RECON

An Employee-Owned Company

February 10, 2022

Mr. Hank Rupp
Rancho Guejito Corporation
17224 San Pasqual Valley Road
Escondido, CA 92027

Reference: Air Quality Analysis for Rancho Guejito Wine Tasting Facility and Event Center, PDS2020-MUP-20-001 (RECON Number 9688)

Dear Mr. Rupp:

The purpose of this report is to assess potential air quality impacts from construction and operation of the Rancho Guejito Wine Tasting Facility and Event Center Project (project). This analysis was prepared in accordance with the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality (County Air Quality Guidelines) (County of San Diego 2007).

1.0 Project Description

The project is a Major Use Permit (MUP) to expand an existing winery to include a wine tasting facility and an event center. An existing small winery exists on the project site that was approved under an administrative permit. The small winery would remain and the MUP would exclude the area regulated by the administrative permit. To accommodate the project, an existing abandoned home and associated farm buildings and an unoccupied modular office would be removed. The project includes the construction of a wine tasting facility and event center, along with associated parking lots, outdoor areas, fire water storage, and storm water infiltration facilities within a 5.6-acre project impact area. The wine tasting facility would include a wine bar and seating area, offices, restrooms, merchandise display areas, wine storage and refrigeration, a commercial kitchen, and food storage area. Outdoor areas would include a 1,500-square-foot covered patio and lawn area for events. The event center would include two buildings that would accommodate bathrooms, changing and lounge rooms, a catering kitchen, and banquet area that would allow amplified music. While the project impact footprint is limited to an approximately 5.6-acre area in the southern portion of the MUP boundary, the MUP would specify allowed activities within the remainder of the MUP area. Allowed activities would include hayrides, picnicking, or future uses associated with the wine tasting operations, subject to any permitting requirements that might be in effect at that time. Such activities would be secondary to the agricultural use and would not involve permanent structures or impacts.

The project would also construct a 35,000-gallon corrugated metal fire water storage tank, approximately 15 feet high and 30 feet in diameter, approximately 1,360 feet north of the wine tasting-event center complex adjacent to an existing farm road that runs the length of the permit area. The tank would be at least 350 feet from any existing buildings and within a vacant area now being used for storage. Pipes from the fire water storage tank would be installed within existing disturbed farm roads. A fire pump and control system would be housed in a proposed pump house constructed midway between the tasting facility and event center. The tank and pump house would be installed on an elevated pad that would be approximately 36 inches higher than the surrounding grade. The pump house would be of masonry construction. Both the tank and pump house would be surrounded by a 12-foot-wide decomposed granite (DG) perimeter. Access to the fire water storage tank area would be provided by existing farm roads of DG. Turn-arounds would be provided as needed to meet County Fire Department standards. Fire department connections (FDCs) and fire hydrants would be located as required by the fire department. The storage tank would supply water to

the fire protection system via a six-inch water line. The pump house would be connected to the FDCs and fire hydrants via six-inch PVC piping. All buildings in the wine tasting-event center complex would have fire sprinklers per current code. The furthest point of the tasting facility and event center buildings would be a 200-foot path from the adjacent roads for the fire department access. Fire water would be supplied to the fire storage tank from an existing agricultural well. Power to the pump house would come underground via an existing San Diego Gas and Electric (SDG&E) pole about 500 feet from the pump house. The fire pump would be on a separate electrical meter from the wine tasting facility and event center. A back-up, diesel power source or equivalent generator would be installed adjacent to the pump house in case SDG&E shuts off power to the project area during a wildfire.

Propane tanks would be added and placed to service the various buildings and appliances. One would be placed at the east edge of the tasting facility parking lot to provide fuel for various appliances in the tasting facility, commercial kitchen, and outdoor fire pit(s). A second would be placed approximately 50 feet north of the banquet barn.

1.1 Location and Existing Conditions

The approximately 404-acre MUP area is located just north of San Pasqual Valley Road at 17224 San Pasqual Valley Road, in the North County Metro Subregional Plan area, within unincorporated San Diego County. The MUP is located within Rockwood Canyon, with the proposed 5.6-acre project footprint of the wine tasting facility and event center located at the southern end of the project area near San Pasqual Valley Road. The project site is subject to the General Plan Regional Category Rural Lands, Land Use Designation RL-40 within the North County Metro Subregional Plan area. The Land Use Designation is A70 (Limited Agriculture) and the Use Regulation is A72 (General Agriculture). Figure 1 shows the regional location and Figure 2 shows an aerial photograph of the project site.

The project footprint for the 5.6-acre wine tasting facility and event center would be located within an area that contains an active agricultural operation in addition to farm roads, an abandoned home, associated farm buildings, and a modular office that would be removed to accommodate the project. The wine tasting facility and event center would be located approximately 320 feet northwest of the existing Rockwood Ranch house and associated farm structures, which are associated with the existing small winery operating under the administrative permit. Grading would occur 240 feet north of State Route 78 (SR-78) and 220 feet east the edge of Guejito Creek (defined as the top of the berm that confines the creek in this area). The entire area is planted with wine grapes, avocados and various types of citrus. Rockwood Canyon has been in agriculture since B. B. Rockwood built his farmhouse in 1883. No natural vegetation exists within 330 feet of the tasting facility-event center. The fire water storage tank would be located approximately 1,360 feet north of the wine tasting-event center complex adjacent to an existing farm road in a previously disturbed area.

1.2 Project Description

The project includes construction of a wine tasting facility and event center. Figure 3 shows the proposed site plan. Each project component is discussed in greater detail below.

1.2.1 Tasting Facility

The proposed tasting facility would be a 4,283-square-foot, single-story building with a commercial kitchen, wine bar, and seating areas for tasting, offices, restrooms, merchandise display areas, wine storage and refrigerated and food storage areas. The commercial kitchen would serve food to wine tasting patrons or provide food for the event center. The event center would include two buildings that would accommodate bathrooms, changing and lounge rooms, a catering kitchen, and banquet area that would allow amplified music. The tasting facility would also include an outdoor covered patio and lawn areas for tasting and private events. The front and rear covered patios would total 1,500 square feet with the majority of the outdoor areas located north of the building. This provides shielding from noise generated by traffic on SR-78.

The project would include a total of 110 parking spaces, of which 64 would be associated with the tasting facility. Forty-one standard sized parking spaces, three handicap-accessible and twenty overflow spaces would be provided for the tasting facility. The standard sized and handicap accessible spaces would be on an asphalt surface, and the overflow spaces would be located on a semi-pervious surface.

The tasting facility building, patios, parking areas, and improvements to existing ingress and egress roads would cover approximately 2.9 acres. A large fountain in front of the tasting facility would be surrounded by permeable pavers, allowing this area to be used to drop off passengers. Adjacent planted areas and ADA accessible concrete walkways would provide a transition from the parking areas to the tasting facility. Low voltage lighting would be installed where needed for safety and decorative purposes.

The tasting facility would include a 1,612-square-foot future expansion area consisting of two additional rooms that could be used for merchandise sales, meetings, small events within the parameters of the permit, private wine tasting, or as an expansion of the proposed uses. These additions would require separate building permits. The parking lots, fire storage and pump house, and wastewater treatment system have been sized to include the 1,612-square-foot expansion area. Occupancy of the tasting facility would be 185 people, increasing to 201 people if the expansion areas are constructed.

The tasting facility would serve wine made using grapes from Rancho Guejito and elsewhere in compliance with the Tiered Winery Ordinance. Tasting facility operations would be allowed from 10:00 a.m. until 10:00 p.m.

1.2.2 Event Center

The event center would consist of two buildings. The event logistics and lounge suite area would be a 1,519-square-foot building complete with restrooms, changing and lounging areas, and a small kitchenette. Low voltage lighting would be installed where needed for safety and decorative purposes. There would also be a lounge suite that would allow a guest or guests to spend the night before or after their event. Decks totaling 915 square feet would provide additional seating and lounging areas and would overlook a central plaza area that could be the site of event activities. The 3,700-square-foot banquet barn would be located on the other side of the central plaza. The banquet barn would include a catering kitchen to allow food to be brought in by an off-site caterer, undergo final preparation and be served. Both the plaza and barn could accommodate amplified music, seating, dancing, food serving areas, and other activities that are generally associated with weddings, quinceañeras, anniversary parties, corporate events, and other similar types of functions. A driveway would be extended to this area from the existing central farm road. As with the tasting facility, event center operations would be allowed from 10:00 a.m. until 10:00 p.m.

The project would include a total of 110 parking spaces, of which 46 would be associated with the event center. Thirty-five standard parking spaces, one handicap accessible, and ten overflow parking spaces would be provided for event attendees and service personnel. The standard and handicap spaces would be on an asphalt, and the overflow spaces would be a permeable surface.

1.2.3 Construction

The project site is relatively flat. Approximately 5,500 cubic yards of dirt would be imported for construction of the tasting facility and event center, the road base, parking lot construction, and other associated structures. The area to be disturbed is 5.6 acres (5.5 acres for the tasting facility/event center and associated roads, parking, landscaped areas, fountain, and water line installation, and fire pump house and 0.1 acre for the fire water storage tank). The entire 5.6 acres to be graded has been in various types of agriculture for decades with the exception of areas that have been used as farm roads or with existing structures to be demolished. No natural vegetation would be disturbed.

The tasting facility and event center need not be constructed at the same time. Either may be constructed first, with the other facility being constructed as the market dictates. For this reason, the tasting facility and event center each have their own wastewater disposal system and separate parking. Construction is anticipated to begin in January 2023 and last approximately six months.

2.0 Existing Conditions

2.1 Existing Setting

The project is located in San Diego County, within the San Diego Air Basin (SDAB) and approximately 20 miles east of the Pacific Ocean. The eastern portion of the SDAB is surrounded by mountains to the north, east, and south. These mountains tend to restrict airflow and concentrate pollutants in the valleys and low-lying areas. Rural residential uses are located in the vicinity of the project site. The two closest residential uses are located approximately 290 feet southeast and 500 feet south of the project footprint, south of San Pasqual Valley Road.

2.2 Climate and Meteorology

The project area, like the rest of San Diego County, has a Mediterranean climate characterized by warm, dry summers and mild winters. The mean annual temperature for the project area is 62 degrees Fahrenheit (°F). The average annual precipitation is 12 inches, falling primarily from November to April. Winter low temperatures in the project area average about 38°F, and summer high temperatures average about 86°F. The average relative humidity is 69 percent and is based on the yearly average humidity at Lindbergh Field (Western Regional Climate Center 2020).

The dominant meteorological feature affecting the region is the Pacific High Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to blow pollutants away from the coast toward the inland areas. Consequently, air quality near the coast is generally better than that which occurs at the base of the coastal mountain range.

Fluctuations in the strength and pattern of winds from the Pacific High Pressure Zone creates a temperature inversion layer (a layer in the atmosphere in which temperature increases with height) that acts as a lid to the vertical dispersion of air pollutants in the SDAB. Beneath the inversion layer pollutants become “trapped” as their ability to disperse diminishes. Sunlight reacts with air pollutants (reactive organic gas [ROG] and oxides of nitrogen [NO_X]) to create ozone (O_3). Thus, poorly dispersed pollutants along with strong sunlight results in the creation of ozone at this surface layer.

The prevailing wind pattern in the western portion of the SDAB includes a daytime onshore flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze), which leads to pollutants being blown out to sea at night and returning to land the following day. The prevailing westerly wind pattern is sometimes interrupted by regional “Santa Ana” conditions. A Santa Ana occurs when a strong high pressure develops over the Nevada-Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds over the mountains and out to sea.

Strong Santa Ana winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin to the north are blown out over the ocean, and low pressure over Baja California, Mexico, draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event does occur, the combination of transported and locally produced contaminants results in air quality conditions worse than normal (California Air Resources Board [CARB] 1997).

2.3 Regulatory Setting

2.3.1 Federal Regulations

Ambient Air Quality Standards (AAQS) represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. The federal Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 (42 U.S. Code [U.S.C.] 7401) for the purposes of protecting and enhancing the quality of the nation's air resources to benefit public health, welfare, and productivity. In 1971, in order to achieve the purposes of Section 109 of the CAA [42 U.S.C. 7409], the U.S. Environmental Protection Agency (U.S. EPA) developed primary and secondary National AAQS (NAAQS).

Six pollutants of primary concern were designated: ozone, carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead (Pb), and particulate matter (PM_{10} and $PM_{2.5}$). The primary NAAQS "in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health…." and the secondary standards "…protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 U.S.C. 7409(b)(2)]. The primary NAAQS were established, with a margin of safety, considering long-term exposure for the most sensitive groups in the general population (i.e., children, senior citizens, and people with breathing difficulties). The NAAQS are presented in Table 1 (CARB 2016).

If an air basin is not in either federal or state attainment for a particular pollutant, the basin is classified as non-attainment area for that pollutant. The SDAB is currently classified as a federal non-attainment area for ozone.

Table 1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone[8]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
Respirable Particulate Matter (PM_{10})[9]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		–		
Fine Particulate Matter ($PM_{2.5}$)[9]	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m³)	Non-dispersive Infrared Photometry	35 ppm (40 mg/m³)	–	Non-dispersive Infrared Photometry
	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	–	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		–	–	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m³)	–	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	–	Ultraviolet Fluorescence; Spectro-photometry (Pararosaniline Method)
	3 Hour	–		–	0.5 ppm (1,300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[11]	–	
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas)[11]	–	
Lead[12,13]	30 Day Average	1.5 µg/m³	Atomic Absorption	–	–	High Volume Sampler and Atomic Absorption
	Calendar Quarter	–		1.5 µg/m³ (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	–		0.15 µg/m³		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m³	Ion Chroma-tography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chroma-tography			

Table 1
Ambient Air Quality Standards

NOTES:
ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter; – = not applicable.

1 California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4 Any equivalent measurement method which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7 Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

8 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

9 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standards of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

10 To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

11 On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

12 The CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

13 The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14 In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

SOURCE: CARB 2016.

On September 27, 2019, the United States Environmental Protection Agency (U.S. EPA) and the National Highway Traffic Safety Administration (NHTSA) published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program" (84 Fed. Reg. 51310). The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On April 30, 2020, the U.S. EPA and NHTSA published the final "SAFE Vehicles Rule: Part Two"

(85 Fed. Reg. 24174). The SAFE Vehicles Rule proposes amended Corporate Average Fuel Economy (CAFE) and light-duty vehicle GHG emissions standards. The SAFE Vehicles Rule relaxed federal GHG emissions and CAFE standards to increase in stringency at only about 1.5 percent per year from model year 2020 levels over model years 2021 through 2026. The previously established emission standards and related "augural" fuel economy standards would have achieved about 4 percent per year improvements through model year 2025. Part two of the SAFE Vehicles Rule set amended fuel economy and carbon dioxide (CO_2) standards for passenger cars and light trucks for model years 2021 through 2026.

2.3.2 State Regulations

Criteria Pollutants

The CARB has developed the California AAQS (CAAQS) and generally has set more stringent limits on the criteria pollutants than the NAAQS (see Table 1). In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

Similar to the federal CAA, the state classifies either "attainment" or "non-attainment" areas for each pollutant based on the comparison of measured data with the CAAQS. The SDAB is a non-attainment area for the state ozone standards, the state PM_{10} standard, and the state $PM_{2.5}$ standard. The California CAA, which became effective on January 1, 1989, requires all areas of the State to attain the CAAQS at the earliest practicable date. The California CAA has specific air quality management strategies that must be adopted by the agency responsible for the non-attainment area. In the case of the SDAB, the responsible agency is the San Diego County Air Pollution Control District (SDAPCD).

Toxic Air Contaminants

The public's exposure to toxic air contaminants (TACs) is a significant public health issue in California. Diesel particulate matter (DPM) emissions have been identified as TACs. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The California Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

The California Air Toxics Program establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air.

The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels.

The Children's Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air monitoring network, and develop any additional air toxic control measures needed to protect children's health. Locally, toxic air pollutants are regulated through the SDAPCD Regulation XII. Of particular concern statewide are DPM emissions. DPM was established as a TAC in 1998, and is estimated to represent a majority of the cancer risk from TACs statewide (based on the statewide average). 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 program.

Following the identification of DPM as a TAC in 1998, CARB has worked on developing strategies and regulations aimed at reducing the risk from DPM. The overall strategy for achieving these reductions is found in the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (CARB 2000). A stated goal of the plan is to reduce the statewide cancer risk arising from exposure to DPM by 85 percent by 2020.

As an ongoing process, CARB will continue to establish new programs and regulations for the control of DPM and other air-toxics emissions as appropriate. The continued development and implementation of these programs and policies will ensure that the public's exposure to DPM and other TACs will continue to decline.

State Implementation Plan

The State Implementation Plan (SIP) is a collection of documents that set forth the state's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as air quality management plans, monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. The CARB then forwards SIP revisions to the U.S. EPA for approval and publication in the Federal Register. All of the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

The SDAPCD is responsible for preparing and implementing the portion of the SIP applicable to the SDAB. The SIP plans for San Diego County specifically include the Redesignation Request and Maintenance Plan for the 1997 National Ozone Standard for San Diego County (2012), and the 2004 Revision to the California State Implementation Plan for Carbon Monoxide–Updated Maintenance Plan for Ten Federal Planning Areas.

The California Environmental Quality Act

Section 15125(d) of the California Environmental Quality Act (CEQA) Guidelines requires discussion of any inconsistencies between the project and applicable general plans and regional plans, including the applicable air quality attainment or maintenance plan (or SIP).

2.3.3 Regional Air Quality Strategy

The SDAPCD prepared the original 1991/1992 Regional Air Quality Strategy (RAQS) in response to requirements set forth in the California CAA. The California CAA requires areas that are designated state non-attainment areas for ozone, CO, SO_2, and NO_2 prepare and implement plans to attain the standards by the earliest practicable date. The California CAA does not provide guidance on timing or requirements for attaining the state PM_{10} and $PM_{2.5}$ standards. Attached as part of the RAQS are the Transportation Control Measures (TCMs) adopted by the San Diego Association of Governments (SANDAG). Updates of the RAQS and corresponding TCM are required every three years. The RAQS and TCM set forth the steps needed to accomplish attainment of NAAQS and CAAQS. The most recent update of the RAQS and TCM occurred in 2019.

2.4 Background Air Quality

Air quality at a particular location is a function of the kinds, amounts, and dispersal rates of pollutants being emitted into the air locally and throughout the basin. The major factors affecting pollutant dispersion are wind speed and direction, the vertical dispersion of pollutants (which is affected by inversions), and the local topography.

Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by the CARB or federal standards set by the U.S. EPA. The SDAPCD maintains 11 air quality

monitoring stations located throughout the greater San Diego metropolitan region. Air pollutant concentrations and meteorological information are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

The San Diego – Kearny Villa Road monitoring station is the closest station that monitors all non-attainment pollutants. The monitoring station is located at 6125A Kearny Villa Road, approximately 20 miles south of the project site. Table 2 provides a summary of the measurements collected at the San Diego – Kearny Villa Road monitoring station for the years 2016 through 2020.

Table 2
Summary of Air Quality Measurements Recorded at the
San Diego – Kearny Villa Road Air Quality Monitoring Station

Pollutant/Standard	2016	2017	2018	2019	2020
Ozone					
Federal Max 8-hr (ppm)	0.75	0.083	0.077	0.075	0.102
Days 2015 Federal 8-hour Standard Exceeded (0.07 ppm)	3	6	5	1	10
Days 2008 Federal 8-hour Standard Exceeded (0.075 ppm)	0	4	1	0	6
State Max 8-hr (ppm)	0.075	0.084	0.077	0.076	0.102
Days State 8-hour Standard Exceeded (0.07 ppm)	3	6	5	1	12
Max. 1-hr (ppm)	0.087	0.097	0.102	0.083	0.123
Days State 1-hour Standard Exceeded (0.09 ppm)	0	2	1	0	2
Nitrogen Dioxide					
Max 1-hr (ppm)	0.053	0.054	0.045	0.046	0.052
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0	0	0
Days Federal 1-hour Standard Exceeded (0.100 ppm)	0	0	0	0	0
Annual Average (ppm)	0.009	0.009	0.008	0.008	0.007
PM_{10}*					
Federal Max. Daily ($\mu g/m^3$)	36.0	46.0	38.0	--	--
Measured Days Federal 24-hour Standard Exceeded (150 $\mu g/m^3$)	0	0	0	--	--
Calculated Days Federal 24-hour Standard Exceeded (150 $\mu g/m^3$)	0.0	0.0	0.0	--	--
Federal Annual Average ($\mu g/m^3$)	17.1	17.6	18.4	--	--
State Max. Daily ($\mu g/m^3$)	35.0	47.0	38.0	--	--
Measured Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)	0	0	0	--	--
Calculated Days State 24-hour Standard Exceeded (50 $\mu g/m^3$)	--	0.0	0.0	--	--
State Annual Average ($\mu g/m^3$)	--	17.6	18.4	--	--
$PM_{2.5}$*					
Federal Max. Daily ($\mu g/m^3$)	19.4	27.5	32.2	16.2	47.5
Measured Days Federal 24-hour Standard Exceeded (35 $\mu g/m^3$)	0	0	0	0	2
Calculated Days Federal 24-hour Standard Exceeded (35 $\mu g/m^3$)	0.0	0.0	0.0	0.0	5.8
Federal Annual Average ($\mu g/m^3$)	7.5	7.9	8.3	7.0	8.7
State Max. Daily ($\mu g/m^3$)	20.3	27.5	32.2	15.0	--
State Annual Average ($\mu g/m^3$)	7.8	8.0	8.3	--	--

SOURCE: CARB 2021.
ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; -- = Not available.
* Calculated days value. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

2.4.1 Ozone

Nitrogen oxides and hydrocarbons (ROG) are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone, which is the primary air pollution problem in the SDAB. Because sunlight plays such an important role in its formation, ozone pollution—or smog—is mainly a concern during the daytime in summer months. Adverse health effects associated with ozone include breathing difficulties and lung tissue damage, The SDAB is currently designated a federal and state non-attainment area for ozone. During the past two decades, San Diego had experienced a decline in ozone levels

due to emission control efforts, despite the region's growth in population and vehicle miles traveled (SDAPCD 2016).

About half of smog-forming emissions come from automobiles. Population growth in San Diego has resulted in a large increase in the number of automobiles expelling ozone-forming pollutants while operating on area roadways. In addition, the occasional transport of smog-filled air from the South Coast Air Basin only adds to the SDAB's ozone problem. Stricter automobile emission controls, including more efficient automobile engines, have played a large role in why ozone levels have steadily decreased.

2.4.2 Carbon Monoxide

The SDAB is classified as a state attainment area and as a federal maintenance area for CO. Until 2003, no violations of the state standard for CO had been recorded in the SDAB since 1991, and no violations of the national standard had been recorded in the SDAB since 1989. The violations that took place in 2003 were likely the result of massive wildfires that occurred throughout the county. No violations of the state or federal CO standards have occurred since 2003.

Small-scale, localized concentrations of CO above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as "CO hot spots" and are a concern at congested intersections, where automobile engines burn fuel less efficiently and their exhaust contains more CO. Adverse health effects associated with CO include chest pain in heart patients, headaches, and reduced mental alertness.

2.4.3 Particulate Matter

Particulate matter (PM) is a complex mixture of microscopic solid or liquid particles including chemicals, soot, and dust. Anthropogenic sources of direct particulate emissions include crushing or grinding operations, dust stirred up by vehicle traffic, and combustion sources such as motor vehicles, power plants, wood burning, forest fires, agricultural burning, and industrial processes. Additionally, indirect emissions may be formed when aerosols react with compounds found in the atmosphere.

Health studies have shown a significant association between exposure to particulate matter and premature death in people with heart or lung diseases. Other important effects include aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and certain cardiovascular problems such as heart attacks and irregular heartbeat (U.S. EPA 2016).

As its properties vary based on the size of suspended particles, particulate matter is generally categorized as PM_{10} or $PM_{2.5}$.

PM_{10}, occasionally referred to as "inhalable coarse particles" has an aerodynamic diameter of about one-seventh of the diameter of a human hair. High concentrations of PM_{10} are often found near roadways, construction, mining, or agricultural operations.

$PM_{2.5}$, occasionally referred to as "inhalable fine particles" has an aerodynamic diameter of about one-thirtieth of the diameter of a human hair. $PM_{2.5}$ is the main cause of haze in many parts of the U.S. Federal standards applicable to $PM_{2.5}$ were first adopted in 1997.

2.4.4 Other Criteria Pollutants

The national and state standards for NO_2, oxides of sulfur (SO_X), and the previous standard for lead are being met in the SDAB, and the latest pollutant trends suggest that these standards will not be exceeded in the foreseeable future. The SDAB is also in attainment of the state standards for vinyl chloride, hydrogen sulfides, sulfates, and visibility-reducing particulates.

3.0 Significance Criteria and Analysis Methodologies

3.1 County of San Diego Significance Thresholds

The guidelines below are consistent with the latest CEQA Guidelines Appendix G, which provide a slight revision from the County of San Diego (County) *Guidelines for Determining Significance, Air Quality* (March 19, 2007) guidelines. Based on the CEQA Guidelines Appendix G, a project will have a significant adverse environmental impact related to air quality if it would:

1. Conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP.
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is non-attainment under an applicable NAAQS or CAAQS (PM_{10}, $PM_{2.5}$, or exceed quantitative thresholds for ozone precursors: NO_X and ROG; see Table 3).
3. Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, day-care centers and project residents and employees) to substantial pollutant concentrations.
    a. Place sensitive receptors near CO hot spots or creates CO hot spots near sensitive receptors.
    b. Result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 1 million without application of best available control technology for toxics or a health hazard index greater than one would be deemed as having a potentially significant impact.
4. Expose considerable number of persons to objectionable odors.

The SDAPCD does not provide quantitative thresholds for determining the significance of construction or mobile source-related impacts. However, the district does specify Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources (SDAPCD Rules 20.1, 20.2, and 20.3). The County's Guidelines for Determining Significance, Air Quality allow the use of the SDAPCD AQIA as CEQA significance thresholds. The County's screening level thresholds (SLTs), which are based on SDAPCD Rules 20.1, 20.2, and 20.3, are shown in Table 3. The SLTs were adopted from the SDAPCD AQIA trigger level thresholds to align with attainment of the NAAQS and be protective of public health. Thus, air quality emissions below the SLTs would meet the NAAQS. The NAAQS were developed to protect public health, specifically the health of "sensitive" populations, including asthmatics, children, and the elderly. There is no level specified for ROG in the SDAPCD AQIA criteria. The County's threshold is based on the VOC threshold of significance from the South Coast Air Quality Management District (SCAQMD). Note that the terms ROG and VOC are considered interchangeable.

Table 3
County of San Diego Screening Level Thresholds

Pollutant	Emission Rate		
	Pounds/Hour	Pounds/Day	Tons/Year
Respirable Particulate Matter (PM_{10})	--	100	15
Fine Particulate Matter ($PM_{2.5}$)	--	55[a]	10[a]
Oxides of Nitrogen (NO_X)	25	250	40
Oxides of Sulfur (SO_X)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	--	3.2	0.6
Volatile Organic Compounds (VOCs)	--	75[b]	13.7[c]

SOURCE: SDAPCD, Rules 20.1, 20.2, 20.3; County of San Diego 2007.
[a] Based on the U.S. EPA "Proposed Rule to Implement the Fine Particle National Ambient Air Quality Standards" published September 8, 2005. Also used by the South Coast Air Quality Management District.
[b] Threshold for VOCs based on the threshold of significance for VOCs from the South Coast Air Quality Management District for the Coachella Valley.
[c] 13.7 tons per year threshold based on 75 pounds per day multiplied by 365 days per year and divided by 2,000 pounds per ton.

3.2 Analysis Methodologies

Air emissions were calculated using California Emissions Estimator Model (CalEEMod) 2020.4.0 (California Air Pollution Control Officers Association 2021). CalEEMod is a tool used to estimate air emissions resulting from land development projects in the state of California. The model generates air quality emission estimates from construction activities and breaks down operational criteria pollutant emissions into three categories: mobile sources (e.g., traffic), area sources (e.g., landscaping equipment, consumer projects, and architectural coatings), and energy sources (e.g., natural gas heating). CalEEMod provides emission estimates of NO_X, CO, SO_X, PM_{10}, $PM_{2.5}$, and ROG.

Inputs to CalEEMod include such items as the air basin containing the project, land uses, trip generation rates, trip lengths, duration of construction phases, construction equipment usage, grading areas, as well as other parameters. The CalEEMod output files are contained in Attachment 1 and provide the specific inputs. The propane emission calculations are provided in Attachment 2.

3.2.1 Construction Methodology and Assumptions

Construction-related activities are temporary, short-term sources of air emissions. Sources of construction-related air emissions include:

- Fugitive dust from demolition and grading activities;
- Construction equipment exhaust;
- Construction-related trips by workers, delivery trucks, and material-hauling trucks; and
- Construction-related power consumption.

Construction-related pollutants result from dust raised during demolition and grading, emissions from construction vehicles, and chemicals used during construction. Fugitive dust emissions vary greatly during construction and are dependent on the amount and type of activity, silt content of the soil, and the weather. Vehicles moving over paved and unpaved surfaces, demolition, excavation, earth movement, grading, and wind erosion from exposed surfaces are all sources of fugitive dust. Construction operations are subject to the requirements established in SDAPCD Regulation 4, Rules 52, 54, and 55. Rule 52 sets limits on the amount of particulate matter that can be discharged into the atmosphere. Rule 54 sets limits on the amount

of dust and fumes that can be released into the atmosphere. Rule 55 regulates fugitive dust and provides roadway dust track-out/carry-out requirements.

Heavy-duty construction equipment is usually diesel powered. In general, emissions from diesel-powered equipment contain more NO_X, SO_X, and PM than gasoline-powered engines. However, diesel-powered engines generally produce less CO and less ROG than gasoline-powered engines. Standard construction equipment includes tractors/loaders/backhoes, rubber-tired dozers, excavators, graders, cranes, forklifts, rollers, paving equipment, generator sets, welders, cement and mortar mixers, and air compressors.

Primary inputs are the numbers of each piece of equipment and the length of each construction stage. Construction is anticipated to begin in January 2023 and last approximately six months. CalEEMod estimates the required construction equipment for a project based on surveys, performed by the SCAQMD and the Sacramento Metropolitan Air Quality Management District of typical construction projects, which provide a basis for scaling equipment needs and schedule with a project's size. Air emission estimates in CalEEMod are based on the duration of construction phases; construction equipment type, quantity, and usage; grading area; season; and ambient temperature, among other parameters. Project emissions were modeled for the following stages: demolition, site preparation, grading, building construction/ architectural coatings, and paving. CalEEMod default construction equipment and usage was modeled. As discussed in Section 1.2.3, the project would require the import of approximately 5,500 cubic yards of dirt. Table 4 summarizes the modeled construction parameters.

Table 4
Construction Parameters

Construction Phase	Phase Duration (Days)	Equipment	Amount	Hours per Day
Demolition	9	Concrete/Industrial Saw	1	8
		Excavators	3	8
		Rubber Tired Dozers	2	8
Site Preparation	4	Rubber Tired Dozers	3	8
		Tractors/Loaders/Backhoes	4	8
Grading	9	Excavator	1	8
		Grader	1	8
		Rubber Tired Dozer	1	8
		Tractors/Loaders/Backhoes	3	8
Building Construction	101	Crane	1	7
		Forklifts	3	8
		Generator Set	1	8
		Tractors/Loaders/Backhoes	3	7
		Welder	1	8
Architectural Coatings	20	Air Compressor	1	6
Paving	9	Pavers	2	8
		Paving Equipment	2	8
		Rollers	2	8

SOURCE: CalEEMod Output, Attachment 1.

3.2.2 Operational Methodology and Assumptions

The project would include the construction of a tasting facility and an event center and associated parking and roadway improvements. Using CalEEMod, the tasting facility was modeled as a high turnover (sit down) restaurant land use and the event center was modeled as a quality restaurant land use. The project would not result in an increase in any of the existing on-site agricultural operations. Therefore, agricultural uses were not considered in this analysis.

Mobile source emissions would originate from traffic generated by the project. Area source emissions would result from landscaping activities, consumer products, as well as the application of architectural coatings. Energy source emissions generally occur from natural gas heating. The project would also include the use of propane.

3.2.2.1 Mobile Emissions

Mobile source operational emission estimates are based on the trip rate, trip length, and size of each land use. A Local Mobility Analysis and a Vehicle Miles Traveled (VMT) Analysis were prepare for the project (Rick Engineering 2021a and 2021b). The VMT Analysis prepared for the project examined the nature of the trips generated by the project, the project's location to nearby attractions, and project features that would further reduce VMT. The project is located within the San Pasqual Valley which is dominated by agricultural uses. Since wineries and winery tasting rooms are often clustered nearby each other, a typical wine tasting outing involves groups of two or more leisurely visiting several wineries throughout the day. This means trips between these wineries are often captured by a diverted trip to or from another nearby winery. Therefore, trips to the proposed winery would most likely consist of existing trips that were redistributed and captured by the project serving the local area, effectively lowering the total VMT for the project. There are also several wine tour companies based in Ramona and Escondido which provide a shuttle to tour wineries within San Pasqual and Ramona Valley. The project is not expected to substantially increase VMT since the area already includes numerous wineries and would continue to capture trips that are currently being generated by the existing nearby attractions.

Additionally, the complimentary part of the project includes the special event facility. Both Orfila and Cordiano offer a special event facility. The event facility use is expected to operate mostly on weekends and for special occasions such as weddings. Other select uses of the event facility may occur during the weekdays for events such as retirement parties or business luncheons. However, the impacts related to the special event facility use are expected to be less than significant since the use of the facility would occur only on select occasions, and most often on weekends when overall regional vehicle travel is less (Rick Engineering 2021b). Furthermore, the event facility would not induce events, but would offer another option for facility use within the region.

Finally, development of the project would also have the effect of diverting trips that otherwise may go to destinations outside the County, such as Temecula, because the project would increase opportunities for wine tasting experiences in San Diego County.

For these reasons, the VMT Analysis concluded that the project would not result in significant VMT impacts. However, for the purposes of calculating anticipated GHG emissions associated with the project, some assumptions about annual average operations at the tasting facility and event center were made. Based on the Local Mobility Analysis prepared for the project, the project would generate a worst-case daily total of 512 new trips. Of these trips, 272 trips would be associated with the winery tasting room and expansion, and 240 trips would be associated with the event center. The Local Mobility Analysis is based on worst-case daily trip generation, while GHG impacts are based on average annual emissions. The project would not generate a worst-case total of 512 trips every day of the year. For example, wine tasting trips would likely be greater June through October and not as popular during the late fall and winter months, and special events are more likely to occur April through September. Both wine tasting and event facility trips would also be greater during the weekends and less during the weekdays. As a conservative GHG analysis, the 272 winery tasting room trips were modeled seven days per week and the 240 event center trips were modeled two days per week (modeled on Saturday and Sunday). Thus, a total of 272 weekday trips and 512 weekend trips were modeled. This is likely an overestimate of the actual annual trips generated by the project due to the reasons outlined above and discussed in detail in the VMT Analysis.

The VMT Analysis provides a detailed discussion of trip lengths associated with the project. As discussed, trips to the proposed winery would most likely consist of existing trips that were redistributed and captured by the project serving the local area, effectively lowering the total VMT for the project. The VMT analysis

identifies approximately 20 to 25 wineries within a 10-mile radius of the project site. Additionally, the project site is located approximately 6 to 10 miles from the Escondido and San Marcos urban centers. Given the data presented in the VMT Analysis, a 10-mile trip length was modeled for trips associated with the winery tasting room. For the event center, a longer 20-mile trip length was modeled to account from trips that would originate within the city of San Diego. Default vehicle emission factors for the soonest operational year of 2023 were used.

As discussed in Section 2.3.1, the SAFE Vehicles Rule was adopted in 2019 that results in slightly greater mobile emissions. CalEEMod includes an option to adjust the vehicle emission factors to account for the SAFE Vehicles Rule. Emissions were modeled using these alternate emission factors.

As discussed in Section 1.2, the project would also include a fire water storage tank. The storage tank would be filled from the existing well that currently provides water to the project site. Therefore, there would be no emissions associated with the transport of water for the storage tank.

3.2.2.2 Energy Source Emissions

Energy source emissions associated with the project include natural gas used in space and water heating. Combustion of any type of fuel, including natural gas, emits criteria pollutants directly into the atmosphere. When this occurs within buildings, it is considered a direct emission source associated with that building. CalEEMod uses the California Commercial End Use Survey (CEUS) database to develop energy intensity values (electricity and natural gas usage per square foot per year) for non-residential buildings. Default energy emission factors were modeled.

The project would also include the use of propane. One 250-gallon propane tank would be placed at the east edge of the tasting facility parking lot and a second 250-gallon propane tank would be placed approximately 50 feet north of the banquet barn. The existing facility has an existing 250-gallon propane tank and approximately 140 gallons of propane was used in 2021. To calculate emissions from the new propane tanks, it was conservatively assumed that each 250-gallon tank would be used in a one-year period, and up to 5 gallons would be used in a single day. Emissions were calculated using U.S. EPA emission factors (U.S. EPA 2008).

3.2.2.3 Area Source Emissions

Area source emissions associated with the project include consumer products, architectural coatings, and landscaping equipment. Consumer products are chemically formulated products used by household and institutional consumers, including but not limited to detergents, cleaning compounds, polishes, floor finishes, disinfectants, sanitizers, and aerosol paints but do not include other paint products, furniture coatings, or architectural coatings.

For architectural coatings, emissions result from evaporation of solvents contained in surface coatings such as in paints and primers. Emission estimates are based on the building square footage and parking lot surface area, architectural coating emission factors, and a reapplication rate of 10 percent of area per year. Architectural coatings would comply with SDAPCD Rule 67.0.1, which limits the VOC content of paints sold within the county.

Landscaping maintenance includes fuel combustion emission from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers as well as air compressors, generators, and pumps. Emission calculations take into account building area, equipment emission factors, and the number of operational days (summer days).

CalEEMod calculates emissions associated with wastewater using the septic, aerobic, and facultative lagoon system percentages specific to each county or air district. The project would include a septic wastewater system; therefore, these default percentages were modified to 100 percent septic tanks.

4.0 Project Impact Analysis

1. *Would the project conflict with or obstruct the implementation of the RAQS and/or applicable portions of the SIP?*

Project consistency is based on whether the project would conflict with or obstruct implementation of the RAQS and/or applicable portions of the SIP, which would lead to increases in the frequency or severity of existing air quality violations.

The RAQS is the applicable regional air quality plan that sets forth the SDAPCD's strategies for achieving the NAAQS and CAAQS. The SDAB is designated a non-attainment area for the federal and state ozone standard. Accordingly, the RAQS was developed to identify feasible emission control measures and provide expeditious progress toward attaining the standards for ozone. The two pollutants addressed in the RAQS are ROG and NO_X, which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and growth create challenges in controlling emissions and, by extension, to maintaining and improving air quality. The RAQS was most recently updated in 2016.

The growth projections used by the SDAPCD to develop the RAQS emissions budgets are based on the population, vehicle trends, and land use plans developed in general plans and used by SANDAG in the development of the regional transportation plans and sustainable communities strategy. As such, projects that propose development that is consistent with the growth anticipated by SANDAG's growth projections and/or the General Plan would not conflict with the RAQS. In the event that a project would propose development that is less dense than anticipated by the growth projections, the project would likewise be consistent with the RAQS. In the event a project proposes development that is greater than anticipated in the growth projections, further analysis would be warranted to determine if the project would exceed the growth projections used in the RAQS for the specific subregional area.

The project site is subject to the General Plan Regional Category Rural Lands, Land Use Designation RL-40, and is zoned A70 Limited Agriculture. The project would not construct new housing or result in an increase in the anticipated growth projections. The project would provide wine tasting opportunities and event space for existing residents in the community. Further, as discussed below, the project would not result in construction or operational emissions in excess of the applicable significance thresholds for all criteria pollutants. The project would, therefore, not result in an increase in emissions that are not already accounted for in the RAQS. Thus, the project would not obstruct or conflict with implementation of the RAQS. Impacts would be considered less than significant.

2. *Would the project 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 (PM_{10}, $PM_{2.5}$, or exceed quantitative thresholds for ozone precursors: NOx and ROG)?*

A project may have a significant direct air quality impact if the project exceeds any of the County's SLTs (see Table 3).

<u>Construction Emissions</u>

A project may result in a cumulatively considerable net increase during construction phase if:

- A project that has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NO_X and/or ROG, would also have a significant cumulatively considerable net increase.
- In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably

foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified above.

Construction activities would be subject to several control measures per the requirements of the County, SDAPCD rules, and CARB Airborne Toxic Control Measures (ATCM). The following required control measures have been incorporated into the calculations of construction emissions.

- Per the County's *Standard Mitigation and Project Design Consideration Grading, Clearing and Watercourses Ordinance* Section 87.428, the applicant shall implement one or more of the following measures during all grading activities:
  - Water actively disturbed surfaces three times a day.
  - Apply non-toxic soil stabilizers to inactive, exposed surfaces when not in use for more than 3 days. Non-toxic soil stabilizers should also be applied to any exposed surfaces immediately (i.e., less than 24 hours) following completion of grading activities if the areas would not be in use for more than 3 days following completion of grading.
  - Remove soil track-out from paved surfaces daily or more frequently as necessary.
  - Minimize the track-out of soil onto paved surfaces by installation of wheel washers.
- Per SDAPCD Rule 67, the applicant shall use regulated coatings for all architectural coating activities.
- Per CARB's ATCM 13 (California Code of Regulations Chapter 10 Section 2485), the applicant shall not allow idling time to exceed 5 minutes unless more time is required per engine manufacturers' specifications or for safety reasons.

Emissions due to project construction were calculated using the methodology and parameters discussed in Section 3.2.1. Table 5 shows the total projected construction maximum daily emission levels for each criteria pollutant. The CalEEMod output files are contained in Attachment 1.

Table 5
Summary of Maximum Construction Emissions
(pounds per day)

	Pollutant					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Demolition	2	22	20	<1	2	1
Site Preparation	3	28	19	<1	21	11
Grading	2	28	18	<1	10	5
Building Construction/Architectural Coatings	9	16	20	<1	1	1
Paving	2	10	15	<1	1	1
Maximum Daily Emissions	**9**	**28**	**20**	**<1**	**21**	**11**
County Screening Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*

Note that the emissions summarized in Table 5 are the maximum emissions for each pollutant that would occur during each phase based on all modeled construction equipment (see Table 4) being active on the same day. Actual construction activities would vary day to day, with all equipment active on some days, and less equipment active on other days depending on the construction task. Therefore, these are the maximum emissions that would occur in a day. As shown in Table 5, maximum construction emissions would be less than the County's SLTs for all criteria pollutants. Project construction would be limited and would begin in January 2023 and last approximately six months. No mass grading would be required, and construction equipment would be minimal. Given the rural nature of the project vicinity, it is unlikely that other major construction activities would occur in the same area at the same time. There are no proposed projects or reasonably foreseeable future projects within proximity of the project that are anticipated to include

construction concurrent with the project. Further, as discussed in Section 3.1, the County's SLT align with attainment of the NAAQS which were developed to protect the public health, specifically the health of "sensitive" populations, including asthmatics, children, and the elderly. Consequently, project construction would have a less than significant impact to public health. Therefore, project construction would not 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, and impacts would be cumulatively less than significant.

Operational Emissions

A project may result in a cumulatively considerable net increase during operation phase if:

- A project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of PM_{10}, $PM_{2.5}$, NOx and/or ROGs, would also have a significant cumulatively considerable net increase.

- Projects that cause road intersections to operate at or below a Level of Service E (analysis only required when the addition of peak-hour trips from the proposed project and the surrounding projects exceeds 2,000) and create a CO "hotspot" create a cumulatively considerable net increase of CO.

Operational emissions associated with the project were quantified using CalEEMod and the methodology summarized in Section 3.2.2. These emissions include mobile and area sources. Daily operational emissions are summarized in Table 6. The CalEEMod output files are contained in Attachment 1, and propane emission calculations are provided in Attachment 2.

Table 6
Summary of Project Operational Emissions
(pounds per day)

	Pollutant					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Propane Sources	<1	<1	<1	<1	<1	<1
Area Sources	<1	<1	<1	<1	<1	<1
Energy Sources	<1	1	<1	<1	<1	<1
Mobile Sources	2	3	24	<1	6	2
Total	**3**	**3**	**24**	**<1**	**6**	**2**
County Screening Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*

As shown in Table 6, the project's daily operational emissions would not exceed the SLTs for any pollutant. As discussed in Section 3.1, the County's SLT align with attainment of the NAAQS which were developed to protect the public health, specifically the health of "sensitive" populations, including asthmatics, children, and the elderly. Therefore, project operation would not 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, and impacts would be cumulatively less than significant.

3. *Would the project expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, day-care centers and project residents) to substantial pollutant concentrations?*

Air quality regulators typically define sensitive receptors as schools (preschool–12th grade), hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. However, for the purposes of CEQA analysis in San Diego County, the definition of a sensitive receptor also includes residents. As discussed, rural residential uses are located in the vicinity of the project site.

The two primary emissions of concern regarding health effects for land development projects are DPM and CO. Projects that would site sensitive receptors near potential CO hotspots or would contribute vehicle traffic to local intersections where a CO hotspot could occur would be considered as having a potentially significant impact. The Local Mobility Analysis prepared an analysis of the intersection of San Pasqual Valley Road and the three access driveways. These intersections would not be signalized, would operate at Level of Service A or B, and peak-hour trips would be less than 2,000 (Rick Engineering 2021a). The project is not anticipated to cause roadway intersections to fail or result in CO hotspots.

Projects that would result in exposure to TACs resulting in a maximum incremental cancer risk greater than one in one million without application of best available control technology for toxics or a threshold of 10 in one million for projects implementing best available control technology for air toxics or a health hazard index greater than one would be considered as having a potentially significant impact.

Construction of the project would result in the generation of DPM emissions from the use of off-road diesel construction activities and on-road diesel equipment used to bring materials to and from the project site. Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the project would occur over a six-month period. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (OEHHA 2015). Thus, if the duration of proposed construction activities near any specific sensitive receptor were six months, the exposure would be less than 2 percent (6 months ÷ 30 years) of the total exposure period used for health risk calculation. Additionally, the two closest residential uses are located approximately 290 feet southeast and 500 feet south of the project footprint. Further, the project would implement construction best management practices and would be conducted in accordance with CARB regulations. Specifically, the project would implement the following Best Available Control Technology for Toxics (T-BACT) measures during construction:

- The construction fleet shall use any combination of diesel catalytic converters, diesel oxidation catalysts, diesel particulate filters and/or utilize CARB/U.S. EPA Engine Certification Tier 3 or better, or other equivalent methods approved by the CARB.
- The engine size of construction equipment shall be the minimum size suitable for the required job.
- Construction equipment shall be properly tuned and maintained in accordance with the manufacturer's specifications.
- Per CARB's Airborne Toxic Control Measures 13 (California Code of Regulations Chapter 10 Section 2485), the applicant shall not allow idling time to exceed 5 minutes unless more time is required per engine manufacturers' specifications or for safety reasons.

Due to the limited time of exposure and the distance to the nearest residential uses, project construction is not anticipated to create conditions where the probability is greater than 10 in one million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of noncarcinogenic TACs that exceed a Hazard Index greater than 1 for the Maximally Exposed Individual. Additionally, with ongoing implementation of U.S. EPA and CARB requirements for cleaner fuels, off-road diesel engine retrofits, and new low-emission diesel engine types, the DPM emissions of individual equipment would be substantially reduced. Thus, DPM generated during construction would not result in the exposure of sensitive receptors to substantial pollutant concentration.

The project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

4. Would the project expose considerable number of persons to objectionable odors?

SDAPCD Rule 51 (Public Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section 41700 prohibit the emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. Projects required to obtain permits from SDAPCD, typically industrial and some commercial projects, are evaluated by SDAPCD staff for potential odor nuisance, and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

During construction, diesel equipment may generate some nuisance odors. Odors would also be generated during paving activities. Sensitive receptors near the project site include residential uses; however, exposure to odors associated with project construction would be short term and temporary in nature. Additionally, due to the rural nature of the project area, residences are located at distances of approximately 500 feet or more from the proposed construction area.

The CARB Air Quality and Land Use Handbook (CARB 2005) identifies a list of the most common sources of odor complaints received by local air districts. Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. The project site includes vineyards and citrus groves that are not a source of objectionable odors. The project would not result in any change to the on-site agricultural operations. A wastewater treatment system (septic system) for the wine tasting facility would be located west and north of the tasting facility along the existing dirt farm road and would be sized to handle wastewater from the tasting facility at buildout. A similar system for the event center would be located just south of the facility in the existing vineyard, or as determined by the contractor who is responsible for designing the system. The leach fields would be a minimum of 75 feet from the event center, over 165 feet from the existing agricultural wells and over 380 feet east of the flow line of Rancho Guejito Creek. That system for the tasting facility was reviewed and approved by Department of Environmental Health (DEH; DEH2018-lowtf008608). The septic system would be properly constructed and maintained to reduce any associated odors. An On-site Wastewater Treatment System permit from DEH would be needed prior to start of construction. Odors at the nearby residences located south of the project site would dissipate due to the distance between the residences and the leach fields. Therefore, operation of the project is not expected to generate significant objectionable odors affecting a substantial number of people, and impacts would be less than significant.

If you have any questions about the results of this analysis, please contact me at jfleming@reconenvironmental.com or (619) 308-9333 extension 177.

Sincerely,

Jessica Fleming

Jessica Fleming
Air Quality Specialist

JLF:sh

5.0 Certification

The following is a list of preparers, persons, and organizations involved with the air quality assessment.

RECON Environmental, Inc.
- Jessica Fleming, County-approved Air Quality Consultant
- Jennifer Campos, Environmental Project Director
- Nick Larkin, Senior Project Manager
- Stacey Higgins, Senior Production Specialist
- Frank McDermott, GIS Specialist

6.0 References Cited

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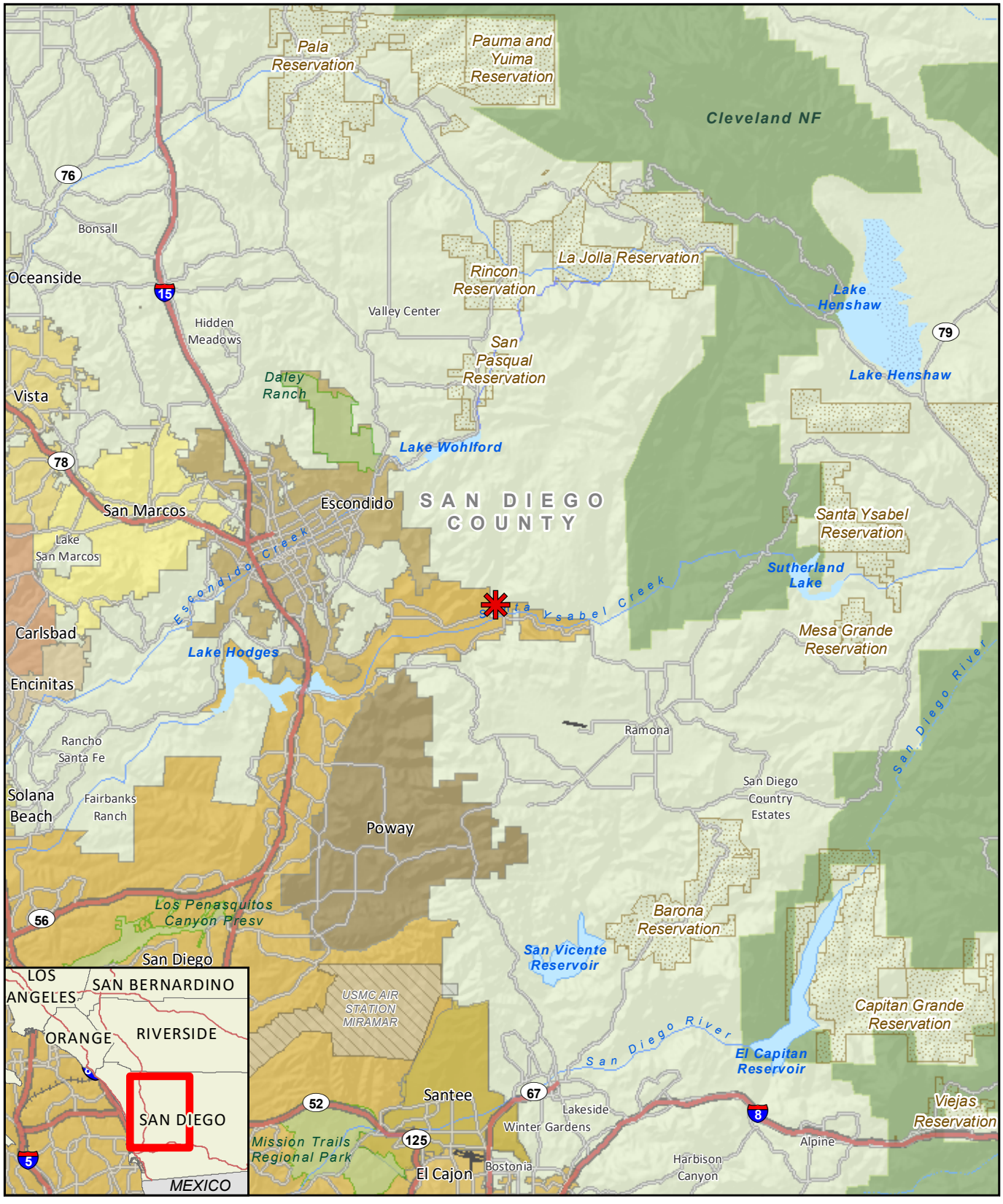


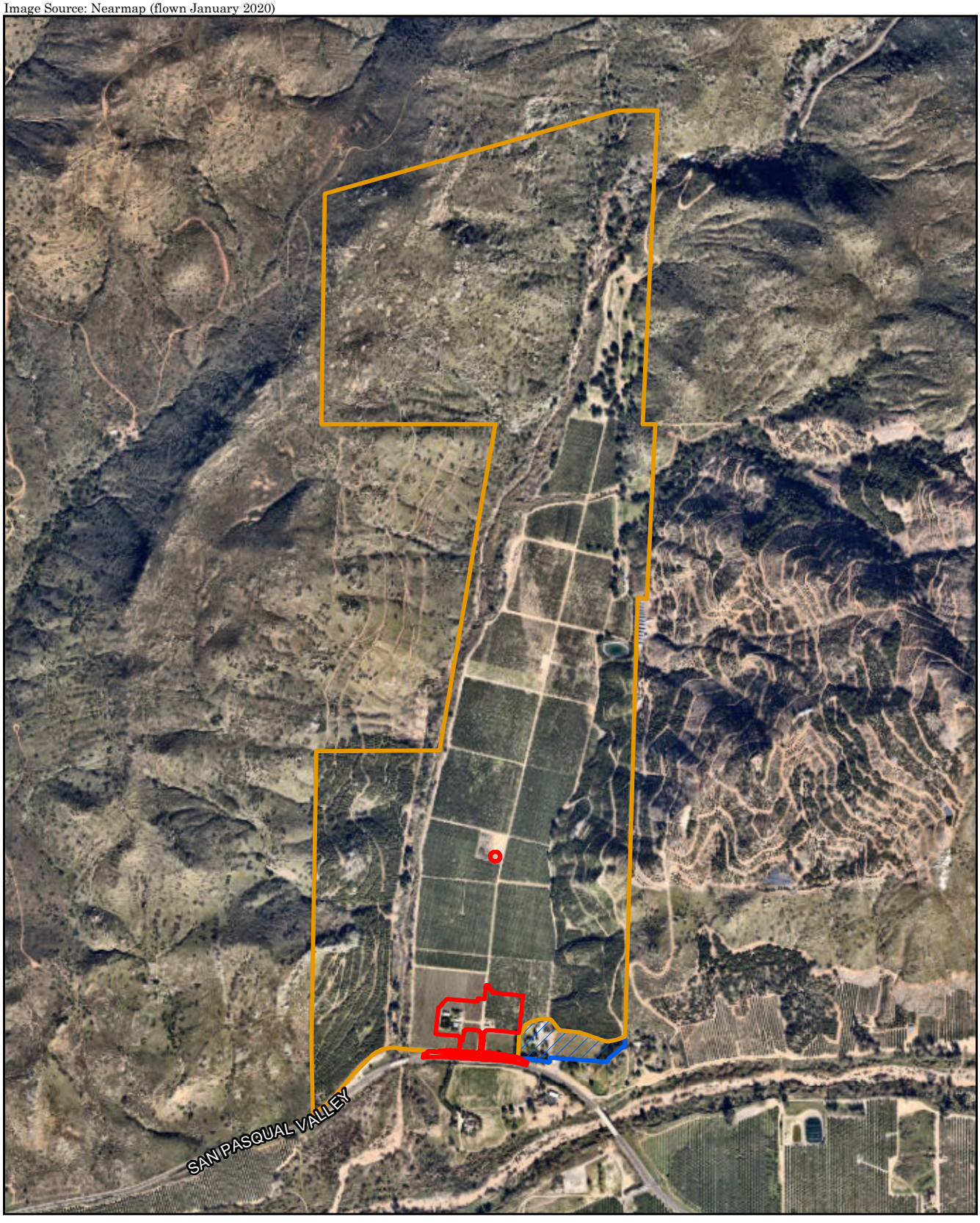
Project Location

RECON

M:\JOBS5\9688\common_gis\fig1.mxd 5/15/2020 lrb

FIGURE 1
Regional Location

Image Source: Nearmap (flown January 2020)



Project Footprint
MUP Boundary
Not A Part (Portion of Existing Admin Permit)

0 Feet 1,200

RECON

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FIGURE 2
Project Location on Aerial Photograph

Image source: Nearmap (flown January 2020)

Site Plan

MUP Boundary

Not A Part (Portion of Existing Admin Permit)

RECON

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FIGURE 3
Site Plan

ATTACHMENTS

ATTACHMENT 1

CalEEMod Output

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

9688 Rancho Guejito Wine Tasting and Event Center

San Diego County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.70	Acre	0.70	30,492.00	0
Parking Lot	110.00	Space	0.99	44,000.00	0
High Turnover (Sit Down Restaurant)	5.90	1000sqft	2.30	5,895.00	0
Quality Restaurant	5.22	1000sqft	2.30	5,219.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 5,895 sf tasting facility (4,283 sf + 1,612 sf expansion)
5,219 event center (1,519 sf building + 3,700 sf barn)
0.7 acres off-site roadway improvements

Construction Phase - 6 month construction schedule

Demolition -

Grading - 5,500 cubic yards import

Architectural Coating - SDAPCD Rule 67.0.1

Vehicle Trips - Winery trips 7 days per week, 10 mile trip length
Event trips 2 days per week, 20 mile trip length

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

Area Coating - SDAPCD Rule 67.0.1

Water And Wastewater - Septic system

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstructionPhase	NumDays	20.00	9.00
tblConstructionPhase	NumDays	10.00	4.00
tblConstructionPhase	NumDays	20.00	9.00
tblConstructionPhase	NumDays	230.00	101.00
tblConstructionPhase	NumDays	20.00	9.00
tblConstructionPhase	PhaseEndDate	1/27/2023	1/12/2023
tblConstructionPhase	PhaseEndDate	2/10/2023	1/18/2023
tblConstructionPhase	PhaseEndDate	3/10/2023	1/31/2023
tblConstructionPhase	PhaseEndDate	1/26/2024	6/21/2023
tblConstructionPhase	PhaseEndDate	3/22/2024	6/21/2023
tblConstructionPhase	PhaseEndDate	2/23/2024	7/4/2023
tblConstructionPhase	PhaseStartDate	1/28/2023	1/13/2023
tblConstructionPhase	PhaseStartDate	2/11/2023	1/19/2023
tblConstructionPhase	PhaseStartDate	3/11/2023	2/1/2023
tblConstructionPhase	PhaseStartDate	2/24/2024	5/25/2023
tblConstructionPhase	PhaseStartDate	1/27/2024	6/22/2023
tblGrading	MaterialImported	0.00	5,500.00
tblLandUse	LotAcreage	0.14	2.30
tblLandUse	LotAcreage	0.12	2.30
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

tblVehicleTrips	CC_TL	6.60	10.00
tblVehicleTrips	CC_TL	6.60	20.00
tblVehicleTrips	CNW_TL	6.60	10.00
tblVehicleTrips	CNW_TL	6.60	20.00
tblVehicleTrips	CW_TL	14.70	10.00
tblVehicleTrips	CW_TL	14.70	20.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	18.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	44.00	0.00
tblVehicleTrips	PR_TP	37.00	100.00
tblVehicleTrips	PR_TP	38.00	100.00
tblVehicleTrips	ST_TR	122.40	46.00
tblVehicleTrips	ST_TR	90.04	46.00
tblVehicleTrips	SU_TR	142.64	46.00
tblVehicleTrips	SU_TR	71.97	46.00
tblVehicleTrips	WD_TR	112.18	46.00
tblVehicleTrips	WD_TR	83.84	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

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

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	8.7809	28.3795	20.2235	0.0770	19.8869	1.2672	21.1541	10.1634	1.1658	11.3293	0.0000	8,094.8817	8,094.8817	1.1972	0.8088	8,365.5800
Maximum	**8.7809**	**28.3795**	**20.2235**	**0.0770**	**19.8869**	**1.2672**	**21.1541**	**10.1634**	**1.1658**	**11.3293**	**0.0000**	**8,094.8817**	**8,094.8817**	**1.1972**	**0.8088**	**8,365.5800**

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	8.7809	28.3795	20.2235	0.0770	19.8869	1.2672	21.1541	10.1634	1.1658	11.3293	0.0000	8,094.8817	8,094.8817	1.1972	0.8088	8,365.5800
Maximum	**8.7809**	**28.3795**	**20.2235**	**0.0770**	**19.8869**	**1.2672**	**21.1541**	**10.1634**	**1.1658**	**11.3293**	**0.0000**	**8,094.8817**	**8,094.8817**	**1.1972**	**0.8088**	**8,365.5800**

	ROG	NOx	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**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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	lb/day										lb/day					
Area	0.3028	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284
Energy	0.0571	0.5195	0.4364	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.3870	623.3870	0.0120	0.0114	627.0915
Mobile	2.1730	2.9383	23.9880	0.0535	5.7571	0.0412	5.7983	1.5336	0.0384	1.5720		5,500.9560	5,500.9560	0.3455	0.2290	5,577.8197
Total	**2.5330**	**3.4579**	**24.4368**	**0.0566**	**5.7571**	**0.0807**	**5.8378**	**1.5336**	**0.0779**	**1.6115**		**6,124.3697**	**6,124.3697**	**0.3575**	**0.2404**	**6,204.9397**

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	0.3028	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284
Energy	0.0571	0.5195	0.4364	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.3870	623.3870	0.0120	0.0114	627.0915
Mobile	2.1730	2.9383	23.9880	0.0535	5.7571	0.0412	5.7983	1.5336	0.0384	1.5720		5,500.9560	5,500.9560	0.3455	0.2290	5,577.8197
Total	**2.5330**	**3.4579**	**24.4368**	**0.0566**	**5.7571**	**0.0807**	**5.8378**	**1.5336**	**0.0779**	**1.6115**		**6,124.3697**	**6,124.3697**	**0.3575**	**0.2404**	**6,204.9397**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	1/12/2023	5	9	
2	Site Preparation	Site Preparation	1/13/2023	1/18/2023	5	4	
3	Grading	Grading	1/19/2023	1/31/2023	5	9	
4	Building Construction	Building Construction	2/1/2023	6/21/2023	5	101	
5	Paving	Paving	6/22/2023	7/4/2023	5	9	
6	Architectural Coating	Architectural Coating	5/25/2023	6/21/2023	5	20	

Acres of Grading (Site Preparation Phase): 6

Acres of Grading (Grading Phase): 9

Acres of Paving: 1.69

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 16,671; Non-Residential Outdoor: 5,557; Striped Parking Area: 4,470 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

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	6	15.00	0.00	23.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	688.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	36.00	14.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

3.2 Demolition - 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					0.5537	0.0000	0.5537	0.0839	0.0000	0.0839			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.5537**	**0.9975**	**1.5512**	**0.0839**	**0.9280**	**1.0118**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	5.4400e-003	0.3478	0.0930	1.5300e-003	0.0447	2.8400e-003	0.0475	0.0123	2.7200e-003	0.0150		169.1573	169.1573	8.5000e-003	0.0269	177.3864
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	0.0592	0.0403	0.4872	1.5800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		162.1806	162.1806	3.8300e-003	4.0900e-003	163.4961
Total	**0.0647**	**0.3881**	**0.5802**	**3.1100e-003**	**0.2363**	**3.8300e-003**	**0.2401**	**0.0631**	**3.6300e-003**	**0.0667**		**331.3380**	**331.3380**	**0.0123**	**0.0310**	**340.8824**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

3.2 Demolition - 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					0.5537	0.0000	0.5537	0.0839	0.0000	0.0839			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.5537**	**0.9975**	**1.5512**	**0.0839**	**0.9280**	**1.0118**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	5.4400e-003	0.3478	0.0930	1.5300e-003	0.0447	2.8400e-003	0.0475	0.0123	2.7200e-003	0.0150		169.1573	169.1573	8.5000e-003	0.0269	177.3864
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	0.0592	0.0403	0.4872	1.5800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		162.1806	162.1806	3.8300e-003	4.0900e-003	163.4961
Total	**0.0647**	**0.3881**	**0.5802**	**3.1100e-003**	**0.2363**	**3.8300e-003**	**0.2401**	**0.0631**	**3.6300e-003**	**0.0667**		**331.3380**	**331.3380**	**0.0123**	**0.0310**	**340.8824**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

3.3 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	0.0711	0.0484	0.5846	1.9000e-003	0.2299	1.1900e-003	0.2311	0.0610	1.1000e-003	0.0621		194.6168	194.6168	4.6000e-003	4.9100e-003	196.1953
Total	**0.0711**	**0.0484**	**0.5846**	**1.9000e-003**	**0.2299**	**1.1900e-003**	**0.2311**	**0.0610**	**1.1000e-003**	**0.0621**		**194.6168**	**194.6168**	**4.6000e-003**	**4.9100e-003**	**196.1953**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

3.3 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	0.0711	0.0484	0.5846	1.9000e-003	0.2299	1.1900e-003	0.2311	0.0610	1.1000e-003	0.0621		194.6168	194.6168	4.6000e-003	4.9100e-003	196.1953
Total	**0.0711**	**0.0484**	**0.5846**	**1.9000e-003**	**0.2299**	**1.1900e-003**	**0.2311**	**0.0610**	**1.1000e-003**	**0.0621**		**194.6168**	**194.6168**	**4.6000e-003**	**4.9100e-003**	**196.1953**

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

3.4 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					7.1685	0.0000	7.1685	3.4377	0.0000	3.4377			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.1685**	**0.7749**	**7.9434**	**3.4377**	**0.7129**	**4.1507**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.1628	10.4033	2.7813	0.0458	1.3370	0.0850	1.4221	0.3665	0.0814	0.4478		5,060.0101	5,060.0101	0.2542	0.8047	5,306.1657
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	0.0592	0.0403	0.4872	1.5800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		162.1806	162.1806	3.8300e-003	4.0900e-003	163.4961
Total	**0.2220**	**10.4436**	**3.2684**	**0.0474**	**1.5286**	**0.0860**	**1.6147**	**0.4173**	**0.0823**	**0.4996**		**5,222.1907**	**5,222.1907**	**0.2580**	**0.8088**	**5,469.6618**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

3.4 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					7.1685	0.0000	7.1685	3.4377	0.0000	3.4377			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.1685**	**0.7749**	**7.9434**	**3.4377**	**0.7129**	**4.1507**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.1628	10.4033	2.7813	0.0458	1.3370	0.0850	1.4221	0.3665	0.0814	0.4478		5,060.0101	5,060.0101	0.2542	0.8047	5,306.1657
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	0.0592	0.0403	0.4872	1.5800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		162.1806	162.1806	3.8300e-003	4.0900e-003	163.4961
Total	**0.2220**	**10.4436**	**3.2684**	**0.0474**	**1.5286**	**0.0860**	**1.6147**	**0.4173**	**0.0823**	**0.4996**		**5,222.1907**	**5,222.1907**	**0.2580**	**0.8088**	**5,469.6618**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0155	0.5818	0.2143	2.6200e-003	0.0858	3.3300e-003	0.0891	0.0247	3.1900e-003	0.0279		282.3799	282.3799	8.5100e-003	0.0410	294.7976
Worker	0.1422	0.0967	1.1693	3.8000e-003	0.4598	2.3800e-003	0.4622	0.1219	2.1900e-003	0.1241		389.2335	389.2335	9.2000e-003	9.8200e-003	392.3906
Total	**0.1577**	**0.6785**	**1.3836**	**6.4200e-003**	**0.5456**	**5.7100e-003**	**0.5513**	**0.1466**	**5.3800e-003**	**0.1520**		**671.6135**	**671.6135**	**0.0177**	**0.0508**	**687.1882**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0155	0.5818	0.2143	2.6200e-003	0.0858	3.3300e-003	0.0891	0.0247	3.1900e-003	0.0279		282.3799	282.3799	8.5100e-003	0.0410	294.7976
Worker	0.1422	0.0967	1.1693	3.8000e-003	0.4598	2.3800e-003	0.4622	0.1219	2.1900e-003	0.1241		389.2335	389.2335	9.2000e-003	9.8200e-003	392.3906
Total	**0.1577**	**0.6785**	**1.3836**	**6.4200e-003**	**0.5456**	**5.7100e-003**	**0.5513**	**0.1466**	**5.3800e-003**	**0.1520**		**671.6135**	**671.6135**	**0.0177**	**0.0508**	**687.1882**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.4920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5247**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	0.0592	0.0403	0.4872	1.5800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		162.1806	162.1806	3.8300e-003	4.0900e-003	163.4961
Total	**0.0592**	**0.0403**	**0.4872**	**1.5800e-003**	**0.1916**	**9.9000e-004**	**0.1926**	**0.0508**	**9.1000e-004**	**0.0517**		**162.1806**	**162.1806**	**3.8300e-003**	**4.0900e-003**	**163.4961**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.4920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5247**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	0.0592	0.0403	0.4872	1.5800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		162.1806	162.1806	3.8300e-003	4.0900e-003	163.4961
Total	**0.0592**	**0.0403**	**0.4872**	**1.5800e-003**	**0.1916**	**9.9000e-004**	**0.1926**	**0.0508**	**9.1000e-004**	**0.0517**		**162.1806**	**162.1806**	**3.8300e-003**	**4.0900e-003**	**163.4961**

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

3.7 Architectural Coating - 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					
Archit. Coating	6.8312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**7.0228**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	0.0276	0.0188	0.2274	7.4000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.3000e-004	0.0241		75.6843	75.6843	1.7900e-003	1.9100e-003	76.2982
Total	**0.0276**	**0.0188**	**0.2274**	**7.4000e-004**	**0.0894**	**4.6000e-004**	**0.0899**	**0.0237**	**4.3000e-004**	**0.0241**		**75.6843**	**75.6843**	**1.7900e-003**	**1.9100e-003**	**76.2982**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

3.7 Architectural Coating - 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					
Archit. Coating	6.8312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**7.0228**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	0.0276	0.0188	0.2274	7.4000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.3000e-004	0.0241		75.6843	75.6843	1.7900e-003	1.9100e-003	76.2982
Total	**0.0276**	**0.0188**	**0.2274**	**7.4000e-004**	**0.0894**	**4.6000e-004**	**0.0899**	**0.0237**	**4.3000e-004**	**0.0241**		**75.6843**	**75.6843**	**1.7900e-003**	**1.9100e-003**	**76.2982**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.1730	2.9383	23.9880	0.0535	5.7571	0.0412	5.7983	1.5336	0.0384	1.5720		5,500.9560	5,500.9560	0.3455	0.2290	5,577.8197
Unmitigated	2.1730	2.9383	23.9880	0.0535	5.7571	0.0412	5.7983	1.5336	0.0384	1.5720		5,500.9560	5,500.9560	0.3455	0.2290	5,577.8197

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	271.17	271.17	271.17	987,059	987,059
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	0.00	240.07	240.07	499,354	499,354
Total	271.17	511.24	511.24	1,486,413	1,486,413

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
High Turnover (Sit Down	10.00	10.00	10.00	8.50	72.50	19.00	100	0	0
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Quality Restaurant	20.00	20.00	20.00	12.00	69.00	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Other Asphalt Surfaces	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Parking Lot	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Quality Restaurant	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164

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	0.0571	0.5195	0.4364	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.3870	623.3870	0.0120	0.0114	627.0915
NaturalGas Unmitigated	0.0571	0.5195	0.4364	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.3870	623.3870	0.0120	0.0114	627.0915

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	2810.54	0.0303	0.2755	0.2315	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.6520	330.6520	6.3400e-003	6.0600e-003	332.6169
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Quality Restaurant	2488.25	0.0268	0.2440	0.2049	1.4600e-003		0.0185	0.0185		0.0185	0.0185		292.7350	292.7350	5.6100e-003	5.3700e-003	294.4746
Total		**0.0571**	**0.5195**	**0.4364**	**3.1100e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**		**623.3870**	**623.3870**	**0.0120**	**0.0114**	**627.0915**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

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					
High Turnover (Sit Down Restaurant)	2.81054	0.0303	0.2755	0.2315	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.6520	330.6520	6.3400e-003	6.0600e-003	332.6169
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Quality Restaurant	2.48825	0.0268	0.2440	0.2049	1.4600e-003		0.0185	0.0185		0.0185	0.0185		292.7350	292.7350	5.6100e-003	5.3700e-003	294.4746
Total		**0.0571**	**0.5195**	**0.4364**	**3.1100e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**		**623.3870**	**623.3870**	**0.0120**	**0.0114**	**627.0915**

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3028	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284
Unmitigated	0.3028	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284

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	0.0374					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1500e-003	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284
Total	**0.3028**	**1.1000e-004**	**0.0124**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0267**	**0.0267**	**7.0000e-005**		**0.0284**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0374					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1500e-003	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284
Total	**0.3028**	**1.1000e-004**	**0.0124**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0267**	**0.0267**	**7.0000e-005**		**0.0284**

7.0 Water Detail

7.1 Mitigation Measures Water

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Winter

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

9688 Rancho Guejito Wine Tasting and Event Center

San Diego County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.70	Acre	0.70	30,492.00	0
Parking Lot	110.00	Space	0.99	44,000.00	0
High Turnover (Sit Down Restaurant)	5.90	1000sqft	2.30	5,895.00	0
Quality Restaurant	5.22	1000sqft	2.30	5,219.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 5,895 sf tasting facility (4,283 sf + 1,612 sf expansion)
5,219 event center (1,519 sf building + 3,700 sf barn)
0.7 acres off-site roadway improvements

Construction Phase - 6 month construction schedule

Demolition -

Grading - 5,500 cubic yards import

Architectural Coating - SDAPCD Rule 67.0.1

Vehicle Trips - Winery trips 7 days per week, 10 mile trip length
Event trips 2 days per week, 20 mile trip length

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

Area Coating - SDAPCD Rule 67.0.1

Water And Wastewater - Septic system

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstructionPhase	NumDays	20.00	9.00
tblConstructionPhase	NumDays	10.00	4.00
tblConstructionPhase	NumDays	20.00	9.00
tblConstructionPhase	NumDays	230.00	101.00
tblConstructionPhase	NumDays	20.00	9.00
tblConstructionPhase	PhaseEndDate	1/27/2023	1/12/2023
tblConstructionPhase	PhaseEndDate	2/10/2023	1/18/2023
tblConstructionPhase	PhaseEndDate	3/10/2023	1/31/2023
tblConstructionPhase	PhaseEndDate	1/26/2024	6/21/2023
tblConstructionPhase	PhaseEndDate	3/22/2024	6/21/2023
tblConstructionPhase	PhaseEndDate	2/23/2024	7/4/2023
tblConstructionPhase	PhaseStartDate	1/28/2023	1/13/2023
tblConstructionPhase	PhaseStartDate	2/11/2023	1/19/2023
tblConstructionPhase	PhaseStartDate	3/11/2023	2/1/2023
tblConstructionPhase	PhaseStartDate	2/24/2024	5/25/2023
tblConstructionPhase	PhaseStartDate	1/27/2024	6/22/2023
tblGrading	MaterialImported	0.00	5,500.00
tblLandUse	LotAcreage	0.14	2.30
tblLandUse	LotAcreage	0.12	2.30
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

tblVehicleTrips	CC_TL	6.60	10.00
tblVehicleTrips	CC_TL	6.60	20.00
tblVehicleTrips	CNW_TL	6.60	10.00
tblVehicleTrips	CNW_TL	6.60	20.00
tblVehicleTrips	CW_TL	14.70	10.00
tblVehicleTrips	CW_TL	14.70	20.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	18.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	44.00	0.00
tblVehicleTrips	PR_TP	37.00	100.00
tblVehicleTrips	PR_TP	38.00	100.00
tblVehicleTrips	ST_TR	122.40	46.00
tblVehicleTrips	ST_TR	90.04	46.00
tblVehicleTrips	SU_TR	142.64	46.00
tblVehicleTrips	SU_TR	71.97	46.00
tblVehicleTrips	WD_TR	112.18	46.00
tblVehicleTrips	WD_TR	83.84	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

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

tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	8.7638	27.9717	20.2606	0.0771	19.8869	1.2672	21.1541	10.1634	1.1658	11.3293	0.0000	8,099.4856	8,099.4856	1.1970	0.8077	8,369.8634
Maximum	**8.7638**	**27.9717**	**20.2606**	**0.0771**	**19.8869**	**1.2672**	**21.1541**	**10.1634**	**1.1658**	**11.3293**	**0.0000**	**8,099.4856**	**8,099.4856**	**1.1970**	**0.8077**	**8,369.8634**

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	8.7638	27.9717	20.2606	0.0771	19.8869	1.2672	21.1541	10.1634	1.1658	11.3293	0.0000	8,099.4856	8,099.4856	1.1970	0.8077	8,369.8634
Maximum	**8.7638**	**27.9717**	**20.2606**	**0.0771**	**19.8869**	**1.2672**	**21.1541**	**10.1634**	**1.1658**	**11.3293**	**0.0000**	**8,099.4856**	**8,099.4856**	**1.1970**	**0.8077**	**8,369.8634**

	ROG	NOx	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**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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	lb/day										lb/day					
Area	0.3028	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284
Energy	0.0571	0.5195	0.4364	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.3870	623.3870	0.0120	0.0114	627.0915
Mobile	2.1862	2.7156	23.9635	0.0560	5.7571	0.0411	5.7982	1.5336	0.0384	1.5720		5,756.3515	5,756.3515	0.3328	0.2180	5,829.6224
Total	**2.5461**	**3.2352**	**24.4124**	**0.0591**	**5.7571**	**0.0807**	**5.8378**	**1.5336**	**0.0779**	**1.6115**		**6,379.7652**	**6,379.7652**	**0.3448**	**0.2294**	**6,456.7423**

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	0.3028	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284
Energy	0.0571	0.5195	0.4364	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.3870	623.3870	0.0120	0.0114	627.0915
Mobile	2.1862	2.7156	23.9635	0.0560	5.7571	0.0411	5.7982	1.5336	0.0384	1.5720		5,756.3515	5,756.3515	0.3328	0.2180	5,829.6224
Total	**2.5461**	**3.2352**	**24.4124**	**0.0591**	**5.7571**	**0.0807**	**5.8378**	**1.5336**	**0.0779**	**1.6115**		**6,379.7652**	**6,379.7652**	**0.3448**	**0.2294**	**6,456.7423**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	1/12/2023	5	9	
2	Site Preparation	Site Preparation	1/13/2023	1/18/2023	5	4	
3	Grading	Grading	1/19/2023	1/31/2023	5	9	
4	Building Construction	Building Construction	2/1/2023	6/21/2023	5	101	
5	Paving	Paving	6/22/2023	7/4/2023	5	9	
6	Architectural Coating	Architectural Coating	5/25/2023	6/21/2023	5	20	

Acres of Grading (Site Preparation Phase): 6

Acres of Grading (Grading Phase): 9

Acres of Paving: 1.69

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 16,671; Non-Residential Outdoor: 5,557; Striped Parking Area: 4,470 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

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

Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38

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	6	15.00	0.00	23.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	688.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	36.00	14.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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

3.2 Demolition - 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					0.5537	0.0000	0.5537	0.0839	0.0000	0.0839			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.5537**	**0.9975**	**1.5512**	**0.0839**	**0.9280**	**1.0118**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	5.7900e-003	0.3343	0.0918	1.5300e-003	0.0447	2.8400e-003	0.0475	0.0123	2.7100e-003	0.0150		168.9931	168.9931	8.5200e-003	0.0269	177.2145
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	0.0531	0.0359	0.5254	1.6800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		171.6967	171.6967	3.7100e-003	3.7900e-003	172.9190
Total	**0.0589**	**0.3702**	**0.6172**	**3.2100e-003**	**0.2363**	**3.8300e-003**	**0.2401**	**0.0631**	**3.6200e-003**	**0.0667**		**340.6898**	**340.6898**	**0.0122**	**0.0307**	**350.1335**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

3.2 Demolition - 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					0.5537	0.0000	0.5537	0.0839	0.0000	0.0839			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**0.5537**	**0.9975**	**1.5512**	**0.0839**	**0.9280**	**1.0118**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

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	5.7900e-003	0.3343	0.0918	1.5300e-003	0.0447	2.8400e-003	0.0475	0.0123	2.7100e-003	0.0150		168.9931	168.9931	8.5200e-003	0.0269	177.2145
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	0.0531	0.0359	0.5254	1.6800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		171.6967	171.6967	3.7100e-003	3.7900e-003	172.9190
Total	**0.0589**	**0.3702**	**0.6172**	**3.2100e-003**	**0.2363**	**3.8300e-003**	**0.2401**	**0.0631**	**3.6200e-003**	**0.0667**		**340.6898**	**340.6898**	**0.0122**	**0.0307**	**350.1335**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

3.3 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	0.0637	0.0430	0.6305	2.0100e-003	0.2299	1.1900e-003	0.2311	0.0610	1.1000e-003	0.0621		206.0361	206.0361	4.4500e-003	4.5500e-003	207.5028
Total	**0.0637**	**0.0430**	**0.6305**	**2.0100e-003**	**0.2299**	**1.1900e-003**	**0.2311**	**0.0610**	**1.1000e-003**	**0.0621**		**206.0361**	**206.0361**	**4.4500e-003**	**4.5500e-003**	**207.5028**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

3.3 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**19.6570**	**1.2660**	**20.9230**	**10.1025**	**1.1647**	**11.2672**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

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	0.0637	0.0430	0.6305	2.0100e-003	0.2299	1.1900e-003	0.2311	0.0610	1.1000e-003	0.0621		206.0361	206.0361	4.4500e-003	4.5500e-003	207.5028
Total	**0.0637**	**0.0430**	**0.6305**	**2.0100e-003**	**0.2299**	**1.1900e-003**	**0.2311**	**0.0610**	**1.1000e-003**	**0.0621**		**206.0361**	**206.0361**	**4.4500e-003**	**4.5500e-003**	**207.5028**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

3.4 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					7.1685	0.0000	7.1685	3.4377	0.0000	3.4377			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129		2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.1685**	**0.7749**	**7.9434**	**3.4377**	**0.7129**	**4.1507**		**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.1731	10.0000	2.7470	0.0457	1.3370	0.0849	1.4219	0.3665	0.0812	0.4477		5,055.0979	5,055.0979	0.2548	0.8039	5,301.0263
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	0.0531	0.0359	0.5254	1.6800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		171.6967	171.6967	3.7100e-003	3.7900e-003	172.9190
Total	**0.2262**	**10.0359**	**3.2724**	**0.0474**	**1.5286**	**0.0859**	**1.6145**	**0.4173**	**0.0821**	**0.4994**		**5,226.7946**	**5,226.7946**	**0.2585**	**0.8077**	**5,473.9453**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

3.4 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					7.1685	0.0000	7.1685	3.4377	0.0000	3.4377			0.0000			0.0000
Off-Road	1.7109	17.9359	14.7507	0.0297		0.7749	0.7749		0.7129	0.7129	0.0000	2,872.6910	2,872.6910	0.9291		2,895.9182
Total	**1.7109**	**17.9359**	**14.7507**	**0.0297**	**7.1685**	**0.7749**	**7.9434**	**3.4377**	**0.7129**	**4.1507**	**0.0000**	**2,872.6910**	**2,872.6910**	**0.9291**		**2,895.9182**

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	0.1731	10.0000	2.7470	0.0457	1.3370	0.0849	1.4219	0.3665	0.0812	0.4477		5,055.0979	5,055.0979	0.2548	0.8039	5,301.0263
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	0.0531	0.0359	0.5254	1.6800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		171.6967	171.6967	3.7100e-003	3.7900e-003	172.9190
Total	**0.2262**	**10.0359**	**3.2724**	**0.0474**	**1.5286**	**0.0859**	**1.6145**	**0.4173**	**0.0821**	**0.4994**		**5,226.7946**	**5,226.7946**	**0.2585**	**0.8077**	**5,473.9453**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0160	0.5580	0.2077	2.6100e-003	0.0858	3.3200e-003	0.0891	0.0247	3.1700e-003	0.0279		281.9398	281.9398	8.5600e-003	0.0409	294.3281
Worker	0.1275	0.0861	1.2609	4.0300e-003	0.4598	2.3800e-003	0.4622	0.1219	2.1900e-003	0.1241		412.0722	412.0722	8.9000e-003	9.1000e-003	415.0056
Total	**0.1435**	**0.6441**	**1.4686**	**6.6400e-003**	**0.5456**	**5.7000e-003**	**0.5513**	**0.1466**	**5.3600e-003**	**0.1520**		**694.0120**	**694.0120**	**0.0175**	**0.0500**	**709.3337**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0160	0.5580	0.2077	2.6100e-003	0.0858	3.3200e-003	0.0891	0.0247	3.1700e-003	0.0279		281.9398	281.9398	8.5600e-003	0.0409	294.3281
Worker	0.1275	0.0861	1.2609	4.0300e-003	0.4598	2.3800e-003	0.4622	0.1219	2.1900e-003	0.1241		412.0722	412.0722	8.9000e-003	9.1000e-003	415.0056
Total	**0.1435**	**0.6441**	**1.4686**	**6.6400e-003**	**0.5456**	**5.7000e-003**	**0.5513**	**0.1466**	**5.3600e-003**	**0.1520**		**694.0120**	**694.0120**	**0.0175**	**0.0500**	**709.3337**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.4920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5247**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	0.0531	0.0359	0.5254	1.6800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		171.6967	171.6967	3.7100e-003	3.7900e-003	172.9190
Total	**0.0531**	**0.0359**	**0.5254**	**1.6800e-003**	**0.1916**	**9.9000e-004**	**0.1926**	**0.0508**	**9.1000e-004**	**0.0517**		**171.6967**	**171.6967**	**3.7100e-003**	**3.7900e-003**	**172.9190**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.4920					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5247**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

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	0.0531	0.0359	0.5254	1.6800e-003	0.1916	9.9000e-004	0.1926	0.0508	9.1000e-004	0.0517		171.6967	171.6967	3.7100e-003	3.7900e-003	172.9190
Total	**0.0531**	**0.0359**	**0.5254**	**1.6800e-003**	**0.1916**	**9.9000e-004**	**0.1926**	**0.0508**	**9.1000e-004**	**0.0517**		**171.6967**	**171.6967**	**3.7100e-003**	**3.7900e-003**	**172.9190**

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

3.7 Architectural Coating - 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					
Archit. Coating	6.8312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**7.0228**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	0.0248	0.0167	0.2452	7.8000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.3000e-004	0.0241		80.1252	80.1252	1.7300e-003	1.7700e-003	80.6955
Total	**0.0248**	**0.0167**	**0.2452**	**7.8000e-004**	**0.0894**	**4.6000e-004**	**0.0899**	**0.0237**	**4.3000e-004**	**0.0241**		**80.1252**	**80.1252**	**1.7300e-003**	**1.7700e-003**	**80.6955**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

3.7 Architectural Coating - 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					
Archit. Coating	6.8312					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**7.0228**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

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	0.0248	0.0167	0.2452	7.8000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.3000e-004	0.0241		80.1252	80.1252	1.7300e-003	1.7700e-003	80.6955
Total	**0.0248**	**0.0167**	**0.2452**	**7.8000e-004**	**0.0894**	**4.6000e-004**	**0.0899**	**0.0237**	**4.3000e-004**	**0.0241**		**80.1252**	**80.1252**	**1.7300e-003**	**1.7700e-003**	**80.6955**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.1862	2.7156	23.9635	0.0560	5.7571	0.0411	5.7982	1.5336	0.0384	1.5720		5,756.3515	5,756.3515	0.3328	0.2180	5,829.6224
Unmitigated	2.1862	2.7156	23.9635	0.0560	5.7571	0.0411	5.7982	1.5336	0.0384	1.5720		5,756.3515	5,756.3515	0.3328	0.2180	5,829.6224

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
High Turnover (Sit Down Restaurant)	271.17	271.17	271.17	987,059	987,059
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	0.00	240.07	240.07	499,354	499,354
Total	271.17	511.24	511.24	1,486,413	1,486,413

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
High Turnover (Sit Down	10.00	10.00	10.00	8.50	72.50	19.00	100	0	0
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

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

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Quality Restaurant	20.00	20.00	20.00	12.00	69.00	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
High Turnover (Sit Down Restaurant)	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Other Asphalt Surfaces	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Parking Lot	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Quality Restaurant	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164

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	0.0571	0.5195	0.4364	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.3870	623.3870	0.0120	0.0114	627.0915
NaturalGas Unmitigated	0.0571	0.5195	0.4364	3.1200e-003		0.0395	0.0395		0.0395	0.0395		623.3870	623.3870	0.0120	0.0114	627.0915

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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	lb/day										lb/day					
High Turnover (Sit Down Restaurant)	2810.54	0.0303	0.2755	0.2315	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.6520	330.6520	6.3400e-003	6.0600e-003	332.6169
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Quality Restaurant	2488.25	0.0268	0.2440	0.2049	1.4600e-003		0.0185	0.0185		0.0185	0.0185		292.7350	292.7350	5.6100e-003	5.3700e-003	294.4746
Total		**0.0571**	**0.5195**	**0.4364**	**3.1100e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**		**623.3870**	**623.3870**	**0.0120**	**0.0114**	**627.0915**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

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

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					
High Turnover (Sit Down Restaurant)	2.81054	0.0303	0.2755	0.2315	1.6500e-003		0.0209	0.0209		0.0209	0.0209		330.6520	330.6520	6.3400e-003	6.0600e-003	332.6169
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
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
Quality Restaurant	2.48825	0.0268	0.2440	0.2049	1.4600e-003		0.0185	0.0185		0.0185	0.0185		292.7350	292.7350	5.6100e-003	5.3700e-003	294.4746
Total		**0.0571**	**0.5195**	**0.4364**	**3.1100e-003**		**0.0395**	**0.0395**		**0.0395**	**0.0395**		**623.3870**	**623.3870**	**0.0120**	**0.0114**	**627.0915**

6.0 Area Detail

6.1 Mitigation Measures Area

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3028	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284
Unmitigated	0.3028	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284

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	0.0374					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1500e-003	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284
Total	**0.3028**	**1.1000e-004**	**0.0124**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0267**	**0.0267**	**7.0000e-005**		**0.0284**

9688 Rancho Guejito Wine Tasting and Event Center - San Diego County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0374					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2642					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1500e-003	1.1000e-004	0.0124	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0267	0.0267	7.0000e-005		0.0284
Total	**0.3028**	**1.1000e-004**	**0.0124**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0267**	**0.0267**	**7.0000e-005**		**0.0284**

7.0 Water Detail

7.1 Mitigation Measures Water

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT 2

Propane Emissions

PROPANE EMISSION CALCULATIONS

Propane Tank Capacity	250	gallons
Number of Tanks	2	tanks
Propane Use Per Year	500	gallons
Days Used Per Year (assuming weekend use only)	104	days
Propane Use Per Day	5	gallons (rounded up)

Pollutant	Emission Factor pounds/1,000 gallons	Emissions pounds/day	Emissions pounds/year	Emissions metric tons/year	GWP	MT CO2E
TOC	1.0	0.005	0.5			
NOx	13.0	0.065	6.5			
CO	7.5	0.0375	3.75			
SO2	1.5	0.0075	0.75			
PM, Filterable	0.2	0.001	0.1			
PM, Condensable	0.5	0.0025	0.25			
PM, Total	0.7	0.0035	0.35			
CO2	12,500	62.5	6,250	2.83	1	2.83
CH4	0.2	0.001	0.1	0.00	28	0.00
N2O	0.9	0.0045	0.45	0.00	265	0.05
						2.89

S, commercial propane	15 gr/100 scf
Pounds per metric ton	2,204.62

Table 1.5-1. EMISSION FACTORS FOR LPG COMBUSTION[a]

EMISSION FACTOR RATING: E

Pollutant	Butane Emission Factor (lb/10^3 gal)		Propane Emission Factor (lb/10^3 gal)	
	Industrial Boilers[b] (SCC 1-02-010-01)	Commercial Boilers[c] (SCC 1-03-010-01)	Industrial Boilers[b] (SCC 1-02-010-02)	Commercial Boilers[c] (SCC 1-03-010-02)
PM, Filterable [d]	0.2	0.2	0.2	0.2
PM, Condensable	0.6	0.6	0.5	0.5
PM, Total	0.8	0.8	0.7	0.7
SO_2[e]	0.09S	0.09S	0.10S	0.10S
NO_x[f]	15	15	13	13
N_2O[g]	0.9	0.9	0.9	0.9
CO_2[h,j]	14,300	14,300	12,500	12,500
CO	8.4	8.4	7.5	7.5
TOC	1.1	1.1	1.0	1.0
CH_4[k]	0.2	0.2	0.2	0.2

[a] Assumes PM, CO, and TOC emissions are the same, on a heat input basis, as for natural gas combustion. Use heat contents of 91.5 x 10^6 Btu/10^3 gallon for propane, 102 x 10^6 Btu/10^3 gallon for butane, 1020 x 10^6 Btu/10^6 scf for methane when calculating an equivalent heat input basis. For example, the equation for converting from methane's emissions factors to propane's emissions factors is as follows: lb pollutant/10^3 gallons of propane = (lb pollutant /10^6 ft^3 methane) * (91.5 x 10^6 Btu/10^3 gallons of propane) / (1020 x 10^6 Btu/10^6 scf of methane). The NO_x emission factors have been multiplied by a correction factor of 1.5, which is the approximate ratio of propane/butane NO_x emissions to natural gas NO_x emissions. To convert from lb/10^3 gal to kg/10^3 L, multiply by 0.12. SCC = Source Classification Code.

[b] Heat input capacities generally between 10 and 100 million Btu/hour.

[c] Heat input capacities generally between 0.3 and 10 million Btu/hour.

[d] Filterable particulate matter (PM) is that PM collected on or prior to the filter of an EPA Method 5 (or equivalent) sampling train. For natural gas, a fuel with similar combustion characteristics, all PM is less than 10 µm in aerodynamic equivalent diameter (PM-10).

[e] S equals the sulfur content expressed in gr/100 ft^3 gas vapor. For example, if the butane sulfur content is 0.18 gr/100 ft^3, the emission factor would be (0.09 x 0.18) = 0.016 lb of SO_2/10^3 gal butane burned.

[f] Expressed as NO_2.

[g] Reference 12.

[h] Assuming 99.5% conversion of fuel carbon to CO_2.

[j] EMISSION FACTOR RATING = C.

[k] Reference 13.