Desert Grove Retail Project

AIR QUALITY IMPACT ANALYSIS

CITY OF VICTORVILLE

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LIST OF ABBREVIATED TERMS

(1)	Reference
µg/m^3	Microgram per Cubic Meter
AADT	Annual Average Daily Trips
AQIA	Air Quality Impact Analysis
AQMD	Air Quality Management District
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BACM	Best Available Control Measures
BMPs	Best Management Practices
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
DPM	Diesel Particulate Matter
EPA	Environmental Protection Agency
LST	Localized Significance Threshold
MDAQMD	Mojave Desert Air Quality Management District
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
Pb	Lead
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
PPM	Parts Per Million
Project	Desert Grove Retail Project
ROG	Reactive Organic Gases
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SIPs	State Implementation Plans
SRA	Source Receptor Area

TAC	Toxic Air Contaminant
TIA	Traffic Impact Analysis
TOG	Total Organic Gases
VMT	Vehicle Miles Traveled

EXECUTIVE SUMMARY

The results of this *Desert Grove Retail Project Air Quality Impact Analysis* are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Potentially Significant*	*Significant and Unavoidable*
CO "Hot Spot" Analysis	3.6	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.7	*Potentially Significant*	*Significant and Unavoidable*
Sensitive Receptors	3.8	*Less Than Significant*	*n/a*
Odors	3.9	*Less Than Significant*	*n/a*
Cumulative Impacts	3.10	*Potentially Significant*	*Significant and Unavoidable*

1 INTRODUCTION

This report presents the results of the air quality impact analysis (AQIA) prepared by Urban Crossroads, Inc., for the proposed Desert Grove Retail Project ("Project").

The purpose of this AQIA is to evaluate the potential impacts to air quality associated with construction and operation of the proposed Project and recommend measures to mitigate impacts considered potentially significant in comparison to thresholds established by the Mojave Desert Air Quality Management District (MDAQMD).

1.1 SITE LOCATION

The proposed Desert Grove Retail Project is located at the southwest corner of the State Route 395 (SR-395) and Palmdale Road (SR-18) in the City of Victorville, as shown on Exhibit 1-A. The Project site is bounded by commercial uses and vacant land to the north (within the City of Adelanto), south, and east (within the City of Victorville); with existing residential homes located west of the Project site in the City of Victorville.

1.2 PROJECT DESCRIPTION

The Project proposes development of approximately 96,300 square feet of commercial/retail uses on an approximately 14.8-acre site, as shown on Exhibit 1-B. For the purposes of this analysis, it has been assumed that the Project will be developed with an anticipated Opening Year of 2019.

1.3 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES (BACMS)

MDAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) (2) and Rule 403.2 (Fugitive Dust) (3).

BACM AQ-1

The following measures shall be incorporated into Project plans and specifications as implementation of Rule 403.

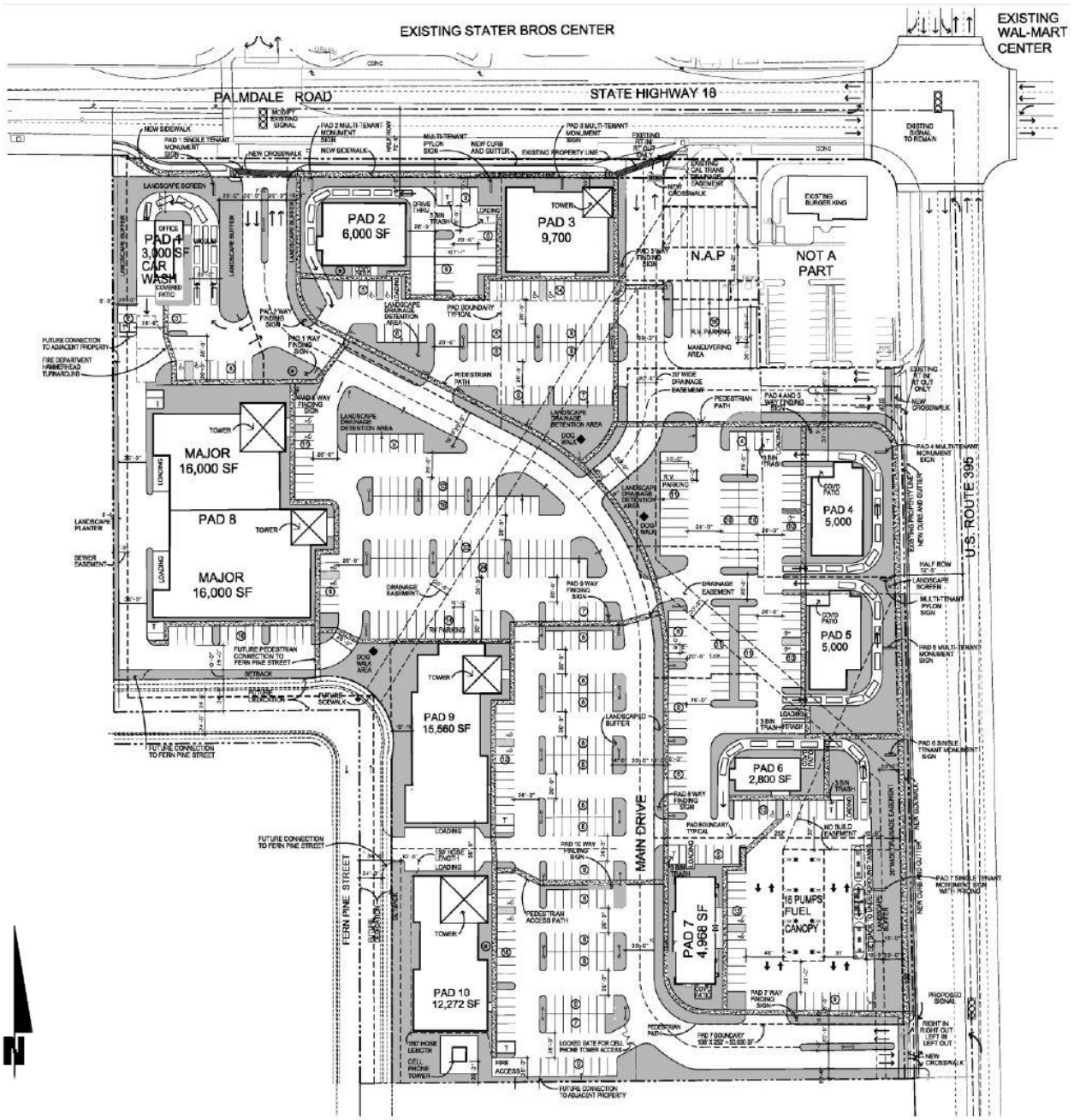
- Use periodic watering for short-term stabilization of Disturbed Surface Area to minimize visible fugitive dust emissions. For purposes of this Rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance
- Take actions sufficient to prevent project-related Trackout onto paved surfaces
- Stabilize graded surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days, except when such a delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate Visible Fugitive Dust emissions

BACM AQ-2

Only "Low-Volatile Organic Compounds" paints (no more than 50 gram/liter of VOC) consistent with MDAQMD Rule 1113 shall be used.

EXHIBIT 1-A: LOCATION MAP

EXHIBIT 1-B: SITE PLAN



1.4 CONSTRUCTION-SOURCE MITIGATION MEASURES

The Project would not result in any potentially significant air quality impacts. Therefore, no mitigation measures are required.

1.5 OPERATIONAL-SOURCE MITIGATION MEASURES

Operational-source emissions has the potential to exceed the threshold of significance, however, no mitigation measures exist that will reduce emissions of NO_x to levels that are less than significance. Therefore, emissions of NO_x are considered significant and unavoidable.

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2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 MOJAVE DESERT AIR BASIN

The Project site is located in the portion of the County of San Bernardino, California, that is part of the Mojave Desert Air Basin (MDAB) and is under the jurisdiction of the MDAQMD. The air quality assessment for the proposed Project includes estimating emissions associated with short-term construction and long-term operation of the proposed Project. A number of air quality modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts, such as the MDAQMD, have created guidelines and requirements to conduct air quality analyses. The MDAQMD's current guidelines, included in its *California Environmental Quality Act and Federal Conformity Guidelines* (August 2011), were adhered to in the assessment of air quality impacts for the proposed Project.

2.2 REGIONAL CLIMATE

Air quality in the Project area is not only affected by various emissions sources (mobile, industry, etc.) but is also affected by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall.

The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains that dot the vast terrain rise from 1,000 to 4,000 ft above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada Mountains to the north; air masses pushed onshore in Southern California by differential heating are channeled through the MDAB. The MDAB is separated from the Southern California coastal and central California valley regions by mountains (highest elevation is approximately 10,000 ft), whose passes form the main channels for these air masses. The Mojave Desert is bordered on the southwest by the San Bernardino Mountains, separated from the San Gabriels by the Cajon Pass (4,200 ft). A lesser pass lies between the San Bernardino Mountains and the Little San Bernardino Mountains in the Morongo Valley. The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley), whose primary channel is the San Gorgonio Pass (2,300 ft) between the San Bernardino and San Jacinto Mountains.

During the summer, the MDAB is generally influenced by a Pacific subtropical high cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inch of precipitation). The MDAB is classified as a dry-hot desert climate, with portions classified

as dry-very hot desert, to indicate that at least three months have maximum average temperatures over 100.4° F.

Snow is common above 5,000 ft in elevation, resulting in moderate snowpack and limited spring runoff. Below 5,000 ft, any precipitation normally occurs as rainfall. Pacific storm fronts normally move into the area from the west, driven by prevailing winds from the west and southwest. During late summer, moist high-pressure systems from the Pacific collide with rising heated air from desert areas, resulting in brief, high-intensity thunderstorms that can cause high winds and localized flash flooding.

2.3 EXISTING AIR QUALITY

Existing air quality is measured at established MDAQMD air quality monitoring stations. Monitored air quality is evaluated and in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-1 (4).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards presented in Table 2-1. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2, NO_2, PM_{10}, $PM_{2.5}$, and visible reducing particles are not to be exceeded at any time in any consecutive three-year period; all other values are not to be equaled or exceeded. The air quality in a region is considered to be in attainment by federal standards if the measured ambient air pollutant levels for O_3, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean are not exceeded more than once per year. The O_3 standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of says per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

TABLE 2-1: AMBIENT AIR QUALITY STANDARDS (1 OF 2)

Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards [1]		National Standards [2]		
		Concentration [3]	Method [4]	Primary [3,5]	Secondary [3,6]	Method [7]
Ozone (O_3)[8]	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM10)[9]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter (PM2.5)[9]	24 Hour	—	—	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12.0 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m^3)		9 ppm (10 mg/m^3)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	
Nitrogen Dioxide (NO_2)[10]	1 Hour	0.18 ppm (339 µg/m^3)	Gas Phase Chemiluminescence	100 ppb (188 µg/m^3)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)		0.053 ppm (100 µg/m^3)	Same as Primary Standard	
Sulfur Dioxide (SO_2)[11]	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	—	Ultraviolet Flourescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[11]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas)[11]	—	
Lead[12,13]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m^3		
Visibility Reducing Particles[14]	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[12]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

See footnotes on next page ...

For more information please call ARB-PIO at (916) 322-2990

California Air Resources Board (5/4/16)

TABLE 2-1: AMBIENT AIR QUALITY STANDARDS (2 OF 2)

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.

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

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

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

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

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

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

9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

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

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

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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

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

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

For more information please call ARB-PIO at (916) 322-2990 **California Air Resources Board (5/4/16)**

2.4 REGIONAL AIR QUALITY

The MDAQMD monitors levels of various criteria pollutants at six monitoring stations throughout the air district (5). No areas of the MDAB exceeded federal or state standards for NO_2, SO_2, CO, sulfates or lead. See Table 2-2, for attainment designations for the MDAB (6) (7). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the MDAB.

TABLE 2-2: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE MOJAVE DESERT AIR BASIN

Criteria Pollutant	State Designation	Federal Designation
Ozone (1-hour standard)	Non-attainment	Non-attainment*
Ozone (8-hour standard)	Non-attainment	Non-attainment*
PM_{10}	Non-attainment	Non-attainment**
$PM_{2.5}$	Non-attainment*	Unclassified/Attainment
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified/Attainment
Lead	Attainment	Unclassified/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the Mojave Desert Air Basin
* Southwest corner of desert portion of San Bernardino County only
**San Bernardino County portion only

2.5 LOCAL AIR QUALITY

Relative to the Project site, the nearest long-term air quality monitoring site for Ozone (O_3), Nitrogen Dioxide (NO_2), Particulate Matter ≤ 10 Microns (PM_{10}), and Ultra-Fine Particulates ($PM_{2.5}$) was obtained from the Mojave Desert Air Quality Management District Victorville-Park Avenue monitoring station, located approximately 4.23 miles east of the project site in Victorville.

The most recent three (3) years of data available is shown on Table 2-3 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, NO_2, PM_{10}, and $PM_{2.5}$ for 2015 through 2017 was obtained from CARB's iADAM Air Quality Data Statistics (8). Data for CO for 2015 through 2017 was obtained from CARB's Air Quality and Meteorological Information System (AQMIS) (9). Additionally, data for SO_2 has been omitted as attainment is regularly met in the South Coast Air Basin and few monitoring stations measure SO_2 concentrations

TABLE 2-3: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2015-2017

POLLUTANT	STANDARD	YEAR		
		2015	2016	2017
Ozone				
Maximum Federal 1-Hour Concentration (ppm)		0.132	0.100	0.088
Maximum Federal 8-Hour Concentration (ppm)		0.105	0.085	0.081
Number of Days Exceeding Federal 1-Hour Standard		1	0	0
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	8	4	0
Number of Days Exceeding Federal 8-Hour Standard	> 0.070 ppm	38	33	17
Number of Days Exceeding State 8-Hour Standard	> 0.070 ppm	39	35	19
Carbon Monoxide (CO)				
Maximum 1-Hour Concentration	> 35 ppm	17.48	11.57	1.52
Nitrogen Dioxide (NO_2)				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.118	0.097	0.057
Maximum State 1-Hour Concentration	> 0.18 ppm	0.118	0.097	0.057
Annual Federal Standard Design Value		11	10	13
Annual State Standard Design Value		14	13	12
Number of Days Exceeding Federal 1-Hour Standard	> 0.18 ppm	1	0	0
Number of Days Exceeding State 1-Hour Standard	> 0.18 ppm	0	0	0
Particulate Matter ≤ 10 Microns (PM_{10})				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	96.1	226.5	182.5
Annual Federal Arithmetic Mean ($\mu g/m^3$)		25.1	29.3	30.1
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	0	2	1
Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	50.2	41.5	27.2
Maximum State 24-Hour Concentration ($\mu g/m^3$)		50.2	41.5	29.3
Annual Federal Arithmetic Mean ($\mu g/m^3$)		--	7.4	8.7
Annual State Arithmetic Mean ($\mu g/m^3$)		--	7.5	8.8
Number of Samples Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	--	1	0

Source: Data for O_3, NO_2, PM_{10}, and $PM_{2.5}$ was obtained from CARB's iADAM. Data for CO was obtained from CARB's AQMIS.
-- = data not available from ARB

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (10):

- Carbon Monoxide (CO): Is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels, such as gasoline or wood. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike ozone, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest

ambient CO concentrations are generally found near congested transportation corridors and intersections.

- Sulfur Dioxide (SO_2): Is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_X).
- Nitrogen Oxides (Oxides of Nitrogen, or NO_x): Nitrogen oxides (NO_x) consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with oxygen (O_2). Their lifespan in the atmosphere ranges from one to seven days for nitric oxide and nitrogen dioxide, to 170 years for nitrous oxide. Nitrogen oxides are typically created during combustion processes, and are major contributors to smog formation and acid deposition. NO_2 is a criteria air pollutant, and may result in numerous adverse health effects; it absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. As ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitors.
- Ozone (O_3): Is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.
- PM_{10} (Particulate Matter less than 10 microns): A major air pollutant consisting of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. Particulate matter pollution is a major cause of reduce visibility (haze) which is caused by the scattering of light and consequently the significant reduction air clarity. The size of the particles (10 microns or smaller, about 0.0004 inches or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. Additionally, it should be noted that PM_{10} is considered a criteria air pollutant.
- $PM_{2.5}$ (Particulate Matter less than 2.5 microns): A similar air pollutant to PM_{10} consisting of tiny solid or liquid particles which are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 release from power plants and industrial facilities and nitrates that are formed from NO_X release from power plants, automobiles and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. $PM_{2.5}$ is a criteria air pollutant.
- Volatile Organic Compounds (VOC): Volatile organic compounds are hydrocarbon compounds (any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and/or may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity; that is, they do not react at the same speed or do not form ozone to the same extent when exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include: carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The SCAQMD uses the terms VOC and ROG (see below) interchangeably.

- Reactive Organic Gases (ROG): Similar to VOC, Reactive Organic Gases (ROG) are also precursors in forming ozone and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and nitrogen oxides react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The SCAQMD uses the terms ROG and VOC (see previous) interchangeably.
- Lead (Pb): Lead is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. The major sources of lead emissions are ore and metals processing, particularly lead smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include operational activities such as metal processing or lead acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of lead emissions.

Health Effects of Air Pollutants

Ozone

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. Short-term exposure (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Carbon Monoxide

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin (COHb). Hence, conditions with an increased demand for oxygen supply can

be adversely affected by exposure to CO. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. In recent years, some studies have reported an association between long-term exposure to air pollution dominated by fine particles and increased mortality, reduction in life-span, and an increased mortality from lung cancer.

Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.

Nitrogen Dioxide

Population-based studies suggest that an increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO_2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO_2.

Sulfur Dioxide

A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are

observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2.

Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.

Odors

The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that cause odors poses a big challenge. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.6 REGULATORY BACKGROUND

2.6.1 FEDERAL REGULATIONS

The U.S. EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_x, SO_2, PM_{10}, and lead (11). The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (12). The CAA also mandates that states submit and implement State Implementation Plans (SIPs) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and lead. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 3-1 (previously presented) provides the NAAQS within the basin.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and nitrogen oxides (NO_x). NOx is a collective term that includes all forms of nitrogen oxides (NO, NO_2, NO_3) which are emitted as byproducts of the combustion process.

2.6.2 CALIFORNIA REGULATIONS

The CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. The California CAA mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the MDAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (13) (14).

Local air quality management districts, such as the MDAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);

- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;
- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, NO_x, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

2.6.3 AIR QUALITY MANAGEMENT PLANNING

Currently, the NAAQS and CAAQS are exceeded in most parts of the MDAB. In regard to the NAAQS, the Project region within the MDAB is in nonattainment for ozone (8-hour) and PM_{10}. For the CAAQS, the Project region within the MDAB is in nonattainment for ozone (1-hour and 8-hour), PM_{10}, and $PM_{2.5}$. In response, the MDAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards (15). AQMPs are updated regularly in order to more effectively reduce emissions, accommodate growth, and to minimize any negative fiscal impacts of air pollution control on the economy. A detailed discussion on the AQMP and Project consistency with the AQMP is provided in Section 3.7.

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3 PROJECT AIR QUALITY IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will violate an air quality standard or contribute to an existing or projected air quality violation. Additionally, the Project has been evaluated to determine if it will result in a cumulatively considerable net increase of a criteria pollutant for which the MDAB is non-attainment under an applicable federal or state ambient air quality standard. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related air quality impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to air quality if it would (1):

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The MDAQMD has developed regional significance thresholds for regulated pollutants, shown below in Table 3-1. The MDAQMD's CEQA And Federal Conformity Guidelines (August 2016) indicate that any projects in the MDAB with daily regional emissions that exceed any of the indicated thresholds should be considered as having an individually and cumulatively significant air quality impact (16).

TABLE 3-1: MAXIMUM REGIONAL DAILY EMISSIONS THRESHOLDS

Pollutant	Daily Threshold (pounds)
CO	548 lbs./day
NO_X	137 lbs./day
VOC	137 lbs./day
SO_X	137 lbs./day
PM_{10}	82 lbs./day
$PM_{2.5}$	65 lbs./day

Note: lbs./day – pounds per day

3.3 CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ESTIMATE AQ EMISSIONS

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

On October 17, 2017, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model™ (CalEEMod™) v2016.3.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (NO_X, VOC, PM_{10}, $PM_{2.5}$, SO_X, and CO) and greenhouse gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (17). Accordingly, the latest version of CalEEMod™ has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendix 3.1 and 3.2.

3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of CO, VOCs, NO_X, SO_X, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating
- Materials Deliveries and Construction Workers Commuting

Construction is expected to commence in April 2019 and will last through December 2019. Construction duration by phase is shown on Table 3-2. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[1] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Site specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity was based on CalEEMod model defaults and a 2019 opening year. The associated construction equipment was generally based on CalEEMod 2016.3.2 defaults. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 of this analysis. A detailed summary of construction equipment assumptions by phase is provided at Table 3-3.

[1] As shown in the California Emissions Estimator Model (CalEEMod) User's Guide Version 2016.3.2, Section 4.3"OFFROAD Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3-2: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Site Preparation	04/01/2019	04/12/2019	10
Grading	04/13/2019	05/24/2019	30
Building Construction	05/25/2019	10/11/2019	100
Paving	10/12/2019	11/08/2019	20
Architectural Coatings	11/09/2019	12/06/2019	20

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Activity	Equipment	Number	Hours Per Day
Site Preparation	Rubber Tired Dozers	3	8
	Tractors/Loaders/Backhoes	4	8
Graders	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
	Tractors/Loaders/Backhoes	2	8
Building Construction	Cranes	1	8
	Forklifts	3	8
	Generator Sets	1	8
	Tractors/Loaders/Backhoes	3	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

Based on the grading plans provided by the Project applicant, the Project is expected require 30,000 cubic yards of cut and 16,000 cubic yards of fill, which will result in a total of 14,000 cubic yards of material exported from the site. Dust is typically a major concern during rough grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called “fugitive emissions”. Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity

Construction emissions for construction worker vehicles traveling to and from the Project site, as well as vendor trips (construction materials delivered to the Project site) were estimated based on information CalEEMod model defaults.

3.4.1 CONSTRUCTION EMISSIONS SUMMARY

MDAQMD Rules that are currently applicable during construction activity for this Project include but are not limited to: Rule 1113 (Architectural Coatings) (2) and Rule 403.2 (Fugitive Dust) (3). It should be noted that Best Available Control Measures (BACMs) are not mitigation as they are standard regulatory requirements. As such, credit for Rule 1113 and Rule 403.2 have been taken.

Impacts without Mitigation

The estimated maximum daily construction emissions without mitigation are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction would not exceed thresholds established by the MDAQMD for emissions of any criteria pollutant. As such, the Project will have a less than significant impact during on-going construction activity and no mitigation is required.

TABLE 3-4: EMISSIONS SUMMARY OF CONSTRUCTION (WITHOUT MITIGATION)

Year	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2019	24.20	70.09	36.57	0.11	20.61	12.17
Maximum Daily Emissions	**24.20**	**70.09**	**36.57**	**0.11**	**20.61**	**12.17**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions

3.5.1 AREA SOURCE EMISSIONS

Architectural Coatings

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using the CalEEMod model.

Consumer Products

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on assumptions provided in the CalEEMod model. In the case of the commercial uses proposed by the Project, no substantive on-site use of consumer products is anticipated.

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod model.

3.5.2 ENERGY SOURCE EMISSIONS

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the MDAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using the CalEEMod model.

3.5.3 MOBILE SOURCE EMISSIONS

Vehicles

Project-related operational air quality impacts derive primarily from vehicle trips generated by the Project. Trip characteristics available from the report, *SWC US-395/Palmdale Road (SR-18) Traffic Impact Analysis* (TJW Engineering, Inc. 2019) were utilized in this analysis (18).

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of tire wear particulates. The emissions estimates for travel on paved roads were calculated using the CalEEMod model.

3.5.4 OPERATIONAL EMISSIONS SUMMARY

Operational-source emissions are summarized on Table 3-5. Detailed operational model outputs are presented in Appendix 3.2. Project operational-source NO_X emissions would exceed applicable MDAQMD regional thresholds. It is important to note that over 99 percent of the

Project's NO_X emissions (by weight) are derived from vehicle usage. Since neither the Project Applicant nor the City of Victorville have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce NO_X emissions to levels that are less-than-significant, thus NO_X emissions are considered significant and unavoidable.

TABLE 3-5: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Operational Activities – Summer Scenario	Emissions (pounds per day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area Source	2.79	5.70E-04	0.06	0.00	2.20E-04	2.20E-04
Energy Source	0.12	1.05	0.88	6.31E-03	0.08	0.08
Mobile	27.49	146.09	187.10	0.56	31.60	8.81
Total Maximum Daily Emissions	**30.40**	**147.14**	**188.04**	**0.56**	**31.68**	**8.89**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**
Operational Activities – Winter Scenario	**Emissions (pounds per day)**					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area Source	2.79	5.70E-04	0.06	0.00	2.20E-04	2.20E-04
Energy Source	0.12	1.05	0.88	6.31E-03	0.08	0.08
Mobile	23.54	143.85	180.49	0.51	31.62	8.83
Total Maximum Daily Emissions	**26.45**	**144.90**	**181.43**	**0.51**	**31.70**	**8.90**
MDAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**YES**	**NO**	**NO**	**NO**	**NO**

3.6 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific carbon monoxide (CO) "hot spots" is not needed to reach this conclusion.

An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the air basin was designated nonattainment under the California AAQS and National AAQS for CO (19).

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the air basin is now designated as attainment, as previously noted in Table 2-2. Also, CO concentrations in the Project vicinity have steadily declined, as indicated by historical emissions data presented previously at Table 2-3.

To establish a more accurate record of baseline CO concentrations affecting the basin, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This 2003 hot spot analysis did not predict any violation of CO standards, as shown on Table 3-6.

TABLE 3-6: CO MODEL RESULTS

Intersection Location	Carbon Monoxide Concentrations (parts per million)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire-Veteran	4.6	3.5	3.7
Sunset-Highland	4	4.5	3.5
La Cienega-Century	3.7	3.1	5.2
Long Beach-Imperial	3	3.1	8.4

Source: 2003 AQMP, Appendix V: Modeling and Attainment Demonstrations
Notes: Federal 1-hour standard is 35 ppm and the deferral 8-hour standard is 9.0 ppm.

As identified within SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the basin were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 8.4 ppm CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the 2003 hot spot analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 7.7 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (19).

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (20).

Traffic volumes generating the CO concentrations for the "hot spot" analysis, shown on Table 3-7. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue and La Cienega Boulevard and Century Boulevard, which has a daily traffic volume of approximately 100,000 vehicles per day. Wilshire Boulevard and Veteran Avenue reported AM traffic volumes of 8,062 vehicles per hour while Cienega Boulevard and Century Boulevard report PM traffic volumes of 7,719 vehicles per hour (19). The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).[2] At buildout of the Project, as shown on Table 32 of the TIA, the greatest daily trips along vicinity roadways including traffic generated by the Project would be 40,555 daily trips on US-395 between Dos

2 Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

Palmas Road and Luna Road, which is substantially less than the highest daily traffic volumes at Wilshire Blvd. and Veteran Ave. of 100,00 vehicles per day (18). Additionally, the highest AM/PM trips on a segment of road would be 3,711 vehicles per hour and 4,128 vehicles per hour respectively, which is lower than the highest AM/PM traffic volumes of 8,062 vehicles per hour and 8,674 vehicles per hour.

Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (20).

The proposed Project considered herein would not produce the volume of traffic required to generate a CO "hot spot" either in the context of the 2003 Los Angeles hot spot study, or based on representative BAAQMD CO threshold considerations, as shown on Table 3-8. Therefore, CO "hot spots" are not an environmental impact of concern for the proposed Project. Localized air quality impacts related to mobile-source CO emissions would therefore be less than significant.

TABLE 3-7: TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vehicles per hour)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire-Veteran	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset-Highland	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega-Century	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach-Imperial	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

Source: 2003 AQMP

TABLE 3-8: PROJECT PEAK TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Northbound (AM/PM)	Southbound (AM/PM)	Eastbound (AM/PM)	Westbound (AM/PM)	Total (AM/PM)
US-395/Palmdale Rd. (SR-18)	962/990	1,101/1,317	911/851	737/970	3,711/4,128
US-395/Bear Valley Rd.	675/960	983/836	462/698	258/442	2,378/2,936
El Evado Rd./Palmdale Rd. (SR-18)	460/737	418/551	1,154/991	619/1,243	2,651/3,522
Amargosa Rd./Palmdale Rd. (SR-18)	508/538	408/656	1,133/1,143	768/1,433	2,817/3,770

Source: *SWC US-395/Palmdale Road (SR-18) Traffic Impact Analysis* (TJW Engineering, Inc. 2019)

3.7 AIR QUALITY MANAGEMENT PLANNING

The Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert set forth a comprehensive set of programs that will lead the MDAB into compliance with federal and state air quality standards. The control measures and related emission reduction

estimates within the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments. Accordingly, conformance with these attainment plans for development projects is determined by demonstrating compliance with: 1) local land use plans and/or population projections, 2) all MDAQMD Rules and Regulations; and 3) demonstrating that the project will not increase the frequency or severity of a violation in the federal or state ambient air quality standards.

The General Plan land use designation for the Project site is Commercial. The Commercial land use designation corresponds to a wide range of retail commercial, service commercial, and office commercial activities (21). The Project applicant proposes land uses that are consistent with development anticipated under the site's existing General Plan Commercial land use designation. The Project would therefore conform to local land use plans.

The Project would be required to comply with all applicable MDAQMD Rules and Regulations, including, but not limited to Rules 401, 402, 403, and 461.

As substantiated herein, Project construction-source emissions would not exceed applicable MDAQMD regional thresholds. However, as presented in the preceding analysis, Project operational-source air pollutant emissions would result in exceedances of regional thresholds for emissions of NO_X. Since neither the Project Applicant nor the City of Victorville have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce NO_X emissions to levels that are less-than-significant, thus NO_X emissions are considered significant and unavoidable and the Project would have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality for on-going project operations.

AQMP Consistency Conclusion

The Project would conform to local land use plans. The Project would comply with all applicable all MDAQMD Rules and Regulations. Project operational-source emissions have the potential to increase the frequency or severity of a violation in the federal or state ambient air quality standards. On this basis, the Project is considered to potentially conflict with the Federal Particulate Matter Attainment Plan and Ozone Attainment Plan for the Mojave Desert. The potential for the Project to conflict with an applicable AQMP is therefore considered significant and unavoidable.

3.8 POTENTIAL IMPACTS TO SENSITIVE RECEPTORS

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, child care centers, and athletic facilities can also be considered as sensitive receptors.

MDAQMD Guidelines state that the following project types located within a specified distance to an existing or planned sensitive receptor land use must be evaluated to determine exposure of substantial pollutant concentrations to sensitive receptors (16) :

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1,000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
- A dry cleaner using perchloroethylene within 500 feet;
- A gasoline dispensing facility within 300 feet.

The proposed Project consists of a 3,000 square foot automated car wash, 8,800 square feet of fast food with drive-through, 4,500 square feet of high turnover sit down restaurants, 75,000 square feet of retail use, and a 16-vehicle fueling gas station with convenience store.

Emissions resulting from the gasoline service station the potential to result in toxic air contaminants (TACs) (e.g., benzene, hexane, MTBE, toluene, xylene) and have the potential to contribute to health risk in the project vicinity. It should be noted that standard gasoline service station regulatory controls would apply to the Project in addition to any permits required that demonstrate appropriate operational controls. The MDAQMD currently does not have a procedure for determining screening-level health risk estimates for gasoline dispensing operations and therefore relies on SCAQMD methodology. The annual amount of gasoline dispensed by the proposed gas station has not yet been fully defined. Prior to issuance of a Permit to Operate, the gasoline dispensing station would be required to obtain the required permits from MDAQMD which would identify the maximum annual throughput allowed based on specific fuel storage and dispensing equipment that is proposed by the operator.

The analysis presented here reflects a maximum annual throughout of approximately 5,000,000 gallons. This is preliminarily determined to be the approximate upper limit of gasoline throughput based on a review of recent permits issued by MDAQMD. Appendix 3.3 includes sample permits recently issued by MDAQMD and the respective throughput limits. Ultimate fuel throughput allowances/requirements would be established by MDAQMD through the fueling station permitting processes noted above.

For purposes of this evaluation, cancer risk estimates have been made consistent with the methodology presented in SCAQMD's *Risk Assessment Procedures for Rules 1401, 1401.1 & 212* which provide screening-level risk estimates for gasoline dispensing operations. The Project site is located nearest to Source Receptor Area (SRA) 32.

The nearest residence to the proposed gasoline station canopy is illustrated at Exhibit 3-A. As shown, the nearest residential receptor is located approximately 1,157 feet to the southwest of the proposed gasoline canopy. Although this is a greater distance than the 300 feet screening criteria established by MDAQMD, a screening health risk assessment is provided in the abundance of caution, for full disclosure of the Project's potential impacts.

EXHIBIT 3-A: GASOLINE CANOPY AND NEAREST SENSITIVE RECEPTOR

Based on the established SCAQMD procedure outlined in the *SCAQMD Permit Application Package "N"* it is estimated that the maximum risk attributable to the gasoline dispensing would be 0.27 in one million for the nearest sensitive receptor and the maximum risk to workers would be 0.02 in one million both of which are well below the threshold of 10 in one million. Appendix 3.3 includes excerpts from the *SCAQMD Permit Application Package "N"* which identifies the potential risk per one million gallons of gasoline dispensed at the defined downwind distances.

The proposed Project would not result in a CO "hotspot" as a result of Project related traffic during ongoing operations, nor would the Project result in a significant adverse health impact as discussed in previous Section 3.6. Additionally, results of the regional analysis indicate that the Project will not exceed the MDAQMD significance thresholds during construction or operations. The Project does not otherwise propose or require uses or activities that would result in or create substantial pollutant concentrations. On this basis, the potential for the Project to expose sensitive receptors to substantial pollutant concentrations is considered less-than-significant.

3.9 ODORS

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not propose or require land uses that would be substantive sources of objectionable odors. Potential temporary and intermittent odors may result from construction equipment exhaust, the application of asphalt and architectural coatings, Temporary and intermittent construction-source emissions are controlled through existing requirements and industry BMPs addressing proper storage of and application construction materials.

Over the life of the Project, odors may result from storage of municipal solid waste pending its transport to area landfills. . Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations.

The proposed Project would also be required to comply with MDAQMD Rule 402. Rule 402 provides 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." Based on the preceding, the potential for the Project to create objectionable odors affecting a substantial number of people is considered less-than-significant.

3.10 CUMULATIVE IMPACTS

The MDAQMD relies on the SCAQMD guidance for determining cumulative impacts. The SCAQMD has recognized that there is typically insufficient information to quantitatively evaluate the cumulative contributions of multiple projects because each project applicant has no control over nearby projects.

The SCAQMD published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (22). In this report the AQMD clearly states (Page D-3):

"…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.

Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."

Individual projects that do not generate operational or construction emissions that exceed the MDAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. As previously noted, the Project construction-source would not exceed applicable MDAQMD regional thresholds. However, as presented in the preceding analysis, Project operational-source air pollutant emissions would result in exceedances of regional thresholds for emissions of NO_X. Since neither the Project Applicant nor the City of Victorville have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce NO_X emissions to levels that are less-than-significant, thus NO_X emissions are considered significant and unavoidable. As such, Project operational-source NO_X emissions exceedances of applicable MDAQMD regional thresholds are considered significant and unavoidable.

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4 CONCLUSION

CONSTRUCTION-SOURCE EMISSIONS

REGIONAL IMPACTS

For regional emissions, the Project will not exceed the significance thresholds established by the Mojave Desert Air Quality Management District (MDAQMD). Thus, a less than significant impact would occur for Project-related construction-source emissions and no mitigation measures are required.

Odors

Existing requirements and BMPs addressing construction equipment operations, and construction material use, storage, and disposal act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Moreover, MDAQMD Rule 402 acts to prevent occurrences of odor nuisances (23). Potential construction-source odor impacts are therefore considered less-than-significant.

OPERATIONAL-SOURCE EMISSIONS

REGIONAL IMPACTS

Project operational-source NO_X emissions would exceed the applicable MDAQMD regional thresholds. It is important to note that over 99 percent of the Project's NO_X emissions are derived from vehicle usage. Since neither the Project Applicant nor the City of Victorville have regulatory authority to control tailpipe emissions, no feasible mitigation measures exist that would reduce NO_X emissions to levels that are less-than-significant, thus NO_X emissions are considered significant and unavoidable.

The proposed Project would not result in a significant CO "hotspot". The proposed Project would not result in a significant CO "hotspot." Project gasoline station operations would not creation or result in hazardous emissions that would adversely affect sensitive receptors. The Project does not otherwise propose or require uses or activities that would result in or create substantial pollutant concentrations. On this basis, the potential for the Project to expose sensitive receptors to substantial pollutant concentrations is considered less-than-significant.

ODORS

The Project does not propose uses or activities that would result in potentially significant operational-source odor impacts. Potential sources of operational odors generated by the Project would include disposal of miscellaneous refuse. Consistent with County requirements, all Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with solid waste regulations. Moreover, MDAQMD Rule 402 acts to prevent

occurrences of odor nuisances (23). Potential operational-source odor impacts are therefore considered less-than-signifi.

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5 REFERENCES

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6 CERTIFICATION

The contents of this air study report represent an accurate depiction of the environmental impacts associated with the proposed Desert Grove Retail Project Project. The information contained in this air quality impact assessment report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May, 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June, 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007
AB2588 Regulatory Standards – Trinity Consultants • November, 2006
Air Dispersion Modeling – Lakes Environmental • June, 2006

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APPENDIX 2.1:

STATE/FEDERAL ATTAINMENT STATUS OF CRITERIA POLLUTANTS

Mojave Desert AQMD Attainment Status					
Pollutant	**Averaging Time**	**California Standards**		**Federal Standards**	
		Concentration	**Attainment Status**	**Concentration**	**Attainment Status**
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Non-attainment	-	Non-attainment*
	8 Hour	0.070 ppm (137 µg/m^3)		0.070 ppm (137 µg/m^3)	
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m^3	Non-attainment	150 µg/m^3	Non-attainment***
	Annual Arithmetic Mean	20 µg/m^3		-	
Fine Particulate Matter ($PM_{2.5}$)	24 Hour	No State Standard		35 µg/m^3	Unclassified/ Attainment
	Annual Arithmetic Mean	12 µg/m^3	Non-attainment*	12 µg/m^3	
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Unclassified/ Attainment
	1 Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppb (57 µg/m^3)	Attainment	0.053 ppm (100 µg/m^3)	Unclassified/ Attainment
	1 Hour	0.18 ppm (330 µg/m^3)		100 ppm (196 µg/m^3)	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	-	Attainment	0.030 ppm (80 µg/m^3)	Unclassified/ Attainment
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	
	3 Hour	-		0.5 ppm (1300 µg/m^3)	
	1 Hour	0.25 ppm (655 µg/m^3)		75 ppb (196 µg/m^3)	
Lead (Pb)	30 Day Average	1.5 µg/m^3	Attainment	-	Unclassified/ Attainment
	Calendar Quarter	-		1.5 µg/m^3	
	Rolling 3-Month Average	-		0.15 µg/m^3	
Visibility Reducing Particles	8 Hour	Extinction Coefficient of 0.24 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent	Unclassified	No Federal Standards	
Sulfates	24 Hour	25 µg/m^3	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Non-attainment**		
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	Unclassified		

*Southwest corner of desert portion of San Bernardino County only

**Searles Valley (northwest corner of San Bernardino County) only

***San Bernardino County portion only

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APPENDIX 3.1:

CALEEMOD CONSTRUCTION EMISSIONS MODEL OUTPUTS

Victorville Retail (Construction - Unmitigated)

San Bernardino-Mojave Desert County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	75.00	1000sqft	6.38	75,000.00	0
Fast Food Restaurant with Drive Thru	8.80	1000sqft	2.20	8,800.00	0
High Turnover (Sit Down Restaurant)	4.50	1000sqft	1.10	4,500.00	0
Automobile Care Center	3.00	1000sqft	0.77	3,000.00	0
Convenience Market With Gas Pumps	16.00	Pump	0.55	5,268.00	0
Parking Lot	488.00	Space	4.39	195,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Victorville Retail (Construction - Unmitigated) - San Bernardino-Mojave Desert County, Summer

Project Characteristics -

Land Use - Total Project area as per the Site Plan is 10.03 acres.

Construction Phase - Construction Schedule adjusted to meet the 2019 Opening Year.

Off-road Equipment - Hours are based on an 8-hour workday.

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday.

Grading - Total acres graded adjusted.

Architectural Coating - Rule 1113

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	250.00	50.00
tblConstructionPhase	NumDays	300.00	100.00
tblConstructionPhase	PhaseEndDate	10/9/2020	12/6/2019
tblConstructionPhase	PhaseEndDate	8/14/2020	10/11/2019
tblConstructionPhase	PhaseEndDate	6/21/2019	5/24/2019
tblConstructionPhase	PhaseEndDate	9/11/2020	11/8/2019
tblConstructionPhase	PhaseEndDate	5/10/2019	4/12/2019
tblConstructionPhase	PhaseStartDate	9/12/2020	11/9/2019
tblConstructionPhase	PhaseStartDate	6/22/2019	5/25/2019
tblConstructionPhase	PhaseStartDate	5/11/2019	4/13/2019

Victorville Retail (Construction - Unmitigated) - San Bernardino-Mojave Desert County, Summer

tblConstructionPhase	PhaseStartDate	8/15/2020	10/12/2019
tblConstructionPhase	PhaseStartDate	4/27/2019	4/1/2019
tblEnergyUse	LightingElect	2.93	0.00
tblEnergyUse	LightingElect	5.61	0.00
tblEnergyUse	LightingElect	6.62	0.00
tblEnergyUse	LightingElect	6.62	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	5.61	0.00
tblEnergyUse	NT24E	5.02	0.00
tblEnergyUse	NT24E	2.44	0.00
tblEnergyUse	NT24E	28.48	0.00
tblEnergyUse	NT24E	28.48	0.00
tblEnergyUse	NT24E	2.44	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	NT24NG	0.30	0.00
tblEnergyUse	NT24NG	195.77	0.00
tblEnergyUse	NT24NG	195.77	0.00
tblEnergyUse	NT24NG	0.30	0.00
tblEnergyUse	T24E	2.20	0.00
tblEnergyUse	T24E	4.58	0.00
tblEnergyUse	T24E	12.38	0.00
tblEnergyUse	T24E	12.38	0.00
tblEnergyUse	T24E	4.58	0.00
tblEnergyUse	T24NG	15.36	0.00
tblEnergyUse	T24NG	1.92	0.00
tblEnergyUse	T24NG	77.67	0.00
tblEnergyUse	T24NG	77.67	0.00

Victorville Retail (Construction - Unmitigated) - San Bernardino-Mojave Desert County, Summer

tblEnergyUse	T24NG	1.92	0.00
tblGrading	AcresOfGrading	75.00	5.00
tblGrading	MaterialExported	0.00	14,000.00
tblLandUse	LandUseSquareFeet	2,258.80	5,268.00
tblLandUse	LotAcreage	1.72	6.38
tblLandUse	LotAcreage	0.20	2.20
tblLandUse	LotAcreage	0.10	1.10
tblLandUse	LotAcreage	0.07	0.77
tblLandUse	LotAcreage	0.05	0.55
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	11.46	0.00
tblSolidWaste	SolidWasteGenerationRate	101.37	0.00
tblSolidWaste	SolidWasteGenerationRate	53.55	0.00
tblSolidWaste	SolidWasteGenerationRate	78.75	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CC_TTP	80.20	0.00
tblVehicleTrips	CC_TTP	78.80	0.00
tblVehicleTrips	CC_TTP	72.50	0.00
tblVehicleTrips	CC_TTP	64.70	0.00

tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
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tblVehicleTrips	CW_TTP	33.00	0.00
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tblVehicleTrips	CW_TTP	8.50	0.00
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tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	21.00	0.00
tblVehicleTrips	PR_TP	14.00	0.00
tblVehicleTrips	PR_TP	29.00	0.00
tblVehicleTrips	PR_TP	37.00	0.00
tblVehicleTrips	PR_TP	54.00	0.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	204.47	0.00
tblVehicleTrips	ST_TR	722.03	0.00
tblVehicleTrips	ST_TR	158.37	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	166.88	0.00
tblVehicleTrips	SU_TR	542.72	0.00
tblVehicleTrips	SU_TR	131.84	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	542.60	0.00
tblVehicleTrips	WD_TR	496.12	0.00
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tblVehicleTrips	WD_TR	42.70	0.00
tblWater	IndoorWaterUseRate	282,243.32	0.00
tblWater	IndoorWaterUseRate	167,314.87	0.00

tblWater	IndoorWaterUseRate	2,671,096.67	0.00
tblWater	IndoorWaterUseRate	1,365,901.71	0.00
tblWater	IndoorWaterUseRate	5,555,439.11	0.00
tblWater	OutdoorWaterUseRate	172,987.84	0.00
tblWater	OutdoorWaterUseRate	102,547.82	0.00
tblWater	OutdoorWaterUseRate	170,495.53	0.00
tblWater	OutdoorWaterUseRate	87,185.22	0.00
tblWater	OutdoorWaterUseRate	3,404,946.55	0.00

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					
2019	24.2030	69.9850	36.3665	0.1100	18.2141	2.4355	20.6055	9.9699	2.2425	12.1700	0.0000	11,219.9790	11,219.9790	2.2181	0.0000	11,275.4314
Maximum	**24.2030**	**69.9850**	**36.3665**	**0.1100**	**18.2141**	**2.4355**	**20.6055**	**9.9699**	**2.2425**	**12.1700**	**0.0000**	**11,219.9790**	**11,219.9790**	**2.2181**	**0.0000**	**11,275.4314**

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					
2019	24.2030	69.9850	36.3665	0.1100	7.1937	2.4355	9.5851	3.9122	2.2425	6.1123	0.0000	11,219.9790	11,219.9790	2.2181	0.0000	11,275.4314
Maximum	**24.2030**	**69.9850**	**36.3665**	**0.1100**	**7.1937**	**2.4355**	**9.5851**	**3.9122**	**2.2425**	**6.1123**	**0.0000**	**11,219.9790**	**11,219.9790**	**2.2181**	**0.0000**	**11,275.4314**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**60.50**	**0.00**	**53.48**	**60.76**	**0.00**	**49.78**	**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	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**	**0.0000**	**2.2000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**	**0.0000**	**0.1391**

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	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**	**0.0000**	**2.2000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**	**0.0000**	**0.1391**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	4/12/2019	5	10	
2	Grading	Grading	4/13/2019	5/24/2019	5	30	
3	Building Construction	Building Construction	5/25/2019	10/11/2019	5	100	
4	Paving	Paving	10/12/2019	11/8/2019	5	20	
5	Architectural Coating	Architectural Coating	11/9/2019	12/6/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5

Acres of Paving: 4.39

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 144,852; Non-Residential Outdoor: 48,284; Striped Parking Area: 11,712 (Architectural Coating – sqft)

OffRoad Equipment

Victorville Retail (Construction - Unmitigated) - San Bernardino-Mojave Desert County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	1,750.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	114.00	48.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

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	0.0868	0.0541	0.6838	1.5600e-003	0.1479	1.0300e-003	0.1489	0.0392	9.5000e-004	0.0402		155.3854	155.3854	5.3100e-003		155.5181
Total	**0.0868**	**0.0541**	**0.6838**	**1.5600e-003**	**0.1479**	**1.0300e-003**	**0.1489**	**0.0392**	**9.5000e-004**	**0.0402**		**155.3854**	**155.3854**	**5.3100e-003**		**155.5181**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.0458**	**2.3904**	**9.4362**	**3.8730**	**2.1991**	**6.0721**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

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	0.0868	0.0541	0.6838	1.5600e-003	0.1479	1.0300e-003	0.1489	0.0392	9.5000e-004	0.0402		155.3854	155.3854	5.3100e-003		155.5181
Total	**0.0868**	**0.0541**	**0.6838**	**1.5600e-003**	**0.1479**	**1.0300e-003**	**0.1489**	**0.0392**	**9.5000e-004**	**0.0402**		**155.3854**	**155.3854**	**5.3100e-003**		**155.5181**

3.3 Grading - 2019

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					6.2644	0.0000	6.2644	3.3392	0.0000	3.3392			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**6.2644**	**2.3827**	**8.6471**	**3.3392**	**2.1920**	**5.5313**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.3 Grading - 2019

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	0.3906	15.4047	2.2300	0.0463	1.0209	0.0517	1.0726	0.2799	0.0494	0.3294		4,907.3092	4,907.3092	0.2696		4,914.0482
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	0.0965	0.0601	0.7598	1.7400e-003	0.1643	1.1400e-003	0.1654	0.0436	1.0500e-003	0.0446		172.6504	172.6504	5.9000e-003		172.7979
Total	**0.4870**	**15.4648**	**2.9898**	**0.0480**	**1.1852**	**0.0528**	**1.2380**	**0.3235**	**0.0505**	**0.3740**		**5,079.9596**	**5,079.9596**	**0.2755**		**5,086.8460**

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					2.4431	0.0000	2.4431	1.3023	0.0000	1.3023			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**2.4431**	**2.3827**	**4.8258**	**1.3023**	**2.1920**	**3.4943**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.3 Grading - 2019

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	0.3906	15.4047	2.2300	0.0463	1.0209	0.0517	1.0726	0.2799	0.0494	0.3294		4,907.3092	4,907.3092	0.2696		4,914.0482
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	0.0965	0.0601	0.7598	1.7400e-003	0.1643	1.1400e-003	0.1654	0.0436	1.0500e-003	0.0446		172.6504	172.6504	5.9000e-003		172.7979
Total	**0.4870**	**15.4648**	**2.9898**	**0.0480**	**1.1852**	**0.0528**	**1.2380**	**0.3235**	**0.0505**	**0.3740**		**5,079.9596**	**5,079.9596**	**0.2755**		**5,086.8460**

3.4 Building Construction - 2019

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	2.5115	22.7062	18.3139	0.0288		1.3802	1.3802		1.2958	1.2958		2,778.3097	2,778.3097	0.6904		2,795.5700
Total	**2.5115**	**22.7062**	**18.3139**	**0.0288**		**1.3802**	**1.3802**		**1.2958**	**1.2958**		**2,778.3097**	**2,778.3097**	**0.6904**		**2,795.5700**

3.4 Building Construction - 2019

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	0.1772	5.6450	1.1509	0.0137	0.3252	0.0365	0.3617	0.0936	0.0349	0.1285		1,438.3251	1,438.3251	0.0945		1,440.6865
Worker	0.5500	0.3427	4.3306	9.8900e-003	0.9365	6.5000e-003	0.9430	0.2484	5.9900e-003	0.2544		984.1073	984.1073	0.0336		984.9478
Total	**0.7272**	**5.9877**	**5.4814**	**0.0235**	**1.2617**	**0.0430**	**1.3046**	**0.3420**	**0.0409**	**0.3829**		**2,422.4324**	**2,422.4324**	**0.1281**		**2,425.6342**

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	2.5115	22.7062	18.3139	0.0288		1.3802	1.3802		1.2958	1.2958	0.0000	2,778.3097	2,778.3097	0.6904		2,795.5700
Total	**2.5115**	**22.7062**	**18.3139**	**0.0288**		**1.3802**	**1.3802**		**1.2958**	**1.2958**	**0.0000**	**2,778.3097**	**2,778.3097**	**0.6904**		**2,795.5700**

3.4 Building Construction - 2019

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	0.1772	5.6450	1.1509	0.0137	0.3252	0.0365	0.3617	0.0936	0.0349	0.1285		1,438.3251	1,438.3251	0.0945		1,440.6865
Worker	0.5500	0.3427	4.3306	9.8900e-003	0.9365	6.5000e-003	0.9430	0.2484	5.9900e-003	0.2544		984.1073	984.1073	0.0336		984.9478
Total	**0.7272**	**5.9877**	**5.4814**	**0.0235**	**1.2617**	**0.0430**	**1.3046**	**0.3420**	**0.0409**	**0.3829**		**2,422.4324**	**2,422.4324**	**0.1281**		**2,425.6342**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.5751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0295**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.5 Paving - 2019

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	0.0724	0.0451	0.5698	1.3000e-003	0.1232	8.6000e-004	0.1241	0.0327	7.9000e-004	0.0335		129.4878	129.4878	4.4200e-003		129.5984
Total	**0.0724**	**0.0451**	**0.5698**	**1.3000e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**7.9000e-004**	**0.0335**		**129.4878**	**129.4878**	**4.4200e-003**		**129.5984**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.5751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0295**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.5 Paving - 2019

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	0.0724	0.0451	0.5698	1.3000e-003	0.1232	8.6000e-004	0.1241	0.0327	7.9000e-004	0.0335		129.4878	129.4878	4.4200e-003		129.5984
Total	**0.0724**	**0.0451**	**0.5698**	**1.3000e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**7.9000e-004**	**0.0335**		**129.4878**	**129.4878**	**4.4200e-003**		**129.5984**

3.6 Architectural Coating - 2019

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	23.7368					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3553	2.4472	2.4551	3.9600e-003		0.1717	0.1717		0.1717	0.1717		375.2641	375.2641	0.0317		376.0565
Total	**24.0920**	**2.4472**	**2.4551**	**3.9600e-003**		**0.1717**	**0.1717**		**0.1717**	**0.1717**		**375.2641**	**375.2641**	**0.0317**		**376.0565**

3.6 Architectural Coating - 2019

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	0.1110	0.0691	0.8737	2.0000e-003	0.1889	1.3100e-003	0.1903	0.0501	1.2100e-003	0.0513		198.5480	198.5480	6.7800e-003		198.7175
Total	**0.1110**	**0.0691**	**0.8737**	**2.0000e-003**	**0.1889**	**1.3100e-003**	**0.1903**	**0.0501**	**1.2100e-003**	**0.0513**		**198.5480**	**198.5480**	**6.7800e-003**		**198.7175**

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	23.7368					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3553	2.4472	2.4551	3.9600e-003		0.1717	0.1717		0.1717	0.1717	0.0000	375.2641	375.2641	0.0317		376.0565
Total	**24.0920**	**2.4472**	**2.4551**	**3.9600e-003**		**0.1717**	**0.1717**		**0.1717**	**0.1717**	**0.0000**	**375.2641**	**375.2641**	**0.0317**		**376.0565**

3.6 Architectural Coating - 2019

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	0.1110	0.0691	0.8737	2.0000e-003	0.1889	1.3100e-003	0.1903	0.0501	1.2100e-003	0.0513		198.5480	198.5480	6.7800e-003		198.7175
Total	**0.1110**	**0.0691**	**0.8737**	**2.0000e-003**	**0.1889**	**1.3100e-003**	**0.1903**	**0.0501**	**1.2100e-003**	**0.0513**		**198.5480**	**198.5480**	**6.7800e-003**		**198.7175**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Convenience Market With Gas Pumps	0.00	0.00	0.00		
Fast Food Restaurant with Drive Thru	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Automobile Care Center	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Convenience Market With Gas	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Fast Food Restaurant with Drive	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	0.00	0.00	0.00	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
Automobile Care Center	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Convenience Market With Gas Pumps	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Fast Food Restaurant with Drive Thru	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
High Turnover (Sit Down Restaurant)	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Parking Lot	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Regional Shopping Center	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Victorville Retail (Construction - Unmitigated) - San Bernardino-Mojave Desert County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	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
Convenience Market With Gas Pumps	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
Fast Food Restaurant with Drive Thru	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
High Turnover (Sit Down Restaurant)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	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
Convenience Market With Gas Pumps	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
Fast Food Restaurant with Drive Thru	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
High Turnover (Sit Down Restaurant)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Unmitigated	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391

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	0.6503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8200e-003	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Total	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**		**0.1391**

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	0.6503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8200e-003	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Total	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**		**0.1391**

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

Victorville Retail (Construction - Unmitigated)

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	75.00	1000sqft	6.38	75,000.00	0
Fast Food Restaurant with Drive Thru	8.80	1000sqft	2.20	8,800.00	0
High Turnover (Sit Down Restaurant)	4.50	1000sqft	1.10	4,500.00	0
Automobile Care Center	3.00	1000sqft	0.77	3,000.00	0
Convenience Market With Gas Pumps	16.00	Pump	0.55	5,268.00	0
Parking Lot	488.00	Space	4.39	195,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Victorville Retail (Construction - Unmitigated) - San Bernardino-Mojave Desert County, Winter

Project Characteristics -

Land Use - Total Project area as per the Site Plan is 10.03 acres.

Construction Phase - Construction Schedule adjusted to meet the 2019 Opening Year.

Off-road Equipment - Hours are based on an 8-hour workday.

Off-road Equipment -

Off-road Equipment - Hours are based on an 8-hour workday.

Grading - Total acres graded adjusted.

Architectural Coating - Rule 1113

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	250.00	50.00
tblConstructionPhase	NumDays	300.00	100.00
tblConstructionPhase	PhaseEndDate	10/9/2020	12/6/2019
tblConstructionPhase	PhaseEndDate	8/14/2020	10/11/2019
tblConstructionPhase	PhaseEndDate	6/21/2019	5/24/2019
tblConstructionPhase	PhaseEndDate	9/11/2020	11/8/2019
tblConstructionPhase	PhaseEndDate	5/10/2019	4/12/2019
tblConstructionPhase	PhaseStartDate	9/12/2020	11/9/2019
tblConstructionPhase	PhaseStartDate	6/22/2019	5/25/2019
tblConstructionPhase	PhaseStartDate	5/11/2019	4/13/2019

Victorville Retail (Construction - Unmitigated) - San Bernardino-Mojave Desert County, Winter

tblConstructionPhase	PhaseStartDate	8/15/2020	10/12/2019
tblConstructionPhase	PhaseStartDate	4/27/2019	4/1/2019
tblEnergyUse	LightingElect	2.93	0.00
tblEnergyUse	LightingElect	5.61	0.00
tblEnergyUse	LightingElect	6.62	0.00
tblEnergyUse	LightingElect	6.62	0.00
tblEnergyUse	LightingElect	0.35	0.00
tblEnergyUse	LightingElect	5.61	0.00
tblEnergyUse	NT24E	5.02	0.00
tblEnergyUse	NT24E	2.44	0.00
tblEnergyUse	NT24E	28.48	0.00
tblEnergyUse	NT24E	28.48	0.00
tblEnergyUse	NT24E	2.44	0.00
tblEnergyUse	NT24NG	17.13	0.00
tblEnergyUse	NT24NG	0.30	0.00
tblEnergyUse	NT24NG	195.77	0.00
tblEnergyUse	NT24NG	195.77	0.00
tblEnergyUse	NT24NG	0.30	0.00
tblEnergyUse	T24E	2.20	0.00
tblEnergyUse	T24E	4.58	0.00
tblEnergyUse	T24E	12.38	0.00
tblEnergyUse	T24E	12.38	0.00
tblEnergyUse	T24E	4.58	0.00
tblEnergyUse	T24NG	15.36	0.00
tblEnergyUse	T24NG	1.92	0.00
tblEnergyUse	T24NG	77.67	0.00
tblEnergyUse	T24NG	77.67	0.00

Victorville Retail (Construction - Unmitigated) - San Bernardino-Mojave Desert County, Winter

tblEnergyUse	T24NG	1.92	0.00
tblGrading	AcresOfGrading	75.00	5.00
tblGrading	MaterialExported	0.00	14,000.00
tblLandUse	LandUseSquareFeet	2,258.80	5,268.00
tblLandUse	LotAcreage	1.72	6.38
tblLandUse	LotAcreage	0.20	2.20
tblLandUse	LotAcreage	0.10	1.10
tblLandUse	LotAcreage	0.07	0.77
tblLandUse	LotAcreage	0.05	0.55
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	11.46	0.00
tblSolidWaste	SolidWasteGenerationRate	101.37	0.00
tblSolidWaste	SolidWasteGenerationRate	53.55	0.00
tblSolidWaste	SolidWasteGenerationRate	78.75	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CC_TTP	80.20	0.00
tblVehicleTrips	CC_TTP	78.80	0.00
tblVehicleTrips	CC_TTP	72.50	0.00
tblVehicleTrips	CC_TTP	64.70	0.00

tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CNW_TTP	19.00	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblVehicleTrips	CW_TTP	33.00	0.00
tblVehicleTrips	CW_TTP	0.80	0.00
tblVehicleTrips	CW_TTP	2.20	0.00
tblVehicleTrips	CW_TTP	8.50	0.00
tblVehicleTrips	CW_TTP	16.30	0.00
tblVehicleTrips	DV_TP	51.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	20.00	0.00
tblVehicleTrips	DV_TP	35.00	0.00

tblVehicleTrips	PB_TP	28.00	0.00
tblVehicleTrips	PB_TP	65.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	43.00	0.00
tblVehicleTrips	PB_TP	11.00	0.00
tblVehicleTrips	PR_TP	21.00	0.00
tblVehicleTrips	PR_TP	14.00	0.00
tblVehicleTrips	PR_TP	29.00	0.00
tblVehicleTrips	PR_TP	37.00	0.00
tblVehicleTrips	PR_TP	54.00	0.00
tblVehicleTrips	ST_TR	23.72	0.00
tblVehicleTrips	ST_TR	204.47	0.00
tblVehicleTrips	ST_TR	722.03	0.00
tblVehicleTrips	ST_TR	158.37	0.00
tblVehicleTrips	ST_TR	49.97	0.00
tblVehicleTrips	SU_TR	11.88	0.00
tblVehicleTrips	SU_TR	166.88	0.00
tblVehicleTrips	SU_TR	542.72	0.00
tblVehicleTrips	SU_TR	131.84	0.00
tblVehicleTrips	SU_TR	25.24	0.00
tblVehicleTrips	WD_TR	23.72	0.00
tblVehicleTrips	WD_TR	542.60	0.00
tblVehicleTrips	WD_TR	496.12	0.00
tblVehicleTrips	WD_TR	127.15	0.00
tblVehicleTrips	WD_TR	42.70	0.00
tblWater	IndoorWaterUseRate	282,243.32	0.00
tblWater	IndoorWaterUseRate	167,314.87	0.00

tblWater	IndoorWaterUseRate	2,671,096.67	0.00
tblWater	IndoorWaterUseRate	1,365,901.71	0.00
tblWater	IndoorWaterUseRate	5,555,439.11	0.00
tblWater	OutdoorWaterUseRate	172,987.84	0.00
tblWater	OutdoorWaterUseRate	102,547.82	0.00
tblWater	OutdoorWaterUseRate	170,495.53	0.00
tblWater	OutdoorWaterUseRate	87,185.22	0.00
tblWater	OutdoorWaterUseRate	3,404,946.55	0.00

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					
2019	24.2003	70.0865	36.5692	0.1086	18.2141	2.4364	20.6055	9.9699	2.2434	12.1700	0.0000	11,075.6719	11,075.6719	2.2403	0.0000	11,131.6782
Maximum	**24.2003**	**70.0865**	**36.5692**	**0.1086**	**18.2141**	**2.4364**	**20.6055**	**9.9699**	**2.2434**	**12.1700**	**0.0000**	**11,075.6719**	**11,075.6719**	**2.2403**	**0.0000**	**11,131.6782**

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					
2019	24.2003	70.0865	36.5692	0.1086	7.1937	2.4364	9.5851	3.9122	2.2434	6.1123	0.0000	11,075.6719	11,075.6719	2.2403	0.0000	11,131.6782
Maximum	**24.2003**	**70.0865**	**36.5692**	**0.1086**	**7.1937**	**2.4364**	**9.5851**	**3.9122**	**2.2434**	**6.1123**	**0.0000**	**11,075.6719**	**11,075.6719**	**2.2403**	**0.0000**	**11,131.6782**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**60.50**	**0.00**	**53.48**	**60.76**	**0.00**	**49.78**	**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	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**	**0.0000**	**2.2000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**	**0.0000**	**0.1391**

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	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**	**0.0000**	**2.2000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**	**0.0000**	**0.1391**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	4/12/2019	5	10	
2	Grading	Grading	4/13/2019	5/24/2019	5	30	
3	Building Construction	Building Construction	5/25/2019	10/11/2019	5	100	
4	Paving	Paving	10/12/2019	11/8/2019	5	20	
5	Architectural Coating	Architectural Coating	11/9/2019	12/6/2019	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 5

Acres of Paving: 4.39

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 144,852; Non-Residential Outdoor: 48,284; Striped Parking Area: 11,712 (Architectural Coating – sqft)

OffRoad Equipment

Victorville Retail (Construction - Unmitigated) - San Bernardino-Mojave Desert County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	8.00	78	0.48
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	1,750.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	114.00	48.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2019

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

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	0.0848	0.0570	0.5715	1.4000e-003	0.1479	1.0300e-003	0.1489	0.0392	9.5000e-004	0.0402		139.4726	139.4726	4.7000e-003		139.5900
Total	**0.0848**	**0.0570**	**0.5715**	**1.4000e-003**	**0.1479**	**1.0300e-003**	**0.1489**	**0.0392**	**9.5000e-004**	**0.0402**		**139.4726**	**139.4726**	**4.7000e-003**		**139.5900**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0458	0.0000	7.0458	3.8730	0.0000	3.8730			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**7.0458**	**2.3904**	**9.4362**	**3.8730**	**2.1991**	**6.0721**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.2 Site Preparation - 2019

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	0.0848	0.0570	0.5715	1.4000e-003	0.1479	1.0300e-003	0.1489	0.0392	9.5000e-004	0.0402		139.4726	139.4726	4.7000e-003		139.5900
Total	**0.0848**	**0.0570**	**0.5715**	**1.4000e-003**	**0.1479**	**1.0300e-003**	**0.1489**	**0.0392**	**9.5000e-004**	**0.0402**		**139.4726**	**139.4726**	**4.7000e-003**		**139.5900**

3.3 Grading - 2019

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					6.2644	0.0000	6.2644	3.3392	0.0000	3.3392			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**6.2644**	**2.3827**	**8.6471**	**3.3392**	**2.1920**	**5.5313**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.3 Grading - 2019

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	0.4082	15.5030	2.5574	0.0451	1.0209	0.0526	1.0735	0.2799	0.0503	0.3302		4,780.6829	4,780.6829	0.2924		4,787.9928
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	0.0942	0.0633	0.6350	1.5600e-003	0.1643	1.1400e-003	0.1654	0.0436	1.0500e-003	0.0446		154.9695	154.9695	5.2200e-003		155.1000
Total	**0.5024**	**15.5663**	**3.1924**	**0.0466**	**1.1852**	**0.0537**	**1.2389**	**0.3235**	**0.0513**	**0.3748**		**4,935.6524**	**4,935.6524**	**0.2976**		**4,943.0928**

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					2.4431	0.0000	2.4431	1.3023	0.0000	1.3023			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**2.4431**	**2.3827**	**4.8258**	**1.3023**	**2.1920**	**3.4943**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.3 Grading - 2019

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	0.4082	15.5030	2.5574	0.0451	1.0209	0.0526	1.0735	0.2799	0.0503	0.3302		4,780.6829	4,780.6829	0.2924		4,787.9928
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	0.0942	0.0633	0.6350	1.5600e-003	0.1643	1.1400e-003	0.1654	0.0436	1.0500e-003	0.0446		154.9695	154.9695	5.2200e-003		155.1000
Total	**0.5024**	**15.5663**	**3.1924**	**0.0466**	**1.1852**	**0.0537**	**1.2389**	**0.3235**	**0.0513**	**0.3748**		**4,935.6524**	**4,935.6524**	**0.2976**		**4,943.0928**

3.4 Building Construction - 2019

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	2.5115	22.7062	18.3139	0.0288		1.3802	1.3802		1.2958	1.2958		2,778.3097	2,778.3097	0.6904		2,795.5700
Total	**2.5115**	**22.7062**	**18.3139**	**0.0288**		**1.3802**	**1.3802**		**1.2958**	**1.2958**		**2,778.3097**	**2,778.3097**	**0.6904**		**2,795.5700**

3.4 Building Construction - 2019

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	0.1858	5.6187	1.3190	0.0131	0.3252	0.0369	0.3621	0.0936	0.0353	0.1289		1,385.0515	1,385.0515	0.1041		1,387.6537
Worker	0.5369	0.3609	3.6194	8.8800e-003	0.9365	6.5000e-003	0.9430	0.2484	5.9900e-003	0.2544		883.3263	883.3263	0.0298		884.0701
Total	**0.7228**	**5.9796**	**4.9384**	**0.0220**	**1.2617**	**0.0434**	**1.3051**	**0.3420**	**0.0413**	**0.3833**		**2,268.3777**	**2,268.3777**	**0.1338**		**2,271.7238**

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	2.5115	22.7062	18.3139	0.0288		1.3802	1.3802		1.2958	1.2958	0.0000	2,778.3097	2,778.3097	0.6904		2,795.5700
Total	**2.5115**	**22.7062**	**18.3139**	**0.0288**		**1.3802**	**1.3802**		**1.2958**	**1.2958**	**0.0000**	**2,778.3097**	**2,778.3097**	**0.6904**		**2,795.5700**

3.4 Building Construction - 2019

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	0.1858	5.6187	1.3190	0.0131	0.3252	0.0369	0.3621	0.0936	0.0353	0.1289		1,385.0515	1,385.0515	0.1041		1,387.6537
Worker	0.5369	0.3609	3.6194	8.8800e-003	0.9365	6.5000e-003	0.9430	0.2484	5.9900e-003	0.2544		883.3263	883.3263	0.0298		884.0701
Total	**0.7228**	**5.9796**	**4.9384**	**0.0220**	**1.2617**	**0.0434**	**1.3051**	**0.3420**	**0.0413**	**0.3833**		**2,268.3777**	**2,268.3777**	**0.1338**		**2,271.7238**

3.5 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.5751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0295**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.5 Paving - 2019

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	0.0707	0.0475	0.4762	1.1700e-003	0.1232	8.6000e-004	0.1241	0.0327	7.9000e-004	0.0335		116.2271	116.2271	3.9100e-003		116.3250
Total	**0.0707**	**0.0475**	**0.4762**	**1.1700e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**7.9000e-004**	**0.0335**		**116.2271**	**116.2271**	**3.9100e-003**		**116.3250**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.5751					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.0295**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.5 Paving - 2019

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	0.0707	0.0475	0.4762	1.1700e-003	0.1232	8.6000e-004	0.1241	0.0327	7.9000e-004	0.0335		116.2271	116.2271	3.9100e-003		116.3250
Total	**0.0707**	**0.0475**	**0.4762**	**1.1700e-003**	**0.1232**	**8.6000e-004**	**0.1241**	**0.0327**	**7.9000e-004**	**0.0335**		**116.2271**	**116.2271**	**3.9100e-003**		**116.3250**

3.6 Architectural Coating - 2019

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	23.7368					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3553	2.4472	2.4551	3.9600e-003		0.1717	0.1717		0.1717	0.1717		375.2641	375.2641	0.0317		376.0565
Total	**24.0920**	**2.4472**	**2.4551**	**3.9600e-003**		**0.1717**	**0.1717**		**0.1717**	**0.1717**		**375.2641**	**375.2641**	**0.0317**		**376.0565**

3.6 Architectural Coating - 2019

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	0.1083	0.0728	0.7302	1.7900e-003	0.1889	1.3100e-003	0.1903	0.0501	1.2100e-003	0.0513		178.2150	178.2150	6.0000e-003		178.3650
Total	**0.1083**	**0.0728**	**0.7302**	**1.7900e-003**	**0.1889**	**1.3100e-003**	**0.1903**	**0.0501**	**1.2100e-003**	**0.0513**		**178.2150**	**178.2150**	**6.0000e-003**		**178.3650**

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	23.7368					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3553	2.4472	2.4551	3.9600e-003		0.1717	0.1717		0.1717	0.1717	0.0000	375.2641	375.2641	0.0317		376.0565
Total	**24.0920**	**2.4472**	**2.4551**	**3.9600e-003**		**0.1717**	**0.1717**		**0.1717**	**0.1717**	**0.0000**	**375.2641**	**375.2641**	**0.0317**		**376.0565**

3.6 Architectural Coating - 2019

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	0.1083	0.0728	0.7302	1.7900e-003	0.1889	1.3100e-003	0.1903	0.0501	1.2100e-003	0.0513		178.2150	178.2150	6.0000e-003		178.3650
Total	**0.1083**	**0.0728**	**0.7302**	**1.7900e-003**	**0.1889**	**1.3100e-003**	**0.1903**	**0.0501**	**1.2100e-003**	**0.0513**		**178.2150**	**178.2150**	**6.0000e-003**		**178.3650**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	0.00	0.00	0.00		
Convenience Market With Gas Pumps	0.00	0.00	0.00		
Fast Food Restaurant with Drive Thru	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Automobile Care Center	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Convenience Market With Gas	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Fast Food Restaurant with Drive	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Regional Shopping Center	0.00	0.00	0.00	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
Automobile Care Center	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Convenience Market With Gas Pumps	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Fast Food Restaurant with Drive Thru	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
High Turnover (Sit Down Restaurant)	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Parking Lot	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Regional Shopping Center	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Victorville Retail (Construction - Unmitigated) - San Bernardino-Mojave Desert County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	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
Convenience Market With Gas Pumps	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
Fast Food Restaurant with Drive Thru	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
High Turnover (Sit Down Restaurant)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	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
Convenience Market With Gas Pumps	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
Fast Food Restaurant with Drive Thru	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
High Turnover (Sit Down Restaurant)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Unmitigated	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391

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	0.6503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8200e-003	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Total	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**		**0.1391**

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	0.6503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8200e-003	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Total	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**		**0.1391**

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

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APPENDIX 3.2:

CALEEMOD OPERATIONAL EMISSIONS MODEL OUTPUTS

Victorville Retail (Operations)

San Bernardino-Mojave Desert County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	488.00	Space	4.39	195,200.00	0
Fast Food Restaurant with Drive Thru	8.80	1000sqft	2.20	8,800.00	0
High Turnover (Sit Down Restaurant)	4.50	1000sqft	1.10	4,500.00	0
Automobile Care Center	3.00	1000sqft	0.77	3,000.00	0
Convenience Market With Gas Pumps	16.00	Pump	0.55	5,268.00	0
Regional Shopping Center	75.00	1000sqft	6.38	75,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Victorville Retail (Operations) - San Bernardino-Mojave Desert County, Summer

Project Characteristics -

Land Use - Total Project area as per the Site Plan is 10.03 acres.

Construction Phase - Operational Run Only.

Off-road Equipment - Operational Run Only.

Trips and VMT - Operational Run Only.

Vehicle Trips - Trip Rates based on TIA by TJW Engineering, Inc. (2019)

Water And Wastewater - Car Wash Water Usage (indoor) adjusted to include CalEEMod Default of 282,243.32 annual gallons + 30 gallons per wash x 365 days x 472 vehicles per day (based on trip generation) = 5,450,643.32 annual gallons

Victorville Retail (Operations) - San Bernardino-Mojave Desert County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LandUseSquareFeet	2,258.80	5,268.00
tblLandUse	LotAcreage	0.20	2.20
tblLandUse	LotAcreage	0.10	1.10
tblLandUse	LotAcreage	0.07	0.77
tblLandUse	LotAcreage	0.05	0.55
tblLandUse	LotAcreage	1.72	6.38
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	ST_TR	23.72	314.67
tblVehicleTrips	ST_TR	204.47	205.36
tblVehicleTrips	ST_TR	722.03	616.12
tblVehicleTrips	ST_TR	158.37	122.40
tblVehicleTrips	ST_TR	49.97	46.12
tblVehicleTrips	SU_TR	11.88	314.67
tblVehicleTrips	SU_TR	166.88	205.36
tblVehicleTrips	SU_TR	542.72	472.58
tblVehicleTrips	SU_TR	131.84	142.64
tblVehicleTrips	SU_TR	25.24	21.10
tblVehicleTrips	WD_TR	23.72	314.67
tblVehicleTrips	WD_TR	542.60	205.36
tblVehicleTrips	WD_TR	496.12	470.95
tblVehicleTrips	WD_TR	127.15	112.18
tblVehicleTrips	WD_TR	42.70	37.75
tblWater	IndoorWaterUseRate	282,243.32	5,450,643.32

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					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	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					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Victorville Retail (Operations) - San Bernardino-Mojave Desert County, Summer

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

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	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Energy	0.1156	1.0509	0.8827	6.3100e-003		0.0799	0.0799		0.0799	0.0799		1,261.0530	1,261.0530	0.0242	0.0231	1,268.5468
Mobile	27.4877	146.0891	187.0979	0.5561	31.0817	0.5215	31.6032	8.3186	0.4913	8.8099		56,826.4094	56,826.4094	4.4438		56,937.5052
Total	**30.3951**	**147.1405**	**188.0420**	**0.5624**	**31.0817**	**0.6016**	**31.6832**	**8.3186**	**0.5714**	**8.8900**		**58,087.5927**	**58,087.5927**	**4.4684**	**0.0231**	**58,206.1911**

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	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Energy	0.1156	1.0509	0.8827	6.3100e-003		0.0799	0.0799		0.0799	0.0799		1,261.0530	1,261.0530	0.0242	0.0231	1,268.5468
Mobile	27.4877	146.0891	187.0979	0.5561	31.0817	0.5215	31.6032	8.3186	0.4913	8.8099		56,826.4094	56,826.4094	4.4438		56,937.5052
Total	**30.3951**	**147.1405**	**188.0420**	**0.5624**	**31.0817**	**0.6016**	**31.6832**	**8.3186**	**0.5714**	**8.8900**		**58,087.5927**	**58,087.5927**	**4.4684**	**0.0231**	**58,206.1911**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	4/1/2019	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 4.39

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Site Preparation - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	27.4877	146.0891	187.0979	0.5561	31.0817	0.5215	31.6032	8.3186	0.4913	8.8099		56,826.4094	56,826.4094	4.4438		56,937.5052
Unmitigated	27.4877	146.0891	187.0979	0.5561	31.0817	0.5215	31.6032	8.3186	0.4913	8.8099		56,826.4094	56,826.4094	4.4438		56,937.5052

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	944.01	944.01	944.01	940,410	940,410
Convenience Market With Gas Pumps	3,285.76	3,285.76	3285.76	1,762,496	1,762,496
Fast Food Restaurant with Drive Thru	4,144.36	5,421.86	4158.70	4,044,608	4,044,608
High Turnover (Sit Down Restaurant)	504.81	550.80	641.88	616,056	616,056
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	2,831.25	3,459.00	1582.50	4,808,501	4,808,501
Total	11,710.19	13,661.43	10,612.85	12,172,070	12,172,070

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
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Convenience Market With Gas Pumps	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Fast Food Restaurant with Drive Thru	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
High Turnover (Sit Down Restaurant)	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Parking Lot	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Regional Shopping Center	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Victorville Retail (Operations) - San Bernardino-Mojave Desert County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1156	1.0509	0.8827	6.3100e-003		0.0799	0.0799		0.0799	0.0799		1,261.0530	1,261.0530	0.0242	0.0231	1,268.5468
NaturalGas Unmitigated	0.1156	1.0509	0.8827	6.3100e-003		0.0799	0.0799		0.0799	0.0799		1,261.0530	1,261.0530	0.0242	0.0231	1,268.5468

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					
Automobile Care Center	267.041	2.8800e-003	0.0262	0.0220	1.6000e-004		1.9900e-003	1.9900e-003		1.9900e-003	1.9900e-003		31.4166	31.4166	6.0000e-004	5.8000e-004	31.6033
Convenience Market With Gas Pumps	32.041	3.5000e-004	3.1400e-003	2.6400e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7695	3.7695	7.0000e-005	7.0000e-005	3.7919
Fast Food Restaurant with Drive Thru	6592.53	0.0711	0.6463	0.5429	3.8800e-003		0.0491	0.0491		0.0491	0.0491		775.5913	775.5913	0.0149	0.0142	780.2003
High Turnover (Sit Down Restaurant)	3371.18	0.0364	0.3305	0.2776	1.9800e-003		0.0251	0.0251		0.0251	0.0251		396.6092	396.6092	7.6000e-003	7.2700e-003	398.9660
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	456.164	4.9200e-003	0.0447	0.0376	2.7000e-004		3.4000e-003	3.4000e-003		3.4000e-003	3.4000e-003		53.6664	53.6664	1.0300e-003	9.8000e-004	53.9853
Total		**0.1156**	**1.0509**	**0.8827**	**6.3100e-003**		**0.0799**	**0.0799**		**0.0799**	**0.0799**		**1,261.0530**	**1,261.0530**	**0.0242**	**0.0231**	**1,268.5468**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.267041	2.8800e-003	0.0262	0.0220	1.6000e-004		1.9900e-003	1.9900e-003		1.9900e-003	1.9900e-003		31.4166	31.4166	6.0000e-004	5.8000e-004	31.6033
Convenience Market With Gas Pumps	0.032041	3.5000e-004	3.1400e-003	2.6400e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7695	3.7695	7.0000e-005	7.0000e-005	3.7919
Fast Food Restaurant with Drive Thru	6.59253	0.0711	0.6463	0.5429	3.8800e-003		0.0491	0.0491		0.0491	0.0491		775.5913	775.5913	0.0149	0.0142	780.2003
High Turnover (Sit Down Restaurant)	3.37118	0.0364	0.3305	0.2776	1.9800e-003		0.0251	0.0251		0.0251	0.0251		396.6092	396.6092	7.6000e-003	7.2700e-003	398.9660
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.456164	4.9200e-003	0.0447	0.0376	2.7000e-004		3.4000e-003	3.4000e-003		3.4000e-003	3.4000e-003		53.6664	53.6664	1.0300e-003	9.8000e-004	53.9853
Total		**0.1156**	**1.0509**	**0.8827**	**6.3100e-003**		**0.0799**	**0.0799**		**0.0799**	**0.0799**		**1,261.0530**	**1,261.0530**	**0.0242**	**0.0231**	**1,268.5468**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Unmitigated	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391

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	0.6503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8200e-003	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Total	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**		**0.1391**

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	0.6503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8200e-003	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Total	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**		**0.1391**

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

Victorville Retail (Operations)

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	488.00	Space	4.39	195,200.00	0
Fast Food Restaurant with Drive Thru	8.80	1000sqft	2.20	8,800.00	0
High Turnover (Sit Down Restaurant)	4.50	1000sqft	1.10	4,500.00	0
Automobile Care Center	3.00	1000sqft	0.77	3,000.00	0
Convenience Market With Gas Pumps	16.00	Pump	0.55	5,268.00	0
Regional Shopping Center	75.00	1000sqft	6.38	75,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Victorville Retail (Operations) - San Bernardino-Mojave Desert County, Winter

Project Characteristics -

Land Use - Total Project area as per the Site Plan is 10.03 acres.

Construction Phase - Operational Run Only.

Off-road Equipment - Operational Run Only.

Trips and VMT - Operational Run Only.

Vehicle Trips - Trip Rates based on TIA by TJW Engineering, Inc. (2019)

Water And Wastewater - Car Wash Water Usage (indoor) adjusted to include CalEEMod Default of 282,243.32 annual gallons + 30 gallons per wash x 365 days x 472 vehicles per day (based on trip generation) = 5,450,643.32 annual gallons

Victorville Retail (Operations) - San Bernardino-Mojave Desert County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LandUseSquareFeet	2,258.80	5,268.00
tblLandUse	LotAcreage	0.20	2.20
tblLandUse	LotAcreage	0.10	1.10
tblLandUse	LotAcreage	0.07	0.77
tblLandUse	LotAcreage	0.05	0.55
tblLandUse	LotAcreage	1.72	6.38
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblVehicleTrips	ST_TR	23.72	314.67
tblVehicleTrips	ST_TR	204.47	205.36
tblVehicleTrips	ST_TR	722.03	616.12
tblVehicleTrips	ST_TR	158.37	122.40
tblVehicleTrips	ST_TR	49.97	46.12
tblVehicleTrips	SU_TR	11.88	314.67
tblVehicleTrips	SU_TR	166.88	205.36
tblVehicleTrips	SU_TR	542.72	472.58
tblVehicleTrips	SU_TR	131.84	142.64
tblVehicleTrips	SU_TR	25.24	21.10
tblVehicleTrips	WD_TR	23.72	314.67
tblVehicleTrips	WD_TR	542.60	205.36
tblVehicleTrips	WD_TR	496.12	470.95
tblVehicleTrips	WD_TR	127.15	112.18
tblVehicleTrips	WD_TR	42.70	37.75
tblWater	IndoorWaterUseRate	282,243.32	5,450,643.32

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					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	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					
2019	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Victorville Retail (Operations) - San Bernardino-Mojave Desert County, Winter

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

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	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Energy	0.1156	1.0509	0.8827	6.3100e-003		0.0799	0.0799		0.0799	0.0799		1,261.0530	1,261.0530	0.0242	0.0231	1,268.5468
Mobile	23.5424	143.8473	180.4854	0.5086	31.0817	0.5351	31.6167	8.3186	0.5043	8.8229		51,980.0096	51,980.0096	4.7197		52,098.0020
Total	**26.4498**	**144.8987**	**181.4295**	**0.5149**	**31.0817**	**0.6151**	**31.6968**	**8.3186**	**0.5844**	**8.9030**		**53,241.1929**	**53,241.1929**	**4.7442**	**0.0231**	**53,366.6880**

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	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Energy	0.1156	1.0509	0.8827	6.3100e-003		0.0799	0.0799		0.0799	0.0799		1,261.0530	1,261.0530	0.0242	0.0231	1,268.5468
Mobile	23.5424	143.8473	180.4854	0.5086	31.0817	0.5351	31.6167	8.3186	0.5043	8.8229		51,980.0096	51,980.0096	4.7197		52,098.0020
Total	**26.4498**	**144.8987**	**181.4295**	**0.5149**	**31.0817**	**0.6151**	**31.6968**	**8.3186**	**0.5844**	**8.9030**		**53,241.1929**	**53,241.1929**	**4.7442**	**0.0231**	**53,366.6880**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	4/1/2019	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 4.39

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

3.2 Site Preparation - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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	23.5424	143.8473	180.4854	0.5086	31.0817	0.5351	31.6167	8.3186	0.5043	8.8229		51,980.0096	51,980.0096	4.7197		52,098.0020
Unmitigated	23.5424	143.8473	180.4854	0.5086	31.0817	0.5351	31.6167	8.3186	0.5043	8.8229		51,980.0096	51,980.0096	4.7197		52,098.0020

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Automobile Care Center	944.01	944.01	944.01	940,410	940,410
Convenience Market With Gas Pumps	3,285.76	3,285.76	3285.76	1,762,496	1,762,496
Fast Food Restaurant with Drive Thru	4,144.36	5,421.86	4158.70	4,044,608	4,044,608
High Turnover (Sit Down Restaurant)	504.81	550.80	641.88	616,056	616,056
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	2,831.25	3,459.00	1582.50	4,808,501	4,808,501
Total	11,710.19	13,661.43	10,612.85	12,172,070	12,172,070

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
Automobile Care Center	9.50	7.30	7.30	33.00	48.00	19.00	21	51	28
Convenience Market With Gas	9.50	7.30	7.30	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	29	21	50
High Turnover (Sit Down	9.50	7.30	7.30	8.50	72.50	19.00	37	20	43
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Regional Shopping Center	9.50	7.30	7.30	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Automobile Care Center	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Convenience Market With Gas Pumps	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Fast Food Restaurant with Drive Thru	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
High Turnover (Sit Down Restaurant)	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Parking Lot	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163
Regional Shopping Center	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Victorville Retail (Operations) - San Bernardino-Mojave Desert County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1156	1.0509	0.8827	6.3100e-003		0.0799	0.0799		0.0799	0.0799		1,261.0530	1,261.0530	0.0242	0.0231	1,268.5468
NaturalGas Unmitigated	0.1156	1.0509	0.8827	6.3100e-003		0.0799	0.0799		0.0799	0.0799		1,261.0530	1,261.0530	0.0242	0.0231	1,268.5468

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					
Automobile Care Center	267.041	2.8800e-003	0.0262	0.0220	1.6000e-004		1.9900e-003	1.9900e-003		1.9900e-003	1.9900e-003		31.4166	31.4166	6.0000e-004	5.8000e-004	31.6033
Convenience Market With Gas Pumps	32.041	3.5000e-004	3.1400e-003	2.6400e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7695	3.7695	7.0000e-005	7.0000e-005	3.7919
Fast Food Restaurant with Drive Thru	6592.53	0.0711	0.6463	0.5429	3.8800e-003		0.0491	0.0491		0.0491	0.0491		775.5913	775.5913	0.0149	0.0142	780.2003
High Turnover (Sit Down Restaurant)	3371.18	0.0364	0.3305	0.2776	1.9800e-003		0.0251	0.0251		0.0251	0.0251		396.6092	396.6092	7.6000e-003	7.2700e-003	398.9660
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	456.164	4.9200e-003	0.0447	0.0376	2.7000e-004		3.4000e-003	3.4000e-003		3.4000e-003	3.4000e-003		53.6664	53.6664	1.0300e-003	9.8000e-004	53.9853
Total		**0.1156**	**1.0509**	**0.8827**	**6.3100e-003**		**0.0799**	**0.0799**		**0.0799**	**0.0799**		**1,261.0530**	**1,261.0530**	**0.0242**	**0.0231**	**1,268.5468**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Automobile Care Center	0.267041	2.8800e-003	0.0262	0.0220	1.6000e-004		1.9900e-003	1.9900e-003		1.9900e-003	1.9900e-003		31.4166	31.4166	6.0000e-004	5.8000e-004	31.6033
Convenience Market With Gas Pumps	0.032041	3.5000e-004	3.1400e-003	2.6400e-003	2.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004		3.7695	3.7695	7.0000e-005	7.0000e-005	3.7919
Fast Food Restaurant with Drive Thru	6.59253	0.0711	0.6463	0.5429	3.8800e-003		0.0491	0.0491		0.0491	0.0491		775.5913	775.5913	0.0149	0.0142	780.2003
High Turnover (Sit Down Restaurant)	3.37118	0.0364	0.3305	0.2776	1.9800e-003		0.0251	0.0251		0.0251	0.0251		396.6092	396.6092	7.6000e-003	7.2700e-003	398.9660
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	0.456164	4.9200e-003	0.0447	0.0376	2.7000e-004		3.4000e-003	3.4000e-003		3.4000e-003	3.4000e-003		53.6664	53.6664	1.0300e-003	9.8000e-004	53.9853
Total		**0.1156**	**1.0509**	**0.8827**	**6.3100e-003**		**0.0799**	**0.0799**		**0.0799**	**0.0799**		**1,261.0530**	**1,261.0530**	**0.0242**	**0.0231**	**1,268.5468**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Unmitigated	2.7918	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391

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	0.6503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8200e-003	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Total	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**		**0.1391**

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	0.6503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.1357					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.8200e-003	5.7000e-004	0.0614	0.0000		2.2000e-004	2.2000e-004		2.2000e-004	2.2000e-004		0.1303	0.1303	3.5000e-004		0.1391
Total	**2.7918**	**5.7000e-004**	**0.0614**	**0.0000**		**2.2000e-004**	**2.2000e-004**		**2.2000e-004**	**2.2000e-004**		**0.1303**	**0.1303**	**3.5000e-004**		**0.1391**

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

APPENDIX 3.3:

MDAQMD PERMITS AND SCAQMD RISK ESTIMATES

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
14306 Park Avenue Victorville, CA 92392-2310
760.245.1661 -- 800.635.4617 -- FAX 760.245.2022

PERMIT TO OPERATE

G000387

Operation under this permit must be conducted in compliance with all information included with the initial application, initial permit condition, and conditions contained herein. The equipment must be maintained and kept in good operating condition at all times. This Permit to Operate or copy must be posted on or within 8 meters of equipment. If a copy is posted, the original must be maintained on site, available for inspection at all times.

EXPIRES LAST DAY OF: MAY 2019

OWNER OF OPERATOR (Co.#53)

JACO Hill
PO Box 82515
Bakersfield, CA 93380-2515

EQUIPMENT LOCATION (Fac.#77)

JACO Hill /Adobe Liquors
4960 Adobe Road
Twentynine Palms, CA 92277

Description:
GASOLINE DISPENSING FACILITY consisting of: Facility elevation is 1836 feet above sea level.

FUEL TANKS

Tank No.	Material Stored	Volume (US Gallons)	Above/Underground
1	87U	12,000	Under Ground
2	91U	12,000	Under Ground
3	Diesel	12,000	Under Ground

DISPENSING EQUIPMENT

Fuel Type	Quantity
Diesel	2
TPN	12

VAPOR CONTROL EQUIPMENT

Type	Equipment Name	Compliance
PI	OPW	VR-102

Fee Schedule: 6 (N/A) Rating: 36 product-nozzles SIC: 5541 SCC: 40600603 Location/UTM(Km): 585E/3777N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

JACO Hill
PO Box 82515
Bakersfield, CA 93380-2515

By: **COPY**
Eldon Heaston
Air Pollution Control Officer

Type	Equipment Name	Compliance
PII	AST	VR-202

CONDITIONS:

1. The owner/operator shall conspicuously post, in the gasoline dispensing area, the operating instructions and the district's toll-free telephone number for complaints (1-800-635-4617).
[District Rule 461 - Gasoline Transfer and Dispensing]

2. The owner/operator shall maintain a log of all inspections; maintenance and repairs (including ISD alarm and failures); and throughput on equipment. Such logs or records shall be maintained at the facility for at least two (2) years and shall be available to the District upon request.
[District Rule 461 - Gasoline Transfer and Dispensing]

3. Any modifications or changes to the piping, control fittings, or configurations of the vapor recovery system require prior approval from the District.
[District Regulation XIII - NSR]

ATC Only: The District must be notified when installation of all piping and control fittings is completed. Vapor control piping and fittings must remain exposed until the District has inspected the installation or given approval to complete backfill. Notification may be made via phone, or via email request to reporting@mdaqmd.ca.gov
[District Regulation XIII - NSR]

4. The Enhanced Vapor Recovery (EVR), Phase I and II Vapor Recovery System must be tested in accordance with the requirements of CARB Executive Orders, VR-102 and Order VR-202, no later than 60 days after initial startup, and at least once every twelve (12) months using the latest adopted version of the required test procedures.

The District must be notified a minimum of 10 days prior to performing the required tests with the final results submitted to the District within 30 days of completion of the tests. Testing notifications and testing results may be sent to VaporRecoveryTesting@mdaqmd.ca.gov
[District Rule 461 - Gasoline Transfer and Dispensing, Executive Orders VR-102 and VR-202]

5. The annual throughput of gasoline shall not exceed 5,000,000 gallons per year. Throughput records shall be kept on site and available to District personnel upon request, and annual throughput for the previous calendar year shall be provided to the District not later than the end of February of each year. Before this annual throughput can be increased the facility is required to submit to the District an application to modify the permit which may require a Health Risk Assessment (HRA). In addition, public notice and/or a commenting period may be required.
[District Rule 1320 - NSR for Toxic Air Contaminants; District Rule 107(b); H&S Code 39607 & 44341-44342; and 40 CFR 51, Subpart A]

6. Enhanced Vapor Recovery (EVR), Point Phase I Vapor Control Equipment must be installed and maintained in compliance with CARB Executive Order VR-102. The owner or operator shall perform the required maintenance as specified in ARB-Approved Installation and Maintenance Manual for the Phase I Vapor Recovery System, including PV maintenance, as applicable.
[District Rule 461 - Gasoline Transfer and Dispensing, Executive Order VR-102, 40 CFR 63, Subpart CCCCCC]

7. Enhanced Vapor Recovery (EVR), Phase II Vapor Control Equipment, including the ISD system and software, must be installed and maintained in compliance with CARB Executive Order VR-202. The owner or operator shall install, operate and maintain the Phase II Vapor Recovery System including In-Station Diagnostics System as specified in the ARB-approved Installation, Operation and Maintenance Manual for the Phase II Vapor Recovery System including In-Station Diagnostics System.
[District Rule 461 - Gasoline Transfer and Dispensing, Executive Order VR-102, 40 CFR 63, Subpart CCCCCC]

8. ISD equipment must be installed and maintained in compliance with CARB Executive Order VR-202. Within 2 hours of the first warning alarm the facility shall notify the responsible official and log information relating to the alarm. When the alarm condition persists, the ISD system activates a failure alarm and dispensing is terminated. The ISD equipment must not be reset to allow vehicle fueling to resume until the condition causing the alarm is repaired by an authorized person or as otherwise allowed per the most recent version of CARB's ISD System Alarm Response Policy: https://www.arb.ca.gov/vapor/advisories/adv405d.pdf

MOJAVE DESERT AIR QUALITY MANAGEMENT DISTRICT
14306 Park Avenue Victorville, CA 92392-2310
760.245.1661 -- 800.635.4617 -- FAX 760.245.2022

AUTHORITY TO CONSTRUCT

G011435

If construction is not completed by the expiration date of this permit, it may be renewed for one additional year upon payment of applicable fees. Any additional extension will require the written approval of the Air Pollution Control Officer. This Authority to Construct may serve as a temporary Permit to Operate provided the APCO is given prior notice of intent to operate and the Permit to Operate is not specifically denied.

EXPIRES LAST DAY OF: MARCH 2019

OWNER OF OPERATOR (Co.#2421)

Sunset Fuels, Inc.
3199 Red Hill Avenue, Unit B
Costa Mesa, CA 92626

EQUIPMENT LOCATION (Fac.#87)

Sunset Fuels, Inc. #2
15482 Palmdale Road
Victorville, CA 92392

Description:
GASOLINE DISPENSING FACILITY Elevation is 2978 feet above sea level. consisting of: A balance system with a Veeder-Root Vapor Polisher and a Veeder-Root ISD system.

FUEL TANKS

Tank No.	Material Stored	Volume (US Gallons)	Above/Underground
001	87U	20,000	Under Ground
002	91U	12,000	Under Ground
003	Diesel	8,000	Under Ground

DISPENSING EQUIPMENT

Fuel Type	Quantity
TPN	12
Diesel	6

VAPOR CONTROL EQUIPMENT

Type	Equipment Name	Compliance
PI	OPW	VR-102

Fee Schedule: 6 (N/A) Rating: 36 product-nozzles SIC: 5541 SCC: 40600603 Location/UTM(Km): 470E/3021N

This permit does not authorize the emission of air contaminants in excess of those allowed by law, including Division 26 of the Health and Safety Code of the State of California and the Rules and Regulations of the District. This permit cannot be construed as permission to violate existing laws, ordinances, statutes or regulations of this or other governmental agencies. This permit must be renewed by the expiration date above. If billing for renewal fee required by Rule 301(c) is not received by expiration date above, please contact the District.

Sunset Fuels, Inc.
3199 Red Hill Avenue, Unit B
Costa Mesa, CA 92626

By: **COPY**
Eldon Heaston
Air Pollution Control Officer

Type	Equipment Name	Compliance
PII	BAL VP	VR-204

CONDITIONS:

1. The owner/operator shall conspicuously post, in the gasoline dispensing area, the operating instructions and the district's toll-free telephone number for complaints (1-800-635-4617).
[District Rule 461 - Gasoline Transfer and Dispensing]

2. The owner/operator shall maintain a log of all inspections; maintenance and repairs (including ISD alarm and failures); and throughput on equipment. Such logs or records shall be maintained at the facility for at least two (2) years and shall be available to the District upon request.
[District Rule 461 - Gasoline Transfer and Dispensing]

3. Any modifications or changes to the piping, control fittings, or configurations of the vapor recovery system require prior approval from the District.
[District Regulation XIII - NSR]

4. The Enhanced Vapor Recovery (EVR), Phase I and II Vapor Recovery System must be tested in accordance with the requirements of CARB Executive Orders, VR-102 and Order VR-204, no later than 60 days after initial startup, and at least once every twelve (12) months using the latest adopted version of the required test procedures.

The District must be notified a minimum of 10 days prior to performing the required tests with the final results submitted to the District within 30 days of completion of the tests. Testing notifications and testing results may be sent to VaporRecoveryTesting@mdaqmd.ca.gov
[District Rule 461 - Gasoline Transfer and Dispensing, Executive Orders VR-102 and VR-204]

5. The annual throughput of gasoline shall not exceed 6,500,000 gallons per year. Throughput records shall be kept on site and available to District personnel upon request, and annual throughput for the previous calendar year shall be provided to the District not later than the end of February of each year. Before this annual throughput can be increased the facility is required to submit to the District an application to modify the permit which may require a Health Risk Assessment (HRA). In addition, public notice and/or a commenting period may be required.
[District Rule 1320 - NSR for Toxic Air Contaminants; District Rule 107(b); H&S Code 39607 & 44341-44342; and 40 CFR 51, Subpart A]

6. Enhanced Vapor Recovery (EVR), Point Phase I Vapor Control Equipment must be installed and maintained in compliance with CARB Executive Order VR-102. The owner or operator shall perform the required maintenance as specified in ARB-Approved Installation and Maintenance Manual for the Phase I Vapor Recovery System, including PV maintenance, as applicable.
[District Rule 461 - Gasoline Transfer and Dispensing, Executive Order VR-102, 40 CFR 63, Subpart CCCCCC]

7. Enhanced Vapor Recovery (EVR), Phase II Vapor Control Equipment, including the ISD system and software, must be installed and maintained in compliance with CARB Executive Order VR-204. The owner or operator shall install, operate and maintain the Phase II Vapor Recovery System including In-Station Diagnostics System as specified in the ARB-approved Installation, Operation and Maintenance Manual for the Phase II Vapor Recovery System including In-Station Diagnostics System.
[District Rule 461 - Gasoline Transfer and Dispensing, Executive Order VR-204, 40 CFR 63, Subpart CCCCCC]

8. ISD equipment must be installed and maintained in compliance with CARB Executive Order VR-204. Within 2 hours of the first warning alarm the facility shall notify the responsible official and log information relating to the alarm. When the alarm condition persists, the ISD system activates a failure alarm and dispensing is terminated. The ISD equipment must not be reset to allow vehicle fueling to resume until the condition causing the alarm is repaired by an authorized person or as otherwise allowed per the most recent version of CARB's ISD System Alarm Response Policy: https://www.arb.ca.gov/vapor/advisories/adv405d.pdf

Table 12.1A – Screening Tables for Gasoline Dispensing Facilities

Underground Storage Tank (UST) **Residential**

MICR per One Million Gallons of Gasoline

		Downwind Distance (meters)							
Station Abbr.	Location	25	50	75	100	200	300	500	1000
AZUS	Azusa	2.884	1.040	0.550	0.340	0.093	0.045	0.018	0.006
BNAP	Banning	4.208	1.703	0.940	0.603	0.186	0.093	0.039	0.013
CELA	Central L.A.	2.484	0.876	0.455	0.287	0.085	0.041	0.017	0.005
ELSI	Lake Elsinore	2.978	1.075	0.558	0.347	0.103	0.051	0.021	0.007
FONT	Fontana	3.306	1.254	0.677	0.423	0.124	0.060	0.025	0.007
MSVJ	Mission Viejo	2.721	0.981	0.515	0.319	0.094	0.047	0.018	0.006
PERI	Perris	3.494	1.310	0.695	0.436	0.127	0.063	0.026	0.008
PICO	Pico Rivera	2.629	0.956	0.509	0.316	0.091	0.044	0.018	0.005
RDLD	Redlands	3.562	1.325	0.691	0.418	0.113	0.055	0.024	0.007
UPLA	Upland	3.108	1.133	0.609	0.384	0.111	0.054	0.022	0.007
KBUR	Burbank Airport	3.097	1.198	0.655	0.410	0.125	0.062	0.026	0.008
KCNO	Chino Airport.	4.084	1.609	0.870	0.549	0.166	0.082	0.033	0.010
KCQT	USC/Downtown L.A.	3.382	1.244	0.656	0.407	0.110	0.052	0.021	0.007
KFUL	Fullerton Airport	2.726	1.027	0.553	0.348	0.104	0.052	0.021	0.007
KHHR	Hawthorne Airport	3.225	1.197	0.640	0.405	0.123	0.061	0.025	0.007
KLAX	Los Angeles Int'l Airport	4.456	1.830	1.010	0.648	0.204	0.102	0.044	0.013
KLGB	Long Beach Airport	3.417	1.394	0.764	0.488	0.151	0.076	0.033	0.010
KONT	Ontario Airport	4.834	2.006	1.111	0.710	0.222	0.112	0.047	0.015
KPSP	Palm Springs Airport	3.363	1.352	0.736	0.467	0.144	0.073	0.031	0.010
KRAL	Riverside Airport	4.141	1.678	0.922	0.588	0.177	0.088	0.038	0.013
KSMO	Santa Monica Airport	3.444	1.336	0.731	0.462	0.139	0.068	0.028	0.008
KSNA	John Wayne Int'l Airport	4.041	1.605	0.870	0.549	0.164	0.079	0.032	0.010
KTRM	Desert Hot Springs Airport	3.820	1.553	0.848	0.540	0.163	0.082	0.035	0.010
KVNY	Van Nuys Airport	2.909	1.132	0.608	0.378	0.111	0.055	0.022	0.007

Table 12.1B – Screening Tables for Gasoline Dispensing Facilities

Underground Storage Tank (UST) **Worker**

MICR per One Million Gallons of Gasoline

		Downwind Distance (meters)							
Station Abbr.	Location	25	50	75	100	200	300	500	1000
AZUS	Azusa	0.238	0.086	0.045	0.028	0.008	0.004	0.002	0.000
BNAP	Banning	0.347	0.140	0.078	0.050	0.015	0.008	0.003	0.001
CELA	Central L.A.	0.205	0.072	0.038	0.024	0.007	0.003	0.001	0.000
ELSI	Lake Elsinore	0.246	0.089	0.046	0.029	0.009	0.004	0.002	0.001
FONT	Fontana	0.273	0.103	0.056	0.035	0.010	0.005	0.002	0.001
MSVJ	Mission Viejo	0.224	0.081	0.042	0.026	0.008	0.004	0.002	0.000
PERI	Perris	0.288	0.108	0.057	0.036	0.010	0.005	0.002	0.001
PICO	Pico Rivera	0.217	0.079	0.042	0.026	0.007	0.004	0.001	0.000
RDLD	Redlands	0.294	0.109	0.057	0.034	0.009	0.005	0.002	0.001
UPLA	Upland	0.256	0.093	0.050	0.032	0.009	0.004	0.002	0.001
KBUR	Burbank Airport	0.255	0.099	0.054	0.034	0.010	0.005	0.002	0.001
KCNO	Chino Airport.	0.337	0.133	0.072	0.045	0.014	0.007	0.003	0.001
KCQT	USC/Downtown L.A.	0.279	0.103	0.054	0.034	0.009	0.004	0.002	0.001
KFUL	Fullerton Airport	0.225	0.085	0.046	0.029	0.009	0.004	0.002	0.001
KHHR	Hawthorne Airport	0.266	0.099	0.053	0.033	0.010	0.005	0.002	0.001
KLAX	Los Angeles Int'l Airport	0.367	0.151	0.083	0.053	0.017	0.008	0.004	0.001
KLGB	Long Beach Airport	0.282	0.115	0.063	0.040	0.012	0.006	0.003	0.001
KONT	Ontario Airport	0.399	0.165	0.092	0.059	0.018	0.009	0.004	0.001
KPSP	Palm Springs Airport	0.277	0.111	0.061	0.038	0.012	0.006	0.003	0.001
KRAL	Riverside Airport	0.341	0.138	0.076	0.049	0.015	0.007	0.003	0.001
KSMO	Santa Monica Airport	0.284	0.110	0.060	0.038	0.011	0.006	0.002	0.001
KSNA	John Wayne Int'l Airport	0.333	0.132	0.072	0.045	0.014	0.007	0.003	0.001
KTRM	Desert Hot Springs Airport	0.315	0.128	0.070	0.045	0.013	0.007	0.003	0.001
KVNY	Van Nuys Airport	0.240	0.093	0.050	0.031	0.009	0.005	0.002	0.001