr				0.0000
General Light Industry	0	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

Miller Vineyard - Napa County, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1151	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.6000e-004	4.6000e-004	0.0000	0.0000	4.9000e-004
Unmitigated	0.1151	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.6000e-004	4.6000e-004	0.0000	0.0000	4.9000e-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	0.0136					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1015					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.6000e-004	4.6000e-004	0.0000	0.0000	4.9000e-004
Total	0.1151	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.6000e-004	4.6000e-004	0.0000	0.0000	4.9000e-004

Miller Vineyard - Napa County, Annual

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0136					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1015					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.6000e-004	4.6000e-004	0.0000	0.0000	4.9000e-004
Total	0.1151	0.0000	2.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.6000e-004	4.6000e-004	0.0000	0.0000	4.9000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

Miller Vineyard - Napa County, Annual

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.2934	5.0000e-005	1.0000e-005	0.2963
Unmitigated	0.2934	5.0000e-005	1.0000e-005	0.2963

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0.905866	0.2934	5.0000e-005	1.0000e-005	0.2963
Total		0.2934	5.0000e-005	1.0000e-005	0.2963

Miller Vineyard - Napa County, Annual

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0.905866	0.2934	5.0000e-005	1.0000e-005	0.2963
Total		0.2934	5.0000e-005	1.0000e-005	0.2963

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

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

8.2 Waste by Land Use

Unmitigated

Waste Disposed	Total CO2	CH4	N2O	CO2e
0	0.0000	0.0000	0.0000	0.0000
Land Use				
tons				
MT/yr				
General Light Industry	0	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000

Mitigated

Waste Disposed	Total CO2	CH4	N2O	CO2e
0	0.0000	0.0000	0.0000	0.0000
Land Use				
tons				
MT/yr				
General Light Industry	0	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
Off-Highway Trucks	1	4.00	260	402	0.38	Diesel

Miller Vineyard - Napa County, Annual

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

Rough Terrain Forklifts	2	4.00	260	100	0.40	Diesel
Tractors/Loaders/Backhoes	2	4.00	260	97	0.37	Diesel

UnMitigated/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
Equipment Type	tons/yr										MT/yr					
Off-Highway Trucks	0.0325	0.2174	0.2123	8.6000e-004		7.8300e-003	7.8300e-003		7.2000e-003	7.2000e-003	0.0000	75.8758	75.8758	0.0245	0.0000	76.4893
Rough Terrain Forklifts	0.0134	0.1764	0.2991	4.5000e-004		5.3700e-003	5.3700e-003		4.9400e-003	4.9400e-003	0.0000	39.5556	39.5556	0.0128	0.0000	39.8754
Tractors/Loaders/Backhoes	0.0186	0.1875	0.2895	4.0000e-004		8.6100e-003	8.6100e-003		7.9200e-003	7.9200e-003	0.0000	35.4442	35.4442	0.0115	0.0000	35.7308
Total	0.0645	0.5813	0.8008	1.7100e-003		0.0218	0.0218		0.0201	0.0201	0.0000	150.8757	150.8757	0.0488	0.0000	152.0956

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Miller Vineyard - Napa County, Annual

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

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	-773.1740	0.0000	0.0000	-773.1740

11.1 Vegetation Land Change

Vegetation Type

	Initial/Final	Total CO2	CH4	N2O	CO2e
	Acres	MT			
Trees	6 / 0	-666.0000	0.0000	0.0000	-666.0000
Total		-666.0000	0.0000	0.0000	-666.0000

Miller Vineyard - Napa County, Annual

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

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Douglas Fir	-23	-20.5620	0.0000	0.0000	-20.5620
Mixed Hardwood	-118	-86.6120	0.0000	0.0000	-86.6120
Total		-107.1740	0.0000	0.0000	-107.1740

Miller Vineyard - Napa County, Summer

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

**Miller Vineyard
Napa County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	26.00	1000sqft	0.60	26,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	3.6	Precipitation Freq (Days)	64
Climate Zone	4			Operational Year	2024
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 -

Construction Phase - 6 months construction

Off-road Equipment - ECP construction equip

Off-road Equipment - ECP construction equip

Trips and VMT - ECP

Vehicle Trips - ECP

Energy Use - ECP

Water And Wastewater - ECP

Solid Waste - ECP

Land Use Change -

Sequestration -

Miller Vineyard - Napa County, Summer

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

Operational Off-Road Equipment - ECP

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	2.00	90.00
tblConstructionPhase	NumDays	1.00	90.00
tblEnergyUse	LightingElect	3.08	0.00
tblEnergyUse	NT24E	3.70	0.00
tblEnergyUse	NT24NG	6.67	0.00
tblEnergyUse	T24E	1.32	0.00
tblEnergyUse	T24NG	19.51	0.00
tblOffRoadEquipment	HorsePower	100.00	187.00
tblOffRoadEquipment	LoadFactor	0.40	0.41
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	4.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	1.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSequestration	NumberOfNewTrees	0.00	-23.00
tblSequestration	NumberOfNewTrees	0.00	-118.00
tblSolidWaste	SolidWasteGenerationRate	32.24	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblVehicleTrips	ST_TR	1.99	0.15
tblVehicleTrips	SU_TR	5.00	0.15

Miller Vineyard - Napa County, Summer

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

tblVehicleTrips	WD_TR	4.96	0.15
tblWater	IndoorWaterUseRate	6,012,500.00	0.00
tblWater	OutdoorWaterUseRate	0.00	905,865.60

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.1511	10.6442	12.5927	0.0334	0.0822	0.3741	0.4563	0.0218	0.3442	0.3660	0.0000	3,233.5884	3,233.5884	1.0247	1.9400e-003	3,259.7841
Maximum	1.1511	10.6442	12.5927	0.0334	0.0822	0.3741	0.4563	0.0218	0.3442	0.3660	0.0000	3,233.5884	3,233.5884	1.0247	1.9400e-003	3,259.7841

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.1511	10.6442	12.5927	0.0334	0.0822	0.3741	0.4563	0.0218	0.3442	0.3660	0.0000	3,233.5884	3,233.5884	1.0247	1.9400e-003	3,259.7841
Maximum	1.1511	10.6442	12.5927	0.0334	0.0822	0.3741	0.4563	0.0218	0.3442	0.3660	0.0000	3,233.5884	3,233.5884	1.0247	1.9400e-003	3,259.7841

Miller Vineyard - Napa County, Summer

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

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6309	2.0000e-005	2.6500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.6900e-003	5.6900e-003	1.0000e-005		6.0600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0137	0.0209	0.1354	3.1000e-004	0.0319	2.6000e-004	0.0322	8.5200e-003	2.4000e-004	8.7600e-003		31.7491	31.7491	1.6400e-003	1.5000e-003	32.2384
Offroad	0.4948	4.4624	6.1498	0.0132		0.1675	0.1675		0.1541	0.1541	0.0000	1,275.6782	1,275.6782	0.4126		1,285.9927
Total	1.1395	4.4834	6.2878	0.0135	0.0319	0.1678	0.1997	8.5200e-003	0.1544	0.1629	0.0000	1,307.4330	1,307.4330	0.4142	1.5000e-003	1,318.2371

Miller Vineyard - Napa County, Summer

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.6309	2.0000e-005	2.6500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.6900e-003	5.6900e-003	1.0000e-005		6.0600e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0137	0.0209	0.1354	3.1000e-004	0.0319	2.6000e-004	0.0322	8.5200e-003	2.4000e-004	8.7600e-003		31.7491	31.7491	1.6400e-003	1.5000e-003	32.2384
Offroad	0.4948	4.4624	6.1498	0.0132		0.1675	0.1675		0.1541	0.1541	0.0000	1,275.678 2	1,275.678 2	0.4126		1,285.992 7
Total	1.1395	4.4834	6.2878	0.0135	0.0319	0.1678	0.1997	8.5200e-003	0.1544	0.1629	0.0000	1,307.433 0	1,307.433 0	0.4142	1.5000e-003	1,318.237 1

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/15/2023	8/18/2023	5	90	
2	Grading	Grading	8/19/2023	12/22/2023	5	90	

Acres of Grading (Site Preparation Phase): 0

Miller Vineyard - Napa County, Summer

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

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Off-Highway Trucks	1	8.00	402	0.38
Site Preparation	Rough Terrain Forklifts	2	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rough Terrain Forklifts	2	8.00	100	0.40
Grading	Tractors/Loaders/Backhoes	2	8.00	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
Site Preparation	5	10.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	5	10.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Miller Vineyard - Napa County, Summer

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

3.2 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.1191	10.6256	10.4282	0.0327		0.3737	0.3737		0.3438	0.3438		3,161.649 4	3,161.649 4	1.0225		3,187.212 9
Total	1.1191	10.6256	10.4282	0.0327	0.0000	0.3737	0.3737	0.0000	0.3438	0.3438		3,161.649 4	3,161.649 4	1.0225		3,187.212 9

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0321	0.0186	0.2670	7.1000e-004	0.0822	4.1000e-004	0.0826	0.0218	3.8000e-004	0.0222		71.9390	71.9390	2.1300e-003	1.9400e-003	72.5712
Total	0.0321	0.0186	0.2670	7.1000e-004	0.0822	4.1000e-004	0.0826	0.0218	3.8000e-004	0.0222		71.9390	71.9390	2.1300e-003	1.9400e-003	72.5712

Miller Vineyard - Napa County, Summer

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

3.2 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.1191	10.6256	10.4282	0.0327		0.3737	0.3737		0.3438	0.3438	0.0000	3,161.649 4	3,161.649 4	1.0225		3,187.212 9
Total	1.1191	10.6256	10.4282	0.0327	0.0000	0.3737	0.3737	0.0000	0.3438	0.3438	0.0000	3,161.649 4	3,161.649 4	1.0225		3,187.212 9

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0321	0.0186	0.2670	7.1000e-004	0.0822	4.1000e-004	0.0826	0.0218	3.8000e-004	0.0222		71.9390	71.9390	2.1300e-003	1.9400e-003	72.5712
Total	0.0321	0.0186	0.2670	7.1000e-004	0.0822	4.1000e-004	0.0826	0.0218	3.8000e-004	0.0222		71.9390	71.9390	2.1300e-003	1.9400e-003	72.5712

Miller Vineyard - Napa County, Summer

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

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0181	9.4380	12.3257	0.0264		0.3705	0.3705		0.3409	0.3409		2,550.648 4	2,550.648 4	0.8249		2,571.271 7
Total	1.0181	9.4380	12.3257	0.0264	0.0000	0.3705	0.3705	0.0000	0.3409	0.3409		2,550.648 4	2,550.648 4	0.8249		2,571.271 7

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0321	0.0186	0.2670	7.1000e-004	0.0822	4.1000e-004	0.0826	0.0218	3.8000e-004	0.0222		71.9390	71.9390	2.1300e-003	1.9400e-003	72.5712
Total	0.0321	0.0186	0.2670	7.1000e-004	0.0822	4.1000e-004	0.0826	0.0218	3.8000e-004	0.0222		71.9390	71.9390	2.1300e-003	1.9400e-003	72.5712

Miller Vineyard - Napa County, Summer

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

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.0181	9.4380	12.3257	0.0264		0.3705	0.3705		0.3409	0.3409	0.0000	2,550.648 4	2,550.648 4	0.8249		2,571.271 7
Total	1.0181	9.4380	12.3257	0.0264	0.0000	0.3705	0.3705	0.0000	0.3409	0.3409	0.0000	2,550.648 4	2,550.648 4	0.8249		2,571.271 7

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0321	0.0186	0.2670	7.1000e-004	0.0822	4.1000e-004	0.0826	0.0218	3.8000e-004	0.0222		71.9390	71.9390	2.1300e-003	1.9400e-003	72.5712
Total	0.0321	0.0186	0.2670	7.1000e-004	0.0822	4.1000e-004	0.0826	0.0218	3.8000e-004	0.0222		71.9390	71.9390	2.1300e-003	1.9400e-003	72.5712

Miller Vineyard - Napa County, Summer

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0137	0.0209	0.1354	3.1000e-004	0.0319	2.6000e-004	0.0322	8.5200e-003	2.4000e-004	8.7600e-003		31.7491	31.7491	1.6400e-003	1.5000e-003	32.2384
Unmitigated	0.0137	0.0209	0.1354	3.1000e-004	0.0319	2.6000e-004	0.0322	8.5200e-003	2.4000e-004	8.7600e-003		31.7491	31.7491	1.6400e-003	1.5000e-003	32.2384

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	3.90	3.90	3.90	15,068	15,068
Total	3.90	3.90	3.90	15,068	15,068

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.535449	0.056642	0.175177	0.133432	0.032505	0.007974	0.012804	0.010998	0.001732	0.000629	0.026564	0.001947	0.004147

Miller Vineyard - Napa County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Miller Vineyard - Napa County, Summer

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Light Industry	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6309	2.0000e-005	2.6500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.6900e-003	5.6900e-003	1.0000e-005		6.0600e-003
Unmitigated	0.6309	2.0000e-005	2.6500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.6900e-003	5.6900e-003	1.0000e-005		6.0600e-003

Miller Vineyard - Napa County, Summer

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0743					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5564					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.6500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.6900e-003	5.6900e-003	1.0000e-005		6.0600e-003
Total	0.6309	2.0000e-005	2.6500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.6900e-003	5.6900e-003	1.0000e-005		6.0600e-003

Miller Vineyard - Napa County, Summer

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0743					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5564					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.6500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.6900e-003	5.6900e-003	1.0000e-005		6.0600e-003
Total	0.6309	2.0000e-005	2.6500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.6900e-003	5.6900e-003	1.0000e-005		6.0600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Off-Highway Trucks	1	4.00	260	402	0.38	Diesel
Rough Terrain Forklifts	2	4.00	260	100	0.40	Diesel
Tractors/Loaders/Backhoes	2	4.00	260	97	0.37	Diesel

Miller Vineyard - Napa County, Summer

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

UnMitigated/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
Equipment Type	lb/day										lb/day					
Off-Highway Trucks	0.2485	1.6639	1.6251	6.6100e-003		0.0599	0.0599		0.0551	0.0551	0.0000	640.1752	640.1752	0.2071		645.3514
Rough Terrain Forklifts	0.1024	1.3502	2.2891	3.4500e-003		0.0411	0.0411		0.0378	0.0378	0.0000	333.7362	333.7362	0.1079		336.4346
Tractors/Loaders/Backhoes	0.1439	1.4483	2.2356	3.1200e-003		0.0665	0.0665		0.0612	0.0612	0.0000	301.7667	301.7667	0.0976		304.2067
Total	0.4948	4.4624	6.1498	0.0132		0.1675	0.1675		0.1541	0.1541	0.0000	1,275.6782	1,275.6782	0.4126		1,285.9927

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation