Eilar Associates, Inc.
Acoustical and Environmental Consulting Services

Air Quality Technical Report for Valley Center ARCO

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Air Quality Technical Report

for the

Valley Center ARCO Project
Valley Center, California

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Glossary of Terms and Acronyms

APCD	Air Pollution Control District
AQIA	Air Quality Impact Assessment
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BACM	Best Available Control Measure
BACT	Best Available Control Technology
BMPs	Best Management Practices
CAA	Clean Air Act (Federal)
CAAQS	California Ambient Air Quality Standard
CALINE4	California Line Source Dispersion Model (Version 4)
Caltrans	California Department of Transportation
CCAA	California Clean Air Act
CO	Carbon Monoxide
H_2S	Hydrogen Sulfide
HARP	HotSpots Analysis and Reporting Program
HI	Hazard Index
ISCST	Industrial Source Complex Short Term Model
mg/m^3	Milligrams per Cubic Meter
$\mu g/m^3$	Micrograms per Cubic Meter
NAAQS	National Ambient Air Quality Standard
NOx	Oxides of Nitrogen
NO_2	Nitrogen Dioxide
O_3	Ozone
$PM_{2.5}$	Fine Particulate Matter (particulate matter with an aerodynamic diameter of 2.5 microns or less
PM_{10}	Respirable Particulate Matter (particulate matter with an aerodynamic diameter of 10 microns or less
ppm	Parts per million
PSD	Prevention of Significant Deterioration
RAQS	San Diego County Regional Air Quality Strategy
ROCs	Reactive Organic Compounds
ROG	Reactive Organic Gases
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SCAB	South Coast Air Basin
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SOx	Oxides of Sulfur
SO_2	Sulfur Dioxide
TACs	Toxic Air Contaminants
T-BACT	Toxics Best Available Control Technology

USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

EXECUTIVE SUMMARY

This report presents an assessment of potential air quality impacts associated with the proposed Valley Center ARCO Project in Valley Center, California. The project is within the jurisdiction of the Department of Planning and Development Services in the County of San Diego. The evaluation addresses the potential for air emissions during construction and after full buildout of the project, including an assessment of the potential for CO "hot spots" to form due to traffic associated with the proposed project.

Valley Center ARCO (the project) encompasses 0.90 acres at the southwest corner of the intersection of Valley Center Road and Cole Grade Road in the unincorporated community of Valley Center in northern San Diego County. The property is part of what is commonly known as the North Village on the General Plan Update (GP Update) map, an area that is intended to form the core of Valley Center's Northern town center. The project is proposed as a 3,953 square foot convenience market selling alcohol and operating 24 hours a day, 7 days a week. It will have a fueling facility with a 38 x 86 foot canopy and 6 multiple product dispensers.

The project is consistent with the GP Update for land uses. The project is therefore consistent with the RAQS and SIP.

To reduce the emissions to the extent feasible, fugitive dust control measures will be implemented during construction. Measures that are incorporated into the project description to reduce emissions associated with construction include the following:

- Application of water three times daily during grading on active grading sites
- Application of water three times daily to unpaved roads
- Reduce speeds to 15 mph on unpaved roads
- Use architectural coatings with a VOC content of 100 g/l or less
- Require the use of Tier 3 construction equipment.

These measures constitute best management practices for dust control, architectural coatings, diesel particulate, and construction equipment emissions.

The proposed project would result in emissions of air pollutants for both the construction phase and operational phase of the project. Construction emissions would include emissions associated with fugitive dust, heavy construction equipment and construction workers commuting to and from the site. Emissions of criteria pollutants during construction would be below the screening-level thresholds.

The main operational impacts associated with the Project would include impacts associated with traffic; impacts associated with gasoline dispensing; and with additional impacts associated with area sources such as energy use and landscaping. Emissions of all pollutants would be below the screening-level thresholds.

The project would be a source of toxic air contaminant (TAC) emissions from gasoline dispensing. A health risk assessment was conducted to evaluate the potential for project construction or operations to result in a significant impact to nearby sensitive receptors. The risk assessment focused on diesel particulate matter, which is the main TAC emitted from vehicles, and from TACs from gasoline dispensing. The risk assessment concluded that risks were less than significant.

An evaluation of odors indicated that odor impacts would be less than significant.

1.0 INTRODUCTION

1.1 Purpose of the Report

This report presents an assessment of potential air quality impacts associated with the proposed Valley Center ARCO Project in Valley Center, California. The project is within the jurisdiction of the Department of Planning and Development Services in the County of San Diego. The evaluation addresses the potential for air emissions during construction and after full buildout of the project, including an assessment of the potential for CO "hot spots" to form due to traffic associated with the proposed project.

1.2 Project Location and Description

Valley Center ARCO (the project) encompasses 0.90 acres at the southwest corner of the intersection of Valley Center Road and Cole Grade Road in the unincorporated community of Valley Center in northern San Diego County. The property is part of what is commonly known as the North Village on the General Plan Update (GP Update) map, an area that is intended to form the core of Valley Center's Northern town center. The project is proposed as a 3,953 square foot convenience market selling alcohol and operating 24 hours a day, 7 days a week. It will have a fueling facility with a 38 x 86 foot canopy and 6 multiple product dispensers. Figure 1 presents a vicinity map and site plan for the project.

This Air Quality Technical Report includes an evaluation of existing conditions in the project vicinity, an assessment of potential impacts associated with project construction, and an evaluation of project operational impacts.

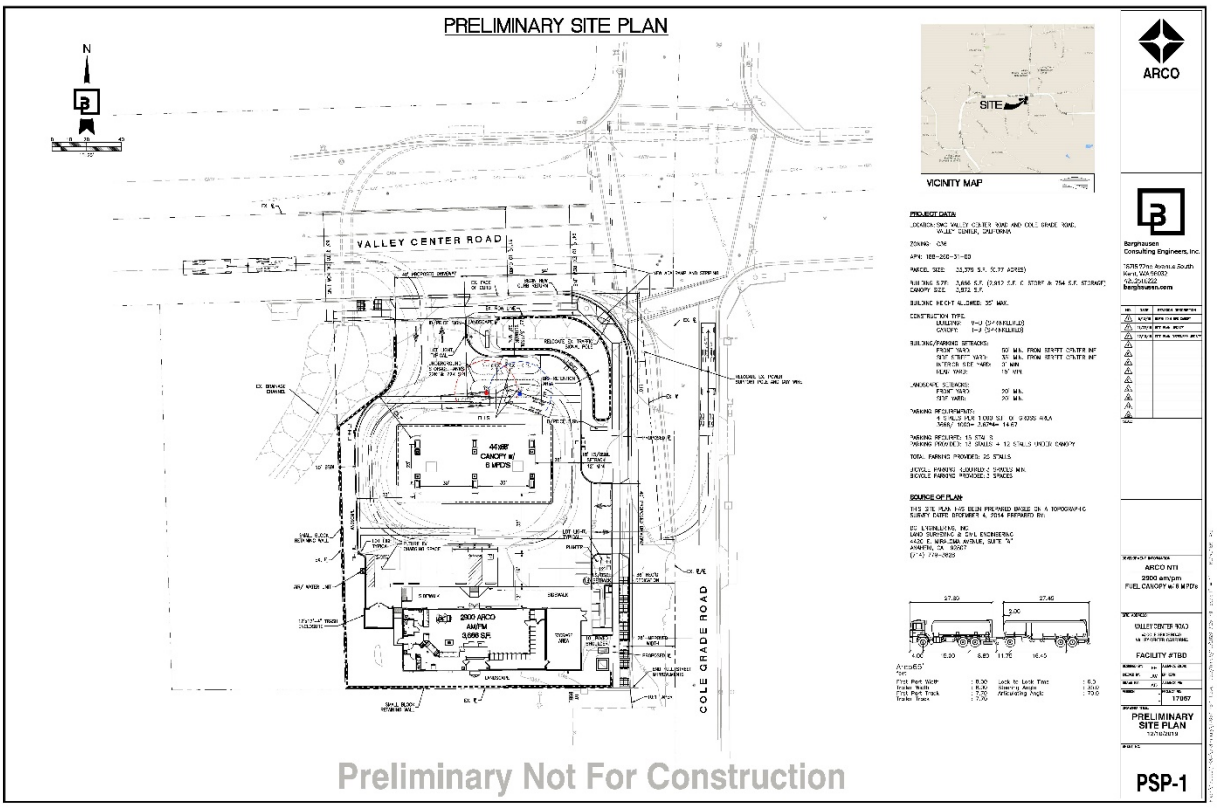


Figure 1. Project Location and Vicinity

2.0 EXISTING CONDITIONS

2.1 Existing Setting

The project site is located in Valley Center within unincorporated San Diego County. The site is currently vacant. The site is relatively flat. The property is surrounded mainly by commercial uses. The nearest sensitive receptor to the site is a single-family residential structure located on the northwest corner of Valley Center Road and Cole Grade Road, approximately 250 feet from the site.

2.2 Climate and Meteorology

The project site is located in the San Diego Air Basin (SDAB). The climate of the SDAB is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. Figure 2 provides a graphic representation of the prevailing winds in the project vicinity, as measured at the San Diego Air Pollution Control District's (APCD's) Escondido Monitoring Station (the closest meteorological monitoring station to the site). The high pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone, commonly known as smog.

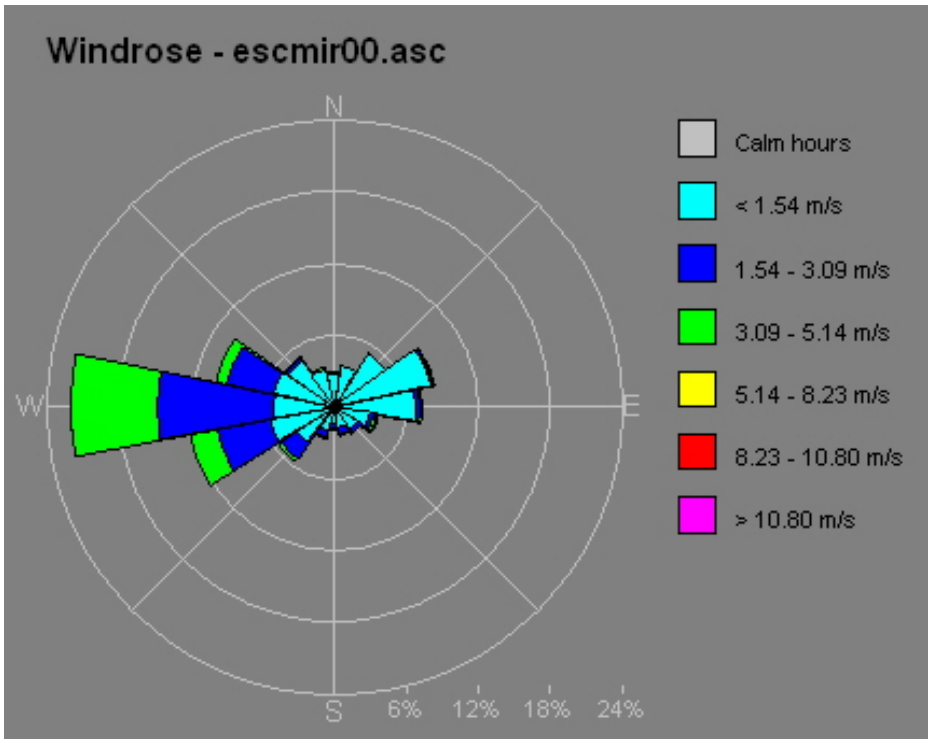


Figure 2. Wind Rose – Escondido Monitoring Station

NOTE: Data provided by the San Diego Air Pollution Control District, Meteorology and Monitoring Department.

2.3 Regulatory Setting

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called "criteria" pollutants). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Air Resources Board (ARB) has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. The SDAB is currently designated as a marginal nonattainment area for the 8-hour NAAQS for ozone (O_3). The SDAB is in attainment for the NAAQS for all other criteria pollutants. The SDAB is currently classified as a nonattainment area under the CAAQS for O_3, particulate matter with an aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), and particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}).

Both the NAAQS and the CAAQS are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health. The standards are based on levels below which human health is protected from adverse effects from exposure to these pollutants. The standards, and the air quality attainment plans that propose strategies to attain and maintain the standards, are designed to ensure that human health is protected from adverse effects associated with criteria pollutants.

The following specific descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on USEPA (2007) and ARB (2005).

Ozone. O_3 is considered a photochemical oxidant, which is a chemical that is formed when volatile organic compounds (VOCs) and oxides of nitrogen (NOx), both by-products of combustion, react in the presence of ultraviolet light. O_3 is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to O_3.

Carbon Monoxide. CO is a product of combustion, and the main source of CO in the SDAB is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the

body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease, and can also affect mental alertness and vision.

Nitrogen Dioxide. NO_2 is also a by-product of fuel combustion, and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitrogen oxide (NO) with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter. Respirable particulate matter, or PM_{10}, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or $PM_{2.5}$, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in this size range has been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, combustion, tire and brake wear, construction operations and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs.

Sulfur dioxide. SO_2 is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Pb in the atmosphere occurs as particulate matter. Pb has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Pb has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Pb is also classified as a probable human carcinogen.

Sulfates. Sulfates are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to sulfur dioxide (SO_2) during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The ARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide. H_2S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the standard would result in exposure to a very disagreeable odor. In 1984, a ARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride. Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer, in humans.

The ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The ARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the

CAAQS. The ARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The San Diego APCD is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

The APCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The RAQS lays out the standards, actions, and regulations to bring the region into attainment for the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health (APCD 2020; APCD 2016).

The RAQS was updated in 1995, 1998, 2001, 2004, 2009, and most recently in 2016. The RAQS outlines APCD's plans and control measures designed to attain the state air quality standards for O_3. The APCD has also developed the air basin's input to the SIP, which is required under the Federal Clean Air Act for areas that are out of attainment of air quality standards. The SIP includes the APCD's plans and control measures for attaining the O_3 NAAQS. The SIP is also updated on a triennial basis. The latest SIP update was submitted by the ARB to the USEPA in 2007, and was approved in 2012. The latest revisions to the SIP were submitted by the ARB to the USEPA in 2020. The APCD has developed its *2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County* (APCD 2020), which provides plans for attaining and maintaining the 8-hour NAAQS for ozone. The 2020 SIP has been submitted to the USEPA is approval is in process.

The RAQS relies on information from ARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future

emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the County's General Plan. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the general plan and SANDAG's growth projections, the project might be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the APCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for O_3.

On April 30, 2020, the National Highway Transportation Safety Administration (NHTSA) and the USEPA published the Safer Affordable Fuel-Efficient (SAFE) Vehicle Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (USEPA 2020). The SAFE Rule revised the Corporate Average Fuel Economy (CAFE) standards and set vehicle model year standards beyond 2025 at 2025 levels. Both the SAFE Rule and CAFE standards set forth vehicle fuel efficiency requirements and greenhouse gas emission standards. The SAFE Rule adopted less stringent fuel efficiency standards than previously adopted.

It should be noted that despite the federal regulatory agencies' relaxation of vehicle standards, the state of California is proceeding with additional measures to reduce greenhouse gas emissions from vehicles, such as the State's achievement of increased penetration of zero emission vehicles under Executive Order N-79-20 and the ARB draft update to its Mobile Source Strategy (regulatory compliance measure). While the Executive Order is mainly directed at reductions in

greenhouse gases, the order and the Mobile Source Strategy will also result in substantial reductions in criteria pollutant emissions through the replacement of petroleum-fueled vehicles with zero emission vehicles. Due to the competing emission rates from the mentioned legislation, no off-model adjustments were made outside of CalEEMod default assumptions. The SAFE Rule adjustment factors were not included in the CalEEMod analysis.

Table 1 presents a summary of the ambient air quality standards adopted by the federal and California Clean Air Acts.

Table 1
Ambient Air Quality Standards

POLLUTANT	AVE. TIME	CALIFORNIA STANDARDS		NATIONAL STANDARDS		
		Concentration	Measurement Method	Primary	Secondary	Measurement Method
Ozone (O_3)	1 hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	--	--	Ethylene Chemiluminescence
	8 hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Average	0.030 ppm (56 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	0.053 ppm (100 µg/m^3)	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 µg/m^3)		0.100 ppm (188 µg/m^3)	--	
Sulfur Dioxide (SO_2)	24 hours	0.04 ppm (105 µg/m^3)	Ultraviolet Fluorescence	--	--	Pararosaniline
	3 hours	--		--	0.5 ppm (1300 µg/m^3)	
	1 hour	0.25 ppm (655 µg/m^3)		0.075 ppm (196 µg/m^3)	--	
Respirable Particulate Matter (PM_{10})	24 hours	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	150 µg/m^3	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		--	--	
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3	15 µg/m^3	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 µg/m^3	35 µg/m^3	
Sulfates	24 hours	25 µg/m^3	Ion Chromatography	--	--	--
Lead (Pb)	30-day Average	1.5 µg/m^3	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 µg/m^3	1.5 µg/m^3	
	3-month Rolling Average	--		0.15 µg/m^3	0.15 µg/m^3	
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride	24 hours	0.010 ppm (26 µg/m^3)	Gas Chromatography	--	--	--

ppm= parts per million
µg/m^3 = micrograms per cubic meter
mg/m^3= milligrams per cubic meter
Source: ARB 2020, www.arb.ca.gov

2.4 Background Air Quality

The APCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring station to the project site is the Escondido monitoring station, which measures O_3, PM_{10}, $PM_{2.5,}$ CO, and NO_2. Because the Escondido monitoring station is located in an area where there is some traffic congestion, it is likely that pollutant concentrations measured at the Escondido monitoring station are higher than concentrations that would be observed or measured in the project area, and would thus provide a conservative estimate of background ambient air quality. Monitoring at the Escondido monitoring station was discontinued in August 2015; however, this monitoring station is still the nearest station to the project site. Therefore, to provide representative background data, ambient concentrations of pollutants over the three-year period from 2013 to 2015 are presented in Table 2. As discussed above, because the Escondido monitoring station was located in an area that experienced high vehicular traffic, and corresponding higher emission levels than the project site, background data are likely higher than what is experienced at the project site and therefore provides a conservative estimate of background pollutant levels.

The federal 8-hour ozone standard was exceeded five times in 2014 at the Escondido monitoring station. The standard was not exceeded in 2013 or 2015. The Escondido monitoring station recorded exceedances of the federal $PM_{2.5}$ standard during the period from 2013 through 2015; however, the standard is not defined by a single exceedance and the SDAB remains unclassified/attainment for $PM_{2.5}$. The Escondido monitoring station also measured exceedances of the state O_3, PM_{10}, and $PM_{2.5}$ standards during the period from 2013 to 2015. The data from the monitoring stations indicate that air quality is in attainment of all other NAAQS and CAAQS.

Table 2
Ambient Background Concentrations
(ppm unless otherwise indicated)

Pollutant	Averaging Time	2013	2014	2015	CAAQS	NAAQS	Monitoring Station
Ozone	8 hour	0.074	0.079	0.071	0.070	0.070	Escondido
	1 hour	0.084	0.099	0.079	0.09	--	Escondido
PM_{10}	Annual	23.1	21.5	17.5	20 $\mu g/m^3$	--	Escondido
	24 hour	82	44	30	50 $\mu g/m^3$	150 $\mu g/m^3$	Escondido
$PM_{2.5}$	Annual	10.5	9.6	8.6	12 $\mu g/m^3$	15 $\mu g/m^3$	Escondido
	24 hour	56.3	77.5	29.4	--	35 $\mu g/m^3$	Escondido
NO_2	Annual	0.013	0.011	0.010	0.030	0.053	Escondido
	1 hour	0.061	0.063	0.048	0.18	0.100	Escondido
CO	8 hour	2.6	3.1	2.0	9.0	9	Escondido
	1 hour	3.2	3.8	3.1	20.0	35	Escondido

[1]Secondary NAAQS
NA – Data not available
Source: ARB 2019. Ambient air quality data the most recent data collected at the Escondido monitoring station, which is the closest monitoring station to the site. Data have been collected through 2020 at other monitoring stations located within the SDAB. Ambient air quality data reflects the most recent data available at the time this project analysis was initiated. Since 2015, ambient air quality monitoring at the Escondido station was ceased. As indicated by monitoring data, ambient pollutant levels have steadily decreased over time due to federal and state regulations. By using older data, it is considered conservative as more recent data generally show lower ambient pollutant concentrations.

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

The County of San Diego (County of San Diego 2007) has approved guidelines for determining significance based on Appendix G.III of the State CEQA Guidelines. Since the County's Guidelines were published, the state has updated Appendix G.III to the State CEQA Guidelines. Section 4.0 of the County of *Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality* (County of San Diego 2007) provides guidance (as updated within the State CEQA Guidelines) that a project would have a significant environmental impact if:

1. The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).
2. The project would result in emissions that would violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation.
    a. The project will result in emissions that exceed 250 pounds per day of NOx, or 75 pounds per day of VOCs.
    b. The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.
    c. The project will result in emissions of $PM_{2.5}$ that will exceed 55 pounds per day.
    d. The project will result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 micrograms per cubic meter (5.0 $\mu g/m^3$) or greater at the maximum exposed individual.
3. The project will expose sensitive receptors to substantial pollutant concentrations.
4. The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will result in substantial emissions (such as odors or nuisance dust [i.e., dust that is visible or deposits on offsite property such that it causes a nuisance]) adversely affecting a substantial number of people.

The APCD has identified trigger criteria that would require stationary sources that are under their permitting jurisdiction to demonstrate compliance with the Air Pollution Control Officer's regulations, either through a demonstration that they would not cause or contribute to a violation of an air quality standard, or to adopt additional emission standards. The APCD's trigger criteria, as established in APCD Rules 20.1 et seq., are not thresholds under CEQA. The County of San Diego adopted these trigger criteria for air quality emissions (Rules 20.1 et seq.) as screening-level thresholds (SLTs) for land development projects to identify potential impacts under CEQA. As stated above, projects that propose development that is consistent with the growth anticipated by the general plans and SANDAG's growth forecasts would be consistent with the RAQS and SIP. Also, projects that are consistent with the SIP rules (i.e., the federally-approved rules and regulations adopted by the APCD) are consistent with the SIP. Thus projects would be required to conform with measures adopted in the RAQS (including use of low-VOC architectural coatings, use of low-NO_x water heaters, and compliance with rules and regulations governing stationary sources) and would also be required to comply with all applicable rules and regulations adopted by the APCD.

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation; or (b) result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for O_3 precursors, oxides of nitrogen (NO_X) and volatile organic compounds (VOCs), project emissions may be evaluated based on the quantitative emission thresholds established by the San Diego APCD. As part of its air quality permitting process, the APCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA). The County of San Diego has also adopted the SCAQMD's screening threshold of 55 pounds per day or 10 tons per year as a significance threshold for $PM_{2.5}$.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in the table below.

Table 3 Screening-Level Thresholds for Air Quality Impact Analysis			
Pollutant	Total Emissions		
Construction Emissions			
	Lb. per Day		
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NOx)	250		
Oxides of Sulfur (SOx)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	75		
Operational Emissions			
	Lb. Per Hour	Lb. per Day	Tons per Year
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	55	10
Oxides of Nitrogen (NOx)	25	250	40
Oxides of Sulfur (SOx)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million without T-BACT 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

Source: County of San Diego 2007. Table 5.

In the event that emissions exceed these screening-level thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the State and Federal Ambient Air Quality Standards, including appropriate background levels. Modeling would therefore demonstrate that the project would not cause or contribute to a violation of an ambient air quality standard that is set forth to protect human health. Projects that comply with the State and Federal Ambient Air Quality Standards therefore would not have an adverse impact on human health. Based on these air quality standards, regional and local impact determinations under CEQA would also reduce potential human health impacts because they do not exceed the health-based standards. For nonattainment pollutants (ozone, with ozone precursors NOx and VOCs, $PM_{2.5}$ and PM_{10}), if emissions exceed the thresholds shown in Table 3, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs). In San Diego County, the Planning and Development Services Department identifies an excess cancer risk level of 1 in 1 million or less for projects that do not implement Toxics Best Available Control Technology (T-BACT), and an excess cancer risk level of 10 in 1 million or less for projects that do implement T-BACT. The significance threshold for non-cancer health effects is a health hazard index of one or less. These significance thresholds are consistent with the San Diego Air Pollution Control District's Rule 1210 requirements for stationary sources. If a project has the potential to result in emissions of any TAC or HAP which result in a cancer risk of greater than 1 in 1 million without T-BACT, 10 in 1 million with T-BACT, or health hazard index of one or more, the project would be deemed to have a potentially significant impact.

With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as residences, schools (Preschool-12th Grade), hospitals, resident care facilities, or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project which has the potential to directly impact a sensitive receptor located within 1 mile and results in a health risk greater than the risk significance thresholds discussed above would be deemed to have a potentially significant impact. One mile was chosen as a conservative means of evaluating significance for the following reasons. As discussed in the SCAQMD's CEQA Air Quality Handbook (SCAQMD 1999), if there is an industrial source within a quarter mile of a sensitive receptor, planners should review the potential for toxic impacts. Additionally, the ARB's *Air Quality and Land Use Handbook* (ARB 2005) recommended that land use agencies avoid siting new sensitive land uses within 300 feet of large gas stations (i.e., with a throughput of 3.6 million gallons or greater). This recommendation was based on the ARB's evaluation of potential impact distances. Because pollutants disperse downwind and thus become less concentrated, impacts are highest near the pollution source and lower downwind. Beyond a radius of one mile from the site, pollutant concentrations and impacts are dispersed in the atmosphere. Therefore, use of a one mile radius is conservative.

APCD Rule 51 (Public Nuisance) prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of any person. A project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of offsite receptors. It should also be noted that all projects would be subject to Rule 51 throughout project operations, and would be required to comply with APCD regulations should nuisance issues occur.

The impacts associated with construction and operation of the project were evaluated for significance based on these significance criteria. Emissions associated with construction and operation of the project were evaluated with the CalEEMod Model, Version 2016.3.2.

4.0 PROJECT IMPACT ANALYSIS

The proposed Valley Center ARCO Project includes both construction and operational impacts. Construction impacts include emissions associated with the construction of the project. Operational impacts include emissions associated with the project, including traffic, at full buildout.

4.1 Conformance to the Regional Air Quality Strategy

4.1.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).

The RAQS outlines APCD's plans and control measures designed to attain the State air quality standards for ozone. In addition, the APCD relies on the SIP, which includes the APCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and the ARB, and the emissions and reduction strategies related to mobile sources are considered in the RAQS and SIP.

As discussed in Section 2, both the NAAQS and the CAAQS are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health. The purpose of the RAQS and SIP is to attain and maintain these standards, such that San Diego's air quality is protective of human health. Sources that are in compliance with the RAQS and SIP would therefore comply with the APCD's requirements to protect human health from exceedances of the ambient air quality standards.

The RAQS relies on information from ARB and SANDAG, including projected growth in the County, mobile, area and all other source emissions in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would proposed development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the County of San Diego General Plan and SANDAG's growth projections, the project would be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality. This situation would warrant further analysis to determine if the proposed project and the surrounding projects exceed the growth projections used in the RAQS for the specific subregional area.

4.1.2 Significance of Impacts Prior to Mitigation

As discussed in Section 1.0, the proposed project is consistent with the County GP Update land use for Valley Center. The land use designation is C-36, and no change is proposed. The project will therefore be consistent with the land use projections within the RAQS and SIP.

As part of its attainment planning process, the San Diego Air Pollution Control District proposes and adopts Rules and Regulations to control air pollutants to demonstrate further progress toward attainment as part of the RAQS and SIP. The Project also will comply with any applicable rules and regulations that have been adopted as part of the RAQS and SIP by the San Diego Air Pollution Control District.

4.1.3 Design Considerations and Mitigation Measures

Based on the General Plan, the project would be consistent with current land uses and with the County's Plan. The project is therefore consistent with the RAQS and SIP.

4.1.4 Conclusions

Because the Project is consistent with the allowable land use at the site, the project is consistent with the RAQS and SIP. Because the Project is consistent with the RAQS and SIP, it would be in compliance with the applicable rules and regulations designed to avoid adverse impacts to human health. The project therefore has a low potential to impact human health.

4.2 Conformance to Federal and State Ambient Air Quality Standards

The project will result in a significant impact to air quality if:

The project would result in emissions that would violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation.

a. The project will result in emissions that exceed 250 pounds per day of NOx, or 75 pounds per day of VOCs.
b. The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.
c. The project will result in emissions of $PM_{2.5}$ that will exceed 55 pounds per day.
d. The project will result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 micrograms per cubic meter (5.0 $\mu g/m^3$) or greater at the maximum exposed individual.

A project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the CAAQS and NAAQS. As discussed in Section 2.0, the SDAB is considered a nonattainment area for the NAAQS for ozone and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$.

4.2.1 Construction Impacts

4.2.1.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), construction impacts would be potentially significant if they exceed the quantitative screening-level thresholds for attainment pollutants (NO_2, SO_2, and CO), and would result in a significant impact if they exceed the screening-level thresholds for nonattainment pollutants (ozone precursors and particulate matter).

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously constructing projects. A project that has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NOx, or VOCs during construction would also have a significant cumulatively considerably net increase. In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Section 3.0.

4.2.1.2 Significance of Impacts Prior to Mitigation

Emissions associated with project construction were estimated using the CalEEMod Model, Version 2016.3.2 (CAPCOA 2016). As discussed in Section 2.3, no adjustments were made within CalEEMod to account for adoption of the SAFE Rule. The construction scenario was based on information provided by the applicant. Based on information provided by the applicant and the site grading plan, there would not be a need for any of the following construction activities:

- Rock Crushing
- Concrete Batch Plant

- On-Site Haul Roads
- Blasting

Because these activities would not be required to construct the project, they are not considered further in this analysis of construction emissions, nor are they considered in the health risk analysis conducted for construction.

The assumptions regarding construction schedule and phasing are provided in the CalEEMod output files that were included in Appendix A. For the purpose of this evaluation, it was assumed that excavation would be required to install the underground storage tanks. Based on the site plan and dimensions of the tanks, it was assumed that 30 feet x 50 feet x 16 feet of excavation would be required, or 950 cubic yards, and that construction would be completed within approximately seven months. The total site is 0.90 acres. Based on the site grading plan, the project will include demolition of existing impervious pavement, which totals approximately 30,975 square feet. The site grading plan calls for 165 cubic yards of cut and 3,800 cubic yards of fill, for a net import of 3,635 cubic yards of material. CalEEMod relies on the total area of the site and estimates site disturbance based on the maximum acres that can be graded given the construction equipment input in an 8-hour day. The project would be subject to the requirements of SDAPCD Rule 50, Visible Emissions, which states that a person shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any period of 60 consecutive minutes which is darker in shade than that designated as Number 1 on the Ringelmann Chart; Rule 51, Nuisance, which states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property; and Rule 55.0, Fugitive Dust Control, which restricts the discharge of visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60 minute period, and requires construction activities to control track-out. The following construction schedule was assumed:

Demolition	7/1/2021 - 7/15/2021
Grading	7/16/2021 - 7/31/2021
Tank Installation	8/1/2021 - 9/30/2021
Building Construction	8/1/2021 - 12/31/2021
Paving	10/1/2021 - 12/31/2021
Architectural Coating	12/1/2021 - 12/31/2021

As shown above, tank installation and building construction would overlap from 8/1/2021 to 9/30/2021, and building construction, paving, and architectural coatings application would overlap from 12/1/2021 to 12/31/2021.

To account for standard dust control measures within the CalEEMod Model, it was assumed that watering three times day would reduce particulate matter emissions by 61%. It was also assumed that the project would use architectural coatings that are compliant with SDAPCD Rule 67.0.1, which limits VOC content to 100 g/l for exterior (non-flat) paints and 50 g/l for interior (flat) paints. This rule was taken into account in the CalEEMod Model. Finally, it was assumed that Tier 3 equipment would be used for construction.

Based on the CalEEMod model, truck trips would be generated from hauling debris from demolition and from the cut and fill activities during grading. The following truck trips were calculated by the CalEEMod model per construction phase:

Demolition	141 truck trips
Grading – Import	454 truck trips
Tank Installation	119 truck trips

Table 4 provides a summary of the emission estimates for construction of the project. Refer to Attachment A for detailed CalEEMod Model outputs.

Table 4
Maximum Daily Estimated Construction Emissions
Valley Center ARCO Project

Emission Source	VOCs	NOx	CO	SO_x	PM_{10}	$PM_{2.5}$
			lbs/day			
Demolition						
Fugitive Dust	-	-	-	-	1.09	0.17
Off Road Diesel	0.27	5.96	7.94	0.01	0.40	0.40
On Road Diesel	0.09	3.29	0.80	0.01	0.23	0.07
Worker Trips	0.05	0.03	0.39	0.001	0.13	0.03
TOTAL	**0.41**	**8.28**	**9.13**	**0.02**	**1.85**	**0.67**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Grading						
Fugitive Dust	-	-	-	-	0.29	0.16
Off Road Diesel	0.14	3.11	4.08	0.01	0.20	0.20
On Road Diesel	0.31	10.58	2.59	0.03	0.75	0.23
Worker Trips	0.05	0.03	0.39	0.001	0.13	0.03
TOTAL	**0.50**	**13.72**	**7.06**	**0.04**	**1.37**	**0.62**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Tank Installation						
Fugitive Dust	-	-	-	-	0.29	0.16
Off Road Diesel	0.27	5.56	8.00	0.01	0.31	0.32
On Road Diesel	0.02	0.69	0.17	0.002	0.05	0.02
Worker Trips	0.05	0.03	0.39	0.002	0.13	0.03
TOTAL	**0.34**	**6.28**	**8.56**	**0.01**	**0.78**	**0.53**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Building Construction						
Off Road Diesel	0.73	14.20	16.51	0.03	0.90	0.90
Vendor Trips	0.01	0.49	0.12	0.001	0.03	0.01
Worker Trips	0.05	0.04	0.43	0.0014	0.14	0.04
TOTAL	**0.79**	**14.73**	**17.06**	**0.03**	**1.07**	**0.95**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Paving						
Asphalt Offgassing	0.02	-	-	-	-	-
Off Road Diesel	0.22	4.76	6.90	0.01	0.29	0.29
Worker Trips	0.09	0.06	0.70	0.002	0.23	0.06
TOTAL	**0.33**	**4.82**	**7.60**	**0.01**	**0.52**	**0.35**

Table 4
Maximum Daily Estimated Construction Emissions
Valley Center ARCO Project

Emission Source	VOCs	NOx	CO	SO_x	PM_{10}	$PM_{2.5}$
			lbs/day			
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Architectural Coatings						
Architectural Coatings Emissions	4.77	-	-	-	-	-
Off Road Diesel	0.06	1.36	1.83	0.003	0.10	0.10
Worker Trips	0.01	0.01	0.08	0.0003	0.03	0.007
TOTAL	**4.84**	**1.37**	**1.91**	**0.003**	**0.13**	**0.11**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Maximum Simultaneous Emissions[1]	**5.96**	**21.02**	**26.58**	**0.04**	**1.87**	**1.48**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

[1]Maximum simultaneous emissions are calculated within the CalEEMod Model, which is designed to identify the maximum daily emissions for each pollutant. The model therefore accounts for overlap of construction phases in calculating the maximum daily emissions. For VOCs, CO, and SOx, the maximum daily emissions occur during the combined activities of building construction, paving, and architectural coatings use. For NOx, PM_{10}, and $PM_{2.5}$, the maximum daily emissions occur during simultaneous tank installation and building construction. Emissions presented in the table may not add up to exactly the total predicted by the CalEEMod Mode due to rounding.

As shown in Table 4, maximum simultaneous emissions are below the screening-level thresholds for all criteria pollutants.

The emissions budget for 2023 in the SIP, as reported on the ARB's website, includes the following emissions for construction for the SDAB:

- Off-Road Equipment: 9.81 tons/day VOC, 10.82 tons/day NOx
- Construction Fugitive Dust: 40.03 tons/day PM_{10}, 4.00 tons/day $PM_{2.5}$

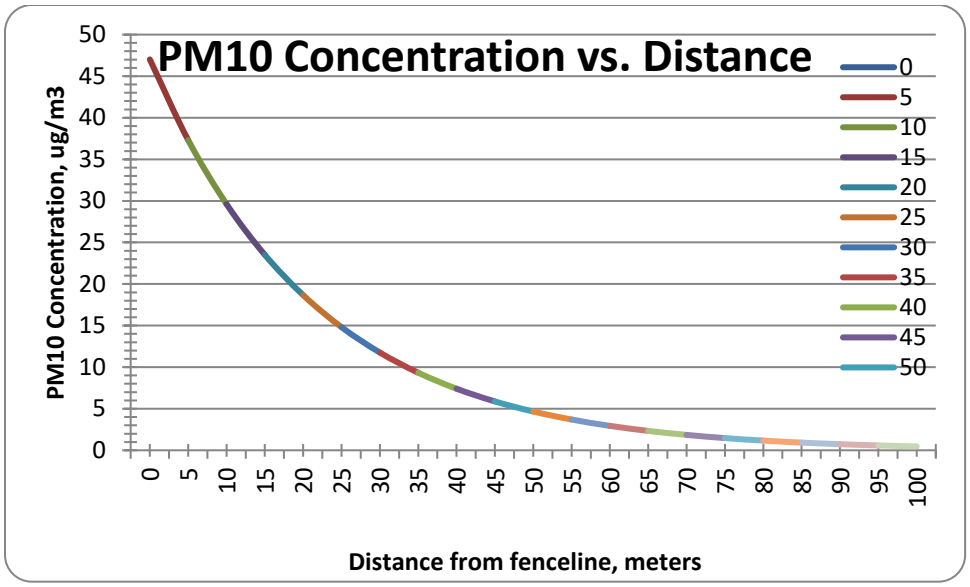
As shown in Table 4, maximum daily emissions from the project during construction are 5.96 lbs/day or 0.00298 tons/day of VOCs, 21.02 lbs/day or 0.01051 tons/day of NOx, 1.87 lbs/day or 0.00094 tons/day of PM_{10}, and 1.48 lbs/day or 0.00074 tons/day of $PM_{2.5}$. Emissions of nonattainment pollutants would be a small proportion of the emissions budget for the SDAB. These emissions budgets are based on projecting compliance with ambient air quality strategies associated with identified future development in the County's General Plan.

To evaluate the potential for cumulative impacts from grading at the project site, the following equation was used (Desert Research Institute 1996), which is utilized in the SCAQMD's Localized Significance Threshold Methodology (SCAQMD 2003) to evaluate localized PM_{10} impacts:

$$C_x = 0.9403\ C_0\ e^{-0.0462X}$$

Where C_x = predicted PM_{10} concentration at X meters from the fenceline;
C_0 = PM_{10} concentration at the fenceline;
e = natural logarithm; and
X = distance in meters from the fenceline.

Conservatively assuming C_0 equals the 24-hour ambient air quality standard of 50 $\mu g/m^3$, fugitive PM_{10} concentrations would decrease with distance from the fenceline. As shown in the chart below, by 100 meters (approximately 330 feet) from the project boundary, the concentration of PM_{10} would decrease by 99 percent.



Source: SCAQMD 2003

A review of other projects in the Valley Center of the Arco Valley Center Project identified one project in the immediate vicinity of the project; the Rite Aid drug store at the corner of Cole Grade Road and Valley Center Road. That project has already been constructed. An additional project was identified upon review of the County's project listings; the Valley Center Energy Storage Project. That project is projected to generate a maximum of 13.55 lbs/day of PM_{10} (LDN Consulting 2020). Assuming these projects would be constructed simultaneously, the total emissions would be 15.42 lbs/day, which is well below the significance threshold of 100 lbs/day. Estimated particulate emissions from additional projects added to the Valley Center Arco particulate emissions during construction would therefore remain below the significance threshold.

The main construction activities at the Valley Center Arco site are greater than 100 meters from the nearest sensitive receptor. Furthermore, it is unlikely that the maximum daily activities would occur on the same day. Due to the locations of the projects, construction activities would likely occur approximately 100 meters apart, and therefore the combined impact of PM_{10} would not be substantial.

Because impacts would be limited to localized areas and emissions are below the significance thresholds, impacts would be less than cumulatively considerable.

4.2.1.3 Design Considerations

Project construction would employ dust control measures to reduce impacts as feasible. Dust control measures would include watering the site at least three times daily during active grading. In addition, the project would utilize low-VOC coatings in accordance with APCD Rule 67.0.1 requirements. The project would reduce emissions to the extent feasible. Emissions would therefore be less than significant.

4.2.1.4 Conclusions

Project criteria pollutants emissions during construction would be less than significant as they would be below the County's SLTs.. Supportive of the NAAQS and CAAQS, the County's SLTs are scientifically substantiated, numerical mass emissions levels of criteria air pollutants considered to be protective of human health. A project with emissions rates below these thresholds is considered to have a less than significant impact on regional and local air quality and would have a low potential for resulting in impacts to human health due to the nexus between SLTs, ambient air quality standards, and public health.

4.2.2 Operational Impacts

4.2.2.1 Guidelines for the Determination of Significance

Based on the County of San Diego Guidelines (County of San Diego 2007), operational impacts would be potentially significant if they exceed the quantitative SLTs for attainment pollutants (NO_2, SO_2, and CO), and would result in a significant impact if they exceed the screening-level thresholds for nonattainment pollutants (ozone precursors and particulate matter).

As discussed above, based on the County of San Diego guidelines (County of San Diego 2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in NOx, VOCs, PM_{10}, and $PM_{2.5}$. In accordance with the

guidelines, a project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of nonattainment pollutants would also have a cumulatively considerable net increase. Also, projects that cause road intersections to operate at or below a LOS E and create a CO "hot spot" create a cumulatively considerable net increase of CO.

4.2.2.2 Significance of Impacts Prior to Mitigation

The main operational impacts associated with the Project would include impacts associated with traffic; additional emissions would be associated with area sources such as energy use and landscaping.

Project-generated traffic trip generation rates were based on the Traffic Impact Report (Darnell & Associates 2020), based on the number of trips generated per fueling location. The Traffic Impact Report estimated a total of 2,465 trips without consideration for pass-by trips. According to the Traffic Impact Report, a pass-by reduction of 62% for am trips and 56% for pm trips is applicable to the project, for 1,084 net new trips. Based on this trip generation and the proposed land use, project operational emissions were estimated using the CalEEMod Model, Version 2016.3.2, assuming an operational year of 2023. As discussed in Section 2.3, no adjustments were made within CalEEMod to account for adoption of the SAFE Rule. Emissions were calculated for both summer and winter conditions, as well as for annual operations. Trip distances are based on the CalEEMod Model results for rural land uses given the location of the project site in Valley Center; this is a conservative assumption because the project will serve local uses in the Valley Center community.

The results of the emission calculations, in lbs/day and tons/year, are summarized in Table 5 for buildout conditions, along with emissions associated with area sources and a comparison with the County of San Diego significance criteria. CalEEMod default values for vehicle emissions, which are based on EMFAC2014, were used in the analysis. No adjustment was made to account for the SAFE Rule. However, the adjustment factors for the SAFE rule for EMFAC2014 are less than

1% (from 1.0003 to 1.0066) and would not substantially affect the results of the analysis (ARB 2019). The CalEEMod outputs are presented in Appendix A.

Table 5
Total Operational Emissions

	VOCs	NOx	CO	Sox	PM_{10}	$PM_{2.5}$
Summer, Lbs/day						
Area Sources	0.06	0.00004	0.004	0.00	0.00001	0.00001
Energy Use	0.0001	0.001	0.00085	0.00001	0.00008	0.00008
Vehicular Emissions	1.47	5.18	15.20	0.05	4.74	1.29
TOTAL	**1.52**	**5.18**	**15.21**	**0.05**	**4.74**	**1.29**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Winter, Lbs/day						
Area Sources	0.06	0.00004	0.004	0.00	0.00001	0.00001
Energy Use	0.0001	0.001	0.00085	0.00001	0.00008	0.00008
Vehicular Emissions	1.42	5.30	15.16	0.05	**4.74**	**1.29**
TOTAL	**1.47**	**5.30**	**15.16**	**0.05**	**4.74**	**1.29**
Screening-Level Thresholds	75	250	550	250	100	55
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*
Tons/year						
Area Sources	0.01	0.00	0.0004	0.00	0.00	0.00
Energy Use	0.00002	0.0002	0.0002	0.00	0.00001	0.00001
Vehicular Emissions	0.20	0.79	2.21	0.008	0.68	0.19
TOTAL	**0.21**	**0.79**	**2.21**	**0.01**	**0.68**	**0.19**
Screening-Level Thresholds	13.7	40	100	40	15	10
Above Screening-Level Thresholds?	*No*	*No*	*No*	*No*	*No*	*No*

Emissions associated with the project are below the County's screening-level thresholds for all pollutants. Because vehicular emissions decrease over time with phase-out of older vehicles and implementation of increasingly stringent emission controls, future emissions would decrease.

Emissions of VOCs from the gas station were estimated using emission factors from the California Air Pollution Control Officers' Association (CAPCOA) *Gasoline Service Station Industry-Wide Risk Assessment Guidelines* (CAPCOA 1997). Because the project is a new construction, it was assumed that the project will be constructed with state-of-the-art controls and will meet Phase I and Phase II vapor recovery requirements with vent valves. Details of the emission calculations

are provided in Appendix B. Based on estimated throughput from the project applicant, the gas station throughput will be approximately 300,000 gallons per month, or 3,600,000 gallons annually. According to the guidelines, there are four emission processes associated with gas station operations: loading, breathing, refueling, and spillage. VOCs emissions were calculated as follows:

Loading

3,600,000 gallons/year x 0.084 lbs VOC/1000 gallons x 1 ton/2000 lbs = 0.151 tons/year

Breathing

3,600,000 gallons/year x 0.025 lbs VOC/1000 gallons x 1 ton/2000 lbs = 0.045 tons/year

Refueling

3,600,000 gallons/year x 0.74 lbs VOC/1000 gallons x 1 ton/2000 lbs = 1.332 tons/year

Spillage

3,600,000 gallons/year x 0.42 lbs VOC/1000 gallons x 1 ton/2000 lbs = 0.756 tons/year

Total

0.151 tons/year + 0.045 tons/year + 1.332 tons/year + 0.756 tons/year = 2.28 tons/year

Emissions of VOCs from the gas station operations were estimated to be 2.28 tons per year, or an average of 12.52 lbs/day of VOCs. When added to the maximum daily VOCs emissions predicted by the CalEEMod Model (summer day, 1.52 lbs/day), emissions would be 14.04 lbs/day, which is below the significance threshold of 55 lbs/day for operational emissions during the maximum summer day, assuming full operation by the year 2023.

Projects involving traffic impacts may result in the formation of locally high concentrations of CO, known as CO "hot spots." The Traffic Impact Report (Darnell and Associates 2020) evaluated

the impacts of project-related traffic on intersections in the vicinity of the project. According to the report, the project would not result in a degradation of any intersection to LOS E or F. Accordingly, no significant traffic impacts would therefore be anticipated. In accordance with the *Transportation Project-Level Carbon Monoxide Protocol* (University of California Davis 1998) followed by Caltrans in their air quality analyses, CO "hot spots" are only evaluated for those intersections where a project would degrade the level of service to LOS E or F. Because the project would not degrade the LOS within the study area at affected intersections, CO "hot spots" would not result from project-related traffic.

Emissions of nonattainment pollutants PM_{10}, $PM_{2.5}$, NOx, or VOCs would be below the screening-level thresholds for project operations. The project would therefore not result in a cumulatively considerable net increase in nonattainment pollutants. The project would not result in a CO "hot spot." The project is consistent with the General Plan. The project would therefore not have a cumulatively significant impact.

With regard to cumulative impacts to sensitive receptors from gas station operations, it should be noted that there is an existing gas station located across Valley Center Road at the northwestern corner of the intersection of Valley Center Road and Cole Grade Road. Gas stations are required to be permitted by the San Diego Air Pollution Control District and as part of that permitting process, are required to demonstrate that the potential health risks are below 10 in a million with Toxics-Best Available Control Technology (T-BACT). Compliance with SDAPCD permitting requirements would require that the facility implement T-BACT, which would require that the facility comply with Rules 61.3.1 and 61.4.1 for underground storage tanks, and with CARB requirements and Rule 61.4 to install certified vapor recovery systems.

As discussed in Section 4.4, the health risks associated with operation of the Valley Center Arco Project are below the significance threshold of 10 in a million at the nearest receptor.

The nearest sensitive receptor is the residence located 250 feet from the fenceline, where residents are present. The nearest location where sensitive receptors such as schoolchildren would be present is the Valley Center Elementary School located north of the project site on Cole Grade

Road. This location is more than 1,000 feet from the Valley Center Arco project site. Receptors representing both the nearest residence and the school grounds (the ballfields) were included in the health risk calculations. In reality, no actual receptor would be present at the ballfields for 24 hours per day, 7 days per week, for 30 years.

Based on the risk calculation for gas station operations, which address emissions of benzene, n-hexane, toluene, ethylbenzene, and xylenes, the maximum predicted risk at the school grounds would be 0.957 in a million, which is an order of magnitude lower than the significance threshold with T-BACT. If the existing gas station's throughput were approximately the same as that proposed for the project, the risk would be approximately doubled. Even if the risk were doubled, the risk at the school is still well below the significance threshold. Thus the project would not result in a cumulatively significant impact to sensitive receptors.

4.2.2.3 Design Considerations

No additional measures would be required to reduce impacts to less than significant.

4.2.2.4 Conclusions

Emissions of all criteria pollutants would be less than the SLTs for project operations and would therefore not result in a significant impact to the ambient air quality. Supportive of the NAAQS and CAAQS, the County's SLTs are scientifically substantiated, numerical mass emissions levels of criteria air pollutants considered to be protective of human health. A project with emissions rates below these thresholds is considered to have a less than significant impact on regional and local air quality and would have a low potential for resulting in impacts to human health due to the nexus between SLTs, ambient air quality standards, and public health.

4.3.2 Operational Impacts

4.3 Impacts to Sensitive Receptors

4.3.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project will expose sensitive receptors to substantial pollutant concentrations.

Air quality regulators typically define "sensitive receptors" as schools, hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. However, for the purpose of CEQA analysis, the County of San Diego definition of "sensitive receptors" includes residences (County of San Diego 2007). The two primary emissions of concern for impacts to sensitive receptors are CO and diesel particulate matter. As discussed in Section 4.2.3.2, operational impacts would not result in CO "hot spots". This analysis therefore focuses on diesel particulate matter.

4.3.2 Significance of Impacts Prior to Mitigation

The project would result in emissions of diesel particulate matter during construction activities. Construction would be short-term in nature, and would only be expected to occur over approximately seven months. Total on-site construction diesel particulate exhaust emissions, assuming the use of Tier 3 equipment based on the project's commitment to use this equipment as a project design feature, are estimated to be 0.07016 tons.

To assess whether there is a potential for a significant impact associated with exposure to diesel exhaust particulate matter, a health risk evaluation was conducted on the particulate emissions. The construction heavy equipment sources were represented as a series of nine elevated volume sources placed at the site. The sources are modeled as an elevated volume sources to account for

buoyancy resulting from the heat of the exhaust. Emissions were allocated to this source based on the estimated emission rates for diesel particulate during construction.

A review of the sensitive receptors within one mile of the site was conducted to identify the nearest sensitive receptors. Impacts will be highest at the nearest receptors. The nearest existing receptors were located based on the site map and aerial photographs for the project area. The nearest residence is located approximately 250 feet from the project site on the northwest corner of Cole Grade Road and Valley Center Road; a receptor was placed at this location, along with two residences to the east of the site. The risk evaluation was conducted to assess the potential for an unacceptable risk at these existing receptors due to exposure to diesel particulate emissions from heavy construction equipment during construction. The residential receptors identified are the closest residences. No other sensitive receptors are located in the project vicinity.

The U.S. EPA's approved air dispersion model, AERMOD (U.S. EPA 2009), was used to estimate the downwind impacts at the closest receptors to the construction site. The model was run using preprocessed meteorological data from the Escondido surface meteorological monitoring station provided by the San Diego Air Pollution Control District. Risks were estimated using the Office of Environmental Health Hazard Assessment (OEHHA)'s guidance, which takes into account the sensitivity of children during developmental years (OEHHA 2015).

Exposure through inhalation is a function of the respiration rate and the concentration of a substance in the air and is calculated by using the following formulas (OEHHA 2015):

$$\text{Risk} = \text{Dose Inhalation} \times \text{CPF} \times \text{ASF}$$

where:

Age Sensitivity Factor (ASF) = described below

Inhalation cancer potency factor (CPF) = 1.1 (milligram per kilogram per day)$^{-1}$ (for Diesel Particulate Matter [DPM])

$$\text{Dose Inhalation} = C_{air} * \text{DBR} * \text{A} * \text{EF} * \text{ED} * 10^{-6} / \text{AT} \quad \text{(Equation 2)}$$

where:

C_{air} = concentration in microgram per cubic meter

DBR = breathing rate in liter per kilogram of body weight per day (Per OEHHA 2015)

A = inhalation absorption factor (1 for DPM)

EF = exposure frequency in days per year (250 days)

ED = exposure duration in years (30 years)

AT = averaging time period over which exposure is averaged in days (25,550 days for 70 years)

For modeling purposes, the values suggested by the OEHHA Guidance were used for the dose inhalation calculation. These values take into account the increased sensitivity of children during the third trimester, ages 0 to 2, and ages 2 to 16, by applying an age sensitivity factor for each period. Daily breathing rates for each of the time periods considered were used to calculate risk. Risk calculations are provided in Appendix B.

Based on the above equations, the maximum cancer risk predicted at the nearest residential receptor would be 0.731 in a million, and the maximum non-cancer chronic hazard is 0.000214. This value is below the County of San Diego's significance threshold of 10 in 1 million, assuming implementation of T-BACT. T-BACT will include the following requirement:

In accordance with County of San Diego Department of Planning and Development Services requirements, the project will require the construction fleet to meet, as a minimum, Tier 3 emission standards.

The risk associated with exposure to diesel particulate from construction of the project is therefore not significant.

Vehicular traffic may result in minor amounts of toxic air contaminants (TACs). Truck trips would be associated with gasoline trucks coming to supply gasoline to the service station and other delivery vehicles servicing the project. The project would not attract a large proportion of truck trips. It is estimated that the project would have a maximum of two to three truck deliveries per

day. The project is a neighborhood gas station and not designed to provide a fueling stop for trucks involved in long-distance travel or goods movement. Because the emissions are well below the significance threshold, and due to the low number of trucks anticipated on a daily basis, emissions from trucks were not anticipated to cause an adverse impact on nearby residents.

The gas station will be required to obtain an Authority to Construct and Permit to Operate from the SDAPCD prior to its construction. Through the permitting process with the SDAPCD, the gas station will be required to undergo a Toxics New Source Review evaluation, taking into account facility emissions and site-specific source configurations. For the purpose of this analysis, a screening health risk assessment was conducted to address potential impacts to nearby sensitive receptors. TAC emissions from the gas station operations were estimated using the CAPCOA Gasoline Service Station Industry-Wide Risk Assessment Guidelines (CAPCOA 1997), assuming the gasoline would meet reformulated fuel standards, assuming 2% ethanol content. Estimated emissions of TACs are presented in Table 6.

Table 6
Toxic Air Contaminant Emissions

TAC	Percent by Weight	Emissions, lbs/year
Benzene	0.62	28.32
n-Hexane	0.76	34.72
Toluene	5.10	232.97
Ethylbenzene	1.64	74.92
Xylenes	5.68	259.46

Source: *Gasoline Service Station Industry-Wide Risk Assessment Guidelines* (CAPCOA 2007). Percent by weight for benzene adjusted to reflect 2015 ARB benzene content requirements.

The next step in the evaluation of the potential for a significant, adverse impact on the ambient air quality was to estimate the impacts associated with the emissions from the gas station. The evaluation involved conducting a screening health risk assessment based on standard air dispersion modeling techniques and California air toxics values for the target toxic air contaminants. Table 7 presents the most recent toxicity values for the toxic air contaminants present in gasoline.

Table 7 Toxicity of Substances in Gasoline			
Toxic Air Contaminant	**Cancer Potency Factor $(\mu g/m^3)^{-1}$**	**Reference Exposure Level, Chronic $\mu g/m^3$**	**Reference Exposure Level, Acute $\mu g/m^3$**
Benzene	1.0E-01	60	1,300
n-Hexane	NA	7,000	NA
Ethylbenzene	NA	2,000	NA
Toluene	NA	300	37,000
Xylene	NA	700	22,000

Source: California Office of Environmental Health Hazard Assessment, *Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values*.

To estimate excess cancer risk (i.e., the added risk of cancer due to exposure to emissions from the gas station), the results of the air dispersion modeling for annual average impacts are multiplied by the cancer unit risk factor. For the purpose of evaluating significance of impacts associated with excess cancer risks, the County's significance threshold of an excess cancer risk of 10 in a million was used for carcinogenic risks, because it was assumed that the SDAPCD would require the facility to be equipped with Toxics-BACT, including vapor recovery systems. To estimate potential for chronic or acute non-cancer effects, a "hazard quotient" is calculated by dividing the predicted concentration by the reference exposure level. A significant risk is predicted if the hazard quotient or sum of all the hazard quotients is greater than 1.

Sources were configured based on the CAPCOA guidance for each of the four emission sources identified. Table 8 presents the source parameters for loading, breathing, refueling, and spillage.

Air dispersion modeling was conducted to determine the maximum acute (1-hour) and chronic (annual average) concentrations that could be expected downwind of the gas station. For conservative purposes, the highest concentration predicted for both averaging times was used to estimate the worst-case potential human health risks associated with exposure to emissions from the gas station. For conservative purposes, it was assumed that receptors could be exposed in a residential scenario (i.e., 24 hours per day, 7 days per week) at all locations modeled.

Table 8
Source Parameters
Gas Station Emission Sources

	Loading	Breathing	Refueling	Spillage
Source Type	Point	Point	Volume	Volume
Stack Height	12 ft	12 ft	NA	NA
Stack Temperature	65 F	60 F	NA	NA
Stack Diameter	2 inches	2 inches	NA	NA
Stack Exit Velocity	9.36E-04 m/sec	2.79E-04 m/sec	NA	NA
Source Volume	NA	NA	4 x 19 x 19 m	4 x 19 x 19 m
Height of Release	NA	NA	1 m	0 m
Lateral Dimension	NA	NA	3.02 m	3.02 m
Vertical Dimension	NA	NA	1.86 m	1.86 m
VOC Emission Rate, g/sec	0.00181	0.000539	0.01597	0.00906

Source: *Gasoline Service Station Industry-Wide Risk Assessment Guidelines* (CAPCOA 2007)

Sources were located on the site to best reflect the source configuration, as shown in Figure 1. The loading and breathing sources were located within the center of the northern portion of the site. The refueling and spillage sources were located in the center of the pumps.

A screening health risk calculation was conducted based on the inhalation unit risk factor (OEHHA 2013) for benzene, and based on chronic and acute (1-hour) reference exposure levels for all substances. Table 9 presents the results of the screening health risk calculations for the Valley Center ARCO Project.

Table 9
Screening Health Risk Results
Valley Center ARCO Project

Risk at Maximally Exposed Individual Residential Receptor (MEIR)

Cancer Risk	Chronic Hazard	Acute Hazard
5.95 in a million	0.0041	0.0007

Based on this screening analysis, risks would be below the County's significance threshold of 10 in a million cancer risk with the application of T-BACT and 1.0 noncancer risk at the nearest sensitive receptor. It is anticipated that risks would be lower at all other receptors in the project

vicinity because they are located farther away than the nearest residence. Operational impacts are less than significant.

4.3.3 Mitigation Measures and Design Considerations

The project will require the use of Tier 3 construction equipment as a project design feature. Because impacts to sensitive receptors from diesel particulate emissions would be less than significant, no additional mitigation measures are required.

The gas station will be required to meet San Diego Air Pollution Control District Rules and Regulations, including the requirements to obtain a permit to operate, and to meet current emission control requirements. Accordingly, the project will be designed to minimize air emissions.

4.3.4 Conclusions

Impacts to sensitive receptors would be less than significant.

4.4 Nuisance/Odor Impacts

4.4.1 Guidelines for the Determination of Significance

The project will result in a significant impact to air quality if:

The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will result in substantial emissions (such as odors or nuisance dust [i.e., dust that is visible or deposits on offsite property such that it causes a nuisance]) adversely affecting a substantial number of people.

Dust emissions during construction were addressed in Section 4.2. This section focuses its analysis on the potential for odor emissions to adversely affect a substantial number of people.

4.4.2 Significance of Impacts Prior to Mitigation

Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. Because the construction equipment would be operating at various locations throughout the construction site, and because any operation that would occur in the vicinity of existing receptors would be temporary, impacts associated with odors during construction are therefore not considered significant.

During construction, diesel equipment operating at the site may generate some nuisance odors; however, due to the distance of sensitive receptors to the project site and the temporary nature of construction, odors associated with project construction would not be significant.

In their CEQA Air Quality Handbook (SCAQMD 1999), the South Coast Air Quality Management District identified the following as sources of objectionable odors: agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, fiberglass molding operations. Gas stations are not identified as sources of objectionable odor.

To address the potential for odor impacts, short-term ground-level concentrations of the main components of gasoline predicted in the modeling analysis conducted to assess risks from VOC emissions were compared with the odor thresholds from the American Industrial Hygiene Association's odor thresholds (AIHA 2013). These odor thresholds are levels at which odors can be detected by human beings. As such, they are not regulatory thresholds but are standard measurements of levels at which a specific compound could be detected. They therefore apply to all situations where odors could be an issue. Odor thresholds are applicable everywhere, not just within San Diego County The thresholds are shown in Table 10.

Table 10 Odor Thresholds for VOCs from Gasoline Station			
Substance	**Odor Threshold, ppm**	**Odor Threshold Concentration, µg/m^3**	**Maxmimum 1-hour Ground-Level Concentration, µg/m^3**
Benzene	0.78 – 160	2.48 – 510	0.19
n-Hexane	65 – 248	228 – 871	0.23
Ethylbenzene	0.092 – 0.60	0.4 – 2.6	0.51
Toluene	0.021 – 69	0.078 - 259	1.57
Xylene	0.081 – 5.4	0.35 - 23	1.75

As shown in Table 10, the maximum ground-level concentrations of benzene and n-hexane are below the lowest odor threshold identified by the American Industrial Hygienists Association. The maximum ground-level concentrations of ethylbenzene, toluene, and xylenes are above the lowest odor thresholds, but below the highest odor thresholds. It should be noted that the maximum 1-hour concentration was predicted for one 1-hour period from 6 pm to 7 pm, which could be a maximum time for refueling and spillage with customers using the gas station, but likely not for gas tank loading and breathing when the gas tanks are being filled by tanker truck. It is unlikely that all of these activities would be occurring at maximum levels at the same time. Further, because the substances are well below midpoints of odor thresholds, it is unlikely that the gas station would expose a substantial number of receptors to objectionable odors.

The project is not considered a source of objectionable odors from operations.

4.4.3 Design Considerations

Because the project would not generate objectionable odors or place sensitive receptors near existing odor sources that would affect a considerable number of persons or the public, no additional design considerations are required.

4.4.4 Conclusions

The operation of a gas station is not explicitly identified as an odor generating source by County guidelines. The project would implement regulatory features that reduce potential odor emissions from vehicle fueling activities, including the requirements of Rule 61.4 to install vapor recovery systems. As discussed in Section 2, the project would be subject to the requirements of APCD Rule 51. Nuisance/odor impacts are therefore less than significant.

5.0 SUMMARY OF RECOMMENDED DESIGN FEATURES, IMPACTS, AND MITIGATION

In summary, the proposed project would result in emissions of air pollutants for both the construction phase and operational phase of the project. The air quality impact analysis evaluated the following air quality issues, and made the following conclusions:

The project will conflict with or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).

Because the Project is consistent with the allowable land use at the site, the project is consistent with the RAQS and SIP. Because the Project is consistent with the RAQS and SIP, it would be in compliance with the applicable rules and regulations designed to avoid adverse impacts to human health. The project therefore has a low potential to impact human health.

The project would result in emissions that would violate any air quality standard or result in a cumulatively considerable net increase in an existing or projected air quality violation.

> ***The project will result in emissions that exceed 250 pounds per day of NOx, or 75 pounds per day of VOCs.***
>
> ***The project will result in emissions of carbon monoxide that when totaled with the ambient concentrations will exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.***
>
> ***The project will result in emissions of $PM_{2.5}$ that will exceed 55 pounds per day.***
>
> ***The project will result in emissions of PM_{10} that exceed 100 pounds per day and increase the ambient PM_{10} concentration by 5 micrograms per cubic meter (5.0 $\mu g/m^3$) or greater at the maximum exposed individual.***

Both construction and operational emissions were evaluated to address these impacts. During both construction and operations, the project would result in emissions that are less than the screening-level thresholds for all criteria pollutants. To reduce the emissions to the extent feasible, fugitive

dust control measures will be implemented during construction. Measures that are incorporated into the project description to reduce emissions associated with construction include the following:

- Application of water three times daily during grading on active grading sites
- Application of water three times daily to unpaved roads
- Reduce speeds to 15 mph on unpaved roads
- Use architectural coatings with a VOC content of 100 g/l or less
- Require the use of Tier 3 construction equipment.

These measures constitute best management practices for dust control, architectural coatings, diesel particulate, and construction equipment emissions.

Project criteria pollutants emissions during construction would be less than significant as they would be below the County's SLTs.. Supportive of the NAAQS and CAAQS, the County's SLTs are scientifically substantiated, numerical mass emissions levels of criteria air pollutants considered to be protective of human health. A project with emissions rates below these thresholds is considered to have a less than significant impact on regional and local air quality and would have a low potential for resulting in impacts to human health due to the nexus between SLTs, ambient air quality standards, and public health.

Operational emissions would be associated with traffic accessing the project, emissions associated with operation of the gas station, and with area sources such as energy use and landscaping. Emissions of all criteria pollutants would be less than the SLTs for project operations and would therefore not result in a significant impact to the ambient air quality. Supportive of the NAAQS and CAAQS, the County's SLTs are scientifically substantiated, numerical mass emissions levels of criteria air pollutants considered to be protective of human health. A project with emissions rates below these thresholds is considered to have a less than significant impact on regional and local air quality and would have a low potential for resulting in impacts to human health due to the nexus between SLTs, ambient air quality standards, and public health.

The project will expose sensitive receptors to substantial pollutant concentrations.

As discussed in Section 4.3, the project would not expose sensitive receptors to substantial pollutant concentrations.

The project which is not an agricultural, commercial or an industrial activity subject to SDAPCD standards, as a result of implementation, will result in substantial emissions (such as odors or dust) adversely affecting a substantial number of people.

The operation of a gas station is not explicitly identified as an odor generating source by County guidelines. The project would implement regulatory features that reduce potential odor emissions from vehicle fueling activities. As discussed in Section 2, the project would be subject to the requirements of APCD Rule 51. Nuisance/odor impacts are therefore less than significant.

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Appendix A

CalEEMod Emission Calculations

Valley View ARCO

San Diego Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market With Gas Pumps	12.00	Pump	0.04	1,694.10	0
Other Asphalt Surfaces	26.02	1000sqft	0.60	26,020.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phase schedule provided by AQ Report

Vehicle Trips - Trip rates, provided by Draft TIA, include reduction for pass-by so pass-by trip percent reduced to zero.
Weeken rates were proportioned from weekday rates

Off-road Equipment -

Off-road Equipment - No concrete saws for grading

Off-road Equipment - Equipment list provided by AQ Report

Off-road Equipment - Equipment information provided by AQ Report

Off-road Equipment -

Off-road Equipment - No concrete saws, equipment list provided by AQ Report.

Grading -

Demolition -

Trips and VMT - Demolition of 30,975 square feet of impervious asphalt.
Truck trips provided by AQ Report.

Construction Off-road Equipment Mitigation - Assumed in AQ Report

Area Mitigation - Will be compliant with SDAPCD Rule 67.0.1

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	847.00	1,977.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,541.00	5,930.00
tblAreaCoating	Area_Nonresidential_Exterior	847	1977
tblAreaCoating	Area_Nonresidential_Interior	2541	5930
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
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tblTripsAndVMT	HaulingTripNumber	359.00	454.00
tblTripsAndVMT	HaulingTripNumber	94.00	119.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	79.00
tblVehicleTrips	ST_TR	204.47	34.06
tblVehicleTrips	SU_TR	166.88	27.78
tblVehicleTrips	WD_TR	542.60	90.33

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.8055	23.6866	25.6534	0.0434	1.6017	1.2565	2.2800	0.6453	1.1956	1.6247	0.0000	4,205.0504	4,205.0504	0.8483	0.0000	4,217.4207
Maximum	**7.8055**	**23.6866**	**25.6534**	**0.0434**	**1.6017**	**1.2565**	**2.2800**	**0.6453**	**1.1956**	**1.6247**	**0.0000**	**4,205.0504**	**4,205.0504**	**0.8483**	**0.0000**	**4,217.4207**

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					
2021	5.9688	21.0207	26.5795	0.0434	1.1425	1.2921	1.8673	0.3929	1.2919	1.4816	0.0000	4,205.0504	4,205.0504	0.8483	0.0000	4,217.4207
Maximum	**5.9688**	**21.0207**	**26.5795**	**0.0434**	**1.1425**	**1.2921**	**1.8673**	**0.3929**	**1.2919**	**1.4816**	**0.0000**	**4,205.0504**	**4,205.0504**	**0.8483**	**0.0000**	**4,217.4207**

	ROG	NOx	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	**23.53**	**11.26**	**-3.61**	**0.00**	**28.67**	**-2.83**	**18.10**	**39.12**	**-8.05**	**8.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0759	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-003
Energy	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249
Mobile	1.4662	5.1833	15.2007	0.0533	4.6974	0.0402	4.7376	1.2554	0.0375	1.2928		5,428.2040	5,428.2040	0.2736		5,435.0431
Total	**1.5422**	**5.1843**	**15.2055**	**0.0533**	**4.6974**	**0.0403**	**4.7377**	**1.2554**	**0.0375**	**1.2929**		**5,429.4300**	**5,429.4300**	**0.2736**	**2.0000e-005**	**5,436.2769**

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	0.0571	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-003
Energy	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249
Mobile	1.4662	5.1833	15.2007	0.0533	4.6974	0.0402	4.7376	1.2554	0.0375	1.2928		5,428.2040	5,428.2040	0.2736		5,435.0431
Total	**1.5233**	**5.1843**	**15.2055**	**0.0533**	**4.6974**	**0.0403**	**4.7377**	**1.2554**	**0.0375**	**1.2929**		**5,429.4300**	**5,429.4300**	**0.2736**	**2.0000e-005**	**5,436.2769**

	ROG	NOx	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	**1.22**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2021	7/15/2021	5	11	
2	Grading	Grading	7/16/2021	7/31/2021	5	11	
3	Tank Installation	Grading	8/1/2021	9/30/2021	5	44	
4	Building Construction	Building Construction	8/1/2021	12/31/2021	5	110	
5	Paving	Paving	10/1/2021	12/31/2021	5	66	
6	Architectural Coating	Architectural Coating	12/1/2021	12/31/2021	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,930; Non-Residential Outdoor: 1,977; Striped Parking Area: 1,561 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Plate Compactors	1	8.00	8	0.43
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Tank Installation	Concrete/Industrial Saws	0	8.00	81	0.73
Tank Installation	Excavators	1	8.00	158	0.38
Tank Installation	Rubber Tired Dozers	1	1.00	247	0.40
Tank Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	141.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	454.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	11.00	5.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Tank Installation	4	10.00	0.00	119.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**		**0.4073**	**0.4073**		**0.3886**	**0.3886**		**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

3.2 Demolition - 2021

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	0.0952	3.2857	0.8038	9.8800e-003	0.2240	0.0100	0.2340	0.0614	9.5900e-003	0.0710		1,084.0084	1,084.0084	0.0958		1,086.4023
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
Worker	0.0480	0.0334	0.3908	1.2600e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		125.4486	125.4486	3.4900e-003		125.5359
Total	**0.1432**	**3.3191**	**1.1946**	**0.0111**	**0.3517**	**0.0109**	**0.3626**	**0.0953**	**0.0104**	**0.1056**		**1,209.4570**	**1,209.4570**	**0.0993**		**1,211.9382**

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	0.2652	5.9644	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**		**0.4017**	**0.4017**		**0.4017**	**0.4017**	**0.0000**	**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

3.2 Demolition - 2021

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	0.0952	3.2857	0.8038	9.8800e-003	0.2240	0.0100	0.2340	0.0614	9.5900e-003	0.0710		1,084.0084	1,084.0084	0.0958		1,086.4023
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
Worker	0.0480	0.0334	0.3908	1.2600e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		125.4486	125.4486	3.4900e-003		125.5359
Total	**0.1432**	**3.3191**	**1.1946**	**0.0111**	**0.3517**	**0.0109**	**0.3626**	**0.0953**	**0.0104**	**0.1056**		**1,209.4570**	**1,209.4570**	**0.0993**		**1,211.9382**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.4518	4.4664	4.1055	6.2100e-003		0.2440	0.2440		0.2253	0.2253		589.2485	589.2485	0.1830		593.8236
Total	**0.4518**	**4.4664**	**4.1055**	**6.2100e-003**	**0.7528**	**0.2440**	**0.9968**	**0.4138**	**0.2253**	**0.6390**		**589.2485**	**589.2485**	**0.1830**		**593.8236**

3.3 Grading - 2021

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	0.3064	10.5796	2.5882	0.0318	0.7212	0.0323	0.7535	0.1977	0.0309	0.2285		3,490.3532	3,490.3532	0.3083		3,498.0612
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
Worker	0.0480	0.0334	0.3908	1.2600e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		125.4486	125.4486	3.4900e-003		125.5359
Total	**0.3544**	**10.6130**	**2.9790**	**0.0331**	**0.8489**	**0.0331**	**0.8821**	**0.2315**	**0.0317**	**0.2632**		**3,615.8018**	**3,615.8018**	**0.3118**		**3,623.5971**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.1401	3.1069	4.0794	6.2100e-003		0.2015	0.2015		0.2015	0.2015	0.0000	589.2485	589.2485	0.1830		593.8236
Total	**0.1401**	**3.1069**	**4.0794**	**6.2100e-003**	**0.2936**	**0.2015**	**0.4951**	**0.1614**	**0.2015**	**0.3628**	**0.0000**	**589.2485**	**589.2485**	**0.1830**		**593.8236**

3.3 Grading - 2021

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	0.3064	10.5796	2.5882	0.0318	0.7212	0.0323	0.7535	0.1977	0.0309	0.2285		3,490.3532	3,490.3532	0.3083		3,498.0612
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
Worker	0.0480	0.0334	0.3908	1.2600e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		125.4486	125.4486	3.4900e-003		125.5359
Total	**0.3544**	**10.6130**	**2.9790**	**0.0331**	**0.8489**	**0.0331**	**0.8821**	**0.2315**	**0.0317**	**0.2632**		**3,615.8018**	**3,615.8018**	**0.3118**		**3,623.5971**

3.4 Tank Installation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.6409	6.3685	7.1669	0.0109		0.3387	0.3387		0.3116	0.3116		1,054.9611	1,054.9611	0.3412		1,063.4910
Total	**0.6409**	**6.3685**	**7.1669**	**0.0109**	**0.7528**	**0.3387**	**1.0914**	**0.4138**	**0.3116**	**0.7254**		**1,054.9611**	**1,054.9611**	**0.3412**		**1,063.4910**

3.4 Tank Installation - 2021

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	0.0201	0.6933	0.1696	2.0900e-003	0.0473	2.1200e-003	0.0494	0.0130	2.0200e-003	0.0150		228.7181	228.7181	0.0202		229.2232
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
Worker	0.0480	0.0334	0.3908	1.2600e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		125.4486	125.4486	3.4900e-003		125.5359
Total	**0.0681**	**0.7267**	**0.5604**	**3.3500e-003**	**0.1750**	**2.9700e-003**	**0.1780**	**0.0468**	**2.8000e-003**	**0.0496**		**354.1667**	**354.1667**	**0.0237**		**354.7591**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.2672	5.5636	7.9974	0.0109		0.3201	0.3201		0.3201	0.3201	0.0000	1,054.9611	1,054.9611	0.3412		1,063.4910
Total	**0.2672**	**5.5636**	**7.9974**	**0.0109**	**0.2936**	**0.3201**	**0.6137**	**0.1614**	**0.3201**	**0.4814**	**0.0000**	**1,054.9611**	**1,054.9611**	**0.3412**		**1,063.4910**

3.4 Tank Installation - 2021

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	0.0201	0.6933	0.1696	2.0900e-003	0.0473	2.1200e-003	0.0494	0.0130	2.0200e-003	0.0150		228.7181	228.7181	0.0202		229.2232
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
Worker	0.0480	0.0334	0.3908	1.2600e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		125.4486	125.4486	3.4900e-003		125.5359
Total	**0.0681**	**0.7267**	**0.5604**	**3.3500e-003**	**0.1750**	**2.9700e-003**	**0.1780**	**0.0468**	**2.8000e-003**	**0.0496**		**354.1667**	**354.1667**	**0.0237**		**354.7591**

3.5 Building Construction - 2021

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	2.0404	15.6778	16.1049	0.0256		0.8376	0.8376		0.8018	0.8018		2,348.6835	2,348.6835	0.4696		2,360.4246
Total	**2.0404**	**15.6778**	**16.1049**	**0.0256**		**0.8376**	**0.8376**		**0.8018**	**0.8018**		**2,348.6835**	**2,348.6835**	**0.4696**		**2,360.4246**

3.5 Building Construction - 2021

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
Vendor	0.0143	0.4890	0.1235	1.2500e-003	0.0306	9.8000e-004	0.0316	8.8100e-003	9.4000e-004	9.7500e-003		134.6157	134.6157	9.8900e-003		134.8630
Worker	0.0528	0.0368	0.4298	1.3800e-003	0.1405	9.3000e-004	0.1414	0.0373	8.6000e-004	0.0381		137.9935	137.9935	3.8400e-003		138.0895
Total	**0.0671**	**0.5258**	**0.5534**	**2.6300e-003**	**0.1711**	**1.9100e-003**	**0.1730**	**0.0461**	**1.8000e-003**	**0.0479**		**272.6091**	**272.6091**	**0.0137**		**272.9525**

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	0.7285	14.2046	16.5094	0.0256		0.9026	0.9026		0.9026	0.9026	0.0000	2,348.6835	2,348.6835	0.4696		2,360.4246
Total	**0.7285**	**14.2046**	**16.5094**	**0.0256**		**0.9026**	**0.9026**		**0.9026**	**0.9026**	**0.0000**	**2,348.6835**	**2,348.6835**	**0.4696**		**2,360.4246**

3.5 Building Construction - 2021

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
Vendor	0.0143	0.4890	0.1235	1.2500e-003	0.0306	9.8000e-004	0.0316	8.8100e-003	9.4000e-004	9.7500e-003		134.6157	134.6157	9.8900e-003		134.8630
Worker	0.0528	0.0368	0.4298	1.3800e-003	0.1405	9.3000e-004	0.1414	0.0373	8.6000e-004	0.0381		137.9935	137.9935	3.8400e-003		138.0895
Total	**0.0671**	**0.5258**	**0.5534**	**2.6300e-003**	**0.1711**	**1.9100e-003**	**0.1730**	**0.0461**	**1.8000e-003**	**0.0479**		**272.6091**	**272.6091**	**0.0137**		**272.9525**

3.6 Paving - 2021

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	0.5892	5.8893	6.3961	9.6600e-003		0.3212	0.3212		0.2964	0.2964		921.6808	921.6808	0.2898		928.9251
Paving	0.0238					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6130**	**5.8893**	**6.3961**	**9.6600e-003**		**0.3212**	**0.3212**		**0.2964**	**0.2964**		**921.6808**	**921.6808**	**0.2898**		**928.9251**

3.6 Paving - 2021

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
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
Worker	0.0864	0.0602	0.7034	2.2700e-003	0.2299	1.5300e-003	0.2314	0.0610	1.4100e-003	0.0624		225.8075	225.8075	6.2800e-003		225.9646
Total	**0.0864**	**0.0602**	**0.7034**	**2.2700e-003**	**0.2299**	**1.5300e-003**	**0.2314**	**0.0610**	**1.4100e-003**	**0.0624**		**225.8075**	**225.8075**	**6.2800e-003**		**225.9646**

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	0.2239	4.7579	6.9028	9.6600e-003		0.2908	0.2908		0.2908	0.2908	0.0000	921.6808	921.6808	0.2898		928.9251
Paving	0.0238					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2477**	**4.7579**	**6.9028**	**9.6600e-003**		**0.2908**	**0.2908**		**0.2908**	**0.2908**	**0.0000**	**921.6808**	**921.6808**	**0.2898**		**928.9251**

3.6 Paving - 2021

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
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
Worker	0.0864	0.0602	0.7034	2.2700e-003	0.2299	1.5300e-003	0.2314	0.0610	1.4100e-003	0.0624		225.8075	225.8075	6.2800e-003		225.9646
Total	**0.0864**	**0.0602**	**0.7034**	**2.2700e-003**	**0.2299**	**1.5300e-003**	**0.2314**	**0.0610**	**1.4100e-003**	**0.0624**		**225.8075**	**225.8075**	**6.2800e-003**		**225.9646**

3.7 Architectural Coating - 2021

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	4.7700					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**4.9889**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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
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
Worker	9.6000e-003	6.6800e-003	0.0782	2.5000e-004	0.0256	1.7000e-004	0.0257	6.7700e-003	1.6000e-004	6.9300e-003		25.0897	25.0897	7.0000e-004		25.1072
Total	**9.6000e-003**	**6.6800e-003**	**0.0782**	**2.5000e-004**	**0.0256**	**1.7000e-004**	**0.0257**	**6.7700e-003**	**1.6000e-004**	**6.9300e-003**		**25.0897**	**25.0897**	**7.0000e-004**		**25.1072**

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	4.7700					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**4.8295**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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
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
Worker	9.6000e-003	6.6800e-003	0.0782	2.5000e-004	0.0256	1.7000e-004	0.0257	6.7700e-003	1.6000e-004	6.9300e-003		25.0897	25.0897	7.0000e-004		25.1072
Total	**9.6000e-003**	**6.6800e-003**	**0.0782**	**2.5000e-004**	**0.0256**	**1.7000e-004**	**0.0257**	**6.7700e-003**	**1.6000e-004**	**6.9300e-003**		**25.0897**	**25.0897**	**7.0000e-004**		**25.1072**

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	1.4662	5.1833	15.2007	0.0533	4.6974	0.0402	4.7376	1.2554	0.0375	1.2928		5,428.2040	5,428.2040	0.2736		5,435.0431
Unmitigated	1.4662	5.1833	15.2007	0.0533	4.6974	0.0402	4.7376	1.2554	0.0375	1.2928		5,428.2040	5,428.2040	0.2736		5,435.0431

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	1,083.96	408.72	333.36	1,799,176	1,799,176
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	1,083.96	408.72	333.36	1,799,176	1,799,176

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	79	21	0
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Other Asphalt Surfaces	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

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	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249
NaturalGas Unmitigated	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249

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					
Convenience Market With Gas Pumps	10.3503	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.1000e-004**	**1.0100e-003**	**8.5000e-004**	**1.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**1.2177**	**1.2177**	**2.0000e-005**	**2.0000e-005**	**1.2249**

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					
Convenience Market With Gas Pumps	0.0103503	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.1000e-004**	**1.0100e-003**	**8.5000e-004**	**1.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**1.2177**	**1.2177**	**2.0000e-005**	**2.0000e-005**	**1.2249**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	0.0571	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-003
Unmitigated	0.0759	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-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	lb/day										lb/day					
Architectural Coating	0.0301					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0455					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.6000e-004	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-003
Total	**0.0759**	**4.0000e-005**	**3.8800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.3200e-003**	**8.3200e-003**	**2.0000e-005**		**8.8700e-003**

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	0.0112					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0455					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.6000e-004	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-003
Total	**0.0571**	**4.0000e-005**	**3.8800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.3200e-003**	**8.3200e-003**	**2.0000e-005**		**8.8700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

Valley View ARCO

San Diego Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market With Gas Pumps	12.00	Pump	0.04	1,694.10	0
Other Asphalt Surfaces	26.02	1000sqft	0.60	26,020.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phase schedule provided by AQ Report

Vehicle Trips - Trip rates, provided by Draft TIA, include reduction for pass-by so pass-by trip percent reduced to zero.
Weeken rates were proportioned from weekday rates

Off-road Equipment -

Off-road Equipment - No concrete saws for grading

Off-road Equipment - Equipment list provided by AQ Report

Off-road Equipment - Equipment information provided by AQ Report

Off-road Equipment -

Off-road Equipment - No concrete saws, equipment list provided by AQ Report.

Grading -

Demolition -

Trips and VMT - Demolition of 30,975 square feet of impervious asphalt.
Truck trips provided by AQ Report.

Construction Off-road Equipment Mitigation - Assumed in AQ Report

Area Mitigation - Will be compliant with SDAPCD Rule 67.0.1

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	847.00	1,977.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,541.00	5,930.00
tblAreaCoating	Area_Nonresidential_Exterior	847	1977
tblAreaCoating	Area_Nonresidential_Interior	2541	5930
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	11.00
tblConstructionPhase	NumDays	2.00	11.00
tblConstructionPhase	NumDays	100.00	110.00

tblConstructionPhase	NumDays	2.00	44.00
tblConstructionPhase	NumDays	5.00	66.00
tblConstructionPhase	NumDays	5.00	23.00
tblGrading	MaterialExported	0.00	950.00
tblGrading	MaterialImported	0.00	3,635.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	141.00
tblTripsAndVMT	HaulingTripNumber	359.00	454.00
tblTripsAndVMT	HaulingTripNumber	94.00	119.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	79.00
tblVehicleTrips	ST_TR	204.47	34.06
tblVehicleTrips	SU_TR	166.88	27.78
tblVehicleTrips	WD_TR	542.60	90.33

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.8303	23.6972	25.5726	0.0432	1.6017	1.2566	2.2801	0.6453	1.1957	1.6247	0.0000	4,137.0108	4,137.0108	0.8491	0.0000	4,149.6288
Maximum	**7.8303**	**23.6972**	**25.5726**	**0.0432**	**1.6017**	**1.2566**	**2.2801**	**0.6453**	**1.1957**	**1.6247**	**0.0000**	**4,137.0108**	**4,137.0108**	**0.8491**	**0.0000**	**4,149.6288**

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					
2021	5.9936	21.0331	26.4987	0.0432	1.1425	1.2922	1.8674	0.3929	1.2919	1.4817	0.0000	4,137.0108	4,137.0108	0.8491	0.0000	4,149.6288
Maximum	**5.9936**	**21.0331**	**26.4987**	**0.0432**	**1.1425**	**1.2922**	**1.8674**	**0.3929**	**1.2919**	**1.4817**	**0.0000**	**4,137.0108**	**4,137.0108**	**0.8491**	**0.0000**	**4,149.6288**

	ROG	NOx	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	**23.46**	**11.24**	**-3.62**	**0.00**	**28.67**	**-2.83**	**18.10**	**39.12**	**-8.05**	**8.81**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0759	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-003
Energy	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249
Mobile	1.4166	5.3037	15.1589	0.0505	4.6974	0.0405	4.7379	1.2554	0.0377	1.2931		5,146.3721	5,146.3721	0.2766		5,153.2868
Total	**1.4926**	**5.3047**	**15.1636**	**0.0505**	**4.6974**	**0.0406**	**4.7380**	**1.2554**	**0.0378**	**1.2932**		**5,147.5981**	**5,147.5981**	**0.2766**	**2.0000e-005**	**5,154.5206**

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	0.0571	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-003
Energy	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249
Mobile	1.4166	5.3037	15.1589	0.0505	4.6974	0.0405	4.7379	1.2554	0.0377	1.2931		5,146.3721	5,146.3721	0.2766		5,153.2868
Total	**1.4737**	**5.3047**	**15.1636**	**0.0505**	**4.6974**	**0.0406**	**4.7380**	**1.2554**	**0.0378**	**1.2932**		**5,147.5981**	**5,147.5981**	**0.2766**	**2.0000e-005**	**5,154.5206**

	ROG	NOx	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	**1.26**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2021	7/15/2021	5	11	
2	Grading	Grading	7/16/2021	7/31/2021	5	11	
3	Tank Installation	Grading	8/1/2021	9/30/2021	5	44	
4	Building Construction	Building Construction	8/1/2021	12/31/2021	5	110	
5	Paving	Paving	10/1/2021	12/31/2021	5	66	
6	Architectural Coating	Architectural Coating	12/1/2021	12/31/2021	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,930; Non-Residential Outdoor: 1,977; Striped Parking Area: 1,561 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Plate Compactors	1	8.00	8	0.43
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Tank Installation	Concrete/Industrial Saws	0	8.00	81	0.73
Tank Installation	Excavators	1	8.00	158	0.38
Tank Installation	Rubber Tired Dozers	1	1.00	247	0.40
Tank Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	141.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	454.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	11.00	5.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Tank Installation	4	10.00	0.00	119.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

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	0.7965	7.2530	7.5691	0.0120		0.4073	0.4073		0.3886	0.3886		1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.7965**	**7.2530**	**7.5691**	**0.0120**		**0.4073**	**0.4073**		**0.3886**	**0.3886**		**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

3.2 Demolition - 2021

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	0.0978	3.3141	0.8544	9.7100e-003	0.2240	0.0102	0.2342	0.0614	9.8000e-003	0.0712		1,065.2796	1,065.2796	0.0989		1,067.7522
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
Worker	0.0558	0.0375	0.3599	1.1800e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		117.7129	117.7129	3.2700e-003		117.7946
Total	**0.1536**	**3.3516**	**1.2144**	**0.0109**	**0.3517**	**0.0111**	**0.3628**	**0.0953**	**0.0106**	**0.1058**		**1,182.9925**	**1,182.9925**	**0.1022**		**1,185.5468**

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	0.2652	5.9644	7.9381	0.0120		0.4017	0.4017		0.4017	0.4017	0.0000	1,147.4338	1,147.4338	0.2138		1,152.7797
Total	**0.2652**	**5.9644**	**7.9381**	**0.0120**		**0.4017**	**0.4017**		**0.4017**	**0.4017**	**0.0000**	**1,147.4338**	**1,147.4338**	**0.2138**		**1,152.7797**

3.2 Demolition - 2021

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	0.0978	3.3141	0.8544	9.7100e-003	0.2240	0.0102	0.2342	0.0614	9.8000e-003	0.0712		1,065.2796	1,065.2796	0.0989		1,067.7522
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
Worker	0.0558	0.0375	0.3599	1.1800e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		117.7129	117.7129	3.2700e-003		117.7946
Total	**0.1536**	**3.3516**	**1.2144**	**0.0109**	**0.3517**	**0.0111**	**0.3628**	**0.0953**	**0.0106**	**0.1058**		**1,182.9925**	**1,182.9925**	**0.1022**		**1,185.5468**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.4518	4.4664	4.1055	6.2100e-003		0.2440	0.2440		0.2253	0.2253		589.2485	589.2485	0.1830		593.8236
Total	**0.4518**	**4.4664**	**4.1055**	**6.2100e-003**	**0.7528**	**0.2440**	**0.9968**	**0.4138**	**0.2253**	**0.6390**		**589.2485**	**589.2485**	**0.1830**		**593.8236**

3.3 Grading - 2021

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	0.3148	10.6708	2.7512	0.0313	0.7212	0.0330	0.7542	0.1977	0.0315	0.2292		3,430.0494	3,430.0494	0.3185		3,438.0106
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
Worker	0.0558	0.0375	0.3599	1.1800e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		117.7129	117.7129	3.2700e-003		117.7946
Total	**0.3706**	**10.7083**	**3.1111**	**0.0325**	**0.8489**	**0.0338**	**0.8827**	**0.2315**	**0.0323**	**0.2638**		**3,547.7622**	**3,547.7622**	**0.3217**		**3,555.8052**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.1401	3.1069	4.0794	6.2100e-003		0.2015	0.2015		0.2015	0.2015	0.0000	589.2485	589.2485	0.1830		593.8236
Total	**0.1401**	**3.1069**	**4.0794**	**6.2100e-003**	**0.2936**	**0.2015**	**0.4951**	**0.1614**	**0.2015**	**0.3628**	**0.0000**	**589.2485**	**589.2485**	**0.1830**		**593.8236**

3.3 Grading - 2021

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	0.3148	10.6708	2.7512	0.0313	0.7212	0.0330	0.7542	0.1977	0.0315	0.2292		3,430.0494	3,430.0494	0.3185		3,438.0106
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
Worker	0.0558	0.0375	0.3599	1.1800e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		117.7129	117.7129	3.2700e-003		117.7946
Total	**0.3706**	**10.7083**	**3.1111**	**0.0325**	**0.8489**	**0.0338**	**0.8827**	**0.2315**	**0.0323**	**0.2638**		**3,547.7622**	**3,547.7622**	**0.3217**		**3,555.8052**

3.4 Tank Installation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	0.6409	6.3685	7.1669	0.0109		0.3387	0.3387		0.3116	0.3116		1,054.9611	1,054.9611	0.3412		1,063.4910
Total	**0.6409**	**6.3685**	**7.1669**	**0.0109**	**0.7528**	**0.3387**	**1.0914**	**0.4138**	**0.3116**	**0.7254**		**1,054.9611**	**1,054.9611**	**0.3412**		**1,063.4910**

3.4 Tank Installation - 2021

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	0.0206	0.6992	0.1803	2.0500e-003	0.0473	2.1600e-003	0.0494	0.0130	2.0700e-003	0.0150		224.7665	224.7665	0.0209		225.2881
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
Worker	0.0558	0.0375	0.3599	1.1800e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		117.7129	117.7129	3.2700e-003		117.7946
Total	**0.0764**	**0.7367**	**0.5402**	**3.2300e-003**	**0.1750**	**3.0100e-003**	**0.1780**	**0.0468**	**2.8500e-003**	**0.0497**		**342.4793**	**342.4793**	**0.0241**		**343.0827**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2936	0.0000	0.2936	0.1614	0.0000	0.1614			0.0000			0.0000
Off-Road	0.2672	5.5636	7.9974	0.0109		0.3201	0.3201		0.3201	0.3201	0.0000	1,054.9611	1,054.9611	0.3412		1,063.4910
Total	**0.2672**	**5.5636**	**7.9974**	**0.0109**	**0.2936**	**0.3201**	**0.6137**	**0.1614**	**0.3201**	**0.4814**	**0.0000**	**1,054.9611**	**1,054.9611**	**0.3412**		**1,063.4910**

3.4 Tank Installation - 2021

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	0.0206	0.6992	0.1803	2.0500e-003	0.0473	2.1600e-003	0.0494	0.0130	2.0700e-003	0.0150		224.7665	224.7665	0.0209		225.2881
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
Worker	0.0558	0.0375	0.3599	1.1800e-003	0.1277	8.5000e-004	0.1286	0.0339	7.8000e-004	0.0347		117.7129	117.7129	3.2700e-003		117.7946
Total	**0.0764**	**0.7367**	**0.5402**	**3.2300e-003**	**0.1750**	**3.0100e-003**	**0.1780**	**0.0468**	**2.8500e-003**	**0.0497**		**342.4793**	**342.4793**	**0.0241**		**343.0827**

3.5 Building Construction - 2021

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	2.0404	15.6778	16.1049	0.0256		0.8376	0.8376		0.8018	0.8018		2,348.6835	2,348.6835	0.4696		2,360.4246
Total	**2.0404**	**15.6778**	**16.1049**	**0.0256**		**0.8376**	**0.8376**		**0.8018**	**0.8018**		**2,348.6835**	**2,348.6835**	**0.4696**		**2,360.4246**

3.5 Building Construction - 2021

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
Vendor	0.0151	0.4870	0.1383	1.2200e-003	0.0306	1.0200e-003	0.0316	8.8100e-003	9.8000e-004	9.7900e-003		130.8493	130.8493	0.0105		131.1128
Worker	0.0614	0.0413	0.3959	1.3000e-003	0.1405	9.3000e-004	0.1414	0.0373	8.6000e-004	0.0381		129.4842	129.4842	3.6000e-003		129.5741
Total	**0.0765**	**0.5282**	**0.5343**	**2.5200e-003**	**0.1711**	**1.9500e-003**	**0.1731**	**0.0461**	**1.8400e-003**	**0.0479**		**260.3335**	**260.3335**	**0.0141**		**260.6869**

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	0.7285	14.2046	16.5094	0.0256		0.9026	0.9026		0.9026	0.9026	0.0000	2,348.6835	2,348.6835	0.4696		2,360.4246
Total	**0.7285**	**14.2046**	**16.5094**	**0.0256**		**0.9026**	**0.9026**		**0.9026**	**0.9026**	**0.0000**	**2,348.6835**	**2,348.6835**	**0.4696**		**2,360.4246**

3.5 Building Construction - 2021

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
Vendor	0.0151	0.4870	0.1383	1.2200e-003	0.0306	1.0200e-003	0.0316	8.8100e-003	9.8000e-004	9.7900e-003		130.8493	130.8493	0.0105		131.1128
Worker	0.0614	0.0413	0.3959	1.3000e-003	0.1405	9.3000e-004	0.1414	0.0373	8.6000e-004	0.0381		129.4842	129.4842	3.6000e-003		129.5741
Total	**0.0765**	**0.5282**	**0.5343**	**2.5200e-003**	**0.1711**	**1.9500e-003**	**0.1731**	**0.0461**	**1.8400e-003**	**0.0479**		**260.3335**	**260.3335**	**0.0141**		**260.6869**

3.6 Paving - 2021

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	0.5892	5.8893	6.3961	9.6600e-003		0.3212	0.3212		0.2964	0.2964		921.6808	921.6808	0.2898		928.9251
Paving	0.0238					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6130**	**5.8893**	**6.3961**	**9.6600e-003**		**0.3212**	**0.3212**		**0.2964**	**0.2964**		**921.6808**	**921.6808**	**0.2898**		**928.9251**

3.6 Paving - 2021

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
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
Worker	0.1004	0.0675	0.6479	2.1300e-003	0.2299	1.5300e-003	0.2314	0.0610	1.4100e-003	0.0624		211.8832	211.8832	5.8800e-003		212.0303
Total	**0.1004**	**0.0675**	**0.6479**	**2.1300e-003**	**0.2299**	**1.5300e-003**	**0.2314**	**0.0610**	**1.4100e-003**	**0.0624**		**211.8832**	**211.8832**	**5.8800e-003**		**212.0303**

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	0.2239	4.7579	6.9028	9.6600e-003		0.2908	0.2908		0.2908	0.2908	0.0000	921.6808	921.6808	0.2898		928.9251
Paving	0.0238					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2477**	**4.7579**	**6.9028**	**9.6600e-003**		**0.2908**	**0.2908**		**0.2908**	**0.2908**	**0.0000**	**921.6808**	**921.6808**	**0.2898**		**928.9251**

3.6 Paving - 2021

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
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
Worker	0.1004	0.0675	0.6479	2.1300e-003	0.2299	1.5300e-003	0.2314	0.0610	1.4100e-003	0.0624		211.8832	211.8832	5.8800e-003		212.0303
Total	**0.1004**	**0.0675**	**0.6479**	**2.1300e-003**	**0.2299**	**1.5300e-003**	**0.2314**	**0.0610**	**1.4100e-003**	**0.0624**		**211.8832**	**211.8832**	**5.8800e-003**		**212.0303**

3.7 Architectural Coating - 2021

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	4.7700					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**4.9889**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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
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
Worker	0.0112	7.5000e-003	0.0720	2.4000e-004	0.0256	1.7000e-004	0.0257	6.7700e-003	1.6000e-004	6.9300e-003		23.5426	23.5426	6.5000e-004		23.5589
Total	**0.0112**	**7.5000e-003**	**0.0720**	**2.4000e-004**	**0.0256**	**1.7000e-004**	**0.0257**	**6.7700e-003**	**1.6000e-004**	**6.9300e-003**		**23.5426**	**23.5426**	**6.5000e-004**		**23.5589**

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	4.7700					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0594	1.3570	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**4.8295**	**1.3570**	**1.8324**	**2.9700e-003**		**0.0951**	**0.0951**		**0.0951**	**0.0951**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

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
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
Worker	0.0112	7.5000e-003	0.0720	2.4000e-004	0.0256	1.7000e-004	0.0257	6.7700e-003	1.6000e-004	6.9300e-003		23.5426	23.5426	6.5000e-004		23.5589
Total	**0.0112**	**7.5000e-003**	**0.0720**	**2.4000e-004**	**0.0256**	**1.7000e-004**	**0.0257**	**6.7700e-003**	**1.6000e-004**	**6.9300e-003**		**23.5426**	**23.5426**	**6.5000e-004**		**23.5589**

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	1.4166	5.3037	15.1589	0.0505	4.6974	0.0405	4.7379	1.2554	0.0377	1.2931		5,146.3721	5,146.3721	0.2766		5,153.2868
Unmitigated	1.4166	5.3037	15.1589	0.0505	4.6974	0.0405	4.7379	1.2554	0.0377	1.2931		5,146.3721	5,146.3721	0.2766		5,153.2868

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	1,083.96	408.72	333.36	1,799,176	1,799,176
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	1,083.96	408.72	333.36	1,799,176	1,799,176

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	79	21	0
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Other Asphalt Surfaces	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

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	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249
NaturalGas Unmitigated	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249

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					
Convenience Market With Gas Pumps	10.3503	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.1000e-004**	**1.0100e-003**	**8.5000e-004**	**1.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**1.2177**	**1.2177**	**2.0000e-005**	**2.0000e-005**	**1.2249**

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					
Convenience Market With Gas Pumps	0.0103503	1.1000e-004	1.0100e-003	8.5000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2177	1.2177	2.0000e-005	2.0000e-005	1.2249
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.1000e-004**	**1.0100e-003**	**8.5000e-004**	**1.0000e-005**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**		**1.2177**	**1.2177**	**2.0000e-005**	**2.0000e-005**	**1.2249**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	0.0571	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-003
Unmitigated	0.0759	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-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	lb/day										lb/day					
Architectural Coating	0.0301					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0455					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.6000e-004	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-003
Total	**0.0759**	**4.0000e-005**	**3.8800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.3200e-003**	**8.3200e-003**	**2.0000e-005**		**8.8700e-003**

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	0.0112					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0455					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.6000e-004	4.0000e-005	3.8800e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		8.3200e-003	8.3200e-003	2.0000e-005		8.8700e-003
Total	**0.0571**	**4.0000e-005**	**3.8800e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**8.3200e-003**	**8.3200e-003**	**2.0000e-005**		**8.8700e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

Valley View ARCO

San Diego Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Convenience Market With Gas Pumps	12.00	Pump	0.04	1,694.10	0
Other Asphalt Surfaces	26.02	1000sqft	0.60	26,020.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Phase schedule provided by AQ Report

Vehicle Trips - Trip rates, provided by Draft TIA, include reduction for pass-by so pass-by trip percent reduced to zero.
Weeken rates were proportioned from weekday rates

Off-road Equipment -

Off-road Equipment - No concrete saws for grading

Off-road Equipment - Equipment list provided by AQ Report

Off-road Equipment - Equipment information provided by AQ Report

Off-road Equipment -

Off-road Equipment - No concrete saws, equipment list provided by AQ Report.

Grading -

Demolition -

Trips and VMT - Demolition of 30,975 square feet of impervious asphalt.
Truck trips provided by AQ Report.

Construction Off-road Equipment Mitigation - Assumed in AQ Report

Area Mitigation - Will be compliant with SDAPCD Rule 67.0.1

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	847.00	1,977.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	2,541.00	5,930.00
tblAreaCoating	Area_Nonresidential_Exterior	847	1977
tblAreaCoating	Area_Nonresidential_Interior	2541	5930
tblAreaMitigation	UseLowVOCPaintNonresidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	10.00	11.00
tblConstructionPhase	NumDays	2.00	11.00
tblConstructionPhase	NumDays	100.00	110.00

tblConstructionPhase	NumDays	2.00	44.00
tblConstructionPhase	NumDays	5.00	66.00
tblConstructionPhase	NumDays	5.00	23.00
tblGrading	MaterialExported	0.00	950.00
tblGrading	MaterialImported	0.00	3,635.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	141.00
tblTripsAndVMT	HaulingTripNumber	359.00	454.00
tblTripsAndVMT	HaulingTripNumber	94.00	119.00
tblTripsAndVMT	WorkerTripNumber	10.00	18.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PR_TP	14.00	79.00
tblVehicleTrips	ST_TR	204.47	34.06
tblVehicleTrips	SU_TR	166.88	27.78
tblVehicleTrips	WD_TR	542.60	90.33

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.2219	1.4048	1.4261	2.6300e-003	0.0478	0.0693	0.1171	0.0187	0.0656	0.0843	0.0000	228.0048	228.0048	0.0445	0.0000	229.1179
Maximum	**0.2219**	**1.4048**	**1.4261**	**2.6300e-003**	**0.0478**	**0.0693**	**0.1171**	**0.0187**	**0.0656**	**0.0843**	**0.0000**	**228.0048**	**228.0048**	**0.0445**	**0.0000**	**229.1179**

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					
2021	0.1230	1.2522	1.4854	2.6300e-003	0.0352	0.0712	0.1064	0.0117	0.0711	0.0829	0.0000	228.0045	228.0045	0.0445	0.0000	229.1177
Maximum	**0.1230**	**1.2522**	**1.4854**	**2.6300e-003**	**0.0352**	**0.0712**	**0.1064**	**0.0117**	**0.0711**	**0.0829**	**0.0000**	**228.0045**	**228.0045**	**0.0445**	**0.0000**	**229.1177**

	ROG	NOx	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	**44.58**	**10.86**	**-4.16**	**0.00**	**26.42**	**-2.76**	**9.15**	**37.17**	**-8.38**	**1.71**	**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	7-1-2021	9-30-2021	0.7214	0.6157
		Highest	0.7214	0.6157

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	0.0138	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.2000e-004
Energy	2.0000e-005	1.9000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.1554	7.1554	2.8000e-004	6.0000e-005	7.1809
Mobile	0.2038	0.7863	2.2080	7.5400e-003	0.6780	5.9600e-003	0.6839	0.1815	5.5400e-003	0.1871	0.0000	697.1799	697.1799	0.0366	0.0000	698.0951
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0398	0.8132	0.8531	4.1200e-003	1.0000e-004	0.9869
Total	**0.2176**	**0.7864**	**2.2085**	**7.5400e-003**	**0.6780**	**5.9700e-003**	**0.6840**	**0.1815**	**5.5500e-003**	**0.1871**	**0.0398**	**705.1492**	**705.1890**	**0.0410**	**1.6000e-004**	**706.2636**

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	0.0104	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.2000e-004
Energy	2.0000e-005	1.9000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	7.1554	7.1554	2.8000e-004	6.0000e-005	7.1809
Mobile	0.2038	0.7863	2.2080	7.5400e-003	0.6780	5.9600e-003	0.6839	0.1815	5.5400e-003	0.1871	0.0000	697.1799	697.1799	0.0366	0.0000	698.0951
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0398	0.8132	0.8531	4.1200e-003	1.0000e-004	0.9869
Total	**0.2142**	**0.7864**	**2.2085**	**7.5400e-003**	**0.6780**	**5.9700e-003**	**0.6840**	**0.1815**	**5.5500e-003**	**0.1871**	**0.0398**	**705.1492**	**705.1890**	**0.0410**	**1.6000e-004**	**706.2636**

	ROG	NOx	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	**1.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	7/1/2021	7/15/2021	5	11	
2	Grading	Grading	7/16/2021	7/31/2021	5	11	
3	Tank Installation	Grading	8/1/2021	9/30/2021	5	44	
4	Building Construction	Building Construction	8/1/2021	12/31/2021	5	110	
5	Paving	Paving	10/1/2021	12/31/2021	5	66	
6	Architectural Coating	Architectural Coating	12/1/2021	12/31/2021	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.6

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 5,930; Non-Residential Outdoor: 1,977; Striped Parking Area: 1,561 (Architectural Coating – sqft)

OffRoad Equipment

Valley View ARCO - San Diego Air Basin, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Concrete/Industrial Saws	0	8.00	81	0.73
Grading	Plate Compactors	1	8.00	8	0.43
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48
Tank Installation	Concrete/Industrial Saws	0	8.00	81	0.73
Tank Installation	Excavators	1	8.00	158	0.38
Tank Installation	Rubber Tired Dozers	1	1.00	247	0.40
Tank Installation	Tractors/Loaders/Backhoes	2	6.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	4	10.00	0.00	141.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	454.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	11.00	5.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	4	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Tank Installation	4	10.00	0.00	119.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.3800e-003	0.0399	0.0416	7.0000e-005		2.2400e-003	2.2400e-003		2.1400e-003	2.1400e-003	0.0000	5.7251	5.7251	1.0700e-003	0.0000	5.7518
Total	**4.3800e-003**	**0.0399**	**0.0416**	**7.0000e-005**		**2.2400e-003**	**2.2400e-003**		**2.1400e-003**	**2.1400e-003**	**0.0000**	**5.7251**	**5.7251**	**1.0700e-003**	**0.0000**	**5.7518**

3.2 Demolition - 2021

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	5.3000e-004	0.0184	4.5400e-003	5.0000e-005	1.2100e-003	6.0000e-005	1.2600e-003	3.3000e-004	5.0000e-005	3.8000e-004	0.0000	5.3694	5.3694	4.8000e-004	0.0000	5.3815
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	1.9900e-003	1.0000e-005	6.9000e-004	0.0000	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.5933	0.5933	2.0000e-005	0.0000	0.5937
Total	**8.0000e-004**	**0.0186**	**6.5300e-003**	**6.0000e-005**	**1.9000e-003**	**6.0000e-005**	**1.9500e-003**	**5.1000e-004**	**5.0000e-005**	**5.7000e-004**	**0.0000**	**5.9627**	**5.9627**	**5.0000e-004**	**0.0000**	**5.9752**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4600e-003	0.0328	0.0437	7.0000e-005		2.2100e-003	2.2100e-003		2.2100e-003	2.2100e-003	0.0000	5.7251	5.7251	1.0700e-003	0.0000	5.7518
Total	**1.4600e-003**	**0.0328**	**0.0437**	**7.0000e-005**		**2.2100e-003**	**2.2100e-003**		**2.2100e-003**	**2.2100e-003**	**0.0000**	**5.7251**	**5.7251**	**1.0700e-003**	**0.0000**	**5.7518**

3.2 Demolition - 2021

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	5.3000e-004	0.0184	4.5400e-003	5.0000e-005	1.2100e-003	6.0000e-005	1.2600e-003	3.3000e-004	5.0000e-005	3.8000e-004	0.0000	5.3694	5.3694	4.8000e-004	0.0000	5.3815
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	1.9900e-003	1.0000e-005	6.9000e-004	0.0000	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.5933	0.5933	2.0000e-005	0.0000	0.5937
Total	**8.0000e-004**	**0.0186**	**6.5300e-003**	**6.0000e-005**	**1.9000e-003**	**6.0000e-005**	**1.9500e-003**	**5.1000e-004**	**5.0000e-005**	**5.7000e-004**	**0.0000**	**5.9627**	**5.9627**	**5.0000e-004**	**0.0000**	**5.9752**

3.3 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.1400e-003	0.0000	4.1400e-003	2.2800e-003	0.0000	2.2800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4800e-003	0.0246	0.0226	3.0000e-005		1.3400e-003	1.3400e-003		1.2400e-003	1.2400e-003	0.0000	2.9401	2.9401	9.1000e-004	0.0000	2.9629
Total	**2.4800e-003**	**0.0246**	**0.0226**	**3.0000e-005**	**4.1400e-003**	**1.3400e-003**	**5.4800e-003**	**2.2800e-003**	**1.2400e-003**	**3.5200e-003**	**0.0000**	**2.9401**	**2.9401**	**9.1000e-004**	**0.0000**	**2.9629**

3.3 Grading - 2021

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	1.7000e-003	0.0593	0.0146	1.7000e-004	3.8800e-003	1.8000e-004	4.0600e-003	1.0700e-003	1.7000e-004	1.2400e-003	0.0000	17.2888	17.2888	1.5600e-003	0.0000	17.3278
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	1.9900e-003	1.0000e-005	6.9000e-004	0.0000	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.5933	0.5933	2.0000e-005	0.0000	0.5937
Total	**1.9700e-003**	**0.0595**	**0.0166**	**1.8000e-004**	**4.5700e-003**	**1.8000e-004**	**4.7500e-003**	**1.2500e-003**	**1.7000e-004**	**1.4300e-003**	**0.0000**	**17.8821**	**17.8821**	**1.5800e-003**	**0.0000**	**17.9215**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6100e-003	0.0000	1.6100e-003	8.9000e-004	0.0000	8.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.7000e-004	0.0171	0.0224	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.9401	2.9401	9.1000e-004	0.0000	2.9629
Total	**7.7000e-004**	**0.0171**	**0.0224**	**3.0000e-005**	**1.6100e-003**	**1.1100e-003**	**2.7200e-003**	**8.9000e-004**	**1.1100e-003**	**2.0000e-003**	**0.0000**	**2.9401**	**2.9401**	**9.1000e-004**	**0.0000**	**2.9629**

3.3 Grading - 2021

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	1.7000e-003	0.0593	0.0146	1.7000e-004	3.8800e-003	1.8000e-004	4.0600e-003	1.0700e-003	1.7000e-004	1.2400e-003	0.0000	17.2888	17.2888	1.5600e-003	0.0000	17.3278
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.0000e-004	1.9900e-003	1.0000e-005	6.9000e-004	0.0000	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.5933	0.5933	2.0000e-005	0.0000	0.5937
Total	**1.9700e-003**	**0.0595**	**0.0166**	**1.8000e-004**	**4.5700e-003**	**1.8000e-004**	**4.7500e-003**	**1.2500e-003**	**1.7000e-004**	**1.4300e-003**	**0.0000**	**17.8821**	**17.8821**	**1.5800e-003**	**0.0000**	**17.9215**

3.4 Tank Installation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0166	0.0000	0.0166	9.1000e-003	0.0000	9.1000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0141	0.1401	0.1577	2.4000e-004		7.4500e-003	7.4500e-003		6.8500e-003	6.8500e-003	0.0000	21.0550	21.0550	6.8100e-003	0.0000	21.2252
Total	**0.0141**	**0.1401**	**0.1577**	**2.4000e-004**	**0.0166**	**7.4500e-003**	**0.0240**	**9.1000e-003**	**6.8500e-003**	**0.0160**	**0.0000**	**21.0550**	**21.0550**	**6.8100e-003**	**0.0000**	**21.2252**

3.4 Tank Installation - 2021

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	4.5000e-004	0.0155	3.8300e-003	5.0000e-005	1.0200e-003	5.0000e-005	1.0700e-003	2.8000e-004	4.0000e-005	3.2000e-004	0.0000	4.5317	4.5317	4.1000e-004	0.0000	4.5419
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.1000e-004	7.9800e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.3730	2.3730	7.0000e-005	0.0000	2.3746
Total	**1.5300e-003**	**0.0164**	**0.0118**	**8.0000e-005**	**3.7600e-003**	**7.0000e-005**	**3.8300e-003**	**1.0100e-003**	**6.0000e-005**	**1.0700e-003**	**0.0000**	**6.9046**	**6.9046**	**4.8000e-004**	**0.0000**	**6.9165**

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					6.4600e-003	0.0000	6.4600e-003	3.5500e-003	0.0000	3.5500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8800e-003	0.1224	0.1759	2.4000e-004		7.0400e-003	7.0400e-003		7.0400e-003	7.0400e-003	0.0000	21.0550	21.0550	6.8100e-003	0.0000	21.2252
Total	**5.8800e-003**	**0.1224**	**0.1759**	**2.4000e-004**	**6.4600e-003**	**7.0400e-003**	**0.0135**	**3.5500e-003**	**7.0400e-003**	**0.0106**	**0.0000**	**21.0550**	**21.0550**	**6.8100e-003**	**0.0000**	**21.2252**

3.4 Tank Installation - 2021

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	4.5000e-004	0.0155	3.8300e-003	5.0000e-005	1.0200e-003	5.0000e-005	1.0700e-003	2.8000e-004	4.0000e-005	3.2000e-004	0.0000	4.5317	4.5317	4.1000e-004	0.0000	4.5419
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0800e-003	8.1000e-004	7.9800e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.3730	2.3730	7.0000e-005	0.0000	2.3746
Total	**1.5300e-003**	**0.0164**	**0.0118**	**8.0000e-005**	**3.7600e-003**	**7.0000e-005**	**3.8300e-003**	**1.0100e-003**	**6.0000e-005**	**1.0700e-003**	**0.0000**	**6.9046**	**6.9046**	**4.8000e-004**	**0.0000**	**6.9165**

3.5 Building Construction - 2021

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	0.1122	0.8623	0.8858	1.4100e-003		0.0461	0.0461		0.0441	0.0441	0.0000	117.1879	117.1879	0.0234	0.0000	117.7738
Total	**0.1122**	**0.8623**	**0.8858**	**1.4100e-003**		**0.0461**	**0.0461**		**0.0441**	**0.0441**	**0.0000**	**117.1879**	**117.1879**	**0.0234**	**0.0000**	**117.7738**

3.5 Building Construction - 2021

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	8.0000e-004	0.0271	7.2000e-003	7.0000e-005	1.6500e-003	5.0000e-005	1.7100e-003	4.8000e-004	5.0000e-005	5.3000e-004	0.0000	6.6377	6.6377	5.1000e-004	0.0000	6.6504
Worker	2.9600e-003	2.2300e-003	0.0219	7.0000e-005	7.5400e-003	5.0000e-005	7.5900e-003	2.0000e-003	5.0000e-005	2.0500e-003	0.0000	6.5257	6.5257	1.8000e-004	0.0000	6.5302
Total	**3.7600e-003**	**0.0293**	**0.0291**	**1.4000e-004**	**9.1900e-003**	**1.0000e-004**	**9.3000e-003**	**2.4800e-003**	**1.0000e-004**	**2.5800e-003**	**0.0000**	**13.1634**	**13.1634**	**6.9000e-004**	**0.0000**	**13.1807**

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	0.0401	0.7813	0.9080	1.4100e-003		0.0496	0.0496		0.0496	0.0496	0.0000	117.1878	117.1878	0.0234	0.0000	117.7736
Total	**0.0401**	**0.7813**	**0.9080**	**1.4100e-003**		**0.0496**	**0.0496**		**0.0496**	**0.0496**	**0.0000**	**117.1878**	**117.1878**	**0.0234**	**0.0000**	**117.7736**

3.5 Building Construction - 2021

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	8.0000e-004	0.0271	7.2000e-003	7.0000e-005	1.6500e-003	5.0000e-005	1.7100e-003	4.8000e-004	5.0000e-005	5.3000e-004	0.0000	6.6377	6.6377	5.1000e-004	0.0000	6.6504
Worker	2.9600e-003	2.2300e-003	0.0219	7.0000e-005	7.5400e-003	5.0000e-005	7.5900e-003	2.0000e-003	5.0000e-005	2.0500e-003	0.0000	6.5257	6.5257	1.8000e-004	0.0000	6.5302
Total	**3.7600e-003**	**0.0293**	**0.0291**	**1.4000e-004**	**9.1900e-003**	**1.0000e-004**	**9.3000e-003**	**2.4800e-003**	**1.0000e-004**	**2.5800e-003**	**0.0000**	**13.1634**	**13.1634**	**6.9000e-004**	**0.0000**	**13.1807**

3.6 Paving - 2021

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	0.0194	0.1944	0.2111	3.2000e-004		0.0106	0.0106		9.7800e-003	9.7800e-003	0.0000	27.5925	27.5925	8.6700e-003	0.0000	27.8093
Paving	7.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0202**	**0.1944**	**0.2111**	**3.2000e-004**		**0.0106**	**0.0106**		**9.7800e-003**	**9.7800e-003**	**0.0000**	**27.5925**	**27.5925**	**8.6700e-003**	**0.0000**	**27.8093**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9100e-003	2.1900e-003	0.0215	7.0000e-005	7.4100e-003	5.0000e-005	7.4600e-003	1.9700e-003	5.0000e-005	2.0100e-003	0.0000	6.4071	6.4071	1.8000e-004	0.0000	6.4115
Total	**2.9100e-003**	**2.1900e-003**	**0.0215**	**7.0000e-005**	**7.4100e-003**	**5.0000e-005**	**7.4600e-003**	**1.9700e-003**	**5.0000e-005**	**2.0100e-003**	**0.0000**	**6.4071**	**6.4071**	**1.8000e-004**	**0.0000**	**6.4115**

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	7.3900e-003	0.1570	0.2278	3.2000e-004		9.6000e-003	9.6000e-003		9.6000e-003	9.6000e-003	0.0000	27.5924	27.5924	8.6700e-003	0.0000	27.8093
Paving	7.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.1800e-003**	**0.1570**	**0.2278**	**3.2000e-004**		**9.6000e-003**	**9.6000e-003**		**9.6000e-003**	**9.6000e-003**	**0.0000**	**27.5924**	**27.5924**	**8.6700e-003**	**0.0000**	**27.8093**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9100e-003	2.1900e-003	0.0215	7.0000e-005	7.4100e-003	5.0000e-005	7.4600e-003	1.9700e-003	5.0000e-005	2.0100e-003	0.0000	6.4071	6.4071	1.8000e-004	0.0000	6.4115
Total	**2.9100e-003**	**2.1900e-003**	**0.0215**	**7.0000e-005**	**7.4100e-003**	**5.0000e-005**	**7.4600e-003**	**1.9700e-003**	**5.0000e-005**	**2.0100e-003**	**0.0000**	**6.4071**	**6.4071**	**1.8000e-004**	**0.0000**	**6.4115**

3.7 Architectural Coating - 2021

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	0.0549					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.5200e-003	0.0176	0.0209	3.0000e-005		1.0800e-003	1.0800e-003		1.0800e-003	1.0800e-003	0.0000	2.9362	2.9362	2.0000e-004	0.0000	2.9413
Total	**0.0574**	**0.0176**	**0.0209**	**3.0000e-005**		**1.0800e-003**	**1.0800e-003**		**1.0800e-003**	**1.0800e-003**	**0.0000**	**2.9362**	**2.9362**	**2.0000e-004**	**0.0000**	**2.9413**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	8.3000e-004	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2481	0.2481	1.0000e-005	0.0000	0.2483
Total	**1.1000e-004**	**8.0000e-005**	**8.3000e-004**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2481**	**0.2481**	**1.0000e-005**	**0.0000**	**0.2483**

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	0.0549					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.8000e-004	0.0156	0.0211	3.0000e-005		1.0900e-003	1.0900e-003		1.0900e-003	1.0900e-003	0.0000	2.9362	2.9362	2.0000e-004	0.0000	2.9413
Total	**0.0555**	**0.0156**	**0.0211**	**3.0000e-005**		**1.0900e-003**	**1.0900e-003**		**1.0900e-003**	**1.0900e-003**	**0.0000**	**2.9362**	**2.9362**	**2.0000e-004**	**0.0000**	**2.9413**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	8.0000e-005	8.3000e-004	0.0000	2.9000e-004	0.0000	2.9000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2481	0.2481	1.0000e-005	0.0000	0.2483
Total	**1.1000e-004**	**8.0000e-005**	**8.3000e-004**	**0.0000**	**2.9000e-004**	**0.0000**	**2.9000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2481**	**0.2481**	**1.0000e-005**	**0.0000**	**0.2483**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2038	0.7863	2.2080	7.5400e-003	0.6780	5.9600e-003	0.6839	0.1815	5.5400e-003	0.1871	0.0000	697.1799	697.1799	0.0366	0.0000	698.0951
Unmitigated	0.2038	0.7863	2.2080	7.5400e-003	0.6780	5.9600e-003	0.6839	0.1815	5.5400e-003	0.1871	0.0000	697.1799	697.1799	0.0366	0.0000	698.0951

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	1,083.96	408.72	333.36	1,799,176	1,799,176
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	1,083.96	408.72	333.36	1,799,176	1,799,176

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	79	21	0
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056
Other Asphalt Surfaces	0.602700	0.040134	0.179939	0.104242	0.014985	0.005435	0.016642	0.024350	0.001934	0.001888	0.005938	0.000757	0.001056

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6.9538	6.9538	2.8000e-004	6.0000e-005	6.9781
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	6.9538	6.9538	2.8000e-004	6.0000e-005	6.9781
NaturalGas Mitigated	2.0000e-005	1.9000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2016	0.2016	0.0000	0.0000	0.2028
NaturalGas Unmitigated	2.0000e-005	1.9000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2016	0.2016	0.0000	0.0000	0.2028

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market With Gas Pumps	3777.84	2.0000e-005	1.9000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2016	0.2016	0.0000	0.0000	0.2028
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.0000e-005**	**1.9000e-004**	**1.6000e-004**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.2016**	**0.2016**	**0.0000**	**0.0000**	**0.2028**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market With Gas Pumps	3777.84	2.0000e-005	1.9000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2016	0.2016	0.0000	0.0000	0.2028
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.0000e-005**	**1.9000e-004**	**1.6000e-004**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.2016**	**0.2016**	**0.0000**	**0.0000**	**0.2028**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	21277.9	6.9538	2.8000e-004	6.0000e-005	6.9781
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**6.9538**	**2.8000e-004**	**6.0000e-005**	**6.9781**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	21277.9	6.9538	2.8000e-004	6.0000e-005	6.9781
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**6.9538**	**2.8000e-004**	**6.0000e-005**	**6.9781**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive 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	0.0104	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.2000e-004
Unmitigated	0.0138	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.2000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.4900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.3000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.2000e-004
Total	**0.0138**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.8000e-004**	**6.8000e-004**	**0.0000**	**0.0000**	**7.2000e-004**

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	2.0500e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	8.3000e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	3.0000e-005	0.0000	3.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	6.8000e-004	6.8000e-004	0.0000	0.0000	7.2000e-004
Total	**0.0104**	**0.0000**	**3.5000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**6.8000e-004**	**6.8000e-004**	**0.0000**	**0.0000**	**7.2000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.8531	4.1200e-003	1.0000e-004	0.9869
Unmitigated	0.8531	4.1200e-003	1.0000e-004	0.9869

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas Pumps	0.125486 / 0.0769109	0.8531	4.1200e-003	1.0000e-004	0.9869
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.8531**	**4.1200e-003**	**1.0000e-004**	**0.9869**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas Pumps	0.125486 / 0.0769109	0.8531	4.1200e-003	1.0000e-004	0.9869
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.8531**	**4.1200e-003**	**1.0000e-004**	**0.9869**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Health Risk Calculations

Table B-1
Risk Calculations - Valley Center ARCO Construction Emissions

DPM Concentration ug/m3	Dose air 3rd trimester	Dose air 0-2	Dose air 2-16	Dose air 16-30	Cancer Risk	Non-Cancer HI
0.001071	3.71166E-07	1.12069E-06	7.65979E-07	3.44434E-07	7.31089E-07	0.000214
0.000326667	1.1321E-07	3.41824E-07	2.33632E-07	1.05056E-07	2.2299E-07	6.53E-05
0.000304333	1.0547E-07	3.18454E-07	2.17659E-07	9.78736E-08	2.07745E-07	6.09E-05
			MEIR		**7.31089E-07**	**0.000214**

Table B-2
Gas Station Health Risk Calculations

X/Q by source	Annual			1-Hour		
	Receptor 1	Receptor 2	Receptor 3	Receptor 1	Receptor 2	Receptor 3
Loading	308.73	75.56	70.15	1149.54	1253.36	1104.72
Breathing	296.54	75.86	70.30	1034.49	1330.97	942.14
Refueling	240.07	71.45	65.92	750.39	1319.76	1261.82
Spillage	208.83	66.28	61.01	617.70	785.69	1492.43

Emission Rates		Tons/year					Grams/second			
	% of ROG	Loading	Breathing	Refueling	Spillage		Loading	Breathing	Refueling	Spillage
ROG	100	0.1510	0.0450	1.3320	0.7560	2.28				
Benzene	0.62	0.0009	0.0003	0.0083	0.0047	28.32	2.6931E-05	8.0259E-06	2.3757E-04	1.3483E-04
Hexane	0.76	0.0011	0.0003	0.0101	0.0057	34.72	3.3012E-05	9.8381E-06	2.9121E-04	1.6528E-04
Toluene	5.1	0.0077	0.0023	0.0679	0.0386	232.97	2.2153E-04	6.6019E-05	1.9542E-03	1.1091E-03
Ethylbenzene	1.64	0.0025	0.0007	0.0218	0.0124	74.92	7.1237E-05	2.1230E-05	6.2840E-04	3.5666E-04
Xylenes	5.68	0.0086	0.0026	0.0757	0.0429	259.46	2.4672E-04	7.3527E-05	2.1764E-03	1.2353E-03

TAC	Chronic REL	Acute REL	Ground-Level Concentration						Noncancer Hazard Calculations					
			Annual			1-hour			Chronic Hazard			Acute Hazard		
			Receptor 1	Receptor 2	Receptor 3	Receptor 1	Receptor 2	Receptor 3	Receptor 1	Receptor 2	Receptor 3	Receptor 1	Receptor 2	Receptor 3
Benzene	60	1,300	0.10	0.03	0.03	0.30	0.46	0.54	0.0016	0.0005	0.0004	0.0002	0.0004	0.0004
Hexane	7,000	NA	0.12	0.04	0.03	0.37	0.57	0.66	0.0000	0.0000	0.0000			
Toluene	2,000	NA	0.79	0.23	0.22	2.47	3.82	4.43	0.0004	0.0001	0.0001			
Ethylbenzene	300	37,000	0.25	0.08	0.07	0.80	1.23	1.42	0.0008	0.0003	0.0002	0.0000	0.0000	0.0000
Xylenes	700	22,000	0.88	0.26	0.24	2.76	4.25	4.93	0.0013	0.0004	0.0003	0.0001	0.0002	0.0002
Total									**0.0041**	**0.0012**	**0.0011**	**0.0004**	**0.0006**	**0.0007**

Cancer Risk Calculation									
Concentration ug/m3	Dose air 3rd trimester	Dose air 0-2	Dose air 2-16	Dose air 16-30	risk 3tm	risk 0-2	risk 2-16	risk 16-30	Cancer Risk
0.10	3.32E-05	1.00E-04	6.86E-05	3.08E-05	1.01E-07	2.44E-06	2.96E-06	4.50E-07	5.95E-06
0.03	9.90E-06	2.99E-05	2.04E-05	9.18E-06	3.00E-08	7.26E-07	8.82E-07	1.34E-07	1.77E-06
0.03	9.13E-06	2.76E-05	1.88E-05	8.47E-06	2.77E-08	6.69E-07	8.14E-07	1.24E-07	1.63E-06
			MEIR				Maximum		**5.95E-06**

Note: Benzene content reflects 2015 requirements to meet 0.62% benzene in California

Table B-3
Cumulative Health Risk Calculations
School Receptor

X/Q by source	Annual Receptor 1
Loading	45.91
Breathing	45.00
Refueling	38.16
Spillage	35.34

		Tons/year					Grams/second			
Emission Rates	% of ROG	Loading	Breathing	Refueling	Spillage		Loading	Breathing	Refueling	Spillage
ROG	100	0.1510	0.0450	1.3320	0.7560	2.28				
Benzene	0.62	0.0009	0.0003	0.0083	0.0047	28.32	2.6931E-05	8.0259E-06	2.3757E-04	1.3483E-04
Hexane	0.76	0.0011	0.0003	0.0101	0.0057	34.72	3.3012E-05	9.8381E-06	2.9121E-04	1.6528E-04
Toluene	5.1	0.0077	0.0023	0.0679	0.0386	232.97	2.2153E-04	6.6019E-05	1.9542E-03	1.1091E-03
Ethylbenzene	1.64	0.0025	0.0007	0.0218	0.0124	74.92	7.1237E-05	2.1230E-05	6.2840E-04	3.5666E-04
Xylenes	5.68	0.0086	0.0026	0.0757	0.0429	259.46	2.4672E-04	7.3527E-05	2.1764E-03	1.2353E-03

			GLC	
			Annual	Chronic Hazard
TAC	Chronic REL	Acute REL	Receptor 1	Receptor 1
Benzene	60	1,300	0.02	0.0003
Hexane	7,000	NA	0.02	0.0000
Toluene	2,000	NA	0.13	0.0001
Ethylbenzene	300	37,000	0.04	0.0001
Xylenes	700	22,000	0.14	0.0002
Total				0.0007

Cancer Risk Calculation									
Concentration ug/m3	Dose air 3rd trimester	Dose air 0-2	Dose air 2-16	Dose air 16-30	risk 3tm	risk 0-2	risk 2-16	risk 16-30	Cancer Risk
0.02	5.35E-06	1.61E-05	1.10E-05	4.96E-06	1.62E-08	3.92E-07	4.77E-07	7.24E-08	9.57E-07
			MEIR				Maximum		**9.57E-07**

Note: Benzene content reflects 2015 requirements to meet 0.62% benzene in California