AIR QUALITY and GHG IMPACT ANALYSES

AKASH WINERY EMISSIONS

RIVERSIDE COUNTY, CALIFORNIA

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PROJECT DESCRIPTION

The 19.34-acre project facility is located east of the City of Temecula in the existing wine country at 39730 Calle Contento**.** The project proposes to expand the existing wine tasting/production building of 4,851 square feet (sf) by adding an additional 6,075 sf (total 10,926 sf)**.** In addition, the project will provide 190 parking spaces for automobiles. The facility has plans to host infrequent large events and frequent smaller events and classes.

ATMOSPHERIC SETTING

The climate of the Temecula area, technically called an interior valley subclimate of Southern California's Mediterranean-type climate, is characterized by warm summers, mild winters, infrequent rainfall, moderate afternoon breezes, and generally fair weather. The clouds and fog that form along the area's coastline rarely extend as far inland as San Jacinto Valley, and if they do, they usually burn off quickly after sunrise. The most important weather pattern is associated with the warm season airflow across populated area of the Los Angeles Basin that brings polluted air into western Riverside County late in the afternoon. This transport pattern creates unhealthful air quality when the fringes of this "urban smog cloud" extend to the project site during the summer months.

Temperatures in the project area average a very comfortable 65°F year-round, with warm summer afternoons (95+ degrees) and often cool winter mornings (around 35 degrees). Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April with summers often completely dry. Rainfall in Temecula averages 12.5 inches per year but varies markedly from one year to the next.

Winds are an important parameter in characterizing the air quality environment of a project site because they both determine the regional pattern of air pollution transport and control the local rate of pollution dispersion near a source. Daytime winds are from the NW at 6-8 mph as air moves regionally onshore from the cool Pacific Ocean to the warm Mojave Desert interior of Southern California. These winds allow for good local mixing, but they may bring air pollutants from urbanized coastal areas into interior valleys. Strong thermal convection in the summer in the San Jacinto Valley ultimately dilutes the smog cloud from urbanized development, but the project area is too close to Los Angeles Basin emissions sources to completely escape the regional air quality degradation resulting from the photochemical airborne reactions that create the summer smog and haze throughout the air basin.

Light nocturnal winds result mainly from drainage of cool air off mountains east and south of the San Jacinto Valley toward the valley floor. Such winds are characterized by stagnation and poor local mixing. However, the origin of these winds in unpopulated mountain areas does not generally impair air quality. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the project vicinity.

In addition to winds that control the rate and direction of pollution dispersal, Southern California is notorious for strong temperature inversions that limit the vertical depth through which pollution can be mixed. In summer, coastal areas are characterized by a sharp discontinuity between the cool marine air at the surface and the warm, sinking air aloft within the high-pressure cell over the ocean to the west. This marine/subsidence inversion allows for good local mixing, but acts like a giant lid over the basin.

A second inversion type forms on clear winter nights when cold air off the mountains sinks to the valley floor while the air aloft over the valley remains warm. This forms radiation inversions. These inversions, in conjunction with calm winds, trap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution "hot spots" in heavily developed coastal areas of the basin, there is not enough traffic in inland valleys to cause any winter air pollution problems. Thus, while summers are periods of hazy visibility and occasionally unhealthful air, winter is often a period of spectacular visibility and excellent air quality in the project area.

AIR QUALITY SETTING

AMBIENT AIR QUALITY STANDARDS (AAQS)

In order to gauge the significance of the air quality impacts of the proposed project, those impacts, together with existing background air quality levels, must be compared to the applicable ambient air quality standards. These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect the public health and welfare. They are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors." Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone (the primary ingredient in photochemical smog) may lead to adverse respiratory health even at concentrations close to the ambient standard.

National AAQS were established in 1971 for six pollution species with states retaining the option to add other pollutants, require more stringent compliance, or to include different exposure periods. The initial attainment deadline of 1977 was extended several times in air quality problem areas like Southern California. In 2003, the Environmental Protection Agency (EPA) adopted a rule, which extended and established a new attainment deadline for ozone for the year 2021. Because the State of California had established AAQS several years before the federal action and because of unique air quality problems introduced by the restrictive dispersion meteorology, there is considerable difference between state and national clean air standards. Those standards currently in effect in California are shown in Table 1. Sources and health effects of various pollutants are shown in Table 2.

The Federal Clean Air Act Amendments (CAAA) of 1990 required that the U.S. Environmental Protection Agency (EPA) review all national AAQS in light of currently known health effects. EPA was charged with modifying existing standards or promulgating new ones where appropriate. EPA subsequently developed standards for chronic ozone exposure (8+ hours per day) and for very small diameter particulate matter (called "PM-2.5"). New national AAQS were adopted in 1997 for these pollutants.

Planning and enforcement of the federal standards for PM-2.5 and for ozone (8-hour) were challenged by trucking and manufacturing organizations. In a unanimous decision, the U.S. Supreme Court ruled that EPA did not require specific congressional authorization to adopt national clean air standards. The Court also ruled that health-based standards did not require preparation of a cost-benefit analysis. The Court did find, however, that there was some inconsistency between existing and "new" standards in their required attainment schedules. Such attainment-planning schedule inconsistencies centered mainly on the 8-hour ozone standard. EPA subsequently agreed to downgrade the attainment designation for a large number of communities to “non-attainment” for the 8-hour ozone standard.

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 (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		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/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page …

Table 1 (continued)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, 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 PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, 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 ARB 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 PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ 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 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard 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 ARB 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 $\mu g/m^3$ 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 ARB 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.

Table 2
Health Effects of Major Criteria Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. • Natural events, such as decomposition of organic matter.	• Reduced tolerance for exercise. • Impairment of mental function. • Impairment of fetal development. • Death at high levels of exposure. • Aggravation of some heart diseases (angina).
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust. • High temperature stationary combustion. • Atmospheric reactions.	• Aggravation of respiratory illness. • Reduced visibility. • Reduced plant growth. • Formation of acid rain.
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	• Aggravation of respiratory and cardiovascular diseases. • Irritation of eyes. • Impairment of cardiopulmonary function. • Plant leaf injury.
Lead (Pb)	• Contaminated soil.	• Impairment of blood function and nerve construction. • Behavioral and hearing problems in children.
Respirable Particulate Matter (PM-10)	• Stationary combustion of solid fuels. • Construction activities. • Industrial processes. • Atmospheric chemical reactions.	• Reduced lung function. • Aggravation of the effects of gaseous pollutants. • Aggravation of respiratory and cardio respiratory diseases. • Increased cough and chest discomfort. • Soiling. • Reduced visibility.
Fine Particulate Matter (PM-2.5)	• Fuel combustion in motor vehicles, equipment, and industrial sources. • Residential and agricultural burning. • Industrial processes. • Also, formed from photochemical reactions of other pollutants, including NOx, sulfur oxides, and organics.	• Increases respiratory disease. • Lung damage. • Cancer and premature death. • Reduces visibility and results in surface soiling.
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels. • Smelting of sulfur-bearing metal ores. • Industrial processes.	• Aggravation of respiratory diseases (asthma, emphysema). • Reduced lung function. • Irritation of eyes. • Reduced visibility. • Plant injury. • Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board, 2002.

Evaluation of the most current data on the health effects of inhalation of fine particulate matter prompted the California Air Resources Board (ARB) to recommend adoption of the statewide PM-2.5 standard that is more stringent than the federal standard. This standard was adopted in 2002. The State PM-2.5 standard is more of a goal in that it does not have specific attainment planning requirements like a federal clean air standard, but only requires continued progress towards attainment.

Similarly, the ARB extensively evaluated health effects of ozone exposure. A new state standard for an 8-hour ozone exposure was adopted in 2005, which aligned with the exposure period for the federal 8-hour standard. The California 8-hour ozone standard of 0.07 ppm is more stringent than the federal 8-hour standard of 0.075 ppm. The state standard, however, does not have a specific attainment deadline. California air quality jurisdictions are required to make steady progress towards attaining state standards, but there are no hard deadlines or any consequences of non-attainment. During the same re-evaluation process, the ARB adopted an annual state standard for nitrogen dioxide ($NO_{2)}$ that is more stringent than the corresponding federal standard, and strengthened the state one-hour NO_2 standard.

As part of EPA's 2002 consent decree on clean air standards, a further review of airborne particulate matter (PM) and human health was initiated. A substantial modification of federal clean air standards for PM was promulgated in 2006. Standards for PM-2.5 were strengthened, a new class of PM in the 2.5-to-10-micron size was created, some PM-10 standards were revoked, and a distinction between rural and urban air quality was adopted. In December 2012, the federal annual standard for PM-2.5 was reduced from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ which matches the California AAQS. The severity of the basin's non-attainment status for PM-2.5 may be increased by this action and thus require accelerated planning for future PM-2.5 attainment.

In response to continuing evidence that ozone exposure at levels just meeting federal clean air standards is demonstrably unhealthful, EPA had proposed a further strengthening of the 8-hour standard. A new 8-hour ozone standard was adopted in 2015 after extensive analysis and public input. The adopted national 8-hour ozone standard is 0.07 ppm which matches the current California standard. It will require three years of ambient data collection, then 2 years of non-attainment findings and planning protocol adoption, then several years of plan development and approval. Final air quality plans for the new standard are likely to be adopted around 2022. Ultimate attainment of the new standard in ozone problem areas such as Southern California might be after 2025.

In 2010 a new federal one-hour primary standard for nitrogen dioxide (NO_2) was adopted. This standard is more stringent than the existing state standard. Based upon air quality monitoring data in the South Coast Air Basin, the California Air Resources Board has requested the EPA to designate the basin as being in attainment for this standard. The federal standard for sulfur dioxide (SO_2) was also recently revised. However, with minimal combustion of coal and mandatory use of low sulfur fuels in California, SO_2 is typically not a problem pollutant.

BASELINE AIR QUALITY

Long-term air quality monitoring is carried out by the South Coast Air Quality Management District (SCAQMD) at various monitoring stations. There are no nearby stations that monitor the full spectrum of pollutants. Ozone is monitored at the Temecula-Borel Road monitoring facility. Carbon monoxide, PM-10 and nitrogen oxides are monitored at the Lake Elsinore facility, while 2.5-micron diameter particulate matter (PM-2.5) is measured at the Riverside Roubidoux station. Table 3 summarizes the last four years of monitoring data from a composite of these data resources. The following conclusions can be drawn from this data:

a. Photochemical smog (ozone) levels occasionally exceed standards. The 1-hour state ozone standard has exceeded around one percent of all measured days and the 8-hour federal standard has been exceeded on two percent of all measured days in the past four years. The 8-hour state standard has exceeded five percent of days for the same period. While ozone levels are still a concern, they are much lower than 10 to 20 years ago. Attainment of all clean air standards in the project vicinity is not likely to occur soon, but the severity and frequency of violations is expected to continue to slowly decline during the current decade.

b. Measurements of carbon monoxide have shown very low baseline levels in comparison to the most stringent one- and eight-hour standards.

c. Respirable dust (PM-10) levels and calculated to have exceeded the state standard on approximately two percent of measurement days in the last four years, but the less stringent federal PM-10 standard has not been violated once for the same period.

d. A substantial fraction of PM-10 is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue (PM-2.5). SCAQMD data suggests that approximately 17 percent of all days have exceeded the 24-hour threshold in the past four years. PM-2.5 can be an air quality concern in the project area.

Although complete attainment of every clean air standard is not yet imminent, extrapolation of the steady improvement trend suggests that such attainment could occur within the reasonably near future.

Table 3
Air Quality Monitoring Summary (2018-2021)
(Expected Number of Days Standards Were Exceeded, and Maximum Levels During Such Violations)

Pollutant/Standard	**2018**	**2019**	**2020**	**2021**
1-Hour > 0.09 ppm (S)	2	0	5	1
8-Hour > 0.07 ppm (S)	15	6	37	10
8- Hour > 0.075 ppm (F)	5	2	20	6
Max. 1-Hour Conc. (ppm)	0.107	0.091	0.108	0.095
Max. 8-Hour Conc. (ppm)	0.085	0.079	0.091	0.083
Carbon Monoxide				
1-Hour > 20. ppm (S)	0	0	0	0
1-Hour > 9. ppm (S, F)	0	0	0	0
Max 8-Hour Conc. (ppm)	0.8	0.7	0.7	0.8
Nitrogen Dioxide				
1-Hour > 0.18 ppm (S)	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.04	0.04	0.04	0.04
Respirable Particulates (PM-10)				
24-Hour > 50 $\mu g/m^3$ (S)	9/342	5/301	7/334	4/360
24-Hour > 150 $\mu g/m^3$ (F)	0/342	0/301	0/334	0/360
Max. 24-Hr. Conc. ($\mu g/m^3$)	104.	93.	84.	89.
Fine Particulates (PM-2.5)				
24-Hour > 35 $\mu g/m^3$ (F)	132/356	21/120	4/357	16/121
Max. 24-Hr. Conc. ($\mu g/m^3$)	126.	99.	41.	76.

S=State Standard
F=Federal Standard

Source: South Coast AQMD Temecula-Borel Road Air Monitoring Station for Ozone.
Lake Elsinore Monitoring Station for CO, NO_2, PM-10
Riverside Rubidoux for PM-2.5.
data: www.arb.ca.gov/adam/

AIR QUALITY PLANNING

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. The SCAB could not meet the deadlines for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with air-sheds with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). Substantial reductions in emissions of ROG, NOx and CO are forecast to continue throughout the next several decades. Unless new particulate control programs are implemented, PM-10 and PM-2.5 are forecast to slightly increase.

The Air Quality Management District (AQMD) adopted an updated clean air "blueprint" in August 2003. The 2003 Air Quality Management Plan (AQMP) was approved by the EPA in 2004. The AQMP outlined the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for particulates (PM-10) by 2006. The 2003 AQMP was based upon the federal one-hour ozone standard which was revoked late in 2005 and replaced by an 8-hour federal standard. Because of the revocation of the hourly standard, a new air quality planning cycle was initiated.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was developed. This plan shifted most of the one-hour ozone standard attainment strategies to the 8-hour standard. As previously noted, the attainment date was to "slip" from 2010 to 2021. The updated attainment plan also includes strategies for ultimately meeting the federal PM-2.5 standard.

Because projected attainment by 2021 required control technologies that did not exist yet, the SCAQMD requested a voluntary "bump-up" from a "severe non-attainment" area to an "extreme non-attainment" designation for ozone. The extreme designation was to allow a longer time period for these technologies to develop. If attainment cannot be demonstrated within the specified deadline without relying on "black-box" measures, EPA would have been required to impose sanctions on the region had the bump-up request not been approved. In April 2010, the EPA approved the change in the non-attainment designation from "severe-17" to "extreme." This reclassification set a later attainment deadline (2024), but also required the air basin to adopt even more stringent emissions controls.

In other air quality attainment plan reviews, EPA had disapproved part of the SCAB PM-2.5 attainment plan included in the AQMP. EPA stated that the current attainment plan relied on PM-2.5 control regulations that had not yet been approved or implemented. It was expected that several rules that were pending approval would remove the identified deficiencies. If these issues were not resolved within the next several years, federal funding sanctions for transportation projects could

result. The 2012 AQMP included in the current California State Implementation Plan (SIP) was expected to remedy identified PM-2.5 planning deficiencies.

The federal Clean Air Act requires that non-attainment air basins have EPA approved attainment plans in place. This requirement includes the federal one-hour ozone standard even though that standard was revoked almost ten years ago. There was no approved attainment plan for the one-hour federal standard at the time of revocation. Through a legal quirk, the SCAQMD is now required to develop an AQMP for the long since revoked one-hour federal ozone standard. Because the current SIP for the basin contains a number of control measures for the 8-hour ozone standard that are equally effective for one-hour levels, the 2012 AQMP was believed to satisfy hourly attainment planning requirements.

AQMPs are required to be updated at regular intervals. The 2012 AQMP was adopted in early 2013. An updated 2016 AQMP was adopted by the SCAQMD Board in March 2017. The 2016 AQMD demonstrated the emissions reductions shown in Table 4 compared to the 2012 AQMP.

Table 4
Comparison of Emissions by Major Source Category From 2012 AQMP

Pollutant	Stationary Sources	Mobile Sources
VOC	-12%	-3%
NOx	-13%	-1%
SOx	-34%	-23%
PM2.5	-9%	-7%

*Source 2016 AQMP

SCAQMD has initiated the development of the 2022 AQMP to address the attainment of the 2015 8-hour ozone standard (70 ppb) for South Coast Air Basin and Coachella Valley which will focus on attaining the 70 ppb 8-hour ozone National Ambient Air Quality Standard (NAAQS) by 2037. On-road vehicles and off-road mobile sources represent the largest categories of NOx emissions. Accomplishment of attainment goals requires an approximate 70% reduction in NOx emissions. Large scale transition to zero emission technologies is a key strategy. To this end, Governor Executive Order N-79-20 requires 100 percent EV sales by 2035 for automobiles and short haul drayage trucks. A full transition to EV buses and heavy-duty long-haul trucks is required by 2045.

The proposed project does not directly relate to the AQMP in that there are no specific air quality programs or regulations governing winery projects. Conformity with adopted plans, forecasts and programs relative to population, housing, employment and land use is the primary yardstick by which impact significance of planned growth is determined. The SCAQMD, however, while acknowledging that the AQMP is a growth-accommodating document, does not favor designating regional impacts as less-than-significant just because the proposed development is consistent with regional growth projections. Air quality impact significance for the proposed project has therefore been analyzed on a project-specific basis.

AIR QUALITY IMPACT

STANDARDS OF SIGNIFICANCE

Air quality impacts are considered "significant" if they cause clean air standards to be violated where they are currently met, or if they "substantially" contribute to an existing violation of standards. Any substantial emissions of air contaminants for which there is no safe exposure, or nuisance emissions such as dust or odors, would also be considered a significant impact.

Appendix G of the California CEQA Guidelines offers the following four tests of air quality impact significance. A project would have a potentially significant impact if it:

a) Conflicts with or obstructs implementation of the applicable air quality plan.

b) Results in a cumulatively considerable net increase of any criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard.
c) Exposes sensitive receptors to substantial pollutant concentrations.

d) Creates objectionable odors affecting a substantial number of people.

Primary Pollutants

Air quality impacts generally occur on two scales of motion. Near an individual source of emissions or a collection of sources such as a crowded intersection or parking lot, levels of those pollutants that are emitted in their already unhealthful form will be highest. Carbon monoxide (CO) is an example of such a pollutant. Primary pollutant impacts can generally be evaluated directly in comparison to appropriate clean air standards. Violations of these standards where they are currently met, or a measurable worsening of an existing or future violation, would be considered a significant impact. Many particulates, especially fugitive dust emissions, are also primary pollutants. Because of the non-attainment status of the South Coast Air Basin (SCAB) for PM-10, an aggressive dust control program is required to control fugitive dust during project construction.

Secondary Pollutants

Many pollutants, however, require time to transform from a more benign form to a more unhealthful contaminant. Their impact occurs regionally far from the source. Their incremental regional impact is minute on an individual basis and cannot be quantified except through complex photochemical computer models. Analysis of significance of such emissions is based upon a specified number of emissions (pounds, tons, etc.) even though there is no way to translate those emissions directly into a corresponding ambient air quality impact.

Because of the chemical complexity of primary versus secondary pollutants, the SCAQMD has designated significant emissions levels as surrogates for evaluating regional air quality impact significance independent of chemical transformation processes. Projects with daily emissions that

exceed any of the following emission thresholds are recommended by the SCAQMD to be considered significant under CEQA guidelines.

Table 5
Daily Emissions Thresholds

Pollutant	Construction	Operations
ROG	75	55
NOx	100	55
CO	550	550
PM-10	150	150
PM-2.5	55	55
SOx	150	150
Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

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Lead	3	3

Source: SCAQMD CEQA Air Quality Handbook, November, 1993 Rev.

CONSTRUCTION ACTIVITY IMPACTS

CalEEMod was developed by the SCAQMD to provide a model by which to calculate both construction emissions and operational emissions from a variety of land use projects. It calculates both the daily maximum and annual average emissions for criteria pollutants as well as total or annual greenhouse gas (GHG) emissions.

The project will expand the existing wine tasting/production building by adding 6,075 sf. In addition, the project will provide 190 parking spaces for automobiles.

The project is expected to begin construction/site preparation for the proposed winery facility in the 3rd quarter of 2023. It is estimated that the project will be in full operation in 2024. It is estimated that construction will require 20 worker trips per day and grading would balance on site. Delivery of construction supplies is anticipated to require an average of 15 round trips per day for about 100 working days. Because of the remoteness of the site each round trip was assumed to be 80 miles.

Construction was modeled in CalEEMod2020.4.0 using the construction equipment and schedule for a project of this size as shown in Table 6.

Table 6
Construction Activity Equipment Fleet

Phase Name and Duration	Equipment
Grading (2 days)	1 Grader
	1 Dozer
	2 Loader/Backhoes
Construction (100 days)	1 Crane
	1 Generator Set
	3 Welders
	1 Loader/Backhoe
	1 Forklift
Paving (10 days)	1 Paver
	1 Mixer
	1 Paving Equipment
	1 Loader/Backhoe
	1 Roller

Utilizing this indicated equipment fleet and durations shown in Table 6 the following worst-case daily construction emissions are calculated by CalEEMod and are listed in Table 7.

Table 7
Construction Activity Emissions
Maximum Daily Emissions (pounds/day)

Maximal Construction Emissions	ROG	NOx	CO	SO_2	PM-10	PM-2.5
2023	1.7	15.4	14.0	<0.1	4.0	1.9
2024	8.1	14.8	13.9	0.1	1.8	0.9
SCAQMD Thresholds	75	100	550	150	150	55

Peak daily construction activity emissions are estimated be below SCAQMD CEQA thresholds with active dust suppression (watering at least 3x a day during grading activities).

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year lifetime exposure. The SCAQMD does not generally require the analysis of construction-related diesel emissions relative to health risk due to the short period for which the majority of diesel exhaust would occur. Health risk analyses are typically assessed over a 9-, 30-, or 70-year timeframe and not over a relatively brief construction period due to the lack of health risk associated with such a brief exposure.

OPERATIONAL IMPACTS

Although the project will add an additional 6,075 sf, most of the operational emissions are attributed exclusively to vehicular trips. There may be up to 35 large events per year. A large event has a maximum of 300 guests. Because visitors will be coming from out of town, visitor trip length was increased to a 50-mile one way distance, or 100 miles round trip. In addition, there will be smaller venues. The attendees for these events will be mostly local and so trip length was shortened.

To obtain a worst-case scenario, for the events summarized below it is assumed that the maximum number of permitted guests would attend each event. In addition, the modeling assumes every attendee/guest drives their own single occupant vehicle with no ride-sharing. The summary is shown in Table 9.

Table 9
Winery Associated Mobile Travel Miles

Event	Event Frequency	No. Events per Year	Number Guests	Travel Miles per event	Miles per year
Large Venue	35 per year	35	300	100	1,050,000
Wellness classes	Once a week	52	40	20	41,600
Comedy night	Once a month	12	100	20	24,000
Wine club night	Once a month	12	30	20	7,200
Charity events (5k walks)	Once a month	12	100	20	24,000
Small business booths	Once a month	12	125	20	30,000
Wedding ceremonies	Twice a month	24	125	20	60,000
Live music	Once a week	52	146	20	151,840
Total					1,388,640

Because CalEEMod does not have the flexibility to model events that occur at various intervals and with varying mileage (the program assumes any inputted use occurs every day), an alternate methodology was used to calculate on-road travel emissions, while the remainder of operational emissions such as energy use were modeled in CalEEMod.

The California Air Resources Board (CARB) developed the EMission FACtors (EMFAC) model to calculate statewide or regional emissions inventories by multiplying emissions rates with vehicle activity data from all motor vehicles, including passenger cars to heavy-duty trucks, operating on highways, freeways, and local roads in California.

Emissions were modeled using the EMFAC2021 emission rates for Riverside County for gasoline powered passenger cars for 2024. The data from Table 9 was used. The most impacted event, a large venue, was used to determine daily mileage while the miles per year is used for GHG modeling which is an annual total.

Table 9
Proposed Uses Daily Operational Impacts (2024)

	Operational Emissions (lbs/day)					
Source	**ROG**	**NOx**	**CO**	**SO_2**	**PM-10**	**PM-2.5**
Area	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
Energy	<0.1	0.4	0.4	<0.1	<0.1	<0.1
Mobile	1.7	2.8	56.2	0.2	1.2	0.3
Total	**1.9**	**3.2**	**56.6**	**0.2**	**1.2**	**0.3**
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Source: EMFAC2021for mobile emissions, CalEEMod for area and energy.

The project would not cause any operational emissions to exceed their respective SCAQMD CEQA significance thresholds. Operational emission impacts are judged to be less than significant. No impact mitigation for operational activity emissions is considered necessary to support this finding.

LOCALIZED SIGNIFICANCE THRESHOLDS

The SCAQMD has developed analysis parameters to evaluate ambient air quality on a local level in addition to the more regional emissions-based thresholds of significance. These analysis elements are called Localized Significance Thresholds (LSTs). LSTs were developed in response to Governing Board's Environmental Justice Enhancement Initiative 1-4 and the LST methodology was provisionally adopted in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005.

Use of an LST analysis for a project is optional. For the proposed project, the primary source of possible LST impact would be during construction. LSTs are applicable for a sensitive receptor where it is possible that an individual could remain for 24 hours such as a residence, hospital or convalescent facility.

LSTs are only applicable to the following criteria pollutants: oxides of nitrogen (NOx), carbon monoxide (CO), and particulate matter (PM-10 and PM-2.5). LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

LST screening tables are available for 25, 50, 100, 200- and 500-meter source-receptor distances. The new construction is in the center of the site and more than 300 feet from any adjacent structure. Therefore, the distance of 100 meters was used.

The SCAQMD has issued guidance on applying CalEEMod to LSTs. LST pollutant screening level concentration data is currently published for 1, 2- and 5-acre sites for varying distances. For this project, the most stringent thresholds for a 1-acre site were applied.

The following thresholds and emissions in Table 10 are therefore determined (pounds per day):

Table 10
LST and Project Emissions (pounds/day)

Temecula Valley Construction Thresholds 1 acre/100 meters	**CO**	**NOx**	**PM-10**	**PM-2.5**
LST Threshold	2,176	292	30	8
Max On-Site Emissions				
2023	14	15	4	2
2024	14	15	2	1
Temecula Valley Operational Thresholds	**CO**	**NOx**	**PM-10**	**PM-2.5**
LST Threshold	2,176	292	8	2
Max On-Site Emissions*	56.6	3.2	1.2	0.3

*Emissions for LST are limited to those generated on site and do not include regional emissions

LSTs were compared to the maximum daily construction and operational activities. As seen in Table 9, LST impacts are less-than-significant.

CONSTRUCTION EMISSIONS MINIMIZATION

Construction activities are not anticipated to cause dust emissions to exceed SCAQMD CEQA thresholds. Nevertheless, emissions minimization through enhanced dust control measures is recommended for use because of the non-attainment status of the air basin. Recommended measures include:

Fugitive Dust Control

- Apply soil stabilizers or moisten inactive areas.
- Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically 2-3 times/day).
- Cover all stock piles with tarps at the end of each day or as needed.
- Provide water spray during loading and unloading of earthen materials.
- Minimize in-out traffic from construction zone
- Cover all trucks hauling dirt, sand, or loose material and require all trucks to maintain at least two feet of freeboard
- Sweep streets daily if visible soil material is carried out from the construction site

Similarly, ozone precursor emissions (ROG and NOx) are calculated to be below SCAQMD CEQA thresholds. However, because of the regional non-attainment for photochemical smog, the use of reasonably available control measures for diesel exhaust is recommended. Combustion emissions control options include:

Exhaust Emissions Control

- Utilize well-tuned off-road construction equipment.
- Establish a preference for contractors using Tier 3 or better rated heavy equipment.
- Enforce 5-minute idling limits for both on-road trucks and off-road equipment.

GREENHOUSE GAS EMISSIONS

"Greenhouse gases" (so called because of their role in trapping heat near the surface of the earth) emitted by human activity are implicated in global climate change, commonly referred to as "global warming." These greenhouse gases contribute to an increase in the temperature of the earth's atmosphere by transparency to short wavelength visible sunlight, but near opacity to outgoing terrestrial long wavelength heat radiation in some parts of the infrared spectrum. The principal greenhouse gases (GHGs) are carbon dioxide, methane, nitrous oxide, ozone, and water vapor. For purposes of planning and regulation, Section 15364.5 of the California Code of Regulations defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride. Fossil fuel consumption in the transportation sector (on-road motor vehicles, off-highway mobile sources, and aircraft) is the single largest source of GHG emissions, accounting for approximately half of GHG emissions globally. Industrial and commercial sources are the second largest contributors of GHG emissions with about one-fourth of total emissions.

California has passed several bills and the Governor has signed at least three executive orders regarding greenhouse gases. GHG statues and executive orders (EO) include AB 32, SB 1368, EO S-03-05, EO S-20-06 and EO S-01-07.

AB 32 is one of the most significant pieces of environmental legislation that California has adopted. Among other things, it is designed to maintain California's reputation as a "national and international leader on energy conservation and environmental stewardship." It will have wide-ranging effects on California businesses and lifestyles as well as far reaching effects on other states and countries. A unique aspect of AB 32, beyond its broad and wide-ranging mandatory provisions and dramatic GHG reductions are the short time frames within which it must be implemented. Major components of the AB 32 include:

- Require the monitoring and reporting of GHG emissions beginning with sources or categories of sources that contribute the most to statewide emissions.
- Requires immediate "early action" control programs on the most readily controlled GHG sources.
- Mandates that by 2020, California's GHG emissions be reduced to 1990 levels.
- Forces an overall reduction of GHG gases in California by 25-40%, from business as usual, to be achieved by 2020.
- Must complement efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminants.

Statewide, the framework for developing the implementation of regulations for AB 32 is under way. Maximum GHG reductions are expected to derive from increased vehicle fuel efficiency, from greater use of renewable energy and from increased structural energy efficiency. Additionally, through the California Climate Action Registry (CCAR now called the Climate Action Reserve), general and industry-specific protocols for assessing and reporting GHG emissions have been developed. GHG sources are categorized into direct sources (i.e. company owned) and indirect sources (i.e. not company owned). Direct sources include combustion

emissions from on-and off-road mobile sources, and fugitive emissions. Indirect sources include off-site electricity generation and non-company owned mobile sources.

THRESHOLDS OF SIGNIFICANCE

In response to the requirements of SB97, the State Resources Agency developed guidelines for the treatment of GHG emissions under CEQA. These new guidelines became state laws as part of Title 14 of the California Code of Regulations in March, 2010. The CEQA Appendix G guidelines were modified to include GHG as a required analysis element. A project would have a potentially significant impact if it:

- Generates GHG emissions, directly or indirectly, that may have a significant impact on the environment, or,

- Conflicts with an applicable plan, policy or regulation adopted to reduce GHG emissions.

Section 15064.4 of the Code specifies how significance of GHG emissions is to be evaluated. The process is broken down into quantification of project related GHG emissions, making a determination of significance, and specification of any appropriate mitigation if impacts are found to be potentially significant. At each of these steps, the new GHG guidelines afford the lead agency substantial flexibility.

Emissions identification may be quantitative, qualitative, or based on performance standards. CEQA guidelines allow the lead agency to "select the model or methodology it considers most appropriate." The most common practice for transportation/combustion GHG emissions quantification is to use a computer model such as CalEEMod, as was used in the ensuing analysis.

The significance of those emissions then must be evaluated; the selection of a threshold of significance must take into consideration what level of GHG emissions would be cumulatively considerable. The guidelines are clear that they do not support a zero net emissions threshold. If the lead agency does not have sufficient expertise in evaluating GHG impacts, it may rely on thresholds adopted by an agency with greater expertise.

On December 5, 2008 the SCAQMD Governing Board adopted an Interim quantitative GHG Significance Threshold for industrial projects where the SCAQMD is the lead agency (e.g., stationary source permit projects, rules, plans, etc.) of 10,000 Metric Tons (MT) CO_2 equivalent/year. In September 2010, the SCAQMD CEQA Significance Thresholds GHG Working Group released revisions which recommended a threshold of 3,000 MT CO_2e for all land use projects. This 3,000 MT/year recommendation has been used as a guideline for this analysis. In the absence of an adopted numerical threshold of significance, project related GHG emissions in excess of the guideline level are presumed to trigger a requirement for enhanced GHG reduction at the project level.

PROJECT RELATED GHG EMISSIONS GENERATION

Construction Activity GHG Emissions

During project construction, the CalEEMod predicts that the construction activities will generate the annual CO_2e emissions identified in Table 11.

Table 11
Construction Emissions (Metric Tons CO_2e)

	CO_2e
Year 2024	183.2
Year 2025	92.8
Total	276
Amortized	**9.2**

CalEEMod Output provided in appendix.

SCAQMD GHG emissions policy from construction activities is to amortize emissions over a 30-year lifetime. The amortized level is also provided. GHG impacts from construction are considered individually less-than-significant.

Project Operational GHG Emissions

Except for mobile source emissions which were modeled in EMFAC, operational emissions were derived from CalEEMod. The total operational and annualized construction emissions for the proposed project are identified in Table 12. The project GHG emissions are considered less-than-significant.

Table 12
Operational Emissions
(Metric Tons CO_2e)

Consumption Source	**MT CO_2e**
Area Sources	<0.1
Energy Utilization	143.6
Mobile Source*	436.2
Solid Waste Generation	2.8
Water Consumption	7.0
Construction	9.2
Total	**598.8**
Guideline Threshold	3,000

*EMFAC

CONSISTENCY WITH GHG PLANS, PROGRAMS AND POLICIES

Riverside County has prepared an Environmental Impact Report (EIR No. 524) assessing the potential direct and indirect impacts resulting from the Temecula Valley Wine Country Community Plan. The EIR, approved in 2014, analyzed GHG impacts due to the construction and operation of public and private improvements, such as wineries. The Board of Supervisors subsequently adopted Ordinance No. 348.4818 to update the Wine Country Zones to improve the Community Plan's implementation in 2015. Part of this update included a Greenhouse Gas Reduction Workbook.

In this workbook, the County determined that there are three appropriate numeric thresholds to determine the GHG significance of a project. Specifically, GHG emissions can be compared to the following three thresholds:

✓ Mass Emissions. A threshold of 3,000 MTCO2e per year is adopted from the recommended SCAQMD's Interim Thresholds document for commercial, residential, mixed use, and industrial development projects; projects below this threshold are considered less than significant.

✓Per Capita Average Emissions. A threshold of 4.1 MT per year per person, adopted from the SCAQMD efficiency-based standard, is most applicable to larger projects, such as subdivisions and other projects of potential regional influence. The threshold is calculated on an emission rate per population or employee (service population) projected for Year 2035; developments which achieve emissions below this threshold are considered less than significant.

✓Reductions Consistent with State Goals. A threshold of 28.5% below Business As Usual (BAU) emissions from future development projects. Project-specific emissions are calculated and compared to similar hypothetical developments; if an implementing project achieves a reduction of at least 28.5% with incorporation of mandatory and voluntary measures, it is considered less than significant.

If a project prefers to opt out of performing a CEQA review, the workbook includes alternatives. Rather than performing a CEQA analysis, option tables were created to assist in the analysis of GHG performance based on AB 32 targets and contain measures to reduce GHG emissions at least 28.5% below Business-as-Usual emissions. Individual projects have the option to use these tables to demonstrate that GHG emissions should be considered exempt from CEQA.

The tables assign points for specific GHG reducing strategy incorporated into a project typically as a project design feature. The point values correspond to the minimum emissions reduction expected from each feature, including those mandated as mitigation measures in the county's EIR No. 524 and by CALGreen Building Codes. Projects which implement enough reduction measures are assumed to be less than significant.

However, as discussed, this project utilized the interim SCAQMD threshold of 3,000 MT per year to determine GHG significance status. Since the project does not exceed this threshold, GHG impacts are less-than-significant.

CALEEMOD2020.4.0 COMPUTER MODEL OUTPUT

- **DAILY EMISISONS**

- **ANNUAL EMISSIONS**

Akash Winery - Riverside-South Coast County, Summer

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

Akash Winery

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Quality Restaurant	6.08	1000sqft	0.14	6,075.00	0
Parking Lot	190.00	Space	1.71	76,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - shortened durations as per winery intruction. Default 200 days construction, used 100

Trips and VMT - 20 worker trips per day, worker trip length increased to 80 miles round trip

Construction Off-road Equipment Mitigation -

Vehicle Trips - 100 miles round trip, 300 trips=trip rate 49.39 per tsf

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	100.00
tblConstructionPhase	NumDays	4.00	2.00
tblConstructionPhase	PhaseEndDate	7/18/2024	2/29/2024

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

tblConstructionPhase	PhaseEndDate	6/20/2024	2/1/2024
tblConstructionPhase	PhaseEndDate	9/14/2023	9/12/2023
tblConstructionPhase	PhaseEndDate	7/4/2024	2/15/2024
tblConstructionPhase	PhaseStartDate	7/5/2024	2/16/2024
tblConstructionPhase	PhaseStartDate	6/21/2024	2/2/2024
tblGrading	AcresOfGrading	2.00	4.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripNumber	13.00	15.00
tblTripsAndVMT	VendorTripNumber	0.00	15.00
tblTripsAndVMT	VendorTripNumber	0.00	15.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	34.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	7.00	20.00
tblVehicleTrips	ST_TR	90.04	1.00
tblVehicleTrips	SU_TR	71.97	1.00
tblVehicleTrips	WD_TR	83.84	1.00

2.0 Emissions Summary

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6712	15.4609	14.0081	0.0517	8.3666	0.6054	8.9720	3.5985	0.5570	4.1555	0.0000	5,132.8531	5,132.8531	0.6500	0.4349	5,271.7052
2024	8.0671	14.8167	13.8515	0.0512	1.3333	0.4996	1.8329	0.3784	0.4817	0.8600	0.0000	5,081.5711	5,081.5711	0.4422	0.4273	5,217.9952
Maximum	**8.0671**	**15.4609**	**14.0081**	**0.0517**	**8.3666**	**0.6054**	**8.9720**	**3.5985**	**0.5570**	**4.1555**	**0.0000**	**5,132.8531**	**5,132.8531**	**0.6500**	**0.4349**	**5,271.7052**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	1.6712	15.4609	14.0081	0.0517	3.3994	0.6054	4.0048	1.4396	0.5570	1.9966	0.0000	5,132.8531	5,132.8531	0.6500	0.4349	5,271.7052
2024	8.0671	14.8167	13.8515	0.0512	1.3333	0.4996	1.8329	0.3784	0.4817	0.8600	0.0000	5,081.5711	5,081.5711	0.4422	0.4273	5,217.9952
Maximum	**8.0671**	**15.4609**	**14.0081**	**0.0517**	**3.3994**	**0.6054**	**4.0048**	**1.4396**	**0.5570**	**1.9966**	**0.0000**	**5,132.8531**	**5,132.8531**	**0.6500**	**0.4349**	**5,271.7052**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	51.21	0.00	45.97	54.29	0.00	43.05	0.00	0.00	0.00	0.00	0.00	0.00

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1703	1.8000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0429	0.0429	1.1000e-004		0.0457
Energy	0.0489	0.4449	0.3737	2.6700e-003		0.0338	0.0338		0.0338	0.0338		533.8951	533.8951	0.0102	9.7900e-003	537.0678
Mobile	0.0143	0.0133	0.0941	1.9000e-004	0.0183	1.5000e-004	0.0184	4.8800e-003	1.4000e-004	5.0200e-003		18.8985	18.8985	1.2400e-003	1.0500e-003	19.2437
Total	**0.2335**	**0.4584**	**0.4878**	**2.8600e-003**	**0.0183**	**0.0340**	**0.0523**	**4.8800e-003**	**0.0340**	**0.0389**		**552.8365**	**552.8365**	**0.0116**	**0.0108**	**556.3572**

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	0.1703	1.8000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0429	0.0429	1.1000e-004		0.0457
Energy	0.0489	0.4449	0.3737	2.6700e-003		0.0338	0.0338		0.0338	0.0338		533.8951	533.8951	0.0102	9.7900e-003	537.0678
Mobile	0.0143	0.0133	0.0941	1.9000e-004	0.0183	1.5000e-004	0.0184	4.8800e-003	1.4000e-004	5.0200e-003		18.8985	18.8985	1.2400e-003	1.0500e-003	19.2437
Total	**0.2335**	**0.4584**	**0.4878**	**2.8600e-003**	**0.0183**	**0.0340**	**0.0523**	**4.8800e-003**	**0.0340**	**0.0389**		**552.8365**	**552.8365**	**0.0116**	**0.0108**	**556.3572**

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	9/11/2023	9/12/2023	5	2	
2	Building Construction	Building Construction	9/15/2023	2/1/2024	5	100	
3	Paving	Paving	2/2/2024	2/15/2024	5	10	
4	Architectural Coating	Architectural Coating	2/16/2024	2/29/2024	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.71

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,113; Non-Residential Outdoor: 3,038; Striped Parking Area: 4,560 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42

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

Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	1	7.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	20.00	0.00	0.00	14.70	80.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	20.00	15.00	0.00	14.70	80.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	20.00	15.00	0.00	14.70	80.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	15.00	0.00	14.70	80.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

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

3.2 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					8.1431	0.0000	8.1431	3.5393	0.0000	3.5393			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**8.1431**	**0.6044**	**8.7474**	**3.5393**	**0.5560**	**4.0953**		**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

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	0.0730	0.0451	0.7317	1.9700e-003	0.2236	1.0500e-003	0.2246	0.0593	9.6000e-004	0.0603		198.7481	198.7481	4.5900e-003	4.6900e-003	200.2612
Total	**0.0730**	**0.0451**	**0.7317**	**1.9700e-003**	**0.2236**	**1.0500e-003**	**0.2246**	**0.0593**	**9.6000e-004**	**0.0603**		**198.7481**	**198.7481**	**4.5900e-003**	**4.6900e-003**	**200.2612**

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

3.2 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.1758	0.0000	3.1758	1.3803	0.0000	1.3803			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**3.1758**	**0.6044**	**3.7802**	**1.3803**	**0.5560**	**1.9363**	**0.0000**	**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

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	0.0730	0.0451	0.7317	1.9700e-003	0.2236	1.0500e-003	0.2246	0.0593	9.6000e-004	0.0603		198.7481	198.7481	4.5900e-003	4.6900e-003	200.2612
Total	**0.0730**	**0.0451**	**0.7317**	**1.9700e-003**	**0.2236**	**1.0500e-003**	**0.2246**	**0.0593**	**9.6000e-004**	**0.0603**		**198.7481**	**198.7481**	**4.5900e-003**	**4.6900e-003**	**200.2612**

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

3.3 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	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**		**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

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	0.0749	3.7054	0.6653	0.0277	1.1097	0.0483	1.1581	0.3191	0.0463	0.3653		2,932.3173	2,932.3173	0.0254	0.4302	3,061.1583
Worker	0.0730	0.0451	0.7317	1.9700e-003	0.2236	1.0500e-003	0.2246	0.0593	9.6000e-004	0.0603		198.7481	198.7481	4.5900e-003	4.6900e-003	200.2612
Total	**0.1479**	**3.7505**	**1.3970**	**0.0296**	**1.3333**	**0.0494**	**1.3827**	**0.3784**	**0.0472**	**0.4256**		**3,131.0654**	**3,131.0654**	**0.0300**	**0.4349**	**3,261.4194**

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

3.3 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	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**	**0.0000**	**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

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	0.0749	3.7054	0.6653	0.0277	1.1097	0.0483	1.1581	0.3191	0.0463	0.3653		2,932.3173	2,932.3173	0.0254	0.4302	3,061.1583
Worker	0.0730	0.0451	0.7317	1.9700e-003	0.2236	1.0500e-003	0.2246	0.0593	9.6000e-004	0.0603		198.7481	198.7481	4.5900e-003	4.6900e-003	200.2612
Total	**0.1479**	**3.7505**	**1.3970**	**0.0296**	**1.3333**	**0.0494**	**1.3827**	**0.3784**	**0.0472**	**0.4256**		**3,131.0654**	**3,131.0654**	**0.0300**	**0.4349**	**3,261.4194**

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

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**		**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

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	0.0728	3.7127	0.6503	0.0272	1.1097	0.0480	1.1577	0.3191	0.0460	0.3650		2,887.2283	2,887.2283	0.0266	0.4229	3,013.9145
Worker	0.0681	0.0402	0.6840	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		192.4214	192.4214	4.1600e-003	4.3600e-003	193.8244
Total	**0.1408**	**3.7529**	**1.3343**	**0.0291**	**1.3333**	**0.0490**	**1.3823**	**0.3784**	**0.0469**	**0.4252**		**3,079.6497**	**3,079.6497**	**0.0308**	**0.4273**	**3,207.7389**

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

3.3 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**	**0.0000**	**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

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	0.0728	3.7127	0.6503	0.0272	1.1097	0.0480	1.1577	0.3191	0.0460	0.3650		2,887.2283	2,887.2283	0.0266	0.4229	3,013.9145
Worker	0.0681	0.0402	0.6840	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		192.4214	192.4214	4.1600e-003	4.3600e-003	193.8244
Total	**0.1408**	**3.7529**	**1.3343**	**0.0291**	**1.3333**	**0.0490**	**1.3823**	**0.3784**	**0.0469**	**0.4252**		**3,079.6497**	**3,079.6497**	**0.0308**	**0.4273**	**3,207.7389**

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

3.4 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.4480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0660**	**5.8607**	**8.8253**	**0.0136**		**0.2810**	**0.2810**		**0.2594**	**0.2594**		**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

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	0.0728	3.7127	0.6503	0.0272	1.1097	0.0480	1.1577	0.3191	0.0460	0.3650		2,887.2283	2,887.2283	0.0266	0.4229	3,013.9145
Worker	0.0681	0.0402	0.6840	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		192.4214	192.4214	4.1600e-003	4.3600e-003	193.8244
Total	**0.1408**	**3.7529**	**1.3343**	**0.0291**	**1.3333**	**0.0490**	**1.3823**	**0.3784**	**0.0469**	**0.4252**		**3,079.6497**	**3,079.6497**	**0.0308**	**0.4273**	**3,207.7389**

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

3.4 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.4480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0660**	**5.8607**	**8.8253**	**0.0136**		**0.2810**	**0.2810**		**0.2594**	**0.2594**	**0.0000**	**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

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	0.0728	3.7127	0.6503	0.0272	1.1097	0.0480	1.1577	0.3191	0.0460	0.3650		2,887.2283	2,887.2283	0.0266	0.4229	3,013.9145
Worker	0.0681	0.0402	0.6840	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		192.4214	192.4214	4.1600e-003	4.3600e-003	193.8244
Total	**0.1408**	**3.7529**	**1.3343**	**0.0291**	**1.3333**	**0.0490**	**1.3823**	**0.3784**	**0.0469**	**0.4252**		**3,079.6497**	**3,079.6497**	**0.0308**	**0.4273**	**3,207.7389**

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

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.7456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**7.9263**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	0.0728	3.7127	0.6503	0.0272	1.1097	0.0480	1.1577	0.3191	0.0460	0.3650		2,887.2283	2,887.2283	0.0266	0.4229	3,013.9145
Worker	0.0681	0.0402	0.6840	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		192.4214	192.4214	4.1600e-003	4.3600e-003	193.8244
Total	**0.1408**	**3.7529**	**1.3343**	**0.0291**	**1.3333**	**0.0490**	**1.3823**	**0.3784**	**0.0469**	**0.4252**		**3,079.6497**	**3,079.6497**	**0.0308**	**0.4273**	**3,207.7389**

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

3.5 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	7.7456					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**7.9263**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

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	0.0728	3.7127	0.6503	0.0272	1.1097	0.0480	1.1577	0.3191	0.0460	0.3650		2,887.2283	2,887.2283	0.0266	0.4229	3,013.9145
Worker	0.0681	0.0402	0.6840	1.9000e-003	0.2236	1.0000e-003	0.2246	0.0593	9.2000e-004	0.0602		192.4214	192.4214	4.1600e-003	4.3600e-003	193.8244
Total	**0.1408**	**3.7529**	**1.3343**	**0.0291**	**1.3333**	**0.0490**	**1.3823**	**0.3784**	**0.0469**	**0.4252**		**3,079.6497**	**3,079.6497**	**0.0308**	**0.4273**	**3,207.7389**

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0143	0.0133	0.0941	1.9000e-004	0.0183	1.5000e-004	0.0184	4.8800e-003	1.4000e-004	5.0200e-003		18.8985	18.8985	1.2400e-003	1.0500e-003	19.2437
Unmitigated	0.0143	0.0133	0.0941	1.9000e-004	0.0183	1.5000e-004	0.0184	4.8800e-003	1.4000e-004	5.0200e-003		18.8985	18.8985	1.2400e-003	1.0500e-003	19.2437

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	6.08	6.08	6.08	8,649	8,649
Total	6.08	6.08	6.08	8,649	8,649

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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44

4.4 Fleet Mix

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

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Quality Restaurant	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

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	0.0489	0.4449	0.3737	2.6700e-003		0.0338	0.0338		0.0338	0.0338		533.8951	533.8951	0.0102	9.7900e-003	537.0678
NaturalGas Unmitigated	0.0489	0.4449	0.3737	2.6700e-003		0.0338	0.0338		0.0338	0.0338		533.8951	533.8951	0.0102	9.7900e-003	537.0678

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
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	4538.11	0.0489	0.4449	0.3737	2.6700e-003		0.0338	0.0338		0.0338	0.0338		533.8951	533.8951	0.0102	9.7900e-003	537.0678
Total		**0.0489**	**0.4449**	**0.3737**	**2.6700e-003**		**0.0338**	**0.0338**		**0.0338**	**0.0338**		**533.8951**	**533.8951**	**0.0102**	**9.7900e-003**	**537.0678**

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					
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	4.53811	0.0489	0.4449	0.3737	2.6700e-003		0.0338	0.0338		0.0338	0.0338		533.8951	533.8951	0.0102	9.7900e-003	537.0678
Total		**0.0489**	**0.4449**	**0.3737**	**2.6700e-003**		**0.0338**	**0.0338**		**0.0338**	**0.0338**		**533.8951**	**533.8951**	**0.0102**	**9.7900e-003**	**537.0678**

6.0 Area Detail

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

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1703	1.8000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0429	0.0429	1.1000e-004		0.0457
Unmitigated	0.1703	1.8000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0429	0.0429	1.1000e-004		0.0457

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	0.0212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8500e-003	1.8000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0429	0.0429	1.1000e-004		0.0457
Total	**0.1703**	**1.8000e-004**	**0.0200**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0429**	**0.0429**	**1.1000e-004**		**0.0457**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0212					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1472					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.8500e-003	1.8000e-004	0.0200	0.0000		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		0.0429	0.0429	1.1000e-004		0.0457
Total	**0.1703**	**1.8000e-004**	**0.0200**	**0.0000**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**		**0.0429**	**0.0429**	**1.1000e-004**		**0.0457**

7.0 Water Detail

7.1 Mitigation Measures Water

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Akash Winery - Riverside-South Coast County, Annual

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

Akash Winery

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Quality Restaurant	6.08	1000sqft	0.14	6,075.00	0
Parking Lot	190.00	Space	1.71	76,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - shortened durations as per winery intruction. Default 200 days construction, used 100

Trips and VMT - 20 worker trips per day, worker trip length increased to 80 miles round trip

Construction Off-road Equipment Mitigation -

Vehicle Trips - 100 miles round trip, 300 trips=trip rate 49.39 per tsf

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	200.00	100.00
tblConstructionPhase	NumDays	4.00	2.00
tblConstructionPhase	PhaseEndDate	7/18/2024	2/29/2024

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

tblConstructionPhase	PhaseEndDate	6/20/2024	2/1/2024
tblConstructionPhase	PhaseEndDate	9/14/2023	9/12/2023
tblConstructionPhase	PhaseEndDate	7/4/2024	2/15/2024
tblConstructionPhase	PhaseStartDate	7/5/2024	2/16/2024
tblConstructionPhase	PhaseStartDate	6/21/2024	2/2/2024
tblGrading	AcresOfGrading	2.00	4.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripLength	6.90	80.00
tblTripsAndVMT	VendorTripNumber	13.00	15.00
tblTripsAndVMT	VendorTripNumber	0.00	15.00
tblTripsAndVMT	VendorTripNumber	0.00	15.00
tblTripsAndVMT	WorkerTripNumber	10.00	20.00
tblTripsAndVMT	WorkerTripNumber	34.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	20.00
tblTripsAndVMT	WorkerTripNumber	7.00	20.00
tblVehicleTrips	ST_TR	90.04	1.00
tblVehicleTrips	SU_TR	71.97	1.00
tblVehicleTrips	WD_TR	83.84	1.00

2.0 Emissions Summary

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0646	0.6104	0.5376	1.9800e-003	0.0583	0.0220	0.0803	0.0178	0.0212	0.0390	0.0000	178.4334	178.4334	0.0133	0.0150	183.2412
2024	0.0649	0.2556	0.2306	9.9000e-004	0.0289	8.2000e-003	0.0371	8.2200e-003	7.8500e-003	0.0161	0.0000	90.1475	90.1475	6.1800e-003	8.5400e-003	92.8458
Maximum	**0.0649**	**0.6104**	**0.5376**	**1.9800e-003**	**0.0583**	**0.0220**	**0.0803**	**0.0178**	**0.0212**	**0.0390**	**0.0000**	**178.4334**	**178.4334**	**0.0133**	**0.0150**	**183.2412**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.0646	0.6104	0.5376	1.9800e-003	0.0533	0.0220	0.0754	0.0156	0.0212	0.0369	0.0000	178.4333	178.4333	0.0133	0.0150	183.2411
2024	0.0649	0.2556	0.2306	9.9000e-004	0.0289	8.2000e-003	0.0371	8.2200e-003	7.8500e-003	0.0161	0.0000	90.1474	90.1474	6.1800e-003	8.5400e-003	92.8458
Maximum	**0.0649**	**0.6104**	**0.5376**	**1.9800e-003**	**0.0533**	**0.0220**	**0.0754**	**0.0156**	**0.0212**	**0.0369**	**0.0000**	**178.4333**	**178.4333**	**0.0133**	**0.0150**	**183.2411**

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**5.70**	**0.00**	**4.23**	**8.30**	**0.00**	**3.92**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-11-2023	12-10-2023	0.5487	0.5487
2	12-11-2023	3-10-2024	0.4407	0.4407
		Highest	0.5487	0.5487

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0310	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8700e-003	4.8700e-003	1.0000e-005	0.0000	5.1800e-003
Energy	8.9300e-003	0.0812	0.0682	4.9000e-004		6.1700e-003	6.1700e-003		6.1700e-003	6.1700e-003	0.0000	142.8413	142.8413	6.2900e-003	2.1800e-003	143.6475
Mobile	2.1400e-003	2.5700e-003	0.0163	3.0000e-005	3.2700e-003	3.0000e-005	3.3000e-003	8.7000e-004	3.0000e-005	9.0000e-004	0.0000	2.9507	2.9507	2.1000e-004	1.8000e-004	3.0093
Waste						0.0000	0.0000		0.0000	0.0000	1.1266	0.0000	1.1266	0.0666	0.0000	2.7911
Water						0.0000	0.0000		0.0000	0.0000	0.5855	4.4937	5.0792	0.0605	1.4700e-003	7.0289
Total	**0.0420**	**0.0838**	**0.0870**	**5.2000e-004**	**3.2700e-003**	**6.2100e-003**	**9.4800e-003**	**8.7000e-004**	**6.2100e-003**	**7.0800e-003**	**1.7121**	**150.2906**	**152.0027**	**0.1336**	**3.8300e-003**	**156.4819**

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0310	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8700e-003	4.8700e-003	1.0000e-005	0.0000	5.1800e-003
Energy	8.9300e-003	0.0812	0.0682	4.9000e-004		6.1700e-003	6.1700e-003		6.1700e-003	6.1700e-003	0.0000	142.8413	142.8413	6.2900e-003	2.1800e-003	143.6475
Mobile	2.1400e-003	2.5700e-003	0.0163	3.0000e-005	3.2700e-003	3.0000e-005	3.3000e-003	8.7000e-004	3.0000e-005	9.0000e-004	0.0000	2.9507	2.9507	2.1000e-004	1.8000e-004	3.0093
Waste						0.0000	0.0000		0.0000	0.0000	1.1266	0.0000	1.1266	0.0666	0.0000	2.7911
Water						0.0000	0.0000		0.0000	0.0000	0.5855	4.4937	5.0792	0.0605	1.4700e-003	7.0289
Total	**0.0420**	**0.0838**	**0.0870**	**5.2000e-004**	**3.2700e-003**	**6.2100e-003**	**9.4800e-003**	**8.7000e-004**	**6.2100e-003**	**7.0800e-003**	**1.7121**	**150.2906**	**152.0027**	**0.1336**	**3.8300e-003**	**156.4819**

	ROG	NOx	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	Grading	Grading	9/11/2023	9/12/2023	5	2	
2	Building Construction	Building Construction	9/15/2023	2/1/2024	5	100	
3	Paving	Paving	2/2/2024	2/15/2024	5	10	

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

4	Architectural Coating	Architectural Coating	2/16/2024	2/29/2024	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 1.71

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 9,113; Non-Residential Outdoor: 3,038; Striped Parking Area: 4,560 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	4	20.00	0.00	0.00	14.70	80.00	20.00	LD_Mix	HDT_Mix	HHDT

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

Building Construction	7	20.00	15.00	0.00	14.70	80.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	20.00	15.00	0.00	14.70	80.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	15.00	0.00	14.70	80.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.1400e-003	0.0000	8.1400e-003	3.5400e-003	0.0000	3.5400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	0.0145	8.7000e-003	2.0000e-005		6.0000e-004	6.0000e-004		5.6000e-004	5.6000e-004	0.0000	1.8104	1.8104	5.9000e-004	0.0000	1.8250
Total	**1.3300e-003**	**0.0145**	**8.7000e-003**	**2.0000e-005**	**8.1400e-003**	**6.0000e-004**	**8.7400e-003**	**3.5400e-003**	**5.6000e-004**	**4.1000e-003**	**0.0000**	**1.8104**	**1.8104**	**5.9000e-004**	**0.0000**	**1.8250**

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

3.2 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	5.0000e-005	6.3000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1672	0.1672	0.0000	0.0000	0.1686
Total	**6.0000e-005**	**5.0000e-005**	**6.3000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1672**	**0.1672**	**0.0000**	**0.0000**	**0.1686**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1800e-003	0.0000	3.1800e-003	1.3800e-003	0.0000	1.3800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	0.0145	8.7000e-003	2.0000e-005		6.0000e-004	6.0000e-004		5.6000e-004	5.6000e-004	0.0000	1.8104	1.8104	5.9000e-004	0.0000	1.8250
Total	**1.3300e-003**	**0.0145**	**8.7000e-003**	**2.0000e-005**	**3.1800e-003**	**6.0000e-004**	**3.7800e-003**	**1.3800e-003**	**5.6000e-004**	**1.9400e-003**	**0.0000**	**1.8104**	**1.8104**	**5.9000e-004**	**0.0000**	**1.8250**

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

3.2 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	5.0000e-005	6.3000e-004	0.0000	2.2000e-004	0.0000	2.2000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.1672	0.1672	0.0000	0.0000	0.1686
Total	**6.0000e-005**	**5.0000e-005**	**6.3000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**0.0000**	**0.1672**	**0.1672**	**0.0000**	**0.0000**	**0.1686**

3.3 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0579	0.4450	0.4792	8.4000e-004		0.0196	0.0196		0.0189	0.0189	0.0000	69.0077	69.0077	0.0117	0.0000	69.3006
Total	**0.0579**	**0.4450**	**0.4792**	**8.4000e-004**		**0.0196**	**0.0196**		**0.0189**	**0.0189**	**0.0000**	**69.0077**	**69.0077**	**0.0117**	**0.0000**	**69.3006**

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

3.3 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-003	0.1491	0.0253	1.0500e-003	0.0416	1.8400e-003	0.0434	0.0120	1.7600e-003	0.0137	0.0000	101.0957	101.0957	8.7000e-004	0.0148	105.5403
Worker	2.4700e-003	1.8300e-003	0.0238	7.0000e-005	8.3500e-003	4.0000e-005	8.3900e-003	2.2200e-003	4.0000e-005	2.2500e-003	0.0000	6.3525	6.3525	1.6000e-004	1.7000e-004	6.4067
Total	**5.2700e-003**	**0.1509**	**0.0491**	**1.1200e-003**	**0.0499**	**1.8800e-003**	**0.0518**	**0.0142**	**1.8000e-003**	**0.0160**	**0.0000**	**107.4481**	**107.4481**	**1.0300e-003**	**0.0150**	**111.9470**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0579	0.4450	0.4792	8.4000e-004		0.0196	0.0196		0.0189	0.0189	0.0000	69.0076	69.0076	0.0117	0.0000	69.3005
Total	**0.0579**	**0.4450**	**0.4792**	**8.4000e-004**		**0.0196**	**0.0196**		**0.0189**	**0.0189**	**0.0000**	**69.0076**	**69.0076**	**0.0117**	**0.0000**	**69.3005**

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

3.3 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8000e-003	0.1491	0.0253	1.0500e-003	0.0416	1.8400e-003	0.0434	0.0120	1.7600e-003	0.0137	0.0000	101.0957	101.0957	8.7000e-004	0.0148	105.5403
Worker	2.4700e-003	1.8300e-003	0.0238	7.0000e-005	8.3500e-003	4.0000e-005	8.3900e-003	2.2200e-003	4.0000e-005	2.2500e-003	0.0000	6.3525	6.3525	1.6000e-004	1.7000e-004	6.4067
Total	**5.2700e-003**	**0.1509**	**0.0491**	**1.1200e-003**	**0.0499**	**1.8800e-003**	**0.0518**	**0.0142**	**1.8000e-003**	**0.0160**	**0.0000**	**107.4481**	**107.4481**	**1.0300e-003**	**0.0150**	**111.9470**

3.3 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0170	0.1328	0.1502	2.6000e-004		5.4100e-003	5.4100e-003		5.2200e-003	5.2200e-003	0.0000	21.7934	21.7934	3.6300e-003	0.0000	21.8841
Total	**0.0170**	**0.1328**	**0.1502**	**2.6000e-004**		**5.4100e-003**	**5.4100e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**21.7934**	**21.7934**	**3.6300e-003**	**0.0000**	**21.8841**

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

3.3 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6000e-004	0.0472	7.8100e-003	3.3000e-004	0.0131	5.8000e-004	0.0137	3.7800e-003	5.5000e-004	4.3400e-003	0.0000	31.4341	31.4341	2.9000e-004	4.6100e-003	32.8141
Worker	7.3000e-004	5.1000e-004	7.0300e-003	2.0000e-005	2.6400e-003	1.0000e-005	2.6500e-003	7.0000e-004	1.0000e-005	7.1000e-004	0.0000	1.9425	1.9425	5.0000e-005	5.0000e-005	1.9584
Total	**1.5900e-003**	**0.0477**	**0.0148**	**3.5000e-004**	**0.0158**	**5.9000e-004**	**0.0164**	**4.4800e-003**	**5.6000e-004**	**5.0500e-003**	**0.0000**	**33.3766**	**33.3766**	**3.4000e-004**	**4.6600e-003**	**34.7725**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0170	0.1328	0.1502	2.6000e-004		5.4100e-003	5.4100e-003		5.2200e-003	5.2200e-003	0.0000	21.7933	21.7933	3.6300e-003	0.0000	21.8841
Total	**0.0170**	**0.1328**	**0.1502**	**2.6000e-004**		**5.4100e-003**	**5.4100e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**21.7933**	**21.7933**	**3.6300e-003**	**0.0000**	**21.8841**

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

3.3 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6000e-004	0.0472	7.8100e-003	3.3000e-004	0.0131	5.8000e-004	0.0137	3.7800e-003	5.5000e-004	4.3400e-003	0.0000	31.4341	31.4341	2.9000e-004	4.6100e-003	32.8141
Worker	7.3000e-004	5.1000e-004	7.0300e-003	2.0000e-005	2.6400e-003	1.0000e-005	2.6500e-003	7.0000e-004	1.0000e-005	7.1000e-004	0.0000	1.9425	1.9425	5.0000e-005	5.0000e-005	1.9584
Total	**1.5900e-003**	**0.0477**	**0.0148**	**3.5000e-004**	**0.0158**	**5.9000e-004**	**0.0164**	**4.4800e-003**	**5.6000e-004**	**5.0500e-003**	**0.0000**	**33.3766**	**33.3766**	**3.4000e-004**	**4.6600e-003**	**34.7725**

3.4 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0900e-003	0.0293	0.0441	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337
Paving	2.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3300e-003**	**0.0293**	**0.0441**	**7.0000e-005**		**1.4100e-003**	**1.4100e-003**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**5.8870**	**5.8870**	**1.8700e-003**	**0.0000**	**5.9337**

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

3.4 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	0.0197	3.2500e-003	1.4000e-004	5.4700e-003	2.4000e-004	5.7100e-003	1.5800e-003	2.3000e-004	1.8100e-003	0.0000	13.0975	13.0975	1.2000e-004	1.9200e-003	13.6725
Worker	3.0000e-004	2.1000e-004	2.9300e-003	1.0000e-005	1.1000e-003	0.0000	1.1000e-003	2.9000e-004	0.0000	3.0000e-004	0.0000	0.8094	0.8094	2.0000e-005	2.0000e-005	0.8160
Total	**6.6000e-004**	**0.0199**	**6.1800e-003**	**1.5000e-004**	**6.5700e-003**	**2.4000e-004**	**6.8100e-003**	**1.8700e-003**	**2.3000e-004**	**2.1100e-003**	**0.0000**	**13.9069**	**13.9069**	**1.4000e-004**	**1.9400e-003**	**14.4885**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.0900e-003	0.0293	0.0441	7.0000e-005		1.4100e-003	1.4100e-003		1.3000e-003	1.3000e-003	0.0000	5.8870	5.8870	1.8700e-003	0.0000	5.9337
Paving	2.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3300e-003**	**0.0293**	**0.0441**	**7.0000e-005**		**1.4100e-003**	**1.4100e-003**		**1.3000e-003**	**1.3000e-003**	**0.0000**	**5.8870**	**5.8870**	**1.8700e-003**	**0.0000**	**5.9337**

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

3.4 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	0.0197	3.2500e-003	1.4000e-004	5.4700e-003	2.4000e-004	5.7100e-003	1.5800e-003	2.3000e-004	1.8100e-003	0.0000	13.0975	13.0975	1.2000e-004	1.9200e-003	13.6725
Worker	3.0000e-004	2.1000e-004	2.9300e-003	1.0000e-005	1.1000e-003	0.0000	1.1000e-003	2.9000e-004	0.0000	3.0000e-004	0.0000	0.8094	0.8094	2.0000e-005	2.0000e-005	0.8160
Total	**6.6000e-004**	**0.0199**	**6.1800e-003**	**1.5000e-004**	**6.5700e-003**	**2.4000e-004**	**6.8100e-003**	**1.8700e-003**	**2.3000e-004**	**2.1100e-003**	**0.0000**	**13.9069**	**13.9069**	**1.4000e-004**	**1.9400e-003**	**14.4885**

3.5 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0387					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**0.0396**	**6.0900e-003**	**9.0500e-003**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

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

3.5 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	0.0197	3.2500e-003	1.4000e-004	5.4700e-003	2.4000e-004	5.7100e-003	1.5800e-003	2.3000e-004	1.8100e-003	0.0000	13.0975	13.0975	1.2000e-004	1.9200e-003	13.6725
Worker	3.0000e-004	2.1000e-004	2.9300e-003	1.0000e-005	1.1000e-003	0.0000	1.1000e-003	2.9000e-004	0.0000	3.0000e-004	0.0000	0.8094	0.8094	2.0000e-005	2.0000e-005	0.8160
Total	**6.6000e-004**	**0.0199**	**6.1800e-003**	**1.5000e-004**	**6.5700e-003**	**2.4000e-004**	**6.8100e-003**	**1.8700e-003**	**2.3000e-004**	**2.1100e-003**	**0.0000**	**13.9069**	**13.9069**	**1.4000e-004**	**1.9400e-003**	**14.4885**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0387					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.0000e-004	6.0900e-003	9.0500e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	1.2766	1.2766	7.0000e-005	0.0000	1.2784
Total	**0.0396**	**6.0900e-003**	**9.0500e-003**	**1.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**1.2766**	**1.2766**	**7.0000e-005**	**0.0000**	**1.2784**

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

3.5 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6000e-004	0.0197	3.2500e-003	1.4000e-004	5.4700e-003	2.4000e-004	5.7100e-003	1.5800e-003	2.3000e-004	1.8100e-003	0.0000	13.0975	13.0975	1.2000e-004	1.9200e-003	13.6725
Worker	3.0000e-004	2.1000e-004	2.9300e-003	1.0000e-005	1.1000e-003	0.0000	1.1000e-003	2.9000e-004	0.0000	3.0000e-004	0.0000	0.8094	0.8094	2.0000e-005	2.0000e-005	0.8160
Total	**6.6000e-004**	**0.0199**	**6.1800e-003**	**1.5000e-004**	**6.5700e-003**	**2.4000e-004**	**6.8100e-003**	**1.8700e-003**	**2.3000e-004**	**2.1100e-003**	**0.0000**	**13.9069**	**13.9069**	**1.4000e-004**	**1.9400e-003**	**14.4885**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1400e-003	2.5700e-003	0.0163	3.0000e-005	3.2700e-003	3.0000e-005	3.3000e-003	8.7000e-004	3.0000e-005	9.0000e-004	0.0000	2.9507	2.9507	2.1000e-004	1.8000e-004	3.0093
Unmitigated	2.1400e-003	2.5700e-003	0.0163	3.0000e-005	3.2700e-003	3.0000e-005	3.3000e-003	8.7000e-004	3.0000e-005	9.0000e-004	0.0000	2.9507	2.9507	2.1000e-004	1.8000e-004	3.0093

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	6.08	6.08	6.08	8,649	8,649
Total	6.08	6.08	6.08	8,649	8,649

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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189
Quality Restaurant	0.537845	0.056225	0.173186	0.138405	0.025906	0.007191	0.011447	0.018769	0.000611	0.000309	0.023821	0.001097	0.005189

5.0 Energy Detail

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

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	54.4490	54.4490	4.6000e-003	5.6000e-004	54.7299
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	54.4490	54.4490	4.6000e-003	5.6000e-004	54.7299
NaturalGas Mitigated	8.9300e-003	0.0812	0.0682	4.9000e-004		6.1700e-003	6.1700e-003		6.1700e-003	6.1700e-003	0.0000	88.3923	88.3923	1.6900e-003	1.6200e-003	88.9176
NaturalGas Unmitigated	8.9300e-003	0.0812	0.0682	4.9000e-004		6.1700e-003	6.1700e-003		6.1700e-003	6.1700e-003	0.0000	88.3923	88.3923	1.6900e-003	1.6200e-003	88.9176

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	1.65641e+006	8.9300e-003	0.0812	0.0682	4.9000e-004		6.1700e-003	6.1700e-003		6.1700e-003	6.1700e-003	0.0000	88.3923	88.3923	1.6900e-003	1.6200e-003	88.9176
Total		**8.9300e-003**	**0.0812**	**0.0682**	**4.9000e-004**		**6.1700e-003**	**6.1700e-003**		**6.1700e-003**	**6.1700e-003**	**0.0000**	**88.3923**	**88.3923**	**1.6900e-003**	**1.6200e-003**	**88.9176**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	1.65641e+006	8.9300e-003	0.0812	0.0682	4.9000e-004		6.1700e-003	6.1700e-003		6.1700e-003	6.1700e-003	0.0000	88.3923	88.3923	1.6900e-003	1.6200e-003	88.9176
Total		**8.9300e-003**	**0.0812**	**0.0682**	**4.9000e-004**		**6.1700e-003**	**6.1700e-003**		**6.1700e-003**	**6.1700e-003**	**0.0000**	**88.3923**	**88.3923**	**1.6900e-003**	**1.6200e-003**	**88.9176**

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	26600	4.7174	4.0000e-004	5.0000e-005	4.7417
Quality Restaurant	280422	49.7316	4.2000e-003	5.1000e-004	49.9882
Total		**54.4490**	**4.6000e-003**	**5.6000e-004**	**54.7299**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	26600	4.7174	4.0000e-004	5.0000e-005	4.7417
Quality Restaurant	280422	49.7316	4.2000e-003	5.1000e-004	49.9882
Total		**54.4490**	**4.6000e-003**	**5.6000e-004**	**54.7299**

6.0 Area Detail

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

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0310	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8700e-003	4.8700e-003	1.0000e-005	0.0000	5.1800e-003
Unmitigated	0.0310	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8700e-003	4.8700e-003	1.0000e-005	0.0000	5.1800e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.8700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0269					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.3000e-004	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8700e-003	4.8700e-003	1.0000e-005	0.0000	5.1800e-003
Total	**0.0310**	**2.0000e-005**	**2.5000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.8700e-003**	**4.8700e-003**	**1.0000e-005**	**0.0000**	**5.1800e-003**

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.8700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0269					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.3000e-004	2.0000e-005	2.5000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	4.8700e-003	4.8700e-003	1.0000e-005	0.0000	5.1800e-003
Total	**0.0310**	**2.0000e-005**	**2.5000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**4.8700e-003**	**4.8700e-003**	**1.0000e-005**	**0.0000**	**5.1800e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.0792	0.0605	1.4700e-003	7.0289
Unmitigated	5.0792	0.0605	1.4700e-003	7.0289

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	1.84548 / 0.117797	5.0792	0.0605	1.4700e-003	7.0289
Total		**5.0792**	**0.0605**	**1.4700e-003**	**7.0289**

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	1.84548 / 0.117797	5.0792	0.0605	1.4700e-003	7.0289
Total		**5.0792**	**0.0605**	**1.4700e-003**	**7.0289**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.1266	0.0666	0.0000	2.7911
Unmitigated	1.1266	0.0666	0.0000	2.7911

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	5.55	1.1266	0.0666	0.0000	2.7911
Total		**1.1266**	**0.0666**	**0.0000**	**2.7911**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	5.55	1.1266	0.0666	0.0000	2.7911
Total		**1.1266**	**0.0666**	**0.0000**	**2.7911**

9.0 Operational Offroad

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

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