

AIR QUALITY ASSESSMENT

**Liberty Bell Plaza Development
PDS2017-STP-17-037
County of San Diego, CA**

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TABLE OF CONTENTS

TABLE OF CONTENTS.....	II
LIST OF FIGURES.....	III
LIST OF TABLES	III
APPENDIX	III
LIST OF COMMON ACRONYMS.....	IV
EXECUTIVE SUMMARY	V
1.0 INTRODUCTION	1
1.1 PURPOSE OF THIS STUDY	1
1.2 PROJECT LOCATION	1
1.3 PROJECT DESCRIPTION	1
2.0 EXISTING ENVIRONMENTAL SETTING.....	4
2.1 EXISTING SETTING	4
2.2 CLIMATE AND METEOROLOGY	4
2.3 REGULATORY STANDARDS.....	4
2.3.1 FEDERAL STANDARDS AND DEFINITIONS	4
2.3.2 STATE STANDARDS AND DEFINITIONS.....	6
2.3.3 REGIONAL STANDARDS.....	8
2.3.4 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) SIGNIFICANCE THRESHOLDS.....	9
2.3.5 SDAPCD RULE 20.2 – AIR QUALITY IMPACT ASSESSMENT SCREENING THRESHOLDS	10
2.4 LOCAL AIR QUALITY.....	11
3.0 METHODOLOGY.....	14
3.1 CONSTRUCTION EMISSIONS CALCULATIONS.....	14
3.2 CONSTRUCTION ASSUMPTIONS.....	15
3.3 OPERATIONAL EMISSIONS	16
3.4 MICRO SCALE OPERATIONAL EMISSIONS	20
3.5 ODOR IMPACTS (ONSITE)	20
4.0 FINDINGS.....	22
4.1 CONSTRUCTION EMISSION FINDINGS	22
4.2 CONSTRUCTION HEALTH RISKS	22
4.3 FUELING STATION OPERATION HEALTH RISKS	23
4.4 FACILITY OPERATIONAL FINDINGS	25
4.5 MICRO-SCALE OPERATIONAL FINDINGS.....	27
4.6 CUMULATIVE CONSTRUCTION IMPACTS	28
4.7 CUMULATIVE OPERATIONS IMPACTS.....	28
4.8 CONCLUSION OF FINDINGS.....	28
5.0 REFERENCES	30
6.0 CERTIFICATIONS	31

List of Figures

FIGURE 1-A: PROJECT VICINITY MAP	2
FIGURE 1-B: PROPOSED PROJECT SITE PLAN	3
FIGURE 2-A: AMBIENT AIR QUALITY MONITORING STATIONS WITHIN SDAB – CARB	13
FIGURE 2-B: MODELING SETUP REPRESENTATION	19
FIGURE 2-C: AERMOD OUTPUT - BENZENE	24

List of Tables

TABLE 2.1: AMBIENT AIR QUALITY STANDARDS	7
TABLE 2.3: SCREENING LEVEL THRESHOLDS FOR CRITERIA POLLUTANTS.....	11
TABLE 2.4: THREE-YEAR AMBIENT AIR QUALITY SUMMARY NEAR THE PROJECT SITE	12
TABLE 3.1: EXPECTED CONSTRUCTION EQUIPMENT	16
TABLE 4.1: EXPECTED CONSTRUCTION EMISSIONS SUMMARY – POUNDS PER DAY	22
TABLE 4.2: MITIGATED CONSTRUCTION EMISSIONS SUMMARY – DAILY POUNDS PER DAY	23
TABLE 4.3: ANNUALIZED BENZENE CONCENTRATIONS AT EACH RECEPTOR	25
TABLE 4.4: CANCER RISK AT WORST-CASE RECEPTORS	25
TABLE 4.5: EXPECTED SUMMER DAILY POLLUTANT GENERATION	26
TABLE 4.6: EXPECTED WINTER DAILY POLLUTANT GENERATION	26
TABLE 4.7: EXPECTED CARBON MONOXIDE HOT SPOT CONCENTRATION LEVELS.....	27

Appendix

CALEEMOD	32
AERMOD FOR PM ₁₀ EXHAUST DURING CONSTRUCTION (UNMITIGATED AND MITIGATED).....	133
HEALTH RISK CALCULATIONS - CONSTRUCTION PM ₁₀ EXHAUST (UNMITIGATED AND MITIGATED)....	170
HEALTH RISK FUELING STATION INPUT/OUTPUTS - CALCULATIONS.....	173
AERMOD FOR BENZENE FUELING STATIONS.....	177
HEALTH RISK CALCULATIONS – FUELING STATION OPERATIONS – BENZENE	200
CALINE 4 CALCULATIONS CO HOTSPOTS DURING OPERATIONS	205

LIST OF COMMON ACRONYMS

Air Quality Impact Assessments (AQIA)
Assembly Bill 32 (AB32)
California Air Resource Board (CARB)
California Ambient Air Quality Standards (CAAQS)
California Environmental Quality Act (CEQA)
Carbon Dioxide (CO₂)
Cubic Yards (CY)
Diesel Particulate Matter (DPM)
Environmental Protection Agency (EPA)
EPA Office of Air Quality Planning and Standards (OAQPS)
Hazardous Air Pollutants (HAPs)
Hydrogen Sulfide (H₂S)
International Residential Code (IRC)
Level of Service (LOS)
Low Carbon Fuel Standard (LCFS)
Methane (CH₄)
National ambient air quality standards (NAAQS)
Nitrous Oxide (N₂O)
North County Transit District (NCTD)
Reactive Organic Gas (ROG)
Regional Air Quality Strategy (RAQS)
San Diego Air Basin (SDAB)
San Diego Air Pollution Control District (SDAPCD)
South Coast Air Quality Management District (SCAQMD)
Specific Plan Area (SPA)
State Implementation Plan (SIP)
Toxic Air Contaminants (TACs)
Vehicle Miles Traveled (VMT)

EXECUTIVE SUMMARY

This air quality impact study has been completed to determine the air quality impacts associated with the development of the proposed Liberty Bell Plaza Project (Project). The Project proposes to develop a 8.49 acre site with up to 85,000 square foot (SF) of neighborhood shopping center uses. The proposed project would include a 52,000 SF market, about 27,700 SF of strip mall retail uses, about 4,000 SF of fast food and a 1,300 SF convenience market with six fueling stations. The project site is located within Valley Center within the County of San Diego (County).

Construction

All construction phases of the proposed Project are anticipated to start in 2020 and full operations expected in 2022. Based upon the analysis of construction activities, no criteria pollutant impacts would be expected.

Based upon the construction health risk analysis significant impacts would be expected. It was found that these health risk impacts can be fully mitigated by utilizing Tier 4 Final construction equipment.

The project would likely generate short-term odors from temporary construction activities such as paving and painting. Since odors from this equipment would be short term, no significant odor impacts would be expected.

The proposed Project is located at the intersection of Valley Center Road and Mirar De Valle Road. Within the general vicinity to this intersection a number of construction projects are planned including the construction of Park Circle which proposes to construct 318 homes to the west and Shady Oaks which would construct 47 homes to the southwest. To avoid a significant cumulative impact, the project grading should be coordinated with the County to ensure that simultaneous grading of the projects does not occur.

Operations

Based upon the analysis of operational activities, no criteria pollutant impacts would be expected. Operational mitigation measures would not be required.

A CO hot spot analysis was conducted at two of the worst-case intersections impacted by the Project which both exceeded the 3,000 Peak Hour trips screening level and operated at LOS E or worse as required (County of San Diego, 2007). Using CALINE, the project was found to produce CO emission concentrations lower than California Ambient Air Quality Standards. Therefore, the project would result in less than significant CO hot spots impacts.

Operational odors would not be expected since the project would install Phase I and Phase II vapor recovery systems. These systems prevent odors and gases from escaping during fueling operations. Given this, less than significant long-term odor impacts are expected.

The Project proposes to construct a convenience market with fueling stations. A health risk analysis was performed for the fueling operations specific to Benzene emissions. Based upon this analysis, no significant impacts would be expected.

The site is subject to the General Plan Regional Category Village, the Land Use Designation is predominantly General Commercial (C- 1) and the zoning for the site is General Commercial (C36). The project site is consistent with the General Plan category and zoning for the commercial site. Based on this, the proposed Project was accounted for in the County's General plan. Therefore, no cumulative operation impacts would be anticipated since the proposed use would be consistent with the RAQS and SIP.

For reference a list of project mitigation measures are shown below:

1. All diesel construction equipment during grading and site preparation activities shall be Tier 4 Final and shall include DPF.
2. Cumulative air quality impacts during construction may be possible if the proposed project simultaneously performs earthwork activities with either the Park Circle or Shady Oaks projects proposed on the Northwest and Southwest corners of the intersection of Valley Center Road and Mirar De Valle Road. To avoid significant cumulative construction impacts, the grading activities shall be coordinated with the County so that the projects do not conduct earthwork activities at the same time.

With the incorporation of the mitigation listed above, the proposed project's, air quality impacts would be less than significant. Additionally, the project will install three electric vehicle (EV) charging stations and plumb for a total of 12 stations EV charging stations throughout the site which equates to 3 percent of the parking. No reductions in emissions were accounted for with the installation of the EV charging stations.

1.0 INTRODUCTION

1.1 Purpose of this Study

The purpose of this Air Quality study is to determine potential air quality impacts (if any) that may be created by construction (short term) or operational emissions (long term) from the proposed Project. Should impacts be determined, the intent of this study would be to recommend suitable mitigation measures to reduce impacts to the extent feasible.

1.2 Project Location

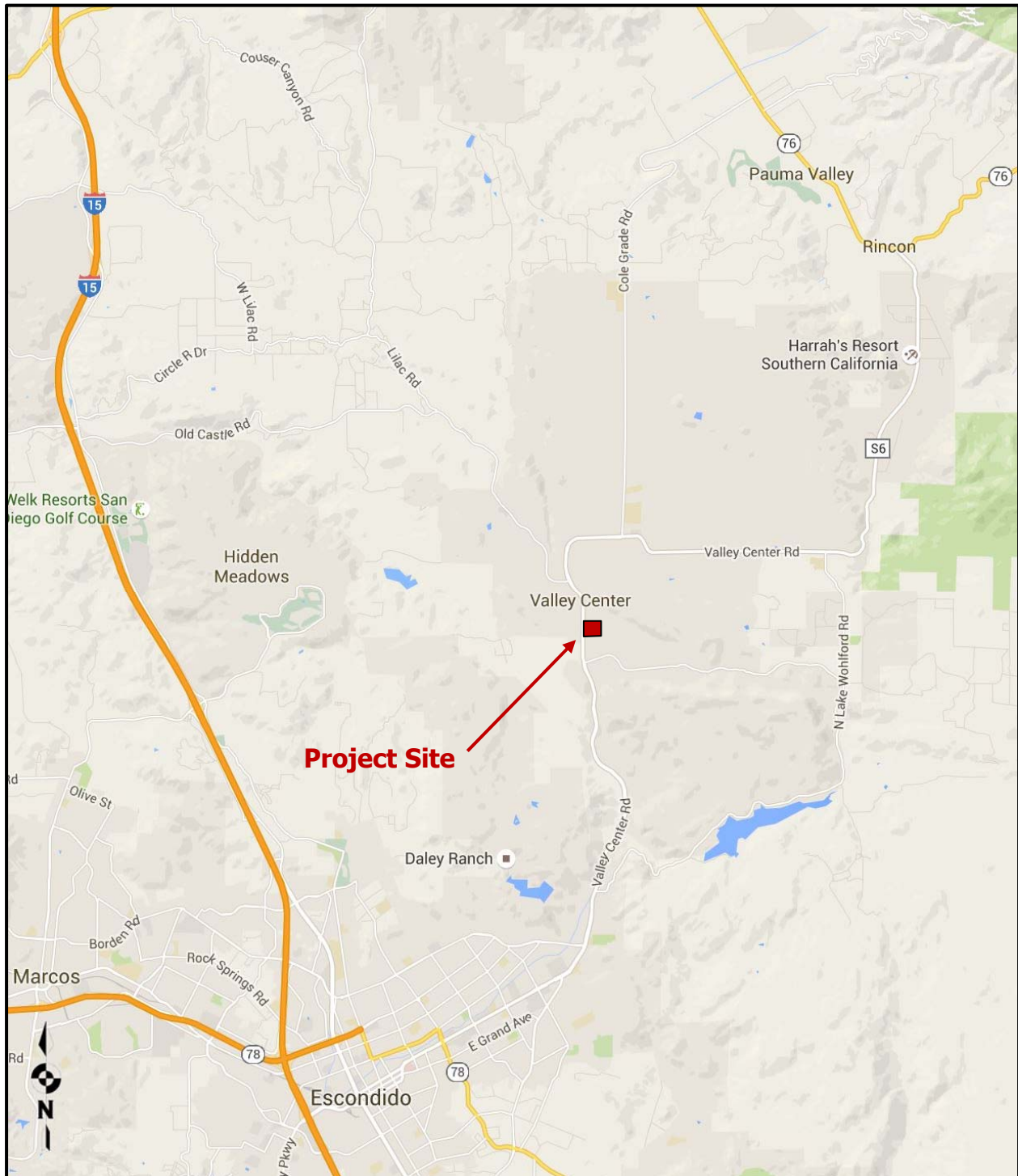
The proposed development is located in the unincorporated County of San Diego in the town of Valley Center, on the northeast corner of the Valley Center Road and Mirar De Valle Road. Access to the Project site would be provided by three driveways on Valley Center Road. A general project vicinity map is shown in Figure 1-A on the following page.

1.3 Project Description

The proposed Liberty Bell Plaza Project proposes to develop the project site with up to 85,000 square foot (SF) neighborhood shopping center. The proposed project would include a 52,000 SF market, about 27,700 SF of strip mall retail uses, about 4,000 SF of fast food, and a 1,300 SF convenience market with 6 fueling stations with two fueling pumps each (12 total fueling pumps). The area subject to the site plan would occupy 8.49 acres over eight parcels (189-012-17, 189-012-20, 189-012-21, 189-012-49, 189-091-08, 189-091-22, and 189-091-30). The site is subject to the General Plan Regional Category Village, the Land Use Designation is predominantly General Commercial (C-1) and the zoning for the site is General Commercial (C36).

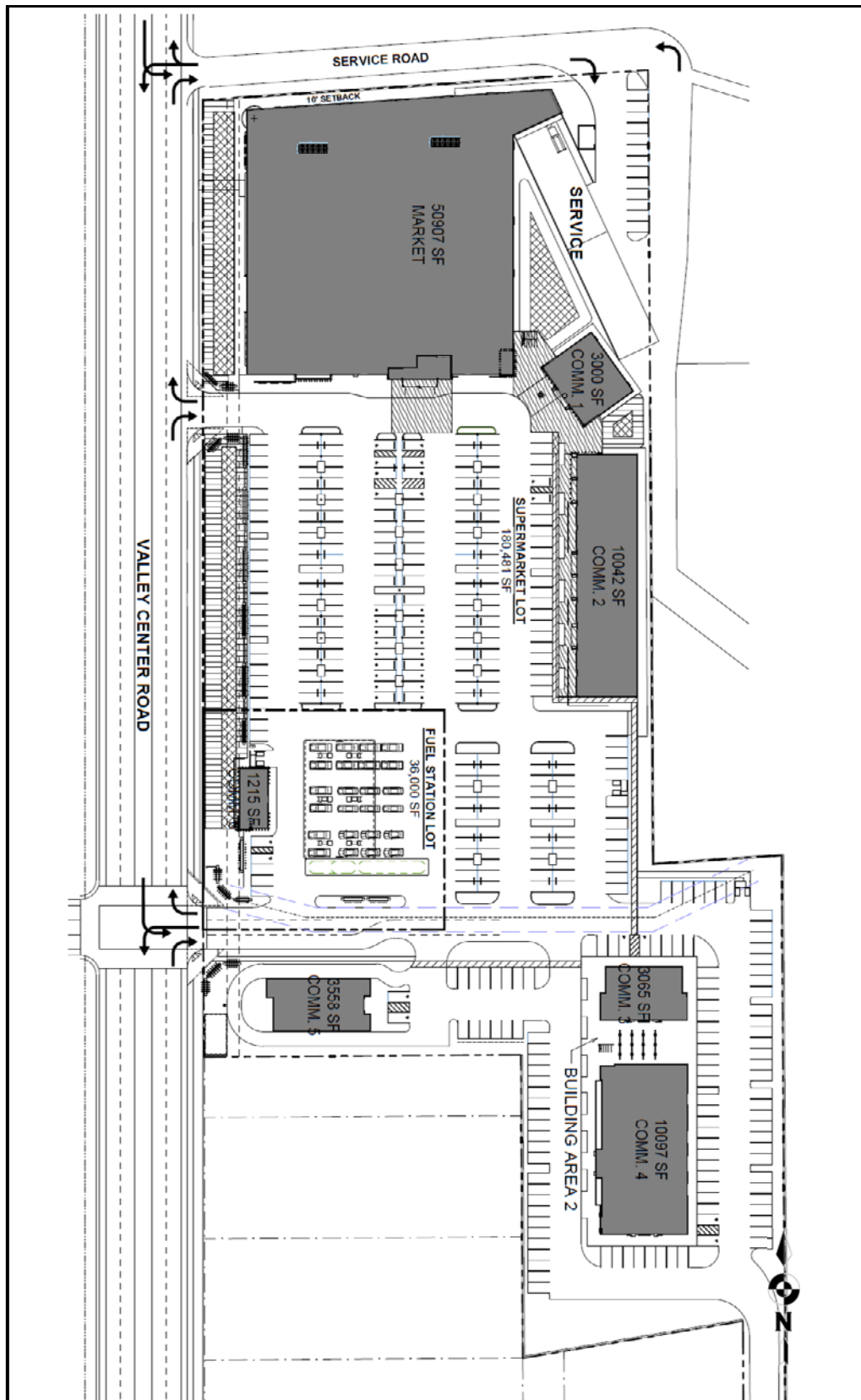
The proposed convenience market would consist of roughly one (1) 1,300 SF convenience market with 12 total fueling pumps. The proposed facility would install underground double wall fiberglass tanks for unleaded, super unleaded and diesel fuels and all appurtenances such as double wall fiberglass piping, leak detection and vapor recovery systems. The facility would also install an assisted phase I system to provide maximum vapor balancing which is necessary to transfer the underground tank vapors being displaced as the tank is being filled back to the delivery tanker as it is being emptied. Also, the project would install a Phase II system to transfer displaced vapors from vehicle fuel tanks back to the underground storage tanks. The throughput of the site would be roughly 6,840,000 gallons of gasoline and roughly 360,000 gallons of diesel. The project site plan is shown in Figure 1-B.

Figure 1-A: Project Vicinity Map



Source: (Google, 2018)

Figure 1-B: Proposed Project Site Plan



Source: (Sterling Warner, 2018)

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The subject property has been previously disturbed for mostly agricultural uses and storage of construction equipment and various commercial uses. Currently the site is generally devoid of significant vegetation. The site is generally flat, and onsite elevations are at or around 1,300 feet above mean sea level (AMSL). The project site is mostly surrounded by agricultural and commercial uses, though a sensitive residential receptor shares the eastern property line with the project site.

2.2 Climate and Meteorology

Climate within the San Diego Air Basin (SDAB) area often varies dramatically over short geographical distances with cooler temperatures on the western coast gradually warming to the east as prevailing winds from the west heat up. Most of southern California is dominated by high-pressure systems for much of the year, which keeps San Diego mostly sunny and warm. Typically, during the winter months, the high-pressure system drops to the south and brings cooler, moister weather from the north. It is common for inversion layers to develop within high-pressure areas, which mostly define pressure patterns over the SDAB. These inversions are caused when a thin layer of the atmosphere increases in temperature with height. An inversion acts like a lid preventing vertical mixing of air through convective overturning.

Meteorological trends within the Valley Center area are generally similar to that of Escondido daytime highs ranging between 65 degrees Fahrenheit (°F) in the winter to approximately 88°F in the summer with August usually being the hottest month. Median temperatures range from approximately 57°F in the winter to approximately 78°F in the summer. Precipitation is generally about 16.2 inches per year (WRCC, 2018). Prevailing wind patterns for the area vary during any given month during the year and also vary depending on the time of day or night. The predominant wind pattern throughout the year is usually from the west (WRCC, 2018).

2.3 Regulatory Standards

2.3.1 Federal Standards and Definitions

The Federal Air Quality Standards were developed per the requirements of The Federal Clean Air Act, which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of

the act included the development of national ambient air quality standards (NAAQS) for major air pollutants.

The Clean Air Act established two types of air quality standards otherwise known as primary and secondary standards. **Primary Standards** set limits for the intention of protecting public health, which includes sensitive populations such as asthmatics, children and elderly. **Secondary Standards** set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings.

The EPA Office of Air Quality Planning and Standards (OAQPS) has set NAAQS for principal pollutants, which are called "criteria" pollutants. These pollutants are defined below:

1. **Carbon Monoxide (CO):** *is a colorless, odorless, and tasteless gas and is produced from the partial combustion of carbon-containing compounds, notably in internal-combustion engines. Carbon monoxide usually forms when there is a reduced availability of oxygen present during the combustion process. Exposure to CO near the levels of the ambient air quality standards can lead to fatigue, headaches, confusion, and dizziness. CO interferes with the blood's ability to carry oxygen.*
2. **Lead (Pb):** *is a potent neurotoxin that accumulates in soft tissues and bone over time. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Because lead is only slowly excreted, exposures to small amounts of lead from a variety of sources can accumulate to harmful levels. Effects from inhalation of lead near the level of the ambient air quality standard include impaired blood formation and nerve conduction. Lead can adversely affect the nervous, reproductive, digestive, immune, and blood-forming systems. Symptoms can include fatigue, anxiety, short-term memory loss, depression, weakness in the extremities, and learning disabilities in children.*
3. **Nitrogen Dioxide (NO₂):** *is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract and is one of the nitrogen oxides emitted from high-temperature combustion, such as those occurring in trucks, cars, power plants, home heaters, and gas stoves. In the presence of other air contaminants, NO₂ is usually visible as a reddish-brown air layer over urban areas. NO₂ along with other traffic-related pollutants is associated with respiratory symptoms, respiratory illness and respiratory impairment. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO₂ above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO₂ exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children.*
4. **Particulate Matter (PM₁₀ or PM_{2.5}):** *is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary in shape, size and chemical composition, and can be made up of multiple materials such as metal, soot, soil, and dust. PM₁₀ particles are 10 microns (µm) or less and PM_{2.5} particles are 2.5 (µm) or less. These particles can contribute significantly to regional haze and reduction of visibility in California. Exposure to PM levels exceeding current air quality standards increases the risk of allergies such as asthma and respiratory illness.*
5. **Ozone (O₃):** *is a highly oxidative unstable gas capable of damaging the linings of the respiratory tract. This pollutant forms in the atmosphere through reactions between chemicals directly emitted from vehicles, industrial plants, and many other sources. Exposure to ozone above ambient air quality standards can lead to human health effects such as lung inflammation, tissue damage and impaired lung functioning. Ozone can also damage materials such as rubber, fabrics and plastics.*

6. **Sulfur Dioxide (SO₂):** *is a gaseous compound of sulfur and oxygen and is formed when sulfur-containing fuel is burned by mobile sources, such as locomotives, ships, and off-road diesel equipment. SO₂ is also emitted from several industrial processes, such as petroleum refining and metal processing. Effects from SO₂ exposures at levels near the one-hour standard include bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Children, the elderly, and people with asthma, cardiovascular disease or chronic lung disease (such as bronchitis or emphysema) are most susceptible to these symptoms. Continued exposure at elevated levels of SO₂ results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.*

2.3.2 State Standards and Definitions

The California Air Resources Board (CARB) sets the laws and regulations for air quality on the state level. The California Ambient Air Quality Standards (CAAQS) is similar to the NAAQS and also restricts four additional contaminants. Table 2.1 on the following page identifies both the NAAQS and CAAQS. The additional contaminants as regulated by the CAAQS are defined below:

1. **Visibility Reducing Particles:** *Particles in the Air that obstruct the visibility.*
2. **Sulfates:** *are salts of Sulfuric Acid. Sulfates occur as microscopic particles (aerosols) resulting from fossil fuel and biomass combustion. They increase the acidity of the atmosphere and form acid rain.*
3. **Hydrogen Sulfide (H₂S):** *is a colorless, toxic and flammable gas with a recognizable smell of rotten eggs or flatulence. H₂S occurs naturally in crude petroleum, natural gas, volcanic gases, and hot springs. Usually, H₂S is formed from bacterial breakdown of organic matter. Exposure to low concentrations of hydrogen sulfide may cause irritation to the eyes, nose, or throat. It may also cause difficulty in breathing for some asthmatics. Brief exposures to high concentrations of hydrogen sulfide (greater than 500 Parts per Million (ppm)) can cause a loss of consciousness and possibly death.*
4. **Vinyl Chloride:** *also known as chloroethene and is a toxic, carcinogenic, colorless gas with a sweet odor. It is an industrial chemical mainly used to produce its polymer, polyvinyl chloride (PVC).*

Table 2.1: Ambient Air Quality Standards

Ambient Air Quality Standards						
Pollutant	Average Time	California Standards ¹		Federal 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	No Separate State Standard		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)	8 hour	9.0 ppm (10mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	-	Non-Dispersive Infrared Photometry
	1 hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		-		
Nitrogen Dioxide (NO ₂) ¹⁰	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³) ⁸	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m ³)		0.100 ppm ⁸ (188/ µg/m ³)	-	
Sulfur Dioxide (SO ₂) ¹¹	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm ¹⁰ (for Certain Areas)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) ⁹
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm ¹⁰ (for Certain Areas) (See Footnote 9)	-	
	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 ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	-	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Calendar Quarter	-		1.5 µg/m ³		
	Rolling 3-Month Average	-		0.15 µg/m ³		
Visibility Reducing Particles	8 Hour	See footnote 14				
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			

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 µg/m3 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 procedure which can be shown to the satisfaction of the CARB 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 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 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 µg/m3 to 12.0 µg/m3 . The existing national 24- hour PM2.5 standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m3 . The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 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 SO2 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 SO2 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.

12.

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

13.

The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

14.

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

Source:

(California Air Resources Board, 5/4/2016)

2.3.3 Regional Standards

The State of California has 35 specific air districts, which are each responsible for ensuring that the criteria pollutants are below the NAAQS and CAAQS. California Air basins that exceed either the NAAQS or the CAAQS for any criteria pollutants are designated as “non-attainment areas” for that pollutant. Currently, there are 15 non-attainment areas for the federal ozone standard and two non-attainment areas for the PM_{2.5} standard and many areas are in non-attainment for PM₁₀ as well. The state therefore created the California State Implementation Plan (SIP), which is designed to provide control measures needed for California Air basins to attain ambient air quality standards.

The San Diego Air Pollution Control District (SDAPCD) is the government agency which regulates sources of air pollution within the County. Therefore, the SDAPCD developed a Regional Air Quality Strategy (RAQS) to provide control measures to try to achieve attainment status for state ozone standards with control measures focused on Volatile Organic Compounds (VOCs) and oxides of nitrogen (NO_x). Currently, the County is in “non-attainment” status for federal and state O₃ and State PM₁₀ and PM_{2.5}. An attainment plan is available for only O₃. The RAQS was adopted in 1992 and has been updated as recently as 2016 which was the latest update incorporating minor changes to the prior 2009 update.

The 2016 update mostly summarizes how the 2009 update has lowered NO_x and VOCs emissions which reduces ozone and clarifies and enhances emission reductions by introducing three new VOC and four new NO_x reduction measures. NO_x and VOCs are precursors to the formation of O₃ in the atmosphere. The criteria pollutant standards are generally attained when each monitor within the region has had no exceedances during the previous three calendar years. A complete listing of the current attainment status with respect to both federal and state nonattainment status by pollutants for County is shown in Table 2.2 on the following page.

The RAQS is largely based on population predictions by the San Diego Association of Governments (SANDAG). Projects that produce the same or less growth than predicted by SANDAG would generally conform to the RAQS. Projects that create more growth than projected by SANDAG may create a significant impact if the project produces unmitigable air quality emissions or if the project produces cumulative impacts.

Table 2.2: San Diego County Air Basin Attainment Status by Pollutant

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Nonattainment	Nonattainment
Ozone (1-Hour)	Attainment *	Nonattainment
Carbon Monoxide	Attainment	Attainment
PM10	Unclassifiable **	Nonattainment
PM2.5	Attainment	Nonattainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified
* The federal 1-hour standard of 12 pphm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in State Implementation Plans. ** At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable. (SDAPCD, 2019)		

2.3.4 California Environmental Quality Act (CEQA) Significance Thresholds

The California Environmental Quality Act has provided a checklist to identify the significance of air quality impacts. These guidelines are found in Appendix G of the CEQA guidelines and are as follows:

AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:

- A:* Conflict with or obstruct implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP)?
- B:* Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?
- C:* Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable Federal or State ambient air quality standard (PM₁₀, PM_{2.5} or exceed quantitative thresholds for O₃ precursors, NO_x and VOCs)?
- D:* Expose sensitive receptors (including, but not limited to, schools, hospitals, residences, resident care facilities, or day-care centers) to substantial pollutant concentrations?

E: Create objectionable odors affecting a substantial number of people?

2.3.5 SDAPCD Rule 20.2 – Air Quality Impact Assessment Screening Thresholds

The SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources. The County's Guidelines for Determining Significance and Report Format and Content Requirements incorporate screening level thresholds from Rule 20.2 for use in all County related Air Quality Impact Assessments (AQIA) and for determining CEQA air quality impacts (County of San Diego, 2007). These screening criteria can be used to demonstrate that a project's total emissions would not result in a significant impact as defined by CEQA. Also, since SDAPCD does not have AQIA threshold for VOCs, it is acceptable to use the Coachella Valley VOC threshold from South Coast Air Quality Management District. Should emissions be found to exceed these thresholds, additional modeling is required to demonstrate that the project's total air quality impacts are below the state and federal ambient air quality standards. These screening thresholds for construction and daily operations are shown in Table 2.3 on the following page.

Non criteria pollutants such as Hazardous Air Pollutants (HAPs) or Toxic Air Contaminants (TACs) are also regulated by the SDAPCD. Rule 1200 (Toxic Air Contaminants - New Source Review) adopted on June 12, 1996, requires evaluation of potential health risks for any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminants. The rule requires that projects that propose to increase cancer risk to between 1 and 10 in one million need to implement toxics best available control technology (T-BACT) or impose the most effective emission limitation, emission control device or control technique to reduce the cancer risk. At no time shall the project increase the incremental cancer risk to over 10 in one million or a health hazard index (chronic and acute) greater than one since risks above. Projects creating cancer risks less than one in one million are not required to implement T-BACT technology.

The U.S. EPA uses the term VOC and the CARB's Emission Inventory Branch (EIB) uses the term Reactive Organic Gases (ROG) to essentially define the same thing. There are minor deviations between compounds that define each term however for purposes of this study we will assume they are essentially the same due to the fact SCAQMD interchanges these words and because air quality models directly calculates ROG in place of VOC.

Table 2.3: Screening Level Thresholds for Criteria Pollutants

Pollutant	Total Emissions (Pounds per Day)
Construction Emissions	
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	100 and 55
Nitrogen Oxide (NO _x)	250
Sulfur Oxide (SO _x)	250
Carbon Monoxide (CO)	550
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75
Operational Emissions	
Respirable Particulate Matter (PM ₁₀ and PM _{2.5})	100 and 55
Nitrogen Oxide (NO _x)	250
Sulfur Oxide (SO _x)	250
Carbon Monoxide (CO)	550
Lead and Lead Compounds	3.2
Volatile Organic Compounds (VOCs)	75
Reactive Organic Gases (ROG) SCAQMD	75

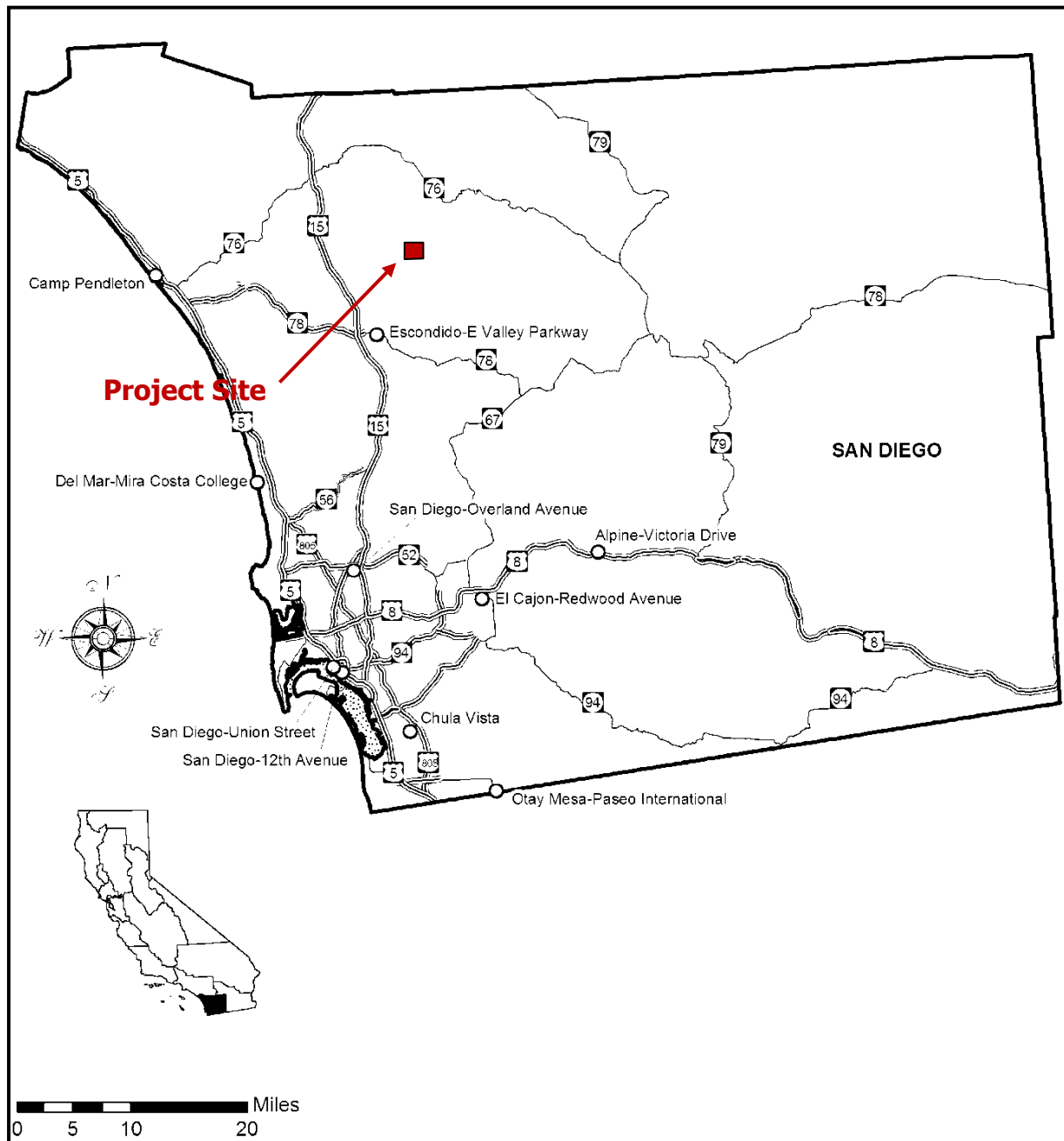
2.4 Local Air Quality

Criteria pollutants are measured continuously throughout the SDAB. This data is used to track ambient air quality patterns throughout the County. As mentioned earlier, this data is also used to determine attainment status when compared to the NAAQS and CAAQS. The SDAPCD is responsible for monitoring and reporting monitoring data (CARB, 2020). The District operates monitoring sites, which collect data on criteria pollutants. The proposed development Project is closest to the Escondido monitoring location roughly 7.5 miles to the southwest of the Project site. It should be noted that the closest ambient data used best reflects air quality emissions within Valley Center but is currently offline. For this reason, the older data (2013-2015) is reported. Table 2.4 on the following page identifies the criteria pollutants monitored at the aforementioned station.

Table 2.4: Three-Year Ambient Air Quality Summary near the Project Site

Pollutant	Closest Recorded Ambient Monitoring Site	Averaging Time	CAAQS	NAAQS	2013	2014	2015	2015 Days Exceeded ²
O ₃ (ppm)	Escondido – Temporarily Discontinued (2015) ¹	1 Hour	0.09 ppm	No Standard	0.08	0.10	0.08	8
		8 Hour	0.070 ppm	0.070 ppm	0.07	0.08	0.07	7
PM ₁₀ (µg/m ³)		24 Hour	50 µg/m ³	150 µg/m ³	80	43	30	-
		Annual Arithmetic Mean	20 µg/m ³	50 µg/m ³	23.1	21.6	19.4	-
PM _{2.5} (µg/m ³)		24 Hour	No Standard	35 µg/m ³	56.3	30.4	29.4	-
		Annual Arithmetic Mean	12 µg/m ³	12 µg/m ³	10.5	9.5	8.6	-
NO ₂ (ppm)		Annual Arithmetic Mean	0.030 ppm	0.053 ppm	0.012	0.011	0.010	-
		1 Hour	0.18 ppm	No Standard	0.061	0.063	0.048	-
CO (ppm)		8 Hour	9 ppm	9 ppm	2.6	3.1	2.0	-
		1 Hour	20 ppm	35 ppm	3.2	3.8	3.1	-
Notes: ¹ Escondido monitoring station is currently offline. For this reason, the older data (2013-2015) is reported. ² Days exceeded marked with "-" represent pollutants for which no exceedances were noted. Source: (CARB, 2020)								

Figure 2-A: Ambient Air Quality Monitoring Stations within SDAB – CARB



3.0 METHODOLOGY

3.1 Construction Emissions Calculations

Air Quality impacts related to construction and daily operations were calculated using the latest CalEEMod 2016.3.2 air quality model, which was developed by BREEZE Software for South Coast Air Quality Management District (SCAQMD) in 2017. The construction module in CalEEMod is used to calculate the emissions associated with the construction of the Project and uses methodologies presented in the U.S. EPA AP-42 document with emphasis on Chapter 11.9. The CalEEMod input/output model is shown in **Attachment A** to this report.

The AERMOD dispersion model will be used to determine the concentration for air pollutants at any location near the pollutant generator. Additionally, the model identifies the maximum exposure distance and concentrations. The notable toxic air contaminant from construction is diesel exhaust since exposure to diesel exhaust is known to cause cancer and acute and chronic health effects. Diesel exhaust emissions can be estimated using the annual PM₁₀ exhaust emissions from onsite construction operations obtained from the annual CalEEMod model output by summing each onsite source for the construction duration. The AERMOD input/output file for the proposed Project is shown in **Attachment B** at the end of this report.

Once the dispersed concentrations of diesel particulates are estimated in the surrounding air, they are used to evaluate estimated exposure to people. Exposure is evaluated by calculating the dose in milligrams per kilogram body weight per day (mg/kg/d). For residential exposure, the breathing rates are determined for specific age groups, so inhalation dose (Dose-air) is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. The following algorithms calculate this dose for exposure through the inhalation pathways. The worst case cancer risk dose calculation is defined in Equation 1 below (OEHHA, 2015):

Equation 1

$$Dose_{air} = C_{air} * (BR/BW) * A * EF * (1 \times 10^{-6})$$

Dose _{air}	=	Dose through inhalation (mg/kg/d)
C _{air}	=	Concentration in air (µg/m ³) Annual average DPM concentration in µg/m ³ – 1-hr concentration are corrected to an annual average by multiplying the 1-hr average by 0.08 (U.S. EPA, 1992)
BR/BW	=	Daily breathing rate normalized to body weight (L/kg BW-day). See Table I.2 for the daily breathing rate for each age range.
A	=	Inhalation absorption factor (assumed to be 1)
EF	=	Exposure frequency (unitless, days/365 days)
1x10 ⁻⁶	=	Milligrams to micrograms conversion (10 ⁻³ mg/ µg), cubic meters to liters conversion (10 ⁻³ m ³ /l)

Cancer risk is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor, the frequency of time spent at home and the exposure duration divided by averaging time, to yield the excess cancer risk. As described below, the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk for any given location. Specific factors as modeled are shown within **Attachment C** to this report. The worst-case cancer risk calculation is defined in Equation 2 below (OEHHA, 2015):

Equation 2

$$RISK_{inh-res} = DOSE_{air} \times CPF \times ASF \times ED/AT \times FAH$$

$RISK_{inh-res}$	=	Residential inhalation cancer risk
$DOSE_{air}$	=	Daily inhalation dose (mg/kg-day)
CPF	=	Inhalation cancer potency factor (mg/kg-day ⁻¹)
ASF	=	Age sensitivity factor for a specified age group (unitless)
ED	=	Exposure duration (in years) for a specified age group
AT	=	Averaging time for lifetime cancer risk (years)
FAH	=	Fraction of time spent at home (unitless)

The Office of Environmental Health Hazard Assessment (OEHHA) recommends that an exposure duration (residency time) of 30 years be used to estimate individual cancer risk for the Maximally Exposed Individual Resident (MEIR). OEHHA also recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans.

Exposure durations of 9-years and 70-years are also recommended to be evaluated for the MEIR to show the range of cancer risk based on residency periods. If a facility is notifying the public regarding cancer risk, the 9-and 70-year cancer risk estimates are useful for people who have resided in their current residence for periods shorter and longer than 30 years.

Non-Cancer risks or risks defined as chronic or acute. With respect to DPM only chronic risks are calculated and are determined by the hazard index. To calculate hazard index, DPM concentration is divided by its chronic Reference Exposure Levels (REL). Where the total equals or exceeds one, a health hazard is presumed to exist. RELs are published by the Office of Environmental Health Hazard Assessment (OEHHA, 2015). Diesel Exhaust has a REL of 5 µg/m³ and targets the respiratory system.

3.2 Construction Assumptions

The Project construction dates were estimated based on a construction kickoff starting mid 2020 with construction ending late 2021. The earthwork associated with Project construction

would include site preparation and grading. Following the completion of earthwork activities, paving and building construction activities would occur. As noted previously, an existing residential development exists immediately east of the project site, representing the nearest sensitive receptor.

CalEEMod 2016.3.2 was utilized for construction calculations. Model defaults were manually updated to reflect SDAPCD Rule 67 paint VOC limits. Table 3.1 shows the expected timeframes for the construction activities for all on-site infrastructure, facilities, improvements, and commercial structures, as well as the expected number of pieces of equipment. Based on information provided by the project applicant, earthwork activities will be balanced.

Table 3.1: Expected Construction Equipment

Equipment Identification	Proposed Start	Proposed Complete	Quantity
Site Preparation	06/01/2020	06/12/2020	
Rubber Tired Dozers			3
Tractors/Loaders/Backhoes			4
Grading	06/13/2020	07/24/2020	
Excavators			1
Graders			1
Rubber Tired Dozers			1
Tractors/Loaders/Backhoes			3
Paving	07/25/2020	09/04/2020	
Pavers			2
Paving Equipment			2
Rollers			2
Building Construction	09/05/2020	10/29/2021	
Cranes			1
Forklifts			3
Generator Sets			1
Tractors/Loaders/Backhoes			3
Welders			1
Architectural Coating	11/30/2020	10/29/2021	
Air Compressors			1
This equipment list is based upon equipment inventory within CalEEMod. The quantity and types are based upon assumptions from Projects of similar size and scope in the County.			

3.3 Operational Emissions

Once construction is completed the Project would generate emissions from daily operations. Operational emissions sources would include area sources, energy usage, and mobile vehicle usage. CalEEMod has been designed to provide conservative estimates for planning purposes.

Based on review of the project plans, CalEEMod has been updated to include roughly 85,000 SF of facilities to include a 52,000 SF supermarket, a 27,700 SF strip mall, a 4,000 SF fast food and a 1,300 SF convenience market with 6 pumps or 12 fueling stations. Area sources include landscaping, consumer products, and architectural coatings as part of regular maintenance. Energy sources would be from uses such as electricity and natural gas. Mobile sources would be generated from project related traffic. Based on the project traffic study, the project would generate 10,200 daily trips. These traffic estimates were used along with CalEEMod defaults to model mobile emissions (LLG Engineers, 2019). Also, it should be noted that the project was modeled assuming a rural setting with default settings for waste, water and energy within CalEEMod.

In addition to the sources described above, the fueling stations associated with the proposed project would generate emissions of benzene, a known cancer causing toxic in humans. The benzene would be generated from the following sources associated with fueling stations:

1. Loading: Loading emissions would occur only during fuel delivery when the fuel delivery trucks unload gasoline into the underground storage tanks. The utilization of pressure vacuum valves on all underground storage tanks would reduce potential loading emissions.
2. Breathing: Gasoline vapors are emitted from the storage tank vent pipes due to temperature and pressure changes within the storage tank.
3. Refueling: During the refueling process, gasoline vapors are emitted at the vehicle/nozzle interface.
4. Spillage: Occasional spillage emissions occur from spills during vehicle fueling operations.

Benzene generated from fueling stations has been found to cause health risks in humans and these risks are typically managed by SDAPCD through special permitting required to operate these facilities within the County of San Diego.

Health risk analysis for fueling stations follow the Gasoline Service Station Industrywide Risk Assessment Guidelines prepared by the Toxics Committee of the California Air Pollution Control Officers Association (CAPCOA, 1997) in consultation with representatives of twelve air pollution control and air quality management districts, CARB, and OEHHA. The purpose of these guidelines is to provide the districts with suggested procedures for preparing gasoline station emissions inventories and risk assessments to meet the requirements of the Air Toxics "Hot Spots" Information and Assessment Act of 1987.

This project will be required to work with the SDAPCD to complete a gas station permit application, which will include required documentation that the proposed project would install appropriate station source equipment. This equipment installed on-site would reduce potential

toxic emissions associated with fueling and would include: Healy Model 900 enhanced vapor recovery (EVR) nozzles with a VP1000 Series vacuum pump or similar EO number VR-201 VR-203 with underground storage tanks or similar; and vented underground tanks with a pressure/vacuum liquid vent valves.

The nearest sensitive land uses around the project would be single family residential unit on the property immediately east of the project. Though immediately adjacent to the project site, this residential unit is roughly 462 feet (141 meters) from the closest fueling pump. The project specific site was modeled using CAPCOA's modeling parameters for a 6B scenario consisting of Phase I and Phase II operations including vent valves and an overall breathing and refueling vapor capture efficiency of 90% (System is rated to capture 95% of the vapors) as a worst-case input as the project design is characteristic of the proposed project site and are shown in **Attachment D** to this report.

For purposes of modeling, AERMOD was used for air quality dispersion modeling and is the preferred/recommended U.S. EPA model for air quality dispersion modeling. The software has the ability to incorporate meteorological inputs as well as multiple source and receptor locations. The model has been updated to include site topography and meteorological inputs specific to the Project's location. The input/output is shown in **Attachment E** to this report. For purposes of this health risk analysis, a Cancer risk in excess of 10 in one million exposed, with the application of T-BACT, would require further mitigation. Calculations for these risks are shown in **Attachment F** to this report.

A graphical representation of the modeling locations is shown on a site aerial in Figure 2-B on the following page. The Loading and Breathing events discussed above are represented by point sources (identified as a light blue dot) and Refueling and Spillage events are represented by 12 volume sources (identified as red squares) representing each filling position. The grid represents a receptor matrix used by AERMOD which are used to develop emission contours. Also, three sensitive receptors were added to determine emissions at discrete sensitive receptor locations (nearest homes). Finally, the proposed convenience market is represented by the blue facility outlines.

Figure 2-B: Modeling Setup Representation



3.4 Micro Scale Operational Emissions

Air pollutant emissions related to Project traffic have the potential to create new, or worsen existing localized air quality violations with respect to carbon monoxide (CO). These increased carbon monoxide "Hot Spots" are determined through the utilization of the Institute of Transportation Studies (ITS) Transportation Project-Level Carbon Monoxide Protocol (University of California, Davis, 1997).

In the event the proposed project traffic adds vehicular trips to either an intersection that operates at Level of Service (LOS) E or F or the addition project trips re-classify the intersection from an acceptable LOS to LOS E or F, and when total intersection peak-hour trips exceed 3,000 vehicles, the Project must conduct a CO "Hot Spot" analysis (County of San Diego, 2007).

The ITS Transportation Project-Level Carbon Monoxide Protocol recommends running the EMFAC model to determine emission rates for the Project year as well as conduct dispersion modeling utilizing CALINE to determine worst-case emission concentrations.

The Project traffic study reported that the proposed Project combined with near term cumulative traffic would re-classify two intersections to a LOS of E or worse directly but only one meets the conditions of being over 3,000 vehicles during the PM peak hour. This intersection is (LLG Engineers, 2019):

- *Valley Center Road and Mirar de Valle Road (PM Only)*

Micro-Scale operations during a cumulative plus Project conditions show that the Project would add trips to this intersection and would have a potential generate CO emissions in excess of the CAAQS.

For purposes of this analysis, the CAAQS would be considered the most stringent air quality standard with CO limits of 9 parts per million (PPM) for the one-hour standard and 20 PPM CO for the 8-hour standard and are used within this analysis. Additionally, the CALINE model incorporated the highest 8-hour air quality data as collected in Escondido which was 3.1 PPM in 2014 and the one-hour ambient data was 3.8 PPM. The CALINE models are shown in **Attachment G** to this report.

3.5 Odor Impacts (Onsite)

Potential onsite construction odor generators would include short term construction odors from activities such as paving and possibly painting. Odors created from paving would include

asphalt laying, which has a slight odor from the bitumen and solvents used within hot asphalt. Impacts associated with asphalt laying activities would be short term, less than one month, as shown in Table 3.1 above and are expected to be less than significant. Gasoline fumes could also be a source of odors however, the project would be installing Phase I and Phase II vapor recovery systems which are designed to capture 95% of the vapors during filling operations. These systems are located at both vehicle filling locations as well as the site fuel tank filling operations. Given this, long term vapor odors from fueling operations would be less than significant for all nearby residential receptors. Additionally, even though vapor odors are not expected, it should be noted that in general odors decrease with distance from the source.

4.0 FINDINGS

4.1 Construction Emission Findings

Construction emissions from the construction activities and equipment identified in Section 3.2 above is shown in Table 4.1. Based on these numbers, the Project would not exceed SDAPCD Rule 20.2 standards and would not require mitigation to comply. It should be noted that Rule 67 architectural coatings is required by SDAPCD and has been included as a design feature within CalEEMod.

Table 4.1: Expected Construction Emissions Summary – Pounds per Day

Year	ROG	NO _x	CO	SO ₂	PM ₁₀ (Dust)	PM ₁₀ (Exhaust)	PM ₁₀ (Total)	PM _{2.5} (Dust)	PM _{2.5} (Exhaust)	PM _{2.5} (Total)
2020	6.61	42.48	24.87	0.06	18.30	2.20	20.50	9.99	2.02	12.01
2021	6.31	23.47	24.16	0.06	1.80	1.07	2.87	0.48	1.01	1.50
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
Impact?	No	No	No	No	-	-	No	-	-	No

4.2 Construction Health Risks

Based upon the annual air quality modeling results attached to this report (Attachment A), worst-case onsite PM₁₀ from exhaust emissions would cumulatively produce 0.0203 tons over the construction duration of 370-working days, or an average of .00576 grams/second. The average emission rate over the grading area is 1.68x10⁻⁷ g/m²/s, which was calculated as follows:

$$\frac{0.00576 \frac{\text{grams}}{\text{second}}}{8.49 \text{ acres} * 4,046 \frac{\text{meters}^2}{\text{acre}}} = 1.68 * 10^{-7} \frac{\text{grams}}{\text{meters}^2 \text{ second}}$$

Utilizing the AERMOD dispersion model, we find that the annual concentration is 1.27 µg/m³ during construction at the closest receptor. Utilizing the risk equation identified above in Section 3.1, the inhalation cancer risk for the closest residential receptor was found to be 230.75 which would exceed the 10 per one million exposed significance threshold which would be a significant impact. It was found that these impacts can be reduced to less than significant through the utilization of Tier 4 equipment, which are considered T-BACT. It was found that Tier 4 equipment would cumulatively produce 0.00123 tons of PM₁₀ over the same

construction duration above or 0.000035 grams/second. Based on this the mitigated average emission rate over the grading area is 1.01×10^{-9} g/m²/s. Utilizing the AERMOD dispersion model, we find that the annual concentration is 0.0077 µg/m³ during construction. Given this, the inhalation cancer risk for the closest residential receptor was found to be 1.40 per one million exposed which would be considered a less than significant impact with the application of T-BACT.

Finally, there are known chronic health risks associated with diesel exhaust which are considered non-cancer risks. These risks are calculated based on methods identified in Section 3.1 of this report. From this we find that the annual concentration of 0.0077 µg/m³ divided by the REL of 5 µg/m³ yields a Health Hazard Index of 0.0015, which is less than one. Therefore, no chronic health risks are expected and all health risks are considered less than significant. Calculations for both the unmitigated and mitigated scenario is shown in **Attachment C** to this report.

It should be noted that the mitigation measure to utilize Tier 4 equipment would further reduce Air Quality emissions identified in Section 4.1 above, which are considered to produce the least amount of DPM and NOx emissions on the market today (U.S. EPA, 2018). Table 4.2 below shows mitigated construction air quality emissions which are also less than significant.

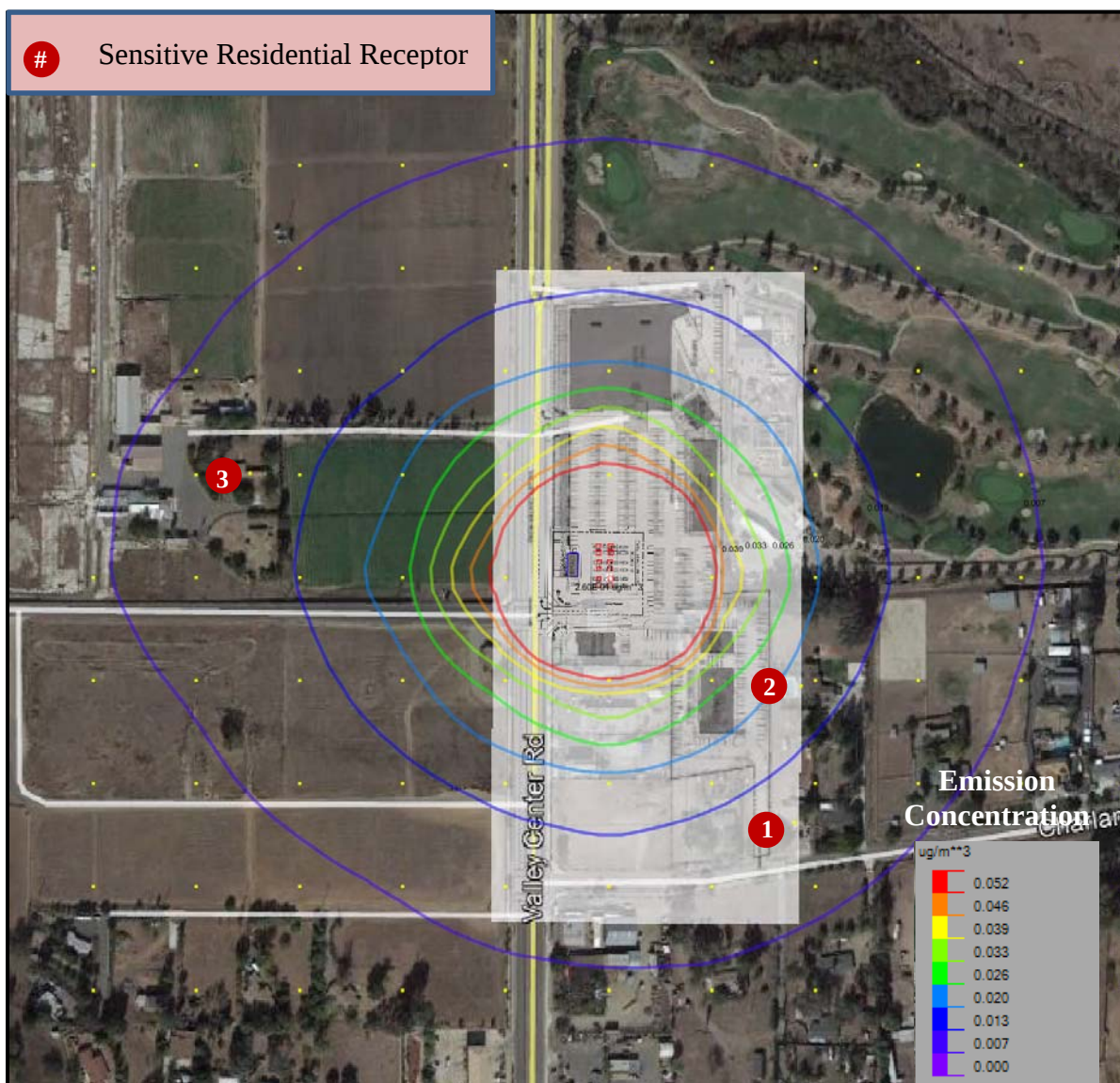
Table 4.2: Mitigated Construction Emissions Summary – Daily Pounds per Day

Year	ROG	NO _x	CO	SO ₂	PM ₁₀ (Dust)	PM ₁₀ (Exhaust)	PM ₁₀ (Total)	PM _{2.5} (Dust)	PM _{2.5} (Exhaust)	PM _{2.5} (Total)
2020	4.61	7.34	25.49	0.06	18.30	0.04	18.31	9.99	0.04	10.00
2021	4.54	6.88	25.06	0.06	1.80	0.03	1.83	0.48	0.02	0.51
Significance Threshold (lb/day)	75	250	550	250	-	-	100	-	-	55
SDAPCD Impact?	No	No	No	No	-	-	No	-	-	No

4.3 Fueling Station Operation Health Risks

The modeling results from AERMOD have been plotted as shown in Figure 2-C below using color contours to graphically represent benzene emissions expected from the operations at the proposed site for a unit volume of 1 million gallons. The Project anticipates that the annual throughput would be 6.84 million gallons. Given this, the emissions results from Figure 2-C and AERMOD outputs would be multiplied by 6.84.

Figure 2-C: AERMOD Output - Benzene



All emissions shown include emissions associated with underground storage tank breathing, fuel loading, accidental spillage, and refueling. Also, sensitive residential receptors closest to the site (shown as red numbered circles in the figure above) were included within the model. The modeling results are provided Table 4.3 and include both the outputs from AERMOD and the emissions multiplied by 6.84 which represents the proposed annual fuel usage from the Project.

Table 4.3: Annualized Benzene Concentrations at each Receptor

Receptor #	Concentration ($\mu\text{g}/\text{m}^3$) Per Million Gallons	Project Concentration ($\mu\text{g}/\text{m}^3$) 6.84 Million Gallons
1	0.0161	0.110
2	0.00979	0.067
3	0.01003	0.069
Worst Case Contour from Figure 2-C	0.052	0.356

The results of the cancer risk calculations are shown in Table 4.4 below and also shown in detail in **Attachment F** to this report as discussed in Section 3.3 of this report. Based on these calculations, cancer risks for benzene would be less than 10 in one million exposed with the application of T-BACT (Phase 1 and Phase II equipment) which would generate a less than significant impact at all identified receptors. Also, the point of maximum exposure represented by the darkest red contours identified in Figure 2-C above would experience risks less than 10 in one million exposed. Given this, impacts associated with benzene emissions would be less than significant.

Table 4.4: Cancer Risk at Worst-Case Receptors

Receptor	C_i ($\mu\text{g}/\text{m}^3$)	Cancer Risk per one million exposed	Impact
1	0.110	0.804	No
2	0.067	0.489	No
3	0.069	0.501	No
Worst Case Contour from Figure 2-C	0.356	2.60	No
C _i annual inputs from AERMOD multiplied by 6.84 to represent throughput of 6,840,000 Gallons Gasoline – See Table 1 above Cancer Risk = DOSE _{air} × CPF × ASF × ED/AT × FAH			

4.4 Facility Operational Findings

Project Buildout and full operations are expected in 2021. The Project traffic generation estimates based on the traffic study are 10,200 trips per day (LLG Engineers, 2019). These

estimated daily trips were used in place of CalEEMod defaults to estimate mobile emissions associated with project operations. Trip distances were estimated based on CalEEMod defaults for a rural project setting. Additionally, the model was run for the winter and summer scenarios to determine operational impacts for the first year of operation. Additionally, the project will install three electric vehicle (EV) charging stations and plumb for a total of 12 stations EV charging stations throughout the site which equates to 3 percent of the parking. No reductions in emissions were accounted for with the installation of the EV charging stations.

The expected daily pollutant generation can be calculated utilizing the product of the average daily miles traveled and the expected emissions inventory calculated by EMFAC2014; CALEEMOD 2016.3.2 performs this calculation. The daily pollutants calculated for summer and winter are shown in Tables 4.5 and 4.6, respectively. It should be noted that CalEEMod was updated to reject SDAPCD Rule 67 paint VOC limits for operational conditions.

Table 4.5: Expected Summer Daily Pollutant Generation

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area	2.111	0.000	0.009	0.000	0.000	0.000
Energy	0.061	0.556	0.467	0.003	0.042	0.042
Mobile	16.073	62.357	167.649	0.551	45.884	12.567
Total (Unmitigated)	18.245	62.913	168.125	0.555	45.926	12.610
County Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod The final numbers are all rounded within Excel and are reported as rounded numbers.						

Table 4.6: Expected Winter Daily Pollutant Generation

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Area	2.111	0.000	0.009	0.000	0.000	0.000
Energy	0.061	0.556	0.467	0.003	0.042	0.042
Mobile	15.591	63.816	167.661	0.522	45.888	12.571
Total (Unmitigated)	17.763	64.371	168.137	0.526	45.930	12.614
County Thresholds	75	250	550	250	100	55
Significant?	No	No	No	No	No	No
Daily pollutant generation assumes trip distances within CalEEMod The final numbers are all rounded within Excel and are reported as rounded numbers.						

Based upon these calculations, the proposed Project would not exceed County operational air quality significance thresholds and would not be required to implement mitigation measures to comply with CEQA and County thresholds. Therefore, the project's operational emissions impacts would be less than significant.

4.5 Micro-Scale Operational Findings

As noted in Section 3.4 of this report, the Project traffic study reported that the proposed Project combined with near term cumulative traffic would re-classify one intersection to a LOS of E or worse directly. This intersection is:

- *Valley Center Road and Mirar de Valle Road (PM Only)*

The CALINE4 model was set up to show a typical intersection with a north, east, south, and west segments extending 50-meters in each direction. Also, intersection and segment volumes were taken from the peak-hour turning movement volumes within the traffic study. Receptors were assumed to be roughly 25-feet to each roadway as this would represent a conservative distance from the roadway to a hypothetical sensitive receptor.

The EMFAC2014 model was run to determine the emission factors for 2021 (Worst-Case Early Build out Year) utilizing an aggregated approach. Additionally, the CALINE4 dispersion model was run for the intersection discussed above. Table 4.7 below identifies both the 1-hour emission concentration predictions and the 8-hour average after utilizing the carbon dioxide persistence factor of 0.7 (U.S. EPA, 1992) . Based on model output results, no CO impacts would occur under cumulative plus Project conditions. Therefore, the Project would have a less than significant impact related to CO "Hot Spot" concentrations.

Table 4.7: Expected Carbon Monoxide Hot Spot Concentration Levels

Intersection	Cumulative plus Project (Worst Case)	
	Predicted Concentration PPM	
	PM	8-HR
Valley Center Road and Mirar De Valle	1.9	1.33
CAAQS - Significant Thresholds?	20	9
Significant	No	No
Emission levels taken from EMFAC 2014 – 2021 scenario Traffic Volumes obtained from Project Traffic Study (LLG Engineers, 2019)		

4.6 Cumulative Construction Impacts

Cumulative construction impacts could occur from construction activities for multiple projects occurring at the same time. These impacts could be significant when the maximum exposure contours for each project construction activity intersect. To illustrate this, if a project was to produce air quality emissions simultaneous to a nearby construction project, the emissions from the combined activities could exceed significance thresholds. For this project, the construction emissions are well below significance as shown in Table 4.2 above. If a nearby project was to be under construction at the same time, that project would need to produce significantly more emissions and be relatively close to the proposed project site.

Approved projects within the project vicinity were included in the cumulative conditions of the project traffic study (LLG Engineers, 2019). The closest approved (cumulative) projects include the Park Circle project and the Shady Oak project, which propose to construct a combined 355 homes, and are located west and southwest of the project site. Based on these general project types, construction impacts could be expected should grading activities associated with all three projects occur simultaneously. Given this, to avoid a significant cumulative construction impact, the project shall coordinate grading schedules with these projects and the County such that simultaneous grading does not occur. This mitigation measure will reduce cumulative impacts to less than significant.

4.7 Cumulative Operations Impacts

The site is subject to the General Plan Regional Category Village, the Land Use Designation is predominantly General Commercial (C-1) and the zoning for the site is General Commercial (C36). The project site is consistent with the General Plan category and zoning for the commercial site. Based on this, the proposed Project was accounted for in the County's General plan and associated EIR. Therefore, the Project would be consistent with the RAQS and SIP and the project would result in less than significant cumulatively considerable impacts.

4.8 Conclusion of Findings

Construction

All construction phases of the proposed Project are anticipated to start in 2020 and full operations expected in 2022. Based upon the analysis of construction activities, no criteria pollutant impacts would be expected.

Based upon the construction health risk analysis significant impacts would be expected. It was found that these health risk impacts can be fully mitigated by utilizing Tier 4 Final construction equipment.

The project would likely generate short-term odors from temporary construction activities such as paving and painting. Since odors from this equipment would be short term, no significant odor impacts would be expected.

The proposed Project is located at the intersection of Valley Center Road and Mirar De Valle Road. Within the general vicinity to this intersection a number of construction projects are planned including the construction of Park Circle which proposes to construct 318 homes to the west and Shady Oaks which would construct 47 homes to the southwest. To avoid a significant cumulative impact, the project grading should be coordinated with the County to ensure that simultaneous grading of the projects does not occur.

Operations

Based upon the analysis of operational activities, no criteria pollutant impacts would be expected. Operational mitigation measures would not be required. A CO hot spot analysis was conducted at two of the worst-case intersections impacted by the Project which both exceeded the 3,000 Peak Hour trips screening level and operated at LOS E or worse as required (County of San Diego, 2007). Using CALINE, the project was found to produce CO emission concentrations lower than California Ambient Air Quality Standards. Therefore, the project would result in less than significant CO hot spots impacts.

Operational odors would not be expected since the project would install Phase I and Phase II vapor recovery systems. These systems prevent odors and gases from escaping during fueling operations. Given this, less than significant long-term odor impacts are expected.

The Project proposes to construct a convenience market with fueling stations. A health risk analysis was performed for the fueling operations specific to Benzene emissions. Based upon this analysis, no significant impacts would be expected.

The site is subject to the General Plan Regional Category Village, the Land Use Designation is predominantly General Commercial (C-1) and the zoning for the site is General Commercial (C36). The project site is consistent with the General Plan Category and zoning for the commercial site. Based on this, the proposed Project was accounted for in the County's General plan. Therefore, no cumulative operation impacts would be anticipated since the proposed use would be consistent with the RAQS and SIP.

5.0 REFERENCES

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6.0 CERTIFICATIONS

The contents of this report represent an accurate depiction of the air quality environment and impacts within and surrounding the proposed development. This report was prepared utilizing the latest emission rates and reduction methodologies. This report was prepared by Jeremy Loudon; a County approved CEQA Consultant for Air Quality.



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Date March 2, 2020

ATTACHMENT A

CalEEMod

Liberty Bell Plaza Mitigated - San Diego County, Summer

Liberty Bell Plaza Mitigated

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	4.00	Acre	4.00	174,240.00	0
Fast Food Restaurant with Drive Thru	4.00	1000sqft	0.50	4,000.00	0
Convenience Market With Gas Pumps	1.30	1000sqft	0.50	1,300.00	0
Strip Mall	27.70	1000sqft	1.00	27,700.00	0
Supermarket	52.00	1000sqft	2.49	52,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	495.89	CH4 Intensity (lb/MW hr)	0.02	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Liberty Bell Plaza Mitigated - San Diego County, Summer

Project Characteristics - 2022 RPS intensities updated

Land Use - project Acreage is 8.49 acres

Construction Phase - Proposed Construction Dates

Off-road Equipment -

Off-road Equipment - Proposed Equipment

Off-road Equipment - Proposed Equipment

Off-road Equipment - Proposed equipment

Off-road Equipment - Proposed Equipment

Trips and VMT -

Grading -

Architectural Coating - rule 67 paint

Vehicle Trips - Per Traffic Study...

Area Coating - rule 67 paints

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Mitigation Proposed

Area Mitigation - rule 67 paints

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00

Liberty Bell Plaza Mitigated - San Diego County, Summer

tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

Liberty Bell Plaza Mitigated - San Diego County, Summer

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	230.00	300.00
tblConstructionPhase	NumDays	20.00	240.00
tblLandUse	LotAcreage	0.09	0.50
tblLandUse	LotAcreage	0.03	0.50
tblLandUse	LotAcreage	0.64	1.00
tblLandUse	LotAcreage	1.19	2.49
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.02
tblProjectCharacteristics	CO2IntensityFactor	720.49	495.89
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00

Liberty Bell Plaza Mitigated - San Diego County, Summer

tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	65.00	22.00
tblVehicleTrips	PB_TP	50.00	22.00
tblVehicleTrips	PB_TP	15.00	22.00
tblVehicleTrips	PB_TP	36.00	22.00
tblVehicleTrips	PR_TP	14.00	78.00
tblVehicleTrips	PR_TP	29.00	78.00
tblVehicleTrips	PR_TP	45.00	78.00
tblVehicleTrips	PR_TP	34.00	78.00
tblVehicleTrips	ST_TR	1,448.33	120.00
tblVehicleTrips	ST_TR	722.03	120.00
tblVehicleTrips	ST_TR	42.04	120.00
tblVehicleTrips	ST_TR	177.59	120.00
tblVehicleTrips	SU_TR	1,182.08	120.00
tblVehicleTrips	SU_TR	542.72	120.00
tblVehicleTrips	SU_TR	20.43	120.00
tblVehicleTrips	SU_TR	166.44	120.00
tblVehicleTrips	WD_TR	845.60	120.00
tblVehicleTrips	WD_TR	496.12	120.00
tblVehicleTrips	WD_TR	44.32	120.00
tblVehicleTrips	WD_TR	102.24	120.00

2.0 Emissions Summary

Liberty Bell Plaza Mitigated - San Diego County, Summer

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					
2020	6.6101	42.4835	24.8736	0.0563	18.2962	2.1990	20.4951	9.9917	2.0231	12.0147	0.0000	5,546.4448	5,546.4448	1.1986	0.0000	5,565.8702
2021	6.3060	23.4712	24.1587	0.0556	1.8027	1.0712	2.8739	0.4839	1.0127	1.4966	0.0000	5,483.5118	5,483.5118	0.7607	0.0000	5,502.5286
Maximum	6.6101	42.4835	24.8736	0.0563	18.2962	2.1990	20.4951	9.9917	2.0231	12.0147	0.0000	5,546.4448	5,546.4448	1.1986	0.0000	5,565.8702

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					
2020	4.6056	7.3395	25.4864	0.0563	18.2962	0.0382	18.3070	9.9917	0.0365	10.0024	0.0000	5,546.4448	5,546.4448	1.1986	0.0000	5,565.8702
2021	4.5437	6.8757	25.0586	0.0556	1.8027	0.0252	1.8279	0.4839	0.0240	0.5079	0.0000	5,483.5118	5,483.5118	0.7607	0.0000	5,502.5286
Maximum	4.6056	7.3395	25.4864	0.0563	18.2962	0.0382	18.3070	9.9917	0.0365	10.0024	0.0000	5,546.4448	5,546.4448	1.1986	0.0000	5,565.8702

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	29.16	78.45	-3.09	0.00	0.00	98.06	13.84	0.00	98.01	22.21	0.00	0.00	0.00	0.00	0.00	0.00

Liberty Bell Plaza Mitigated - San Diego County, Summer

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	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208
Energy	0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597
Mobile	15.0208	58.9414	156.1856	0.5338	45.4269	0.4334	45.8604	12.1408	0.4046	12.5454		54,291.9595	54,291.9595	2.8333		54,362.7914
Total	17.1926	59.4970	156.6614	0.5371	45.4269	0.4757	45.9026	12.1408	0.4468	12.5876		54,958.6768	54,958.6768	2.8461	0.0122	55,033.4718

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	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208
Energy	0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597
Mobile	15.0208	58.9414	156.1856	0.5338	45.4269	0.4334	45.8604	12.1408	0.4046	12.5454		54,291.9595	54,291.9595	2.8333		54,362.7914
Total	17.1926	59.4970	156.6614	0.5371	45.4269	0.4757	45.9026	12.1408	0.4468	12.5876		54,958.6768	54,958.6768	2.8461	0.0122	55,033.4718

Liberty Bell Plaza Mitigated - San Diego 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
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	6/1/2020	6/12/2020	5	10	
2	Grading	Grading	6/13/2020	7/24/2020	5	30	
3	Paving	Paving	7/25/2020	9/4/2020	5	30	
4	Building Construction	Building Construction	9/5/2020	10/29/2021	5	300	
5	Architectural Coating	Architectural Coating	11/30/2020	10/29/2021	5	240	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 15

Acres of Paving: 4

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 127,500; Non-Residential Outdoor: 42,500; Striped Parking Area: 10,454 (Architectural Coating – sqft)

OffRoad Equipment

Liberty Bell Plaza Mitigated - San Diego County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	101.00	42.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Liberty Bell Plaza Mitigated - San Diego County, Summer

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2020**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	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	4.0765	42.4173	21.5136	0.0380	18.0663	2.1974	20.2637	9.9307	2.0216	11.9523		3,685.1016	3,685.1016	1.1918		3,714.8975

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.2 Site Preparation - 2020**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	0.0916	0.0661	0.7507	2.3400e-003	0.2299	1.5500e-003	0.2315	0.0610	1.4300e-003	0.0624		233.6611	233.6611	6.8000e-003		233.8310
Total	0.0916	0.0661	0.7507	2.3400e-003	0.2299	1.5500e-003	0.2315	0.0610	1.4300e-003	0.0624		233.6611	233.6611	6.8000e-003		233.8310

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		9.3100e-003	9.3100e-003		9.3100e-003	9.3100e-003	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	0.4656	2.0175	20.8690	0.0380	18.0663	9.3100e-003	18.0756	9.9307	9.3100e-003	9.9400	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.2 Site Preparation - 2020**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	0.0916	0.0661	0.7507	2.3400e-003	0.2299	1.5500e-003	0.2315	0.0610	1.4300e-003	0.0624		233.6611	233.6611	6.8000e-003		233.8310
Total	0.0916	0.0661	0.7507	2.3400e-003	0.2299	1.5500e-003	0.2315	0.0610	1.4300e-003	0.0624		233.6611	233.6611	6.8000e-003		233.8310

3.3 Grading - 2020**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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	2.4288	26.3859	16.0530	0.0297	6.5523	1.2734	7.8258	3.3675	1.1716	4.5390		2,872.4851	2,872.4851	0.9290		2,895.7106

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.3 Grading - 2020**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	0.0763	0.0551	0.6256	1.9500e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		194.7176	194.7176	5.6600e-003		194.8592
Total	0.0763	0.0551	0.6256	1.9500e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		194.7176	194.7176	5.6600e-003		194.8592

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		7.2600e-003	7.2600e-003		7.2600e-003	7.2600e-003	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	0.3632	1.5737	17.7527	0.0297	6.5523	7.2600e-003	6.5596	3.3675	7.2600e-003	3.3747	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.3 Grading - 2020**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	0.0763	0.0551	0.6256	1.9500e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		194.7176	194.7176	5.6600e-003		194.8592
Total	0.0763	0.0551	0.6256	1.9500e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		194.7176	194.7176	5.6600e-003		194.8592

3.4 Paving - 2020**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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7059	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.4 Paving - 2020**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	0.0763	0.0551	0.6256	1.9500e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		194.7176	194.7176	5.6600e-003		194.8592
Total	0.0763	0.0551	0.6256	1.9500e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		194.7176	194.7176	5.6600e-003		194.8592

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6298	1.2154	17.2957	0.0228		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.4 Paving - 2020**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	0.0763	0.0551	0.6256	1.9500e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		194.7176	194.7176	5.6600e-003		194.8592
Total	0.0763	0.0551	0.6256	1.9500e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		194.7176	194.7176	5.6600e-003		194.8592

3.5 Building Construction - 2020**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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.5 Building Construction - 2020**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	0.1477	4.5315	1.1476	0.0106	0.2572	0.0211	0.2783	0.0740	0.0202	0.0942		1,141.212 1	1,141.212 1	0.0867		1,143.378 9
Worker	0.5137	0.3711	4.2120	0.0132	1.2901	8.7100e-003	1.2988	0.3421	8.0200e-003	0.3501		1,311.0982	1,311.0982	0.0381		1,312.051 7
Total	0.6613	4.9026	5.3597	0.0238	1.5473	0.0298	1.5770	0.4162	0.0282	0.4444		2,452.310 3	2,452.310 3	0.1248		2,455.430 7

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	0.3278	2.2347	17.4603	0.0269		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.5 Building Construction - 2020**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	0.1477	4.5315	1.1476	0.0106	0.2572	0.0211	0.2783	0.0740	0.0202	0.0942		1,141.212 1	1,141.212 1	0.0867		1,143.378 9
Worker	0.5137	0.3711	4.2120	0.0132	1.2901	8.7100e-003	1.2988	0.3421	8.0200e-003	0.3501		1,311.0982	1,311.0982	0.0381		1,312.051 7
Total	0.6613	4.9026	5.3597	0.0238	1.5473	0.0298	1.5770	0.4162	0.0282	0.4444		2,452.310 3	2,452.310 3	0.1248		2,455.430 7

3.5 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.363 9	2,553.363 9	0.6160		2,568.764 3

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.5 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1201	4.1078	1.0377	0.0105	0.2572	8.2200e-003	0.2654	0.0740	7.8600e-003	0.0819		1,130.7714	1,130.7714	0.0831		1,132.8490
Worker	0.4850	0.3376	3.9467	0.0127	1.2901	8.5700e-003	1.2987	0.3421	7.8900e-003	0.3500		1,267.0312	1,267.0312	0.0353		1,267.9127
Total	0.6051	4.4454	4.9844	0.0232	1.5473	0.0168	1.5640	0.4162	0.0158	0.4319		2,397.8026	2,397.8026	0.1184		2,400.7617

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	0.3278	2.2347	17.4603	0.0269		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1201	4.1078	1.0377	0.0105	0.2572	8.2200e-003	0.2654	0.0740	7.8600e-003	0.0819		1,130.7714	1,130.7714	0.0831		1,132.8490
Worker	0.4850	0.3376	3.9467	0.0127	1.2901	8.5700e-003	1.2987	0.3421	7.8900e-003	0.3500		1,267.0312	1,267.0312	0.0353		1,267.9127
Total	0.6051	4.4454	4.9844	0.0232	1.5473	0.0168	1.5640	0.4162	0.0158	0.4319		2,397.8026	2,397.8026	0.1184		2,400.7617

3.6 Architectural Coating - 2020**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	3.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	3.7272	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.6 Architectural Coating - 2020**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	0.1017	0.0735	0.8341	2.6000e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		259.6234	259.6234	7.5500e-003		259.8122
Total	0.1017	0.0735	0.8341	2.6000e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		259.6234	259.6234	7.5500e-003		259.8122

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	3.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0218		281.9928
Total	3.5147	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0218		281.9928

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.6 Architectural Coating - 2020**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	0.1017	0.0735	0.8341	2.6000e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		259.6234	259.6234	7.5500e-003		259.8122
Total	0.1017	0.0735	0.8341	2.6000e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		259.6234	259.6234	7.5500e-003		259.8122

3.6 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	3.7039	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.6 Architectural Coating - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0960	0.0669	0.7815	2.5200e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		250.8973	250.8973	6.9800e-003		251.0718
Total	0.0960	0.0669	0.7815	2.5200e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		250.8973	250.8973	6.9800e-003		251.0718

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	3.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0193		281.9309
Total	3.5147	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0193		281.9309

Liberty Bell Plaza Mitigated - San Diego County, Summer

3.6 Architectural Coating - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0960	0.0669	0.7815	2.5200e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		250.8973	250.8973	6.9800e-003		251.0718
Total	0.0960	0.0669	0.7815	2.5200e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		250.8973	250.8973	6.9800e-003		251.0718

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Liberty Bell Plaza Mitigated - San Diego 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					
Mitigated	15.0208	58.9414	156.1856	0.5338	45.4269	0.4334	45.8604	12.1408	0.4046	12.5454		54,291.95 95	54,291.95 95	2.8333		54,362.79 14
Unmitigated	15.0208	58.9414	156.1856	0.5338	45.4269	0.4334	45.8604	12.1408	0.4046	12.5454		54,291.95 95	54,291.95 95	2.8333		54,362.79 14

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	156.00	156.00	156.00	296,443	296,443
Fast Food Restaurant with Drive Thru	480.00	480.00	480.00	927,588	927,588
Parking Lot	0.00	0.00	0.00		
Strip Mall	3,324.00	3,324.00	3,324.00	7,524,335	7,524,335
Supermarket	6,240.00	6,240.00	6,240.00	12,675,711	12,675,711
Total	10,200.00	10,200.00	10,200.00	21,424,077	21,424,077

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	78	0	22
Fast Food Restaurant with Drive	14.70	6.60	6.60	2.20	78.80	19.00	78	0	22
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00	78	0	22
Supermarket	14.70	6.60	6.60	6.50	74.50	19.00	78	0	22

Liberty Bell Plaza Mitigated - San Diego County, Summer

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Fast Food Restaurant with Drive Thru	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Strip Mall	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Supermarket	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597
NaturalGas Unmitigated	0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597

Liberty Bell Plaza Mitigated - San Diego County, Summer

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Convenience Market With Gas Pumps	7.94247	9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9344	0.9344	2.0000e-005	2.0000e-005	0.9400
Fast Food Restaurant with Drive Thru	1911.01	0.0206	0.1874	0.1574	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.8251	224.8251	4.3100e-003	4.1200e-003	226.1612
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
Strip Mall	169.236	1.8300e-003	0.0166	0.0139	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003		19.9101	19.9101	3.8000e-004	3.7000e-004	20.0284
Supermarket	3578.74	0.0386	0.3509	0.2947	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.0282	421.0282	8.0700e-003	7.7200e-003	423.5302
Total		0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597

Liberty Bell Plaza Mitigated - San Diego County, Summer

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					
Convenience Market With Gas Pumps	0.00794247	9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9344	0.9344	2.0000e-005	2.0000e-005	0.9400
Fast Food Restaurant with Drive Thru	1.91101	0.0206	0.1874	0.1574	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.8251	224.8251	4.3100e-003	4.1200e-003	226.1612
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
Strip Mall	0.169236	1.8300e-003	0.0166	0.0139	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003		19.9101	19.9101	3.8000e-004	3.7000e-004	20.0284
Supermarket	3.57874	0.0386	0.3509	0.2947	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.0282	421.0282	8.0700e-003	7.7200e-003	423.5302
Total		0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597

6.0 Area Detail**6.1 Mitigation Measures Area**

Liberty Bell Plaza Mitigated - San Diego 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					
Mitigated	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208
Unmitigated	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208

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	0.2292					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.5000e-004	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208
Total	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208

Liberty Bell Plaza Mitigated - San Diego County, Summer

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	0.2292					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.5000e-004	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208
Total	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208

7.0 Water Detail**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Liberty Bell Plaza Mitigated - San Diego County, Summer

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Liberty Bell Plaza Mitigated - San Diego County, Winter

Liberty Bell Plaza Mitigated

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	4.00	Acre	4.00	174,240.00	0
Fast Food Restaurant with Drive Thru	4.00	1000sqft	0.50	4,000.00	0
Convenience Market With Gas Pumps	1.30	1000sqft	0.50	1,300.00	0
Strip Mall	27.70	1000sqft	1.00	27,700.00	0
Supermarket	52.00	1000sqft	2.49	52,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	495.89	CH4 Intensity (lb/MW hr)	0.02	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Liberty Bell Plaza Mitigated - San Diego County, Winter

Project Characteristics - 2022 RPS intensities updated

Land Use - project Acreage is 8.49 acres

Construction Phase - Proposed Construction Dates

Off-road Equipment -

Off-road Equipment - Proposed Equipment

Off-road Equipment - Proposed Equipment

Off-road Equipment - Proposed equipment

Off-road Equipment - Proposed Equipment

Trips and VMT -

Grading -

Architectural Coating - rule 67 paint

Vehicle Trips - Per Traffic Study...

Area Coating - rule 67 paints

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Mitigation Proposed

Area Mitigation - rule 67 paints

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00

Liberty Bell Plaza Mitigated - San Diego County, Winter

tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

Liberty Bell Plaza Mitigated - San Diego County, Winter

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	230.00	300.00
tblConstructionPhase	NumDays	20.00	240.00
tblLandUse	LotAcreage	0.09	0.50
tblLandUse	LotAcreage	0.03	0.50
tblLandUse	LotAcreage	0.64	1.00
tblLandUse	LotAcreage	1.19	2.49
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.02
tblProjectCharacteristics	CO2IntensityFactor	720.49	495.89
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00

Liberty Bell Plaza Mitigated - San Diego County, Winter

tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	65.00	22.00
tblVehicleTrips	PB_TP	50.00	22.00
tblVehicleTrips	PB_TP	15.00	22.00
tblVehicleTrips	PB_TP	36.00	22.00
tblVehicleTrips	PR_TP	14.00	78.00
tblVehicleTrips	PR_TP	29.00	78.00
tblVehicleTrips	PR_TP	45.00	78.00
tblVehicleTrips	PR_TP	34.00	78.00
tblVehicleTrips	ST_TR	1,448.33	120.00
tblVehicleTrips	ST_TR	722.03	120.00
tblVehicleTrips	ST_TR	42.04	120.00
tblVehicleTrips	ST_TR	177.59	120.00
tblVehicleTrips	SU_TR	1,182.08	120.00
tblVehicleTrips	SU_TR	542.72	120.00
tblVehicleTrips	SU_TR	20.43	120.00
tblVehicleTrips	SU_TR	166.44	120.00
tblVehicleTrips	WD_TR	845.60	120.00
tblVehicleTrips	WD_TR	496.12	120.00
tblVehicleTrips	WD_TR	44.32	120.00
tblVehicleTrips	WD_TR	102.24	120.00

2.0 Emissions Summary

Liberty Bell Plaza Mitigated - San Diego County, Winter

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					
2020	6.7157	42.4915	24.6207	0.0550	18.2962	2.1990	20.4951	9.9917	2.0231	12.0147	0.0000	5,417.785 0	5,417.785 0	1.1982	0.0000	5,437.282 1
2021	6.4066	23.5031	23.9099	0.0544	1.8027	1.0716	2.8743	0.4839	1.0130	1.4970	0.0000	5,358.272 1	5,358.272 1	0.7634	0.0000	5,377.357 6
Maximum	6.7157	42.4915	24.6207	0.0550	18.2962	2.1990	20.4951	9.9917	2.0231	12.0147	0.0000	5,417.785 0	5,417.785 0	1.1982	0.0000	5,437.282 1

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					
2020	4.7112	7.3828	25.2334	0.0550	18.2962	0.0387	18.3070	9.9917	0.0369	10.0024	0.0000	5,417.785 0	5,417.785 0	1.1982	0.0000	5,437.282 1
2021	4.6443	6.9076	24.8098	0.0544	1.8027	0.0256	1.8283	0.4839	0.0244	0.5083	0.0000	5,358.272 1	5,358.272 1	0.7634	0.0000	5,377.357 6
Maximum	4.7112	7.3828	25.2334	0.0550	18.2962	0.0387	18.3070	9.9917	0.0369	10.0024	0.0000	5,417.785 0	5,417.785 0	1.1982	0.0000	5,437.282 1

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	28.71	78.35	-3.12	0.00	0.00	98.04	13.84	0.00	97.98	22.21	0.00	0.00	0.00	0.00	0.00	0.00

Liberty Bell Plaza Mitigated - San Diego County, Winter

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	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208
Energy	0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597
Mobile	14.5485	60.2157	155.9045	0.5059	45.4269	0.4373	45.8642	12.1408	0.4083	12.5491		51,465.6702	51,465.6702	2.8683		51,537.3776
Total	16.7204	60.7714	156.3803	0.5092	45.4269	0.4795	45.9065	12.1408	0.4505	12.5913		52,132.3875	52,132.3875	2.8811	0.0122	52,208.0581

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	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208
Energy	0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597
Mobile	14.5485	60.2157	155.9045	0.5059	45.4269	0.4373	45.8642	12.1408	0.4083	12.5491		51,465.6702	51,465.6702	2.8683		51,537.3776
Total	16.7204	60.7714	156.3803	0.5092	45.4269	0.4795	45.9065	12.1408	0.4505	12.5913		52,132.3875	52,132.3875	2.8811	0.0122	52,208.0581

Liberty Bell Plaza Mitigated - San Diego 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
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	6/1/2020	6/12/2020	5	10	
2	Grading	Grading	6/13/2020	7/24/2020	5	30	
3	Paving	Paving	7/25/2020	9/4/2020	5	30	
4	Building Construction	Building Construction	9/5/2020	10/29/2021	5	300	
5	Architectural Coating	Architectural Coating	11/30/2020	10/29/2021	5	240	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 15

Acres of Paving: 4

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 127,500; Non-Residential Outdoor: 42,500; Striped Parking Area: 10,454 (Architectural Coating – sqft)

OffRoad Equipment

Liberty Bell Plaza Mitigated - San Diego County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	101.00	42.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Liberty Bell Plaza Mitigated - San Diego County, Winter

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2020**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	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	4.0765	42.4173	21.5136	0.0380	18.0663	2.1974	20.2637	9.9307	2.0216	11.9523		3,685.1016	3,685.1016	1.1918		3,714.8975

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.2 Site Preparation - 2020**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	0.1062	0.0742	0.6932	2.2000e-003	0.2299	1.5500e-003	0.2315	0.0610	1.4300e-003	0.0624		219.2562	219.2562	6.3700e-003		219.4155
Total	0.1062	0.0742	0.6932	2.2000e-003	0.2299	1.5500e-003	0.2315	0.0610	1.4300e-003	0.0624		219.2562	219.2562	6.3700e-003		219.4155

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	0.4656	2.0175	20.8690	0.0380		9.3100e-003	9.3100e-003		9.3100e-003	9.3100e-003	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	0.4656	2.0175	20.8690	0.0380	18.0663	9.3100e-003	18.0756	9.9307	9.3100e-003	9.9400	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.2 Site Preparation - 2020**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	0.1062	0.0742	0.6932	2.2000e-003	0.2299	1.5500e-003	0.2315	0.0610	1.4300e-003	0.0624		219.2562	219.2562	6.3700e-003		219.4155
Total	0.1062	0.0742	0.6932	2.2000e-003	0.2299	1.5500e-003	0.2315	0.0610	1.4300e-003	0.0624		219.2562	219.2562	6.3700e-003		219.4155

3.3 Grading - 2020**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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.485 1	2,872.485 1	0.9290		2,895.710 6
Total	2.4288	26.3859	16.0530	0.0297	6.5523	1.2734	7.8258	3.3675	1.1716	4.5390		2,872.485 1	2,872.485 1	0.9290		2,895.710 6

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.3 Grading - 2020**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	0.0885	0.0618	0.5777	1.8300e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		182.7135	182.7135	5.3100e-003		182.8463
Total	0.0885	0.0618	0.5777	1.8300e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		182.7135	182.7135	5.3100e-003		182.8463

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	0.3632	1.5737	17.7527	0.0297		7.2600e-003	7.2600e-003		7.2600e-003	7.2600e-003	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	0.3632	1.5737	17.7527	0.0297	6.5523	7.2600e-003	6.5596	3.3675	7.2600e-003	3.3747	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.3 Grading - 2020**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	0.0885	0.0618	0.5777	1.8300e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		182.7135	182.7135	5.3100e-003		182.8463
Total	0.0885	0.0618	0.5777	1.8300e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		182.7135	182.7135	5.3100e-003		182.8463

3.4 Paving - 2020**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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.7059	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.4 Paving - 2020**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	0.0885	0.0618	0.5777	1.8300e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		182.7135	182.7135	5.3100e-003		182.8463
Total	0.0885	0.0618	0.5777	1.8300e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		182.7135	182.7135	5.3100e-003		182.8463

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2805	1.2154	17.2957	0.0228		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.3493					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.6298	1.2154	17.2957	0.0228		5.6100e-003	5.6100e-003		5.6100e-003	5.6100e-003	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.4 Paving - 2020**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	0.0885	0.0618	0.5777	1.8300e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		182.7135	182.7135	5.3100e-003		182.8463
Total	0.0885	0.0618	0.5777	1.8300e-003	0.1916	1.2900e-003	0.1929	0.0508	1.1900e-003	0.0520		182.7135	182.7135	5.3100e-003		182.8463

3.5 Building Construction - 2020**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	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.5 Building Construction - 2020**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	0.1550	4.5205	1.2808	0.0103	0.2572	0.0215	0.2787	0.0740	0.0206	0.0946		1,109.3851	1,109.3851	0.0924		1,111.6949
Worker	0.5957	0.4164	3.8897	0.0123	1.2901	8.7100e-003	1.2988	0.3421	8.0200e-003	0.3501		1,230.2709	1,230.2709	0.0358		1,231.1649
Total	0.7507	4.9368	5.1705	0.0227	1.5473	0.0302	1.5775	0.4162	0.0286	0.4448		2,339.6559	2,339.6559	0.1282		2,342.8598

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	0.3278	2.2347	17.4603	0.0269		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.5 Building Construction - 2020**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	0.1550	4.5205	1.2808	0.0103	0.2572	0.0215	0.2787	0.0740	0.0206	0.0946		1,109.3851	1,109.3851	0.0924		1,111.6949
Worker	0.5957	0.4164	3.8897	0.0123	1.2901	8.7100e-003	1.2988	0.3421	8.0200e-003	0.3501		1,230.2709	1,230.2709	0.0358		1,231.1649
Total	0.7507	4.9368	5.1705	0.0227	1.5473	0.0302	1.5775	0.4162	0.0286	0.4448		2,339.6559	2,339.6559	0.1282		2,342.8598

3.5 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.5 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1269	4.0904	1.1620	0.0102	0.2572	8.5900e-003	0.2658	0.0740	8.2100e-003	0.0823		1,099.1343	1,099.1343	0.0885		1,101.3478
Worker	0.5633	0.3787	3.6353	0.0119	1.2901	8.5700e-003	1.2987	0.3421	7.8900e-003	0.3500		1,188.9001	1,188.9001	0.0330		1,189.7254
Total	0.6902	4.4692	4.7973	0.0222	1.5473	0.0172	1.5644	0.4162	0.0161	0.4323		2,288.0344	2,288.0344	0.1216		2,291.0732

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.3278	2.2347	17.4603	0.0269		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	0.3278	2.2347	17.4603	0.0269		6.1200e-003	6.1200e-003		6.1200e-003	6.1200e-003	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1269	4.0904	1.1620	0.0102	0.2572	8.5900e-003	0.2658	0.0740	8.2100e-003	0.0823		1,099.1343	1,099.1343	0.0885		1,101.3478
Worker	0.5633	0.3787	3.6353	0.0119	1.2901	8.5700e-003	1.2987	0.3421	7.8900e-003	0.3500		1,188.9001	1,188.9001	0.0330		1,189.7254
Total	0.6902	4.4692	4.7973	0.0222	1.5473	0.0172	1.5644	0.4162	0.0161	0.4323		2,288.0344	2,288.0344	0.1216		2,291.0732

3.6 Architectural Coating - 2020**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	3.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	3.7272	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.6 Architectural Coating - 2020**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	0.1180	0.0825	0.7703	2.4400e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		243.6180	243.6180	7.0800e-003		243.7950
Total	0.1180	0.0825	0.7703	2.4400e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		243.6180	243.6180	7.0800e-003		243.7950

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	3.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0218		281.9928
Total	3.5147	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0218		281.9928

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.6 Architectural Coating - 2020**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	0.1180	0.0825	0.7703	2.4400e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		243.6180	243.6180	7.0800e-003		243.7950
Total	0.1180	0.0825	0.7703	2.4400e-003	0.2555	1.7200e-003	0.2572	0.0678	1.5900e-003	0.0693		243.6180	243.6180	7.0800e-003		243.7950

3.6 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	3.7039	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.6 Architectural Coating - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1116	0.0750	0.7199	2.3600e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		235.4258	235.4258	6.5400e-003		235.5892
Total	0.1116	0.0750	0.7199	2.3600e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		235.4258	235.4258	6.5400e-003		235.5892

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	3.4850					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0193		281.9309
Total	3.5147	0.1288	1.8324	2.9700e-003		5.9000e-004	5.9000e-004		5.9000e-004	5.9000e-004	0.0000	281.4481	281.4481	0.0193		281.9309

Liberty Bell Plaza Mitigated - San Diego County, Winter

3.6 Architectural Coating - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1116	0.0750	0.7199	2.3600e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		235.4258	235.4258	6.5400e-003		235.5892
Total	0.1116	0.0750	0.7199	2.3600e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		235.4258	235.4258	6.5400e-003		235.5892

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Liberty Bell Plaza Mitigated - San Diego 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					
Mitigated	14.5485	60.2157	155.9045	0.5059	45.4269	0.4373	45.8642	12.1408	0.4083	12.5491		51,465.6702	51,465.6702	2.8683		51,537.3776
Unmitigated	14.5485	60.2157	155.9045	0.5059	45.4269	0.4373	45.8642	12.1408	0.4083	12.5491		51,465.6702	51,465.6702	2.8683		51,537.3776

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	156.00	156.00	156.00	296,443	296,443
Fast Food Restaurant with Drive Thru	480.00	480.00	480.00	927,588	927,588
Parking Lot	0.00	0.00	0.00		
Strip Mall	3,324.00	3,324.00	3,324.00	7,524,335	7,524,335
Supermarket	6,240.00	6,240.00	6,240.00	12,675,711	12,675,711
Total	10,200.00	10,200.00	10,200.00	21,424,077	21,424,077

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	78	0	22
Fast Food Restaurant with Drive	14.70	6.60	6.60	2.20	78.80	19.00	78	0	22
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00	78	0	22
Supermarket	14.70	6.60	6.60	6.50	74.50	19.00	78	0	22

Liberty Bell Plaza Mitigated - San Diego County, Winter

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Fast Food Restaurant with Drive Thru	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Strip Mall	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Supermarket	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597
NaturalGas Unmitigated	0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597

Liberty Bell Plaza Mitigated - San Diego County, Winter

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Convenience Market With Gas Pumps	7.94247	9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9344	0.9344	2.0000e-005	2.0000e-005	0.9400
Fast Food Restaurant with Drive Thru	1911.01	0.0206	0.1874	0.1574	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.8251	224.8251	4.3100e-003	4.1200e-003	226.1612
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
Strip Mall	169.236	1.8300e-003	0.0166	0.0139	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003		19.9101	19.9101	3.8000e-004	3.7000e-004	20.0284
Supermarket	3578.74	0.0386	0.3509	0.2947	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.0282	421.0282	8.0700e-003	7.7200e-003	423.5302
Total		0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597

Liberty Bell Plaza Mitigated - San Diego County, Winter

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					
Convenience Market With Gas Pumps	0.00794247	9.0000e-005	7.8000e-004	6.5000e-004	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.9344	0.9344	2.0000e-005	2.0000e-005	0.9400
Fast Food Restaurant with Drive Thru	1.91101	0.0206	0.1874	0.1574	1.1200e-003		0.0142	0.0142		0.0142	0.0142		224.8251	224.8251	4.3100e-003	4.1200e-003	226.1612
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
Strip Mall	0.169236	1.8300e-003	0.0166	0.0139	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003		19.9101	19.9101	3.8000e-004	3.7000e-004	20.0284
Supermarket	3.57874	0.0386	0.3509	0.2947	2.1100e-003		0.0267	0.0267		0.0267	0.0267		421.0282	421.0282	8.0700e-003	7.7200e-003	423.5302
Total		0.0611	0.5556	0.4667	3.3300e-003		0.0422	0.0422		0.0422	0.0422		666.6978	666.6978	0.0128	0.0122	670.6597

6.0 Area Detail**6.1 Mitigation Measures Area**

Liberty Bell Plaza Mitigated - San Diego 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					
Mitigated	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208
Unmitigated	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208

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	0.2292					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.5000e-004	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208
Total	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208

Liberty Bell Plaza Mitigated - San Diego County, Winter

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	0.2292					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.8807					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.5000e-004	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208
Total	2.1107	8.0000e-005	9.1000e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0195	0.0195	5.0000e-005		0.0208

7.0 Water Detail**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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Liberty Bell Plaza Mitigated - San Diego County, Winter

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Liberty Bell Plaza Mitigated - San Diego County, Annual

Liberty Bell Plaza Mitigated

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	4.00	Acre	4.00	174,240.00	0
Fast Food Restaurant with Drive Thru	4.00	1000sqft	0.50	4,000.00	0
Convenience Market With Gas Pumps	1.30	1000sqft	0.50	1,300.00	0
Strip Mall	27.70	1000sqft	1.00	27,700.00	0
Supermarket	52.00	1000sqft	2.49	52,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2022
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	495.89	CH4 Intensity (lb/MW hr)	0.02	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Liberty Bell Plaza Mitigated - San Diego County, Annual

Project Characteristics - 2022 RPS intensities updated

Land Use - project Acreage is 8.49 acres

Construction Phase - Proposed Construction Dates

Off-road Equipment -

Off-road Equipment - Proposed Equipment

Off-road Equipment - Proposed Equipment

Off-road Equipment - Proposed equipment

Off-road Equipment - Proposed Equipment

Trips and VMT -

Grading -

Architectural Coating - rule 67 paint

Vehicle Trips - Per Traffic Study...

Area Coating - rule 67 paints

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Mitigation Proposed

Area Mitigation - rule 67 paints

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	100.00
tblArchitecturalCoating	EF_Parking	250.00	100.00

Liberty Bell Plaza Mitigated - San Diego County, Annual

tblAreaCoating	Area_EF_Nonresidential_Exterior	250	100
tblAreaCoating	Area_EF_Nonresidential_Interior	250	100
tblAreaCoating	Area_EF_Parking	250	100
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

Liberty Bell Plaza Mitigated - San Diego County, Annual

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	20.00	30.00
tblConstructionPhase	NumDays	230.00	300.00
tblConstructionPhase	NumDays	20.00	240.00
tblLandUse	LotAcreage	0.09	0.50
tblLandUse	LotAcreage	0.03	0.50
tblLandUse	LotAcreage	0.64	1.00
tblLandUse	LotAcreage	1.19	2.49
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.02
tblProjectCharacteristics	CO2IntensityFactor	720.49	495.89
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.004
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00

Liberty Bell Plaza Mitigated - San Diego County, Annual

tblVehicleTrips	DV_TP	30.00	0.00
tblVehicleTrips	PB_TP	65.00	22.00
tblVehicleTrips	PB_TP	50.00	22.00
tblVehicleTrips	PB_TP	15.00	22.00
tblVehicleTrips	PB_TP	36.00	22.00
tblVehicleTrips	PR_TP	14.00	78.00
tblVehicleTrips	PR_TP	29.00	78.00
tblVehicleTrips	PR_TP	45.00	78.00
tblVehicleTrips	PR_TP	34.00	78.00
tblVehicleTrips	ST_TR	1,448.33	120.00
tblVehicleTrips	ST_TR	722.03	120.00
tblVehicleTrips	ST_TR	42.04	120.00
tblVehicleTrips	ST_TR	177.59	120.00
tblVehicleTrips	SU_TR	1,182.08	120.00
tblVehicleTrips	SU_TR	542.72	120.00
tblVehicleTrips	SU_TR	20.43	120.00
tblVehicleTrips	SU_TR	166.44	120.00
tblVehicleTrips	WD_TR	845.60	120.00
tblVehicleTrips	WD_TR	496.12	120.00
tblVehicleTrips	WD_TR	44.32	120.00
tblVehicleTrips	WD_TR	102.24	120.00

2.0 Emissions Summary

Liberty Bell Plaza Mitigated - San Diego County, Annual

2.1 Overall Construction**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2485	1.8574	1.5434	3.2000e-003	0.2618	0.0910	0.3528	0.1199	0.0848	0.2046	0.0000	285.2120	285.2120	0.0568	0.0000	286.6310
2021	0.6826	2.5430	2.5789	5.9100e-003	0.1902	0.1157	0.3059	0.0512	0.1094	0.1605	0.0000	528.1851	528.1851	0.0745	0.0000	530.0486
Maximum	0.6826	2.5430	2.5789	5.9100e-003	0.2618	0.1157	0.3528	0.1199	0.1094	0.2046	0.0000	528.1851	528.1851	0.0745	0.0000	530.0486

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1055	0.3599	1.6311	3.2000e-003	0.2618	1.8300e-003	0.2637	0.1199	1.7600e-003	0.1216	0.0000	285.2118	285.2118	0.0568	0.0000	286.6308
2021	0.4923	0.7507	2.6761	5.9100e-003	0.1902	2.7400e-003	0.1929	0.0512	2.6100e-003	0.0538	0.0000	528.1848	528.1848	0.0745	0.0000	530.0483
Maximum	0.4923	0.7507	2.6761	5.9100e-003	0.2618	2.7400e-003	0.2637	0.1199	2.6100e-003	0.1216	0.0000	528.1848	528.1848	0.0745	0.0000	530.0483

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	35.80	74.76	-4.48	0.00	0.00	97.79	30.68	0.00	97.75	51.97	0.00	0.00	0.00	0.00	0.00	0.00

Liberty Bell Plaza Mitigated - San Diego County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
7	5-5-2020	8-4-2020	0.6966	0.0501
8	8-5-2020	11-4-2020	0.7630	0.2005
9	11-5-2020	2-4-2021	0.9875	0.3563
10	2-5-2021	5-4-2021	0.9491	0.3656
11	5-5-2021	8-4-2021	0.9784	0.3752
12	8-5-2021	9-30-2021	0.6062	0.2325
		Highest	0.9875	0.3752

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3851	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.7000e-003
Energy	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003	0.0000	658.7597	658.7597	0.0242	6.4500e-003	661.2868
Mobile	2.5773	11.0072	27.9460	0.0930	8.0737	0.0791	8.1528	2.1620	0.0738	2.2358	0.0000	8,584.5097	8,584.5097	0.4671	0.0000	8,596.1863
Waste						0.0000	0.0000		0.0000	0.0000	75.5857	0.0000	75.5857	4.4670	0.0000	187.2604
Water						0.0000	0.0000		0.0000	0.0000	3.1003	32.6004	35.7006	0.3197	7.7800e-003	46.0131
Total	2.9736	11.1086	28.0320	0.0936	8.0737	0.0868	8.1605	2.1620	0.0815	2.2435	78.6860	9,275.8714	9,354.5574	5.2780	0.0142	9,490.7483

Liberty Bell Plaza Mitigated - San Diego County, Annual

2.2 Overall Operational**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3851	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.7000e-003
Energy	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003	0.0000	658.7597	658.7597	0.0242	6.4500e-003	661.2868
Mobile	2.5773	11.0072	27.9460	0.0930	8.0737	0.0791	8.1528	2.1620	0.0738	2.2358	0.0000	8,584.5097	8,584.5097	0.4671	0.0000	8,596.1863
Waste						0.0000	0.0000		0.0000	0.0000	56.6893	0.0000	56.6893	3.3502	0.0000	140.4453
Water						0.0000	0.0000		0.0000	0.0000	2.4802	26.0803	28.5605	0.2558	6.2300e-003	36.8105
Total	2.9736	11.1086	28.0320	0.0936	8.0737	0.0868	8.1605	2.1620	0.0815	2.2435	59.1695	9,269.3513	9,328.5208	4.0973	0.0127	9,434.7306

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	24.80	0.07	0.28	22.37	10.89	0.59

3.0 Construction Detail**Construction Phase**

Liberty Bell Plaza Mitigated - San Diego County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/1/2020	6/12/2020	5	10	
2	Grading	Grading	6/13/2020	7/24/2020	5	30	
3	Paving	Paving	7/25/2020	9/4/2020	5	30	
4	Building Construction	Building Construction	9/5/2020	10/29/2021	5	300	
5	Architectural Coating	Architectural Coating	11/30/2020	10/29/2021	5	240	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 15

Acres of Paving: 4

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 127,500; Non-Residential Outdoor: 42,500; Striped Parking Area: 10,454
(Architectural Coating – sqft)

OffRoad Equipment

Liberty Bell Plaza Mitigated - San Diego County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

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	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	101.00	42.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Liberty Bell Plaza Mitigated - San Diego County, Annual

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

3.2 Site Preparation - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0204	0.2121	0.1076	1.9000e-004		0.0110	0.0110		0.0101	0.0101	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	0.0204	0.2121	0.1076	1.9000e-004	0.0903	0.0110	0.1013	0.0497	0.0101	0.0598	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.2 Site Preparation - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.7000e-004	3.4900e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0045	1.0045	3.0000e-005	0.0000	1.0053
Total	4.7000e-004	3.7000e-004	3.4900e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0045	1.0045	3.0000e-005	0.0000	1.0053

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.3300e-003	0.0101	0.1043	1.9000e-004		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505
Total	2.3300e-003	0.0101	0.1043	1.9000e-004	0.0903	5.0000e-005	0.0904	0.0497	5.0000e-005	0.0497	0.0000	16.7153	16.7153	5.4100e-003	0.0000	16.8505

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.2 Site Preparation - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.7000e-004	3.4900e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0045	1.0045	3.0000e-005	0.0000	1.0053
Total	4.7000e-004	3.7000e-004	3.4900e-003	1.0000e-005	1.1200e-003	1.0000e-005	1.1300e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	1.0045	1.0045	3.0000e-005	0.0000	1.0053

3.3 Grading - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0364	0.3958	0.2408	4.4000e-004		0.0191	0.0191		0.0176	0.0176	0.0000	39.0881	39.0881	0.0126	0.0000	39.4042
Total	0.0364	0.3958	0.2408	4.4000e-004	0.0983	0.0191	0.1174	0.0505	0.0176	0.0681	0.0000	39.0881	39.0881	0.0126	0.0000	39.4042

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.3 Grading - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	9.1000e-004	8.7200e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8200e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.5114	2.5114	7.0000e-005	0.0000	2.5132
Total	1.1700e-003	9.1000e-004	8.7200e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8200e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.5114	2.5114	7.0000e-005	0.0000	2.5132

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.4500e-003	0.0236	0.2663	4.4000e-004		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	39.0881	39.0881	0.0126	0.0000	39.4041
Total	5.4500e-003	0.0236	0.2663	4.4000e-004	0.0983	1.1000e-004	0.0984	0.0505	1.1000e-004	0.0506	0.0000	39.0881	39.0881	0.0126	0.0000	39.4041

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.3 Grading - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	9.1000e-004	8.7200e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8200e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.5114	2.5114	7.0000e-005	0.0000	2.5132
Total	1.1700e-003	9.1000e-004	8.7200e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8200e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.5114	2.5114	7.0000e-005	0.0000	2.5132

3.4 Paving - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0204	0.2110	0.2198	3.4000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	30.0423	30.0423	9.7200e-003	0.0000	30.2852
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0256	0.2110	0.2198	3.4000e-004		0.0113	0.0113		0.0104	0.0104	0.0000	30.0423	30.0423	9.7200e-003	0.0000	30.2852

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.4 Paving - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	9.1000e-004	8.7200e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8200e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.5114	2.5114	7.0000e-005	0.0000	2.5132
Total	1.1700e-003	9.1000e-004	8.7200e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8200e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.5114	2.5114	7.0000e-005	0.0000	2.5132

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.2100e-003	0.0182	0.2594	3.4000e-004		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	30.0423	30.0423	9.7200e-003	0.0000	30.2852
Paving	5.2400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	9.4500e-003	0.0182	0.2594	3.4000e-004		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	30.0423	30.0423	9.7200e-003	0.0000	30.2852

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.4 Paving - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	9.1000e-004	8.7200e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8200e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.5114	2.5114	7.0000e-005	0.0000	2.5132
Total	1.1700e-003	9.1000e-004	8.7200e-003	3.0000e-005	2.8100e-003	2.0000e-005	2.8200e-003	7.5000e-004	2.0000e-005	7.6000e-004	0.0000	2.5114	2.5114	7.0000e-005	0.0000	2.5132

3.5 Building Construction - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0890	0.8058	0.7076	1.1300e-003		0.0469	0.0469		0.0441	0.0441	0.0000	97.2762	97.2762	0.0237	0.0000	97.8695
Total	0.0890	0.8058	0.7076	1.1300e-003		0.0469	0.0469		0.0441	0.0441	0.0000	97.2762	97.2762	0.0237	0.0000	97.8695

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.5 Building Construction - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.3300e-003	0.1922	0.0510	4.4000e-004	0.0106	8.9000e-004	0.0115	3.0600e-003	8.5000e-004	3.9100e-003	0.0000	42.9729	42.9729	3.4000e-003	0.0000	43.0579
Worker	0.0220	0.0172	0.1645	5.2000e-004	0.0529	3.7000e-004	0.0533	0.0141	3.4000e-004	0.0144	0.0000	47.3472	47.3472	1.3800e-003	0.0000	47.3816
Total	0.0283	0.2094	0.2154	9.6000e-004	0.0635	1.2600e-003	0.0647	0.0171	1.1900e-003	0.0183	0.0000	90.3201	90.3201	4.7800e-003	0.0000	90.4395

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0138	0.0939	0.7333	1.1300e-003		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	97.2761	97.2761	0.0237	0.0000	97.8694
Total	0.0138	0.0939	0.7333	1.1300e-003		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	97.2761	97.2761	0.0237	0.0000	97.8694

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.5 Building Construction - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.3300e-003	0.1922	0.0510	4.4000e-004	0.0106	8.9000e-004	0.0115	3.0600e-003	8.5000e-004	3.9100e-003	0.0000	42.9729	42.9729	3.4000e-003	0.0000	43.0579
Worker	0.0220	0.0172	0.1645	5.2000e-004	0.0529	3.7000e-004	0.0533	0.0141	3.4000e-004	0.0144	0.0000	47.3472	47.3472	1.3800e-003	0.0000	47.3816
Total	0.0283	0.2094	0.2154	9.6000e-004	0.0635	1.2600e-003	0.0647	0.0171	1.1900e-003	0.0183	0.0000	90.3201	90.3201	4.7800e-003	0.0000	90.4395

3.5 Building Construction - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2053	1.8827	1.7901	2.9100e-003		0.1035	0.1035		0.0973	0.0973	0.0000	250.1683	250.1683	0.0604	0.0000	251.6771
Total	0.2053	1.8827	1.7901	2.9100e-003		0.1035	0.1035		0.0973	0.0973	0.0000	250.1683	250.1683	0.0604	0.0000	251.6771

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.5 Building Construction - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0133	0.4472	0.1187	1.1200e-003	0.0272	9.0000e-004	0.0281	7.8600e-003	8.7000e-004	8.7300e-003	0.0000	109.4866	109.4866	8.3800e-003	0.0000	109.6960
Worker	0.0534	0.0403	0.3955	1.3000e-003	0.1360	9.3000e-004	0.1369	0.0361	8.5000e-004	0.0370	0.0000	117.6568	117.6568	3.2700e-003	0.0000	117.7385
Total	0.0667	0.4874	0.5142	2.4200e-003	0.1632	1.8300e-003	0.1651	0.0440	1.7200e-003	0.0457	0.0000	227.1434	227.1434	0.0117	0.0000	227.4345

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0354	0.2414	1.8857	2.9100e-003		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	250.1680	250.1680	0.0604	0.0000	251.6768
Total	0.0354	0.2414	1.8857	2.9100e-003		6.6000e-004	6.6000e-004		6.6000e-004	6.6000e-004	0.0000	250.1680	250.1680	0.0604	0.0000	251.6768

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.5 Building Construction - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0133	0.4472	0.1187	1.1200e-003	0.0272	9.0000e-004	0.0281	7.8600e-003	8.7000e-004	8.7300e-003	0.0000	109.4866	109.4866	8.3800e-003	0.0000	109.6960
Worker	0.0534	0.0403	0.3955	1.3000e-003	0.1360	9.3000e-004	0.1369	0.0361	8.5000e-004	0.0370	0.0000	117.6568	117.6568	3.2700e-003	0.0000	117.7385
Total	0.0667	0.4874	0.5142	2.4200e-003	0.1632	1.8300e-003	0.1651	0.0440	1.7200e-003	0.0457	0.0000	227.1434	227.1434	0.0117	0.0000	227.4345

3.6 Architectural Coating - 2020**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9100e-003	0.0202	0.0220	4.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	3.0639	3.0639	2.4000e-004	0.0000	3.0698
Total	0.0447	0.0202	0.0220	4.0000e-005		1.3300e-003	1.3300e-003		1.3300e-003	1.3300e-003	0.0000	3.0639	3.0639	2.4000e-004	0.0000	3.0698

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.6 Architectural Coating - 2020**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2400e-003	9.7000e-004	9.3000e-003	3.0000e-005	2.9900e-003	2.0000e-005	3.0100e-003	8.0000e-004	2.0000e-005	8.1000e-004	0.0000	2.6788	2.6788	8.0000e-005	0.0000	2.6807
Total	1.2400e-003	9.7000e-004	9.3000e-003	3.0000e-005	2.9900e-003	2.0000e-005	3.0100e-003	8.0000e-004	2.0000e-005	8.1000e-004	0.0000	2.6788	2.6788	8.0000e-005	0.0000	2.6807

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.6000e-004	1.5500e-003	0.0220	4.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0639	3.0639	2.4000e-004	0.0000	3.0698
Total	0.0422	1.5500e-003	0.0220	4.0000e-005		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0639	3.0639	2.4000e-004	0.0000	3.0698

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.6 Architectural Coating - 2020**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2400e-003	9.7000e-004	9.3000e-003	3.0000e-005	2.9900e-003	2.0000e-005	3.0100e-003	8.0000e-004	2.0000e-005	8.1000e-004	0.0000	2.6788	2.6788	8.0000e-005	0.0000	2.6807
Total	1.2400e-003	9.7000e-004	9.3000e-003	3.0000e-005	2.9900e-003	2.0000e-005	3.0100e-003	8.0000e-004	2.0000e-005	8.1000e-004	0.0000	2.6788	2.6788	8.0000e-005	0.0000	2.6807

3.6 Architectural Coating - 2021**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0236	0.1649	0.1963	3.2000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	27.5751	27.5751	1.8900e-003	0.0000	27.6225
Total	0.4000	0.1649	0.1963	3.2000e-004		0.0102	0.0102		0.0102	0.0102	0.0000	27.5751	27.5751	1.8900e-003	0.0000	27.6225

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.6 Architectural Coating - 2021**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0106	7.9700e-003	0.0783	2.6000e-004	0.0269	1.8000e-004	0.0271	7.1600e-003	1.7000e-004	7.3200e-003	0.0000	23.2984	23.2984	6.5000e-004	0.0000	23.3146
Total	0.0106	7.9700e-003	0.0783	2.6000e-004	0.0269	1.8000e-004	0.0271	7.1600e-003	1.7000e-004	7.3200e-003	0.0000	23.2984	23.2984	6.5000e-004	0.0000	23.3146

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3764					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2100e-003	0.0139	0.1979	3.2000e-004		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	27.5751	27.5751	1.8900e-003	0.0000	27.6224
Total	0.3796	0.0139	0.1979	3.2000e-004		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	27.5751	27.5751	1.8900e-003	0.0000	27.6224

Liberty Bell Plaza Mitigated - San Diego County, Annual

3.6 Architectural Coating - 2021**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0106	7.9700e-003	0.0783	2.6000e-004	0.0269	1.8000e-004	0.0271	7.1600e-003	1.7000e-004	7.3200e-003	0.0000	23.2984	23.2984	6.5000e-004	0.0000	23.3146
Total	0.0106	7.9700e-003	0.0783	2.6000e-004	0.0269	1.8000e-004	0.0271	7.1600e-003	1.7000e-004	7.3200e-003	0.0000	23.2984	23.2984	6.5000e-004	0.0000	23.3146

4.0 Operational Detail - Mobile**4.1 Mitigation Measures Mobile**

Liberty Bell Plaza Mitigated - San Diego County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.5773	11.0072	27.9460	0.0930	8.0737	0.0791	8.1528	2.1620	0.0738	2.2358	0.0000	8,584.5097	8,584.5097	0.4671	0.0000	8,596.1863
Unmitigated	2.5773	11.0072	27.9460	0.0930	8.0737	0.0791	8.1528	2.1620	0.0738	2.2358	0.0000	8,584.5097	8,584.5097	0.4671	0.0000	8,596.1863

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	156.00	156.00	156.00	296,443	296,443
Fast Food Restaurant with Drive Thru	480.00	480.00	480.00	927,588	927,588
Parking Lot	0.00	0.00	0.00		
Strip Mall	3,324.00	3,324.00	3,324.00	7,524,335	7,524,335
Supermarket	6,240.00	6,240.00	6,240.00	12,675,711	12,675,711
Total	10,200.00	10,200.00	10,200.00	21,424,077	21,424,077

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Convenience Market With Gas	14.70	6.60	6.60	0.80	80.20	19.00	78	0	22
Fast Food Restaurant with Drive	14.70	6.60	6.60	2.20	78.80	19.00	78	0	22
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Strip Mall	14.70	6.60	6.60	16.60	64.40	19.00	78	0	22
Supermarket	14.70	6.60	6.60	6.50	74.50	19.00	78	0	22

Liberty Bell Plaza Mitigated - San Diego County, Annual

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Fast Food Restaurant with Drive Thru	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Parking Lot	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Strip Mall	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122
Supermarket	0.598645	0.040929	0.181073	0.106149	0.015683	0.005479	0.016317	0.023976	0.001926	0.001932	0.006016	0.000753	0.001122

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	548.3804	548.3804	0.0221	4.4200e-003	550.2515
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	548.3804	548.3804	0.0221	4.4200e-003	550.2515
NaturalGas Mitigated	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003	0.0000	110.3793	110.3793	2.1200e-003	2.0200e-003	111.0352
NaturalGas Unmitigated	0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003	0.0000	110.3793	110.3793	2.1200e-003	2.0200e-003	111.0352

Liberty Bell Plaza Mitigated - San Diego County, Annual

5.2 Energy by Land Use - NaturalGas**Unmitigated**

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Convenience Market With Gas Pumps	2899	2.0000e-005	1.4000e-004	1.2000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1547	0.1547	0.0000	0.0000	0.1556
Fast Food Restaurant with Drive Thru	697520	3.7600e-003	0.0342	0.0287	2.1000e-004		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	37.2223	37.2223	7.1000e-004	6.8000e-004	37.4435
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	61771	3.3000e-004	3.0300e-003	2.5400e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2963	3.2963	6.0000e-005	6.0000e-005	3.3159
Supermarket	1.30624e+006	7.0400e-003	0.0640	0.0538	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	69.7059	69.7059	1.3400e-003	1.2800e-003	70.1202
Total		0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003	0.0000	110.3793	110.3793	2.1100e-003	2.0200e-003	111.0352

Liberty Bell Plaza Mitigated - San Diego County, Annual

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	tons/yr										MT/yr					
Convenience Market With Gas Pumps	2899	2.0000e-005	1.4000e-004	1.2000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1547	0.1547	0.0000	0.0000	0.1556
Fast Food Restaurant with Drive Thru	697520	3.7600e-003	0.0342	0.0287	2.1000e-004		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	37.2223	37.2223	7.1000e-004	6.8000e-004	37.4435
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	61771	3.3000e-004	3.0300e-003	2.5400e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	3.2963	3.2963	6.0000e-005	6.0000e-005	3.3159
Supermarket	1.30624e+006	7.0400e-003	0.0640	0.0538	3.8000e-004		4.8700e-003	4.8700e-003		4.8700e-003	4.8700e-003	0.0000	69.7059	69.7059	1.3400e-003	1.2800e-003	70.1202
Total		0.0112	0.1014	0.0852	6.1000e-004		7.7100e-003	7.7100e-003		7.7100e-003	7.7100e-003	0.0000	110.3793	110.3793	2.1100e-003	2.0200e-003	111.0352

Liberty Bell Plaza Mitigated - San Diego County, Annual

5.3 Energy by Land Use - Electricity**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	16328	3.6727	1.5000e- 004	3.0000e- 005	3.6852
Fast Food Restaurant with Drive Thru	154800	34.8195	1.4000e- 003	2.8000e- 004	34.9383
Parking Lot	60984	13.7173	5.5000e- 004	1.1000e- 004	13.7641
Strip Mall	347912	78.2565	3.1600e- 003	6.3000e- 004	78.5235
Supermarket	1.85796e +006	417.9145	0.0169	3.3700e- 003	419.3405
Total		548.3804	0.0221	4.4200e- 003	550.2515

Liberty Bell Plaza Mitigated - San Diego County, Annual

5.3 Energy by Land Use - Electricity**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	16328	3.6727	1.5000e-004	3.0000e-005	3.6852
Fast Food Restaurant with Drive Thru	154800	34.8195	1.4000e-003	2.8000e-004	34.9383
Parking Lot	60984	13.7173	5.5000e-004	1.1000e-004	13.7641
Strip Mall	347912	78.2565	3.1600e-003	6.3000e-004	78.5235
Supermarket	1.85796e+006	417.9145	0.0169	3.3700e-003	419.3405
Total		548.3804	0.0221	4.4200e-003	550.2515

6.0 Area Detail**6.1 Mitigation Measures Area**

Liberty Bell Plaza Mitigated - San Diego County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3851	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.7000e-003
Unmitigated	0.3851	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.7000e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3432					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.7000e-003
Total	0.3851	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.7000e-003

Liberty Bell Plaza Mitigated - San Diego County, Annual

6.2 Area by SubCategory**Mitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0418					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3432					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-005	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.7000e-003
Total	0.3851	1.0000e-005	8.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.5900e-003	1.5900e-003	0.0000	0.0000	1.7000e-003

7.0 Water Detail**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy

Liberty Bell Plaza Mitigated - San Diego County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	28.5605	0.2558	6.2300e-003	36.8105
Unmitigated	35.7006	0.3197	7.7800e-003	46.0131

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas Pumps	0.0962943 / 0.0590191	0.4601	3.1600e-003	8.0000e-005	0.5621
Fast Food Restaurant with Drive Thru	1.21413 / 0.077498	4.1349	0.0397	9.6000e-004	5.4151
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	2.05181 / 1.25756	9.8030	0.0672	1.6500e-003	11.9761
Supermarket	6.40995 / 0.198246	21.3027	0.2097	5.0900e-003	28.0598
Total		35.7006	0.3198	7.7800e-003	46.0131

Liberty Bell Plaza Mitigated - San Diego County, Annual

7.2 Water by Land Use**Mitigated**

	Indoor/Out door Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas Pumps	0.0770354 / 0.0472153	0.3681	2.5200e- 003	6.0000e- 005	0.4497
Fast Food Restaurant with Drive Thru	0.971308 / 0.0619984	3.3079	0.0318	7.7000e- 004	4.3321
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	1.64145 / 1.00605	7.8424	0.0538	1.3200e- 003	9.5809
Supermarket	5.12796 / 0.158597	17.0422	0.1677	4.0700e- 003	22.4479
Total		28.5605	0.2558	6.2200e- 003	36.8105

8.0 Waste Detail**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

Liberty Bell Plaza Mitigated - San Diego County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	56.6893	3.3502	0.0000	140.4453
Unmitigated	75.5857	4.4670	0.0000	187.2604

8.2 Waste by Land Use**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market With Gas Pumps	3.91	0.7937	0.0469	0.0000	1.9663
Fast Food Restaurant with Drive Thru	46.08	9.3538	0.5528	0.0000	23.1737
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	29.09	5.9050	0.3490	0.0000	14.6294
Supermarket	293.28	59.5332	3.5183	0.0000	147.4910
Total		75.5857	4.4670	0.0000	187.2604

Liberty Bell Plaza Mitigated - San Diego County, Annual

8.2 Waste by Land Use**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market With Gas Pumps	2.9325	0.5953	0.0352	0.0000	1.4748
Fast Food Restaurant with Drive Thru	34.56	7.0154	0.4146	0.0000	17.3803
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	21.8175	4.4288	0.2617	0.0000	10.9721
Supermarket	219.96	44.6499	2.6387	0.0000	110.6182
Total		56.6893	3.3502	0.0000	140.4453

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment**Fire Pumps and Emergency Generators**

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

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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Liberty Bell Plaza Mitigated - San Diego County, Annual

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

ATTACHMENT B

AERMOD for PM₁₀ Exhaust During Construction (Unmitigated and Mitigated)

1 AERMOD PRIME - (DATED 18081)

AERMODPrMSPx VERSION
(C) COPYRIGHT 1998-2017, Trinity Consultants

Run Began on 1/21/2020 at 10:07:49

** BREEZE AERMOD
** Trinity Consultants
** VERSION 8.1

CO STARTING
CO TITLEONE PM10 Exhaust Unmitigated
CO MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
CO RUNORNOT RUN
CO AVERTIME ANNUAL
CO POLLUTID PM10
CO FLAGPOLE 1.5
CO FINISHED

SO STARTING
SO ELEVUNIT METERS
SO LOCATION AYI18002 AREAPOLY 496883.9 3674895.2 394.28
SO SRCPARAM AYI18002 1.68E-07 5 12 1
SO AREAVERT AYI18002 496883.9 3674895.2 496880.6 3674655.5 496959.9 3674656.4 496959.4 3674581.4
SO AREAVERT AYI18002 497013.7 3674590.3 497014.7 3674530.4 497025 3674533.7 497024.1 3674705
SO AREAVERT AYI18002 496993 3674704.5 496996.3 3674904.2 496995.8 3674902.3 496883.9 3674895.2
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE ELEVUNIT METERS
RE GRIDCART AYI18001 STA
** GRDESCR contour receptors
RE GRIDCART AYI18001 XYINC 496167.9 21 68.3 3675465.6 21 -68.3
RE GRIDCART AYI18001 ELEV 1 387.8 388.2 388.8 389.4 390.1 390.5 391.7 394.6 396.4 397.6 399.6
RE GRIDCART AYI18001 ELEV 1 401.1 403.7 409.3 409.6 414.8 425.2 442.7 465.1 482.1 483.6
RE GRIDCART AYI18001 ELEV 2 388.0 388.4 389.0 389.1 389.7 390.4 391.5 393.6 395.2 396.2 397.6
RE GRIDCART AYI18001 ELEV 2 399.4 401.4 402.6 408.8 414.5 420.5 441.8 461.4 470.7 482.7
RE GRIDCART AYI18001 ELEV 3 389.4 389.2 389.7 389.8 389.7 390.2 391.2 393.2 396.3 396.9 396.7
RE GRIDCART AYI18001 ELEV 3 396.8 400.1 404.3 409.8 413.9 418.6 429.1 442.9 458.6 470.7
RE GRIDCART AYI18001 ELEV 4 391.4 391.0 390.6 390.3 390.1 390.9 390.7 392.3 395.3 396.9 396.8
RE GRIDCART AYI18001 ELEV 4 396.2 398.8 403.2 408.7 416.7 415.0 416.6 421.6 435.0 447.8
RE GRIDCART AYI18001 ELEV 5 393.0 392.5 391.7 391.1 390.6 391.0 391.1 391.4 393.0 394.3 395.0
RE GRIDCART AYI18001 ELEV 5 395.4 396.8 399.9 402.6 406.7 407.3 408.5 410.7 412.8 420.6
RE GRIDCART AYI18001 ELEV 6 395.2 393.8 392.9 392.1 391.5 391.3 391.7 391.8 391.8 392.1 392.9
RE GRIDCART AYI18001 ELEV 6 394.1 395.0 396.0 397.5 400.1 402.4 402.9 403.5 403.2 404.9
RE GRIDCART AYI18001 ELEV 7 396.5 395.1 394.0 393.1 392.4 392.2 392.4 392.6 392.7 392.9 393.1
RE GRIDCART AYI18001 ELEV 7 393.3 394.0 394.6 395.2 396.4 398.8 400.2 401.2 401.6 402.3
RE GRIDCART AYI18001 ELEV 8 397.3 395.8 395.0 394.2 393.4 393.2 393.3 393.5 393.5 393.6 393.6
RE GRIDCART AYI18001 ELEV 8 393.8 394.5 395.2 396.1 396.8 396.6 397.8 399.2 400.2 401.4
RE GRIDCART AYI18001 ELEV 9 397.3 396.5 396.2 395.3 394.4 394.1 394.3 394.3 394.3 394.2 394.1
RE GRIDCART AYI18001 ELEV 9 394.3 395.0 395.9 396.7 397.3 397.3 397.4 397.8 398.9 399.4
RE GRIDCART AYI18001 ELEV 10 403.4 403.1 399.2 396.5 395.5 395.2 395.4 395.3 395.2 394.9 394.7
RE GRIDCART AYI18001 ELEV 10 394.6 395.3 396.4 397.1 397.6 397.8 397.9 398.2 398.5 399.0
RE GRIDCART AYI18001 ELEV 11 410.0 407.0 403.6 399.2 396.6 396.7 396.8 396.3 396.1 395.6 395.3
RE GRIDCART AYI18001 ELEV 11 395.2 395.5 396.8 397.4 397.8 398.1 398.6 398.8 399.1 399.6
RE GRIDCART AYI18001 ELEV 12 421.1 411.7 405.9 402.4 398.6 397.6 397.6 397.4 396.8 396.1 395.9
RE GRIDCART AYI18001 ELEV 12 395.7 395.6 396.9 397.5 398.0 398.7 399.1 399.6 399.9 400.1
RE GRIDCART AYI18001 ELEV 13 417.1 418.3 412.8 406.1 401.1 399.4 399.6 398.5 396.8 396.5 396.5
RE GRIDCART AYI18001 ELEV 13 396.4 396.2 397.0 397.6 398.4 399.2 399.7 400.0 400.4 400.7
RE GRIDCART AYI18001 ELEV 14 425.1 424.6 421.9 409.8 402.7 402.2 402.6 400.8 397.9 397.3 397.4
RE GRIDCART AYI18001 ELEV 14 397.3 397.0 397.0 398.0 398.8 399.5 400.1 400.5 400.8 401.0
RE GRIDCART AYI18001 ELEV 15 435.3 434.1 420.4 411.1 405.7 408.4 407.0 403.7 401.3 399.5 398.8
RE GRIDCART AYI18001 ELEV 15 398.4 398.1 397.9 398.6 399.6 400.5 401.0 401.2 401.4 401.5
RE GRIDCART AYI18001 ELEV 16 440.8 445.4 426.8 412.7 416.3 422.0 415.4 407.5 402.9 401.2 400.3
RE GRIDCART AYI18001 ELEV 16 399.7 399.2 399.6 400.0 400.7 401.1 401.6 401.9 402.0 402.1
RE GRIDCART AYI18001 ELEV 17 453.5 441.5 435.4 420.1 433.9 444.2 426.7 412.6 404.5 402.1 401.1
RE GRIDCART AYI18001 ELEV 17 401.2 401.0 400.9 401.1 401.5 401.9 402.3 402.6 402.6 402.5

RE GRIDCART	AYI18001	ELEV	18	463.6	449.9	436.1	438.9	453.6	453.6	429.9	414.3	407.3	403.0	402.5
RE GRIDCART	AYI18001	ELEV	18	401.9	401.7	401.4	401.9	402.3	402.7	403.2	404.7	404.2	402.9	
RE GRIDCART	AYI18001	ELEV	19	472.0	464.0	446.4	437.1	453.0	457.0	441.7	419.9	412.0	407.3	403.8
RE GRIDCART	AYI18001	ELEV	19	402.5	402.2	402.1	402.2	402.9	406.1	409.3	411.0	410.1	407.0	
RE GRIDCART	AYI18001	ELEV	20	472.6	459.5	448.1	440.7	452.1	453.7	439.2	435.7	424.8	416.7	407.3
RE GRIDCART	AYI18001	ELEV	20	403.4	403.0	402.9	402.5	404.8	413.4	423.4	420.0	424.4	416.3	
RE GRIDCART	AYI18001	ELEV	21	468.9	457.8	467.0	446.9	454.6	455.0	456.9	454.7	442.7	427.0	414.1
RE GRIDCART	AYI18001	ELEV	21	407.5	405.6	404.2	402.9	405.6	415.2	432.4	427.0	432.8	431.5	
RE GRIDCART	AYI18001	HILL	1	502.7	502.7	464.4	464.4	390.1	490.0	490.0	490.0	490.0	492.3	492.3
RE GRIDCART	AYI18001	HILL	1	492.3	492.3	492.3	492.3	492.3	492.3	492.3	490.0	488.8	488.6	
RE GRIDCART	AYI18001	HILL	2	515.5	513.8	502.7	502.7	389.7	490.0	490.0	490.0	490.0	492.3	492.3
RE GRIDCART	AYI18001	HILL	2	492.3	492.3	492.3	492.3	492.3	492.3	492.3	490.0	490.0	484.4	
RE GRIDCART	AYI18001	HILL	3	519.7	519.7	519.7	516.3	513.8	490.0	490.0	490.0	490.0	492.3	492.3
RE GRIDCART	AYI18001	HILL	3	492.3	492.3	492.3	492.3	492.3	528.1	492.3	492.3	492.3	488.6	
RE GRIDCART	AYI18001	HILL	4	519.7	519.7	519.7	519.7	519.7	519.6	513.8	490.0	490.0	490.0	492.3
RE GRIDCART	AYI18001	HILL	4	492.3	492.3	492.3	492.3	492.3	528.1	528.1	550.8	528.1	492.3	
RE GRIDCART	AYI18001	HILL	5	519.7	519.7	519.7	519.7	519.7	519.7	519.7	515.0	490.0	490.0	492.3
RE GRIDCART	AYI18001	HILL	5	492.3	492.3	492.3	528.1	528.1	550.8	550.8	550.8	550.8	550.8	
RE GRIDCART	AYI18001	HILL	6	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	490.0	492.3
RE GRIDCART	AYI18001	HILL	6	492.3	492.3	528.1	528.1	550.8	550.8	550.8	550.8	550.8	550.8	
RE GRIDCART	AYI18001	HILL	7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	492.3
RE GRIDCART	AYI18001	HILL	7	492.3	492.3	528.1	550.8	550.8	550.8	550.8	550.8	550.8	585.1	
RE GRIDCART	AYI18001	HILL	8	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7
RE GRIDCART	AYI18001	HILL	8	492.3	492.3	492.3	550.8	550.8	550.8	550.8	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	9	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7
RE GRIDCART	AYI18001	HILL	9	519.6	492.3	492.3	532.1	550.8	550.8	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	10	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7
RE GRIDCART	AYI18001	HILL	10	519.7	490.0	492.3	532.0	550.8	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	11	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7
RE GRIDCART	AYI18001	HILL	11	519.7	519.7	490.0	531.6	585.2	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	12	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7
RE GRIDCART	AYI18001	HILL	12	519.7	519.7	513.7	585.2	585.2	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	13	519.7	519.7	519.7	519.8	523.5	519.7	519.7	519.7	519.7	519.7	519.7
RE GRIDCART	AYI18001	HILL	13	519.7	519.7	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	14	519.7	519.7	519.7	523.5	523.5	523.5	519.7	519.7	519.7	519.7	519.7
RE GRIDCART	AYI18001	HILL	14	519.7	585.1	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	15	519.7	519.7	519.8	523.5	523.5	523.5	519.7	519.7	519.7	519.7	519.7
RE GRIDCART	AYI18001	HILL	15	519.7	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	16	519.7	519.7	519.8	523.5	523.5	519.7	519.7	523.5	523.5	519.7	519.7
RE GRIDCART	AYI18001	HILL	16	519.7	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	17	519.7	519.7	519.7	523.5	519.7	519.7	519.7	523.5	523.5	523.5	519.7
RE GRIDCART	AYI18001	HILL	17	585.1	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	18	519.7	519.7	523.5	519.7	519.7	519.7	523.5	523.5	523.5	523.5	523.5
RE GRIDCART	AYI18001	HILL	18	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	19	519.7	519.7	519.7	523.5	519.7	519.7	519.7	523.5	523.5	523.5	523.5
RE GRIDCART	AYI18001	HILL	19	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	20	519.7	519.7	523.5	523.5	519.7	519.7	519.7	519.7	519.7	523.3	523.5
RE GRIDCART	AYI18001	HILL	20	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	
RE GRIDCART	AYI18001	HILL	21	519.7	523.5	519.7	523.5	519.7	519.7	519.7	513.7	519.7	519.7	523.5
RE GRIDCART	AYI18001	HILL	21	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	585.2	

RE GRIDCART AYI18001 END

RE DISCCART 497046.6 3674641.9 396.94 585.19 1.5

** SENSITIV

** RCPDESCR R1

RE DISCCART 497042.4 3674551.4 397.01 585.19 1.5

** SENSITIV

** RCPDESCR R2

RE DISCCART 496681.6 3674783.7 396.18 519.68 1.5

** SENSITIV

** RCPDESCR R3

RE FINISHED

ME STARTING

ME SURFFILE "C:\Users\XEONRT\AMAZON~1\LDN\18-63L~1\Aermod\ESCOND~1\ESCONDIDO-2012-V15181.SFC"

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** PROFFILE "C:\Users\XEONRT\AMAZON~1\LDN\18-63L~1\Aermod\ESCOND~1\ESCONDIDO-2012-V15181.PFL"

ME SURFDATA 53120 2012

ME UAIRDATA 3190 2012

ME SITEDATA 00001002 2012
ME PROFBASE 205 METERS
ME STARTEND 2012 1 1 1 2012 12 31 24
ME FINISHED

OU STARTING
OU FILEFORM FIX
OU PLOTFILE ANNUAL ALL ALL`ANNUAL.plt 10000
OU FINISHED

** It is recommended that the user not edit any data below this line
** *****

** TERRFILE C:\USERS\XEONRT\AMAZON~1\LDN\18-63L~1\AERMOD\NEDU53~1\NEDU53643667.TIF 2 0 WGS84 11 0 495726.0
3673542.0 495727.5 3676944.5 498716.6 3676943.6 498716.2 3673541.1
** AMPTYPE NED
** AMPDATUM 2
** AMPZONE 11
** AMPHEMISPHERE N

** PROJECTIONWKT
PROJCS["UTM_6326_Zone11",GEOGCS["WGS_84",DATUM["World_Geodetic_System_1984",SPHEROID["WGS_1984",6378137,298.2572235
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se_Mercator"],PARAMETER["Zone",11],UNIT["Meter",1,AUTHORITY["EPSG","9001"]]]]
** PROJECTION UTM
** DATUM WGE
** UNITS METER
** ZONE 11
** HEMISPHERE N
** ORIGINLON 0
** ORIGINLAT 0
** PARALLEL1 0
** PARALLEL2 0
** AZIMUTH 0
** SCALEFACT 0
** FALSEEAST 0
** FALSENORTH 0

** POSTFMT UNFORM
** TEMPLATE REGULATORY,0
** AERMODEXE AERMOD_BREEZE_18081_64.EXE
** AERMAPEXE AERMAP_EPA_18081_64.EXE

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
RE W216 120 RECAT: FLAG Input Inconsistent With Option: Defaults Used AYI18001
ME W186 142 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.40
MX W403 142 PFLCNV: Turbulence data is being used w/o ADJ_U* option SigA Data
MX W402 142 PFLCNV: Turbulence data being used with ADJ_U* w/o DFAULT Option

*** SETUP Finishes Successfully ***

```

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
10:07:49

PAGE 1
*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** MODEL SETUP OPTIONS SUMMARY ***
-----

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:
1. Stack-tip Downwash.
2. Model Accounts for ELEvated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.

**Other Options Specified:
CCVR_Sub - Meteorological data includes CCVR substitutions
TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM10

**Model Calculates ANNUAL Averages Only

**This Run Includes: 1 Source(s); 1 Source Group(s); and 444 Receptor(s)

with: 0 POINT(s), including
      0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 1 AREA type source(s)
and: 0 LINE source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 15181

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                         m for Missing Hours
                                                         b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 205.00 ; Decay Coef. = 0.000 ; Rot. Angle
= 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor =
0.10000E+07
Output Units = MICROGRAMS/M**3

```

**Approximate Storage Requirements of Model = 3.6 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

▲ *** AERMOD - VERSION 18081 *** PM10 Exhaust Unmitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
10:07:49

PAGE 2

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X Y (METERS) (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
--------------	--------------------------	---	--	---------------------------	-------------------------------	---------------------	-------------------------	-----------------	------------------------------------

AYI18002 0 0.16800E-06 496883.9 3674895.2 394.3 5.00 12 1.00 NO
▲ *** AERMOD - VERSION 18081 *** PM10 Exhaust Unmitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
10:07:49

PAGE 3

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
-------------	------------

ALL AYI18002 ,
▲ *** AERMOD - VERSION 18081 *** PM10 Exhaust Unmitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
10:07:49

PAGE 4

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

496167.9, 496236.2, 496304.5, 496372.8, 496441.1, 496509.4, 496577.7, 496646.0, 496714.3, 496782.6,
496850.9, 496919.2, 496987.5, 497055.8, 497124.1, 497192.4, 497260.7, 497329.0, 497397.3, 497465.6,
497533.9,

*** Y-COORDINATES OF GRID ***
(METERS)

3675465.6, 3675397.3, 3675329.0, 3675260.7, 3675192.4, 3675124.1, 3675055.8, 3674987.5, 3674919.2, 3674850.9,
3674782.6, 3674714.3, 3674646.0, 3674577.7, 3674509.4, 3674441.1, 3674372.8, 3674304.5, 3674236.2, 3674167.9,
3674099.6,

▲ *** AERMOD - VERSION 18081 *** PM10 Exhaust Unmitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***

10:07:49

PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)					X-COORD (METERS)			
496646.00	496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70	

3674099.60	468.90	457.80	467.00	446.90	454.60	455.00	456.90
454.70	442.70						
3674167.90	472.60	459.50	448.10	440.70	452.10	453.70	439.20
435.70	424.80						
3674236.20	472.00	464.00	446.40	437.10	453.00	457.00	441.70
419.90	412.00						
3674304.50	463.60	449.90	436.10	438.90	453.60	453.60	429.90
414.30	407.30						
3674372.80	453.50	441.50	435.40	420.10	433.90	444.20	426.70
412.60	404.50						
3674441.10	440.80	445.40	426.80	412.70	416.30	422.00	415.40
407.50	402.90						
3674509.40	435.30	434.10	420.40	411.10	405.70	408.40	407.00
403.70	401.30						
3674577.70	425.10	424.60	421.90	409.80	402.70	402.20	402.60
400.80	397.90						
3674646.00	417.10	418.30	412.80	406.10	401.10	399.40	399.60
398.50	396.80						
3674714.30	421.10	411.70	405.90	402.40	398.60	397.60	397.60
397.40	396.80						
3674782.60	410.00	407.00	403.60	399.20	396.60	396.70	396.80
396.30	396.10						
3674850.90	403.40	403.10	399.20	396.50	395.50	395.20	395.40
395.30	395.20						
3674919.20	397.30	396.50	396.20	395.30	394.40	394.10	394.30
394.30	394.30						
3674987.50	397.30	395.80	395.00	394.20	393.40	393.20	393.30
393.50	393.50						
3675055.80	396.50	395.10	394.00	393.10	392.40	392.20	392.40
392.60	392.70						
3675124.10	395.20	393.80	392.90	392.10	391.50	391.30	391.70
391.80	391.80						
3675192.40	393.00	392.50	391.70	391.10	390.60	391.00	391.10
391.40	393.00						
3675260.70	391.40	391.00	390.60	390.30	390.10	390.90	390.70
392.30	395.30						
3675329.00	389.40	389.20	389.70	389.80	389.70	390.20	391.20
393.20	396.30						
3675397.30	388.00	388.40	389.00	389.10	389.70	390.40	391.50
393.60	395.20						
3675465.60	387.80	388.20	388.80	389.40	390.10	390.50	391.70
394.60	396.40						

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated
01/21/20

*** AERMET - VERSION 15181 *** ***
10:07:49

PAGE 6

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)					X-COORD (METERS)			
497260.70	497329.00	496782.60	496850.90	496919.20	496987.50	497055.80	497124.10	497192.40

3674099.60		427.00	414.10	407.50	405.60	404.20	402.90	405.60
415.20	432.40							
3674167.90		416.70	407.30	403.40	403.00	402.90	402.50	404.80
413.40	423.40							
3674236.20		407.30	403.80	402.50	402.20	402.10	402.20	402.90
406.10	409.30							
3674304.50		403.00	402.50	401.90	401.70	401.40	401.90	402.30
402.70	403.20							
3674372.80		402.10	401.10	401.20	401.00	400.90	401.10	401.50
401.90	402.30							
3674441.10		401.20	400.30	399.70	399.20	399.60	400.00	400.70
401.10	401.60							
3674509.40		399.50	398.80	398.40	398.10	397.90	398.60	399.60
400.50	401.00							
3674577.70		397.30	397.40	397.30	397.00	397.00	398.00	398.80
399.50	400.10							
3674646.00		396.50	396.50	396.40	396.20	397.00	397.60	398.40
399.20	399.70							
3674714.30		396.10	395.90	395.70	395.60	396.90	397.50	398.00
398.70	399.10							
3674782.60		395.60	395.30	395.20	395.50	396.80	397.40	397.80
398.10	398.60							
3674850.90		394.90	394.70	394.60	395.30	396.40	397.10	397.60
397.80	397.90							
3674919.20		394.20	394.10	394.30	395.00	395.90	396.70	397.30
397.30	397.40							
3674987.50		393.60	393.60	393.80	394.50	395.20	396.10	396.80
396.60	397.80							
3675055.80		392.90	393.10	393.30	394.00	394.60	395.20	396.40
398.80	400.20							
3675124.10		392.10	392.90	394.10	395.00	396.00	397.50	400.10
402.40	402.90							
3675192.40		394.30	395.00	395.40	396.80	399.90	402.60	406.70
407.30	408.50							
3675260.70		396.90	396.80	396.20	398.80	403.20	408.70	416.70
415.00	416.60							
3675329.00		396.90	396.70	396.80	400.10	404.30	409.80	413.90
418.60	429.10							
3675397.30		396.20	397.60	399.40	401.40	402.60	408.80	414.50
420.50	441.80							
3675465.60		397.60	399.60	401.10	403.70	409.30	409.60	414.80
425.20	442.70							

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
01/21/20

*** AERMET - VERSION 15181 *** ***
10:07:49 ***

PAGE 7

*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)				X-COORD (METERS)
	497397.30	497465.60	497533.90	

3674099.60		427.00	432.80	431.50
3674167.90		420.00	424.40	416.30
3674236.20		411.00	410.10	407.00
3674304.50		404.70	404.20	402.90

3674372.80		402.60	402.60	402.50
3674441.10		401.90	402.00	402.10
3674509.40		401.20	401.40	401.50
3674577.70		400.50	400.80	401.00
3674646.00		400.00	400.40	400.70
3674714.30		399.60	399.90	400.10
3674782.60		398.80	399.10	399.60
3674850.90		398.20	398.50	399.00
3674919.20		397.80	398.90	399.40
3674987.50		399.20	400.20	401.40
3675055.80		401.20	401.60	402.30
3675124.10		403.50	403.20	404.90
3675192.40		410.70	412.80	420.60
3675260.70		421.60	435.00	447.80
3675329.00		442.90	458.60	470.70
3675397.30		461.40	470.70	482.70
3675465.60		465.10	482.10	483.60

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated
01/21/20

*** AERMET - VERSION 15181 *** ***
10:07:49

PAGE 8

*** MODELOPTS: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)		496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70
496646.00		496714.30						

3674099.60		519.70	523.50	519.70	523.50	519.70	519.70	519.70
513.70		519.70						
3674167.90		519.70	519.70	523.50	523.50	519.70	519.70	519.70
519.70		519.70						
3674236.20		519.70	519.70	519.70	523.50	519.70	519.70	519.70
523.50		523.50						
3674304.50		519.70	519.70	523.50	519.70	519.70	519.70	519.70
523.50		523.50						
3674372.80		519.70	519.70	519.70	523.50	519.70	519.70	519.70
523.50		523.50						
3674441.10		519.70	519.70	519.80	523.50	523.50	519.70	519.70
523.50		523.50						
3674509.40		519.70	519.70	519.80	523.50	523.50	523.50	519.70
519.70		519.70						
3674577.70		519.70	519.70	519.70	523.50	523.50	523.50	519.70
519.70		519.70						
3674646.00		519.70	519.70	519.70	519.80	523.50	519.70	519.70
519.70		519.70						
3674714.30		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3674782.60		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3674850.90		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3674919.20		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3674987.50		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3675055.80		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3675124.10		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3675192.40		519.70	519.70	519.70	519.70	519.70	519.70	519.70
515.00		490.00						

3675260.70	519.70	519.70	519.70	519.70	519.70	519.60	513.80
490.00	490.00						
3675329.00	519.70	519.70	519.70	516.30	513.80	490.00	490.00
490.00	490.00						
3675397.30	515.50	513.80	502.70	502.70	389.70	490.00	490.00
490.00	490.00						
3675465.60	502.70	502.70	464.40	464.40	390.10	490.00	490.00
490.00	490.00						

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
 01/21/20
 *** AERMET - VERSION 15181 *** ***
 10:07:49

PAGE 9

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	496782.60	496850.90	496919.20	X-COORD (METERS) 496987.50	497055.80	497124.10	497192.40
497260.70	497329.00						

3674099.60	519.70	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20						
3674167.90	523.30	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20						
3674236.20	523.50	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20						
3674304.50	523.50	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20						
3674372.80	523.50	519.70	585.10	585.20	585.20	585.20	585.20
585.20	585.20						
3674441.10	519.70	519.70	519.70	585.20	585.20	585.20	585.20
585.20	585.20						
3674509.40	519.70	519.70	519.70	585.20	585.20	585.20	585.20
585.20	585.20						
3674577.70	519.70	519.70	519.70	585.10	585.20	585.20	585.20
585.20	585.20						
3674646.00	519.70	519.70	519.70	519.70	585.20	585.20	585.20
585.20	585.20						
3674714.30	519.70	519.70	519.70	519.70	513.70	585.20	585.20
585.20	585.20						
3674782.60	519.70	519.70	519.70	519.70	490.00	531.60	585.20
585.20	585.20						
3674850.90	519.70	519.70	519.70	490.00	492.30	532.00	550.80
585.20	585.20						
3674919.20	519.70	519.70	519.60	492.30	492.30	532.10	550.80
550.80	585.20						
3674987.50	519.70	519.70	492.30	492.30	492.30	550.80	550.80
550.80	550.80						
3675055.80	519.70	492.30	492.30	492.30	528.10	550.80	550.80
550.80	550.80						
3675124.10	490.00	492.30	492.30	492.30	528.10	528.10	550.80
550.80	550.80						
3675192.40	490.00	492.30	492.30	492.30	492.30	528.10	528.10
550.80	550.80						
3675260.70	490.00	492.30	492.30	492.30	492.30	492.30	492.30
528.10	528.10						
3675329.00	492.30	492.30	492.30	492.30	492.30	492.30	492.30
528.10	492.30						
3675397.30	492.30	492.30	492.30	492.30	492.30	492.30	492.30
492.30	492.30						
3675465.60	492.30	492.30	492.30	492.30	492.30	492.30	492.30
492.30	492.30						

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***

01/21/20
*** AERMET - VERSION 15181 *** ***
10:07:49

PAGE 10
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)				X-COORD (METERS)
	497397.30	497465.60	497533.90	
3674099.60	585.20	585.20	585.20	
3674167.90	585.20	585.20	585.20	
3674236.20	585.20	585.20	585.20	
3674304.50	585.20	585.20	585.20	
3674372.80	585.20	585.20	585.20	
3674441.10	585.20	585.20	585.20	
3674509.40	585.20	585.20	585.20	
3674577.70	585.20	585.20	585.20	
3674646.00	585.20	585.20	585.20	
3674714.30	585.20	585.20	585.20	
3674782.60	585.20	585.20	585.20	
3674850.90	585.20	585.20	585.20	
3674919.20	585.20	585.20	585.20	
3674987.50	585.20	585.20	585.20	
3675055.80	550.80	550.80	585.10	
3675124.10	550.80	550.80	550.80	
3675192.40	550.80	550.80	550.80	
3675260.70	550.80	528.10	492.30	
3675329.00	492.30	492.30	488.60	
3675397.30	490.00	490.00	484.40	
3675465.60	490.00	488.80	488.60	

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
10:07:49

PAGE 11
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

Y-COORD (METERS)				X-COORD (METERS)			
	496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70
496646.00	496714.30						
3674099.60	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674167.90	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674236.20	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674304.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674372.80	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674441.10	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674509.40	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						

1.50	1.50							
3674919.20		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674987.50		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675055.80		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675124.10		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675192.40		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675260.70		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675329.00		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675397.30		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675465.60		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
 01/21/20
 *** AERMET - VERSION 15181 *** ***
 10:07:49

PAGE 13

*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

Y-COORD				X-COORD (METERS)
(METERS)	497397.30	497465.60	497533.90	

3674099.60		1.50	1.50	1.50
3674167.90		1.50	1.50	1.50
3674236.20		1.50	1.50	1.50
3674304.50		1.50	1.50	1.50
3674372.80		1.50	1.50	1.50
3674441.10		1.50	1.50	1.50
3674509.40		1.50	1.50	1.50
3674577.70		1.50	1.50	1.50
3674646.00		1.50	1.50	1.50
3674714.30		1.50	1.50	1.50
3674782.60		1.50	1.50	1.50
3674850.90		1.50	1.50	1.50
3674919.20		1.50	1.50	1.50
3674987.50		1.50	1.50	1.50
3675055.80		1.50	1.50	1.50
3675124.10		1.50	1.50	1.50
3675192.40		1.50	1.50	1.50
3675260.70		1.50	1.50	1.50
3675329.00		1.50	1.50	1.50
3675397.30		1.50	1.50	1.50
3675465.60		1.50	1.50	1.50

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
 01/21/20
 *** AERMET - VERSION 15181 *** ***
 10:07:49

PAGE 14

*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
 (1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

12 01 01	1 09	33.3	0.106	0.323	0.014	36.	83.	-3.2	0.47	1.10	0.30	0.44	44.	10.0	285.4
10.0															
12 01 01	1 10	85.9	0.121	0.634	0.011	106.	101.	-1.8	0.48	1.10	0.23	0.44	232.	10.0	291.4
10.0															
12 01 01	1 11	123.6	0.252	0.982	0.005	273.	303.	-11.5	0.48	1.10	0.21	1.34	242.	10.0	297.5
10.0															
12 01 01	1 12	141.2	0.255	1.253	0.005	496.	309.	-10.4	0.48	1.10	0.20	1.34	249.	10.0	299.8
10.0															
12 01 01	1 13	139.0	0.308	1.399	0.005	700.	410.	-18.6	0.48	1.10	0.20	1.78	244.	10.0	300.4
10.0															
12 01 01	1 14	118.4	0.303	1.510	0.005	1033.	401.	-20.9	0.48	1.10	0.21	1.78	241.	10.0	301.4
10.0															
12 01 01	1 15	79.3	0.291	1.390	0.005	1204.	377.	-27.6	0.48	1.10	0.24	1.78	260.	10.0	301.4
10.0															
12 01 01	1 16	24.5	0.162	0.951	0.005	1244.	167.	-15.4	0.51	1.10	0.34	0.89	292.	10.0	299.8
10.0															
12 01 01	1 17	-2.5	0.060	-9.000	-9.000	-999.	45.	7.5	0.51	1.10	0.61	0.89	282.	10.0	296.9
10.0															
12 01 01	1 18	-0.6	0.029	-9.000	-9.000	-999.	12.	3.4	0.47	1.10	1.00	0.44	10.	10.0	293.1
10.0															
12 01 01	1 19	-4.0	0.066	-9.000	-9.000	-999.	40.	6.3	0.11	1.10	1.00	1.48	329.	10.0	290.4
10.0															
12 01 01	1 20	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	65.	10.0	288.1
10.0															
12 01 01	1 21	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	61.	10.0	286.4
10.0															
12 01 01	1 22	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	33.	10.0	285.4
10.0															
12 01 01	1 23	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	50.	10.0	284.2
10.0															
12 01 01	1 24	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	42.	10.0	283.1
10.0															

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	10.0	1	51.	0.44	282.6	30.0	-99.00	0.20

F indicates top of profile (=1) or below (=0)

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
 01/21/20
 *** AERMET - VERSION 15181 *** ***
 10:07:49

PAGE 16

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): AYI18002 ,

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM10 IN MICROGRAMS/M**3

**

Y-COORD (METERS)	496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70
496646.00	496714.30						

3674099.60	0.00081	0.00089	0.00081	0.00093	0.00078	0.00069	0.00061
0.00059	0.00074						
3674167.90	0.00090	0.00098	0.00108	0.00119	0.00097	0.00088	0.00100
0.00108	0.00193						
3674236.20	0.00098	0.00105	0.00122	0.00145	0.00116	0.00110	0.00114
0.00325	0.01052						
3674304.50	0.00110	0.00124	0.00161	0.00156	0.00138	0.00137	0.00197
0.00762	0.03525						

3674372.80		0.00127	0.00156	0.00186	0.00475	0.00207	0.00176	0.00275
0.01160		0.08507						
3674441.10		0.00171	0.00165	0.00317	0.01864	0.00882	0.00450	0.00905
0.04795		0.15337						
3674509.40		0.00227	0.00247	0.00662	0.03019	0.10434	0.05187	0.07167
0.16896		0.27771						
3674577.70		0.00477	0.00507	0.00666	0.04543	0.19924	0.23534	0.24370
0.35970		0.54488						
3674646.00		0.01301	0.01113	0.02678	0.10927	0.25794	0.35171	0.40780
0.53919		0.76162						
3674714.30		0.00825	0.03355	0.10445	0.19196	0.31417	0.41320	0.50504
0.63594		0.83130						
3674782.60		0.04353	0.07634	0.13717	0.23670	0.32216	0.38443	0.46829
0.59161		0.76642						
3674850.90		0.10416	0.11680	0.17943	0.23610	0.27607	0.32421	0.38533
0.46996		0.59074						
3674919.20		0.13886	0.15472	0.17211	0.19362	0.21875	0.24791	0.28284
0.32606		0.37810						
3674987.50		0.11594	0.12735	0.13882	0.15140	0.16515	0.18004	0.19604
0.21208		0.22576						
3675055.80		0.09543	0.10231	0.10909	0.11596	0.12179	0.12803	0.13555
0.14225		0.14611						
3675124.10		0.07782	0.08181	0.08567	0.08834	0.09092	0.09412	0.09841
0.10064		0.10039						
3675192.40		0.06370	0.06586	0.06744	0.06918	0.07086	0.07370	0.07521
0.07585		0.07755						
3675260.70		0.05186	0.05332	0.05479	0.05626	0.05756	0.05961	0.05946
0.06107		0.05985						
3675329.00		0.04284	0.04405	0.04579	0.04703	0.04771	0.04839	0.04898
0.04977		0.04776						
3675397.30		0.03642	0.03766	0.03894	0.03963	0.04033	0.04058	0.04083
0.04110		0.03971						
3675465.60		0.03199	0.03287	0.03372	0.03433	0.03464	0.03437	0.03456
0.03455		0.03300						
▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***								
01/21/20								
*** AERMET - VERSION 15181 *** ***								
10:07:49								

PAGE 17

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): AYI18002 ,

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM10 IN MICROGRAMS/M**3

**

Y-COORD (METERS)				X-COORD (METERS)			
497260.70	497329.00	496782.60	496850.90	496919.20	496987.50	497055.80	497124.10
							497192.40

3674099.60		0.00144	0.00571	0.02200	0.03295	0.04262	0.05072	0.03483
0.00464		0.00068						
3674167.90		0.00413	0.02473	0.05131	0.05501	0.05726	0.06053	0.04421
0.00703		0.00152						
3674236.20		0.02863	0.05696	0.06745	0.07085	0.07345	0.07299	0.06751
0.04057		0.02114						
3674304.50		0.08513	0.08457	0.08779	0.09036	0.09593	0.09078	0.08764
0.08427		0.07913						
3674372.80		0.12609	0.13407	0.12224	0.12385	0.12790	0.12646	0.12162
0.11507		0.10709						
3674441.10		0.19826	0.21056	0.20950	0.21099	0.20361	0.19658	0.17710
0.16061		0.14171						
3674509.40		0.36752	0.39540	0.39701	0.38982	0.38361	0.33633	0.27044

0.21596	0.18010							
3674577.70		0.68187	0.76423	0.91418	1.10834	0.84123	0.50790	0.37091
0.28125	0.22097							
3674646.00		0.96989	1.27376	1.57536	1.84281	1.17034	0.69154	0.43151
0.31259	0.23979							
3674714.30		1.11109	1.52563	1.91653	1.65083	1.10410	0.69249	0.43781
0.31783	0.24323							
3674782.60		1.02209	1.35378	1.59418	1.52341	0.96438	0.61059	0.39110
0.29325	0.22637							
3674850.90		0.76945	1.01459	1.19456	1.24927	0.75708	0.47985	0.34353
0.24375	0.19699							
3674919.20		0.43548	0.47386	0.46972	0.49879	0.42212	0.31978	0.25151
0.20564	0.17160							
3674987.50		0.23234	0.22369	0.20231	0.20112	0.20597	0.19238	0.17139
0.15208	0.12077							
3675055.80		0.14530	0.13601	0.12303	0.12081	0.12359	0.12221	0.11612
0.09136	0.07969							
3675124.10		0.09835	0.09306	0.08481	0.08356	0.08417	0.08269	0.06249
0.05147	0.04902							
3675192.40		0.07422	0.06778	0.06259	0.06165	0.04772	0.03780	0.02430
0.02367	0.02121							
3675260.70		0.05606	0.05132	0.04853	0.04137	0.02879	0.01451	0.00704
0.00866	0.00806							
3675329.00		0.04478	0.04100	0.03903	0.03168	0.02204	0.01104	0.00744
0.00564	0.00366							
3675397.30		0.03685	0.03329	0.02710	0.02465	0.02269	0.01127	0.00612
0.00426	0.00214							
3675465.60		0.03025	0.02335	0.02095	0.01795	0.00985	0.00938	0.00532
0.00288	0.00176							

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
 01/21/20
 *** AERMET - VERSION 15181 *** ***
 10:07:49

PAGE 18
 *** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

 *** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

 INCLUDING SOURCE(S): AYI18002 ,

 *** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

 ** CONC OF PM10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)				X-COORD (METERS)
	497397.30	497465.60	497533.90	

3674099.60	0.00103	0.00068	0.00075	
3674167.90	0.00246	0.00149	0.00571	
3674236.20	0.01572	0.02086	0.03903	
3674304.50	0.06391	0.06782	0.07594	
3674372.80	0.09959	0.09466	0.08983	
3674441.10	0.12676	0.11503	0.10407	
3674509.40	0.15543	0.13481	0.11845	
3674577.70	0.18012	0.15038	0.12812	
3674646.00	0.19218	0.15653	0.13074	
3674714.30	0.19079	0.15543	0.12998	
3674782.60	0.18230	0.14930	0.12335	
3674850.90	0.16172	0.13519	0.11353	
3674919.20	0.13556	0.11281	0.09673	
3674987.50	0.10173	0.08678	0.07311	
3675055.80	0.07036	0.06453	0.05783	
3675124.10	0.04594	0.04615	0.03903	
3675192.40	0.01715	0.01434	0.00840	
3675260.70	0.00624	0.00397	0.00318	
3675329.00	0.00270	0.00228	0.00217	

3675397.30 | 0.00174 0.00175 0.00172
3675465.60 | 0.00141 0.00137 0.00143
*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
10:07:49

PAGE 19

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): AYI18002 ,

*** SENSITIVE DISCRETE RECEPTOR POINTS ***

		** CONC OF PM10	IN MICROGRAMS/M**3			
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC	
497046.60	3674641.90	1.27453	497042.40	3674551.40	0.72620	
496681.60	3674783.70	0.67246				

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
10:07:49

PAGE 20

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

NETWORK GROUP ID GRID-ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE
--------------------------------	--------------	--

ALL	1ST HIGHEST VALUE IS	1.91653 AT (496919.20, 3674714.30, 395.70, 519.70, 1.50) GC
AYI18001	2ND HIGHEST VALUE IS	1.84281 AT (496987.50, 3674646.00, 396.20, 519.70, 1.50) GC
AYI18001	3RD HIGHEST VALUE IS	1.65083 AT (496987.50, 3674714.30, 395.60, 519.70, 1.50) GC
AYI18001	4TH HIGHEST VALUE IS	1.59418 AT (496919.20, 3674782.60, 395.20, 519.70, 1.50) GC
AYI18001	5TH HIGHEST VALUE IS	1.57536 AT (496919.20, 3674646.00, 396.40, 519.70, 1.50) GC
AYI18001	6TH HIGHEST VALUE IS	1.52563 AT (496850.90, 3674714.30, 395.90, 519.70, 1.50) GC
AYI18001	7TH HIGHEST VALUE IS	1.52341 AT (496987.50, 3674782.60, 395.50, 519.70, 1.50) GC
AYI18001	8TH HIGHEST VALUE IS	1.35378 AT (496850.90, 3674782.60, 395.30, 519.70, 1.50) GC
AYI18001	9TH HIGHEST VALUE IS	1.27453 AT (497046.60, 3674641.90, 396.94, 585.19, 1.50) SR
AYI18001	10TH HIGHEST VALUE IS	1.27376 AT (496850.90, 3674646.00, 396.50, 519.70, 1.50) GC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR

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                DC = DISCCART
                DP = DISCPOLR
▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Unmitigated ***
    01/21/20
*** AERMET - VERSION 15181 *** ***
    10:07:49

PAGE 21
*** MODELOPTs:   RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of          0 Fatal Error Message(s)
A Total of          4 Warning Message(s)
A Total of         378 Informational Message(s)

A Total of          8784 Hours Were Processed

A Total of          250 Calm Hours Identified

A Total of          128 Missing Hours Identified ( 1.46 Percent)

***** FATAL ERROR MESSAGES *****
      *** NONE ***

***** WARNING MESSAGES *****
RE W216    120      RECAR: FLAG Input Inconsistent With Option: Defaults Used      AYI18001
ME W186    142      MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used      0.40
MX W403    142      PFLCNV: Turbulence data is being used w/o ADJ_U* option      SigA Data
MX W402    142      PFLCNV: Turbulence data being used with ADJ_U* w/o DFAULT      Option

*****
*** AERMOD Finishes Successfully ***
*****

```

1 AERMOD PRIME - (DATED 18081)

AERMODPrMSPx VERSION
(C) COPYRIGHT 1998-2017, Trinity Consultants

Run Began on 1/21/2020 at 11:04:14

** BREEZE AERMOD
** Trinity Consultants
** VERSION 8.1

CO STARTING
CO TITLEONE PM10 Exhaust Mitigated
CO MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
CO RUNORNOT RUN
CO AVERTIME ANNUAL
CO POLLUTID PM10
CO FLAGPOLE 1.5
CO FINISHED

SO STARTING
SO ELEVUNIT METERS
SO LOCATION AYI18002 AREAPOLY 496883.9 3674895.2 394.28
SO SRCPARAM AYI18002 1.01E-09 5 12 1
SO AREAVERT AYI18002 496883.9 3674895.2 496880.6 3674655.5 496959.9 3674656.4 496959.4 3674581.4
SO AREAVERT AYI18002 497013.7 3674590.3 497014.7 3674530.4 497025 3674533.7 497024.1 3674705
SO AREAVERT AYI18002 496993 3674704.5 496996.3 3674904.2 496995.8 3674902.3 496883.9 3674895.2
SO SRCGROUP ALL
SO FINISHED

RE STARTING
RE ELEVUNIT METERS
RE GRIDCART AYI18001 STA
** GRDESCR contour receptors
RE GRIDCART AYI18001 XYINC 496167.9 21 68.3 3675465.6 21 -68.3
RE GRIDCART AYI18001 ELEV 1 387.8 388.2 388.8 389.4 390.1 390.5 391.7 394.6 396.4 397.6 399.6
RE GRIDCART AYI18001 ELEV 1 401.1 403.7 409.3 409.6 414.8 425.2 442.7 465.1 482.1 483.6
RE GRIDCART AYI18001 ELEV 2 388.0 388.4 389.0 389.1 389.7 390.4 391.5 393.6 395.2 396.2 397.6
RE GRIDCART AYI18001 ELEV 2 399.4 401.4 402.6 408.8 414.5 420.5 441.8 461.4 470.7 482.7
RE GRIDCART AYI18001 ELEV 3 389.4 389.2 389.7 389.8 389.7 390.2 391.2 393.2 396.3 396.9 396.7
RE GRIDCART AYI18001 ELEV 3 396.8 400.1 404.3 409.8 413.9 418.6 429.1 442.9 458.6 470.7
RE GRIDCART AYI18001 ELEV 4 391.4 391.0 390.6 390.3 390.1 390.9 390.7 392.3 395.3 396.9 396.8
RE GRIDCART AYI18001 ELEV 4 396.2 398.8 403.2 408.7 416.7 415.0 416.6 421.6 435.0 447.8
RE GRIDCART AYI18001 ELEV 5 393.0 392.5 391.7 391.1 390.6 391.0 391.1 391.4 393.0 394.3 395.0
RE GRIDCART AYI18001 ELEV 5 395.4 396.8 399.9 402.6 406.7 407.3 408.5 410.7 412.8 420.6
RE GRIDCART AYI18001 ELEV 6 395.2 393.8 392.9 392.1 391.5 391.3 391.7 391.8 391.8 392.1 392.9
RE GRIDCART AYI18001 ELEV 6 394.1 395.0 396.0 397.5 400.1 402.4 402.9 403.5 403.2 404.9
RE GRIDCART AYI18001 ELEV 7 396.5 395.1 394.0 393.1 392.4 392.2 392.4 392.6 392.7 392.9 393.1
RE GRIDCART AYI18001 ELEV 7 393.3 394.0 394.6 395.2 396.4 398.8 400.2 401.2 401.6 402.3
RE GRIDCART AYI18001 ELEV 8 397.3 395.8 395.0 394.2 393.4 393.2 393.3 393.5 393.5 393.6 393.6
RE GRIDCART AYI18001 ELEV 8 393.8 394.5 395.2 396.1 396.8 396.6 397.8 399.2 400.2 401.4
RE GRIDCART AYI18001 ELEV 9 397.3 396.5 396.2 395.3 394.4 394.1 394.3 394.3 394.3 394.2 394.1
RE GRIDCART AYI18001 ELEV 9 394.3 395.0 395.9 396.7 397.3 397.3 397.4 397.8 398.9 399.4
RE GRIDCART AYI18001 ELEV 10 403.4 403.1 399.2 396.5 395.5 395.2 395.4 395.3 395.2 394.9 394.7
RE GRIDCART AYI18001 ELEV 10 394.6 395.3 396.4 397.1 397.6 397.8 397.9 398.2 398.5 399.0
RE GRIDCART AYI18001 ELEV 11 410.0 407.0 403.6 399.2 396.6 396.7 396.8 396.3 396.1 395.6 395.3
RE GRIDCART AYI18001 ELEV 11 395.2 395.5 396.8 397.4 397.8 398.1 398.6 398.8 399.1 399.6
RE GRIDCART AYI18001 ELEV 12 421.1 411.7 405.9 402.4 398.6 397.6 397.6 397.4 396.8 396.1 395.9
RE GRIDCART AYI18001 ELEV 12 395.7 395.6 396.9 397.5 398.0 398.7 399.1 399.6 399.9 400.1
RE GRIDCART AYI18001 ELEV 13 417.1 418.3 412.8 406.1 401.1 399.4 399.6 398.5 396.8 396.5 396.5
RE GRIDCART AYI18001 ELEV 13 396.4 396.2 397.0 397.6 398.4 399.2 399.7 400.0 400.4 400.7
RE GRIDCART AYI18001 ELEV 14 425.1 424.6 421.9 409.8 402.7 402.2 402.6 400.8 397.9 397.3 397.4
RE GRIDCART AYI18001 ELEV 14 397.3 397.0 397.0 398.0 398.8 399.5 400.1 400.5 400.8 401.0
RE GRIDCART AYI18001 ELEV 15 435.3 434.1 420.4 411.1 405.7 408.4 407.0 403.7 401.3 399.5 398.8
RE GRIDCART AYI18001 ELEV 15 398.4 398.1 397.9 398.6 399.6 400.5 401.0 401.2 401.4 401.5
RE GRIDCART AYI18001 ELEV 16 440.8 445.4 426.8 412.7 416.3 422.0 415.4 407.5 402.9 401.2 400.3
RE GRIDCART AYI18001 ELEV 16 399.7 399.2 399.6 400.0 400.7 401.1 401.6 401.9 402.0 402.1
RE GRIDCART AYI18001 ELEV 17 453.5 441.5 435.4 420.1 433.9 444.2 426.7 412.6 404.5 402.1 401.1
RE GRIDCART AYI18001 ELEV 17 401.2 401.0 400.9 401.1 401.5 401.9 402.3 402.6 402.6 402.5

RE	GRIDCART	AYI18001	ELEV	18	463.6	449.9	436.1	438.9	453.6	453.6	429.9	414.3	407.3	403.0	402.5
RE	GRIDCART	AYI18001	ELEV	18	401.9	401.7	401.4	401.9	402.3	402.7	403.2	404.7	404.2	402.9	
RE	GRIDCART	AYI18001	ELEV	19	472.0	464.0	446.4	437.1	453.0	457.0	441.7	419.9	412.0	407.3	403.8
RE	GRIDCART	AYI18001	ELEV	19	402.5	402.2	402.1	402.2	402.9	406.1	409.3	411.0	410.1	407.0	
RE	GRIDCART	AYI18001	ELEV	20	472.6	459.5	448.1	440.7	452.1	453.7	439.2	435.7	424.8	416.7	407.3
RE	GRIDCART	AYI18001	ELEV	20	403.4	403.0	402.9	402.5	404.8	413.4	423.4	420.0	424.4	416.3	
RE	GRIDCART	AYI18001	ELEV	21	468.9	457.8	467.0	446.9	454.6	455.0	456.9	454.7	442.7	427.0	414.1
RE	GRIDCART	AYI18001	ELEV	21	407.5	405.6	404.2	402.9	405.6	415.2	432.4	427.0	432.8	431.5	
RE	GRIDCART	AYI18001	HILL	1	502.7	502.7	464.4	464.4	390.1	490.0	490.0	490.0	490.0	492.3	492.3
RE	GRIDCART	AYI18001	HILL	1	492.3	492.3	492.3	492.3	492.3	492.3	492.3	490.0	488.8	488.6	
RE	GRIDCART	AYI18001	HILL	2	515.5	513.8	502.7	502.7	389.7	490.0	490.0	490.0	490.0	492.3	492.3
RE	GRIDCART	AYI18001	HILL	2	492.3	492.3	492.3	492.3	492.3	492.3	492.3	490.0	490.0	484.4	
RE	GRIDCART	AYI18001	HILL	3	519.7	519.7	519.7	516.3	513.8	490.0	490.0	490.0	490.0	492.3	492.3
RE	GRIDCART	AYI18001	HILL	3	492.3	492.3	492.3	492.3	492.3	528.1	492.3	492.3	492.3	488.6	
RE	GRIDCART	AYI18001	HILL	4	519.7	519.7	519.7	519.7	519.7	519.6	513.8	490.0	490.0	490.0	492.3
RE	GRIDCART	AYI18001	HILL	4	492.3	492.3	492.3	492.3	492.3	528.1	528.1	550.8	528.1	492.3	
RE	GRIDCART	AYI18001	HILL	5	519.7	519.7	519.7	519.7	519.7	519.7	519.7	515.0	490.0	490.0	492.3
RE	GRIDCART	AYI18001	HILL	5	492.3	492.3	492.3	528.1	528.1	550.8	550.8	550.8	550.8	550.8	
RE	GRIDCART	AYI18001	HILL	6	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	490.0	492.3
RE	GRIDCART	AYI18001	HILL	6	492.3	492.3	528.1	528.1	550.8	550.8	550.8	550.8	550.8	550.8	
RE	GRIDCART	AYI18001	HILL	7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	492.3
RE	GRIDCART	AYI18001	HILL	7	492.3	492.3	528.1	550.8	550.8	550.8	550.8	550.8	550.8	585.1	
RE	GRIDCART	AYI18001	HILL	8	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7
RE	GRIDCART	AYI18001	HILL	8	492.3	492.3	492.3	550.8	550.8	550.8	550.8	585.2	585.2	585.2	
RE	GRIDCART	AYI18001	HILL	9	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7
RE	GRIDCART	AYI18001	HILL	9	519.6	492.3	492.3	532.1	550.8	550.8	585.2	585.2	585.2	585.2	
RE	GRIDCART	AYI18001	HILL	10	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7	519.7
RE	GRIDCART	AYI18001	HILL	10	519.7	490.0</									

ME SITEDATA 00001002 2012
ME PROFBASE 205 METERS
ME STARTEND 2012 1 1 1 2012 12 31 24
ME FINISHED

OU STARTING
OU FILEFORM FIX
OU PLOTFILE ANNUAL ALL ALL`ANNUAL.plt 10000
OU FINISHED

** It is recommended that the user not edit any data below this line

** TERRFILE C:\USERS\XEONRT\AMAZON~1\LDN\18-63L~1\AERMOD\NEDU53~1\NEDU53643667.TIF 2 0 WGS84 11 0 495726.0
3673542.0 495727.5 3676944.5 498716.6 3676943.6 498716.2 3673541.1
** AMPTYPE NED
** AMPDATUM 2
** AMPZONE 11
** AMPHEMISPHERE N

** PROJECTIONWKT
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se_Mercator"],PARAMETER["Zone",11],UNIT["Meter",1,AUTHORITY["EPSG","9001"]]]]
** PROJECTION UTM
** DATUM WGE
** UNITS METER
** ZONE 11
** HEMISPHERE N
** ORIGINLON 0
** ORIGINLAT 0
** PARALLEL1 0
** PARALLEL2 0
** AZIMUTH 0
** SCALEFACT 0
** FALSEEAST 0
** FALSENORTH 0

** POSTFMT UNFORM
** TEMPLATE REGULATORY,0
** AERMODEXE AERMOD_BREEZE_18081_64.EXE
** AERMAPEXE AERMAP_EPA_18081_64.EXE

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
RE W216 120 RECAT: FLAG Input Inconsistent With Option: Defaults Used AYI18001
ME W186 142 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.40
MX W403 142 PFLCNV: Turbulence data is being used w/o ADJ_U* option SigA Data
MX W402 142 PFLCNV: Turbulence data being used with ADJ_U* w/o DFAULT Option

*** SETUP Finishes Successfully ***

```

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
11:04:14

PAGE 1
*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** MODEL SETUP OPTIONS SUMMARY ***
-----

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --
**NO GAS DEPOSITION Data Provided.
**NO PARTICLE DEPOSITION Data Provided.
**Model Uses NO DRY DEPLETION. DRYDPLT = F
**Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:
1. Stack-tip Downwash.
2. Model Accounts for ELEVated Terrain Effects.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.

**Other Options Specified:
CCVR_Sub - Meteorological data includes CCVR substitutions
TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: PM10

**Model Calculates ANNUAL Averages Only

**This Run Includes: 1 Source(s); 1 Source Group(s); and 444 Receptor(s)

with: 0 POINT(s), including
      0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 1 AREA type source(s)
and: 0 LINE source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 15181

**Output Options Selected:
Model Outputs Tables of ANNUAL Averages by Receptor
Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
                                                    m for Missing Hours
                                                    b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 205.00 ; Decay Coef. = 0.000 ; Rot. Angle
= 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor =
0.10000E+07
Output Units = MICROGRAMS/M**3

```

**Approximate Storage Requirements of Model = 3.6 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

▲ *** AERMOD - VERSION 18081 *** PM10 Exhaust Mitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
11:04:14

PAGE 2

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X Y (METERS) (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
--------------	--------------------------	---	--	---------------------------	-------------------------------	---------------------	-------------------------	-----------------	------------------------------------

AYI18002 0 0.10100E-08 496883.9 3674895.2 394.3 5.00 12 1.00 NO
▲ *** AERMOD - VERSION 18081 *** PM10 Exhaust Mitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
11:04:14

PAGE 3

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
-------------	------------

ALL AYI18002 ,
▲ *** AERMOD - VERSION 18081 *** PM10 Exhaust Mitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
11:04:14

PAGE 4

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
(METERS)

496167.9, 496236.2, 496304.5, 496372.8, 496441.1, 496509.4, 496577.7, 496646.0, 496714.3, 496782.6,
496850.9, 496919.2, 496987.5, 497055.8, 497124.1, 497192.4, 497260.7, 497329.0, 497397.3, 497465.6,
497533.9,

*** Y-COORDINATES OF GRID ***
(METERS)

3675465.6, 3675397.3, 3675329.0, 3675260.7, 3675192.4, 3675124.1, 3675055.8, 3674987.5, 3674919.2, 3674850.9,
3674782.6, 3674714.3, 3674646.0, 3674577.7, 3674509.4, 3674441.1, 3674372.8, 3674304.5, 3674236.2, 3674167.9,
3674099.6,

▲ *** AERMOD - VERSION 18081 *** PM10 Exhaust Mitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***

11:04:14

PAGE 5

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)					X-COORD (METERS)			
496646.00	496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70	

3674099.60	468.90	457.80	467.00	446.90	454.60	455.00	456.90	
454.70	442.70							
3674167.90	472.60	459.50	448.10	440.70	452.10	453.70	439.20	
435.70	424.80							
3674236.20	472.00	464.00	446.40	437.10	453.00	457.00	441.70	
419.90	412.00							
3674304.50	463.60	449.90	436.10	438.90	453.60	453.60	429.90	
414.30	407.30							
3674372.80	453.50	441.50	435.40	420.10	433.90	444.20	426.70	
412.60	404.50							
3674441.10	440.80	445.40	426.80	412.70	416.30	422.00	415.40	
407.50	402.90							
3674509.40	435.30	434.10	420.40	411.10	405.70	408.40	407.00	
403.70	401.30							
3674577.70	425.10	424.60	421.90	409.80	402.70	402.20	402.60	
400.80	397.90							
3674646.00	417.10	418.30	412.80	406.10	401.10	399.40	399.60	
398.50	396.80							
3674714.30	421.10	411.70	405.90	402.40	398.60	397.60	397.60	
397.40	396.80							
3674782.60	410.00	407.00	403.60	399.20	396.60	396.70	396.80	
396.30	396.10							
3674850.90	403.40	403.10	399.20	396.50	395.50	395.20	395.40	
395.30	395.20							
3674919.20	397.30	396.50	396.20	395.30	394.40	394.10	394.30	
394.30	394.30							
3674987.50	397.30	395.80	395.00	394.20	393.40	393.20	393.30	
393.50	393.50							
3675055.80	396.50	395.10	394.00	393.10	392.40	392.20	392.40	
392.60	392.70							
3675124.10	395.20	393.80	392.90	392.10	391.50	391.30	391.70	
391.80	391.80							
3675192.40	393.00	392.50	391.70	391.10	390.60	391.00	391.10	
391.40	393.00							
3675260.70	391.40	391.00	390.60	390.30	390.10	390.90	390.70	
392.30	395.30							
3675329.00	389.40	389.20	389.70	389.80	389.70	390.20	391.20	
393.20	396.30							
3675397.30	388.00	388.40	389.00	389.10	389.70	390.40	391.50	
393.60	395.20							
3675465.60	387.80	388.20	388.80	389.40	390.10	390.50	391.70	
394.60	396.40							

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated
01/21/20

*** AERMET - VERSION 15181 *** ***
11:04:14

PAGE 6

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)					X-COORD (METERS)			
497260.70	497329.00	496782.60	496850.90	496919.20	496987.50	497055.80	497124.10	497192.40

3674099.60		427.00	414.10	407.50	405.60	404.20	402.90	405.60
415.20	432.40							
3674167.90		416.70	407.30	403.40	403.00	402.90	402.50	404.80
413.40	423.40							
3674236.20		407.30	403.80	402.50	402.20	402.10	402.20	402.90
406.10	409.30							
3674304.50		403.00	402.50	401.90	401.70	401.40	401.90	402.30
402.70	403.20							
3674372.80		402.10	401.10	401.20	401.00	400.90	401.10	401.50
401.90	402.30							
3674441.10		401.20	400.30	399.70	399.20	399.60	400.00	400.70
401.10	401.60							
3674509.40		399.50	398.80	398.40	398.10	397.90	398.60	399.60
400.50	401.00							
3674577.70		397.30	397.40	397.30	397.00	397.00	398.00	398.80
399.50	400.10							
3674646.00		396.50	396.50	396.40	396.20	397.00	397.60	398.40
399.20	399.70							
3674714.30		396.10	395.90	395.70	395.60	396.90	397.50	398.00
398.70	399.10							
3674782.60		395.60	395.30	395.20	395.50	396.80	397.40	397.80
398.10	398.60							
3674850.90		394.90	394.70	394.60	395.30	396.40	397.10	397.60
397.80	397.90							
3674919.20		394.20	394.10	394.30	395.00	395.90	396.70	397.30
397.30	397.40							
3674987.50		393.60	393.60	393.80	394.50	395.20	396.10	396.80
396.60	397.80							
3675055.80		392.90	393.10	393.30	394.00	394.60	395.20	396.40
398.80	400.20							
3675124.10		392.10	392.90	394.10	395.00	396.00	397.50	400.10
402.40	402.90							
3675192.40		394.30	395.00	395.40	396.80	399.90	402.60	406.70
407.30	408.50							
3675260.70		396.90	396.80	396.20	398.80	403.20	408.70	416.70
415.00	416.60							
3675329.00		396.90	396.70	396.80	400.10	404.30	409.80	413.90
418.60	429.10							
3675397.30		396.20	397.60	399.40	401.40	402.60	408.80	414.50
420.50	441.80							
3675465.60		397.60	399.60	401.10	403.70	409.30	409.60	414.80
425.20	442.70							

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
01/21/20

*** AERMET - VERSION 15181 *** ***
11:04:14 ***

PAGE 7

*** MODELOPTS: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)				X-COORD (METERS)
	497397.30	497465.60	497533.90	

3674099.60		427.00	432.80	431.50
3674167.90		420.00	424.40	416.30
3674236.20		411.00	410.10	407.00
3674304.50		404.70	404.20	402.90

3674372.80		402.60	402.60	402.50
3674441.10		401.90	402.00	402.10
3674509.40		401.20	401.40	401.50
3674577.70		400.50	400.80	401.00
3674646.00		400.00	400.40	400.70
3674714.30		399.60	399.90	400.10
3674782.60		398.80	399.10	399.60
3674850.90		398.20	398.50	399.00
3674919.20		397.80	398.90	399.40
3674987.50		399.20	400.20	401.40
3675055.80		401.20	401.60	402.30
3675124.10		403.50	403.20	404.90
3675192.40		410.70	412.80	420.60
3675260.70		421.60	435.00	447.80
3675329.00		442.90	458.60	470.70
3675397.30		461.40	470.70	482.70
3675465.60		465.10	482.10	483.60

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated
01/21/20

*** AERMET - VERSION 15181 *** ***
11:04:14

PAGE 8

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)		496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70
496646.00		496714.30						

3674099.60		519.70	523.50	519.70	523.50	519.70	519.70	519.70
513.70		519.70						
3674167.90		519.70	519.70	523.50	523.50	519.70	519.70	519.70
519.70		519.70						
3674236.20		519.70	519.70	519.70	523.50	519.70	519.70	519.70
523.50		523.50						
3674304.50		519.70	519.70	523.50	519.70	519.70	519.70	519.70
523.50		523.50						
3674372.80		519.70	519.70	519.70	523.50	519.70	519.70	519.70
523.50		523.50						
3674441.10		519.70	519.70	519.80	523.50	523.50	519.70	519.70
523.50		523.50						
3674509.40		519.70	519.70	519.80	523.50	523.50	523.50	519.70
519.70		519.70						
3674577.70		519.70	519.70	519.70	523.50	523.50	523.50	519.70
519.70		519.70						
3674646.00		519.70	519.70	519.70	519.80	523.50	519.70	519.70
519.70		519.70						
3674714.30		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3674782.60		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3674850.90		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3674919.20		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3674987.50		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3675055.80		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3675124.10		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70		519.70						
3675192.40		519.70	519.70	519.70	519.70	519.70	519.70	519.70
515.00		490.00						

3675260.70		519.70	519.70	519.70	519.70	519.70	519.60	513.80
490.00	490.00							
3675329.00		519.70	519.70	519.70	516.30	513.80	490.00	490.00
490.00	490.00							
3675397.30		515.50	513.80	502.70	502.70	389.70	490.00	490.00
490.00	490.00							
3675465.60		502.70	502.70	464.40	464.40	390.10	490.00	490.00
490.00	490.00							

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
 01/21/20
 *** AERMET - VERSION 15181 *** ***
 11:04:14 ***

PAGE 9

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD					X-COORD (METERS)			
(METERS)		496782.60	496850.90	496919.20	496987.50	497055.80	497124.10	497192.40
497260.70	497329.00							

3674099.60		519.70	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20							
3674167.90		523.30	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20							
3674236.20		523.50	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20							
3674304.50		523.50	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20							
3674372.80		523.50	519.70	585.10	585.20	585.20	585.20	585.20
585.20	585.20							
3674441.10		519.70	519.70	519.70	585.20	585.20	585.20	585.20
585.20	585.20							
3674509.40		519.70	519.70	519.70	585.20	585.20	585.20	585.20
585.20	585.20							
3674577.70		519.70	519.70	519.70	585.10	585.20	585.20	585.20
585.20	585.20							
3674646.00		519.70	519.70	519.70	519.70	585.20	585.20	585.20
585.20	585.20							
3674714.30		519.70	519.70	519.70	519.70	513.70	585.20	585.20
585.20	585.20							
3674782.60		519.70	519.70	519.70	519.70	490.00	531.60	585.20
585.20	585.20							
3674850.90		519.70	519.70	519.70	490.00	492.30	532.00	550.80
585.20	585.20							
3674919.20		519.70	519.70	519.60	492.30	492.30	532.10	550.80
550.80	585.20							
3674987.50		519.70	519.70	492.30	492.30	492.30	550.80	550.80
550.80	550.80							
3675055.80		519.70	492.30	492.30	492.30	528.10	550.80	550.80
550.80	550.80							
3675124.10		490.00	492.30	492.30	492.30	528.10	528.10	550.80
550.80	550.80							
3675192.40		490.00	492.30	492.30	492.30	492.30	528.10	528.10
550.80	550.80							
3675260.70		490.00	492.30	492.30	492.30	492.30	492.30	492.30
528.10	528.10							
3675329.00		492.30	492.30	492.30	492.30	492.30	492.30	492.30
528.10	492.30							
3675397.30		492.30	492.30	492.30	492.30	492.30	492.30	492.30
492.30	492.30							
3675465.60		492.30	492.30	492.30	492.30	492.30	492.30	492.30
492.30	492.30							

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***

01/21/20
*** AERMET - VERSION 15181 *** ***
11:04:14

PAGE 10
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)				X-COORD (METERS)
	497397.30	497465.60	497533.90	
3674099.60	585.20	585.20	585.20	
3674167.90	585.20	585.20	585.20	
3674236.20	585.20	585.20	585.20	
3674304.50	585.20	585.20	585.20	
3674372.80	585.20	585.20	585.20	
3674441.10	585.20	585.20	585.20	
3674509.40	585.20	585.20	585.20	
3674577.70	585.20	585.20	585.20	
3674646.00	585.20	585.20	585.20	
3674714.30	585.20	585.20	585.20	
3674782.60	585.20	585.20	585.20	
3674850.90	585.20	585.20	585.20	
3674919.20	585.20	585.20	585.20	
3674987.50	585.20	585.20	585.20	
3675055.80	550.80	550.80	585.10	
3675124.10	550.80	550.80	550.80	
3675192.40	550.80	550.80	550.80	
3675260.70	550.80	528.10	492.30	
3675329.00	492.30	492.30	488.60	
3675397.30	490.00	490.00	484.40	
3675465.60	490.00	488.80	488.60	

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
11:04:14

PAGE 11
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

Y-COORD (METERS)				X-COORD (METERS)			
	496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70
496646.00	496714.30						
3674099.60	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674167.90	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674236.20	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674304.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674372.80	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674441.10	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						
3674509.40	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50						

1.50	1.50							
3674919.20		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674987.50		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675055.80		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675124.10		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675192.40		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675260.70		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675329.00		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675397.30		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675465.60		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
 01/21/20
 *** AERMET - VERSION 15181 *** ***
 11:04:14

PAGE 13

*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

Y-COORD					X-COORD (METERS)
(METERS)		497397.30	497465.60	497533.90	

3674099.60		1.50	1.50	1.50
3674167.90		1.50	1.50	1.50
3674236.20		1.50	1.50	1.50
3674304.50		1.50	1.50	1.50
3674372.80		1.50	1.50	1.50
3674441.10		1.50	1.50	1.50
3674509.40		1.50	1.50	1.50
3674577.70		1.50	1.50	1.50
3674646.00		1.50	1.50	1.50
3674714.30		1.50	1.50	1.50
3674782.60		1.50	1.50	1.50
3674850.90		1.50	1.50	1.50
3674919.20		1.50	1.50	1.50
3674987.50		1.50	1.50	1.50
3675055.80		1.50	1.50	1.50
3675124.10		1.50	1.50	1.50
3675192.40		1.50	1.50	1.50
3675260.70		1.50	1.50	1.50
3675329.00		1.50	1.50	1.50
3675397.30		1.50	1.50	1.50
3675465.60		1.50	1.50	1.50

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
 01/21/20
 *** AERMET - VERSION 15181 *** ***
 11:04:14

PAGE 14

*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
 (1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

12 01 01	1 09	33.3	0.106	0.323	0.014	36.	83.	-3.2	0.47	1.10	0.30	0.44	44.	10.0	285.4
10.0															
12 01 01	1 10	85.9	0.121	0.634	0.011	106.	101.	-1.8	0.48	1.10	0.23	0.44	232.	10.0	291.4
10.0															
12 01 01	1 11	123.6	0.252	0.982	0.005	273.	303.	-11.5	0.48	1.10	0.21	1.34	242.	10.0	297.5
10.0															
12 01 01	1 12	141.2	0.255	1.253	0.005	496.	309.	-10.4	0.48	1.10	0.20	1.34	249.	10.0	299.8
10.0															
12 01 01	1 13	139.0	0.308	1.399	0.005	700.	410.	-18.6	0.48	1.10	0.20	1.78	244.	10.0	300.4
10.0															
12 01 01	1 14	118.4	0.303	1.510	0.005	1033.	401.	-20.9	0.48	1.10	0.21	1.78	241.	10.0	301.4
10.0															
12 01 01	1 15	79.3	0.291	1.390	0.005	1204.	377.	-27.6	0.48	1.10	0.24	1.78	260.	10.0	301.4
10.0															
12 01 01	1 16	24.5	0.162	0.951	0.005	1244.	167.	-15.4	0.51	1.10	0.34	0.89	292.	10.0	299.8
10.0															
12 01 01	1 17	-2.5	0.060	-9.000	-9.000	-999.	45.	7.5	0.51	1.10	0.61	0.89	282.	10.0	296.9
10.0															
12 01 01	1 18	-0.6	0.029	-9.000	-9.000	-999.	12.	3.4	0.47	1.10	1.00	0.44	10.	10.0	293.1
10.0															
12 01 01	1 19	-4.0	0.066	-9.000	-9.000	-999.	40.	6.3	0.11	1.10	1.00	1.48	329.	10.0	290.4
10.0															
12 01 01	1 20	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	65.	10.0	288.1
10.0															
12 01 01	1 21	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	61.	10.0	286.4
10.0															
12 01 01	1 22	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	33.	10.0	285.4
10.0															
12 01 01	1 23	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	50.	10.0	284.2
10.0															
12 01 01	1 24	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	42.	10.0	283.1
10.0															

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
12	01	01	01	10.0	1	51.	0.44	282.6	30.0	-99.00	0.20

F indicates top of profile (=1) or below (=0)

▲ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
 01/21/20
 *** AERMET - VERSION 15181 *** ***
 11:04:14

PAGE 16

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): AYI18002 ,

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM10 IN MICROGRAMS/M**3

**

Y-COORD (METERS)	496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70
496646.00	496714.30						

3674099.60	0.00000	0.00001	0.00000	0.00001	0.00000	0.00000	0.00000
0.00000	0.00000						
3674167.90	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
0.00001	0.00001						
3674236.20	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
0.00002	0.00006						
3674304.50	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001
0.00005	0.00021						

0.00130	0.00108							
3674577.70		0.00410	0.00459	0.00550	0.00666	0.00506	0.00305	0.00223
0.00169	0.00133							
3674646.00		0.00583	0.00766	0.00947	0.01108	0.00704	0.00416	0.00259
0.00188	0.00144							
3674714.30		0.00668	0.00917	0.01152	0.00992	0.00664	0.00416	0.00263
0.00191	0.00146							
3674782.60		0.00614	0.00814	0.00958	0.00916	0.00580	0.00367	0.00235
0.00176	0.00136							
3674850.90		0.00463	0.00610	0.00718	0.00751	0.00455	0.00288	0.00207
0.00147	0.00118							
3674919.20		0.00262	0.00285	0.00282	0.00300	0.00254	0.00192	0.00151
0.00124	0.00103							
3674987.50		0.00140	0.00134	0.00122	0.00121	0.00124	0.00116	0.00103
0.00091	0.00073							
3675055.80		0.00087	0.00082	0.00074	0.00073	0.00074	0.00073	0.00070
0.00055	0.00048							
3675124.10		0.00059	0.00056	0.00051	0.00050	0.00051	0.00050	0.00038
0.00031	0.00029							
3675192.40		0.00045	0.00041	0.00038	0.00037	0.00029	0.00023	0.00015
0.00014	0.00013							
3675260.70		0.00034	0.00031	0.00029	0.00025	0.00017	0.00009	0.00004
0.00005	0.00005							
3675329.00		0.00027	0.00025	0.00023	0.00019	0.00013	0.00007	0.00004
0.00003	0.00002							
3675397.30		0.00022	0.00020	0.00016	0.00015	0.00014	0.00007	0.00004
0.00003	0.00001							
3675465.60		0.00018	0.00014	0.00013	0.00011	0.00006	0.00006	0.00003
0.00002	0.00001							

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
 01/21/20
 *** AERMET - VERSION 15181 *** ***
 11:04:14

PAGE 18

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): AYI18002 ,

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM10 IN MICROGRAMS/M**3

**

Y-COORD (METERS)				X-COORD (METERS)
	497397.30	497465.60	497533.90	

3674099.60		0.00001	0.00000	0.00000
3674167.90		0.00001	0.00001	0.00003
3674236.20		0.00009	0.00013	0.00023
3674304.50		0.00038	0.00041	0.00046
3674372.80		0.00060	0.00057	0.00054
3674441.10		0.00076	0.00069	0.00063
3674509.40		0.00093	0.00081	0.00071
3674577.70		0.00108	0.00090	0.00077
3674646.00		0.00116	0.00094	0.00079
3674714.30		0.00115	0.00093	0.00078
3674782.60		0.00110	0.00090	0.00074
3674850.90		0.00097	0.00081	0.00068
3674919.20		0.00081	0.00068	0.00058
3674987.50		0.00061	0.00052	0.00044
3675055.80		0.00042	0.00039	0.00035
3675124.10		0.00028	0.00028	0.00023
3675192.40		0.00010	0.00009	0.00005
3675260.70		0.00004	0.00002	0.00002
3675329.00		0.00002	0.00001	0.00001

3675397.30 | 0.00001 0.00001 0.00001
3675465.60 | 0.00001 0.00001 0.00001
*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
11:04:14

PAGE 19

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): AYI18002 ,

*** SENSITIVE DISCRETE RECEPTOR POINTS ***

		** CONC OF PM10	IN MICROGRAMS/M**3			
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC	
497046.60	3674641.90	0.00766	497042.40	3674551.40	0.00437	
496681.60	3674783.70	0.00404				

*** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
01/21/20
*** AERMET - VERSION 15181 *** ***
11:04:14

PAGE 20

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF PM10 IN MICROGRAMS/M**3 **

NETWORK GROUP ID GRID-ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE
--------------------------------	--------------	--

ALL	1ST HIGHEST VALUE IS	0.01152 AT (496919.20, 3674714.30, 395.70, 519.70, 1.50) GC
AYI18001	2ND HIGHEST VALUE IS	0.01108 AT (496987.50, 3674646.00, 396.20, 519.70, 1.50) GC
AYI18001	3RD HIGHEST VALUE IS	0.00992 AT (496987.50, 3674714.30, 395.60, 519.70, 1.50) GC
AYI18001	4TH HIGHEST VALUE IS	0.00958 AT (496919.20, 3674782.60, 395.20, 519.70, 1.50) GC
AYI18001	5TH HIGHEST VALUE IS	0.00947 AT (496919.20, 3674646.00, 396.40, 519.70, 1.50) GC
AYI18001	6TH HIGHEST VALUE IS	0.00917 AT (496850.90, 3674714.30, 395.90, 519.70, 1.50) GC
AYI18001	7TH HIGHEST VALUE IS	0.00916 AT (496987.50, 3674782.60, 395.50, 519.70, 1.50) GC
AYI18001	8TH HIGHEST VALUE IS	0.00814 AT (496850.90, 3674782.60, 395.30, 519.70, 1.50) GC
AYI18001	9TH HIGHEST VALUE IS	0.00766 AT (497046.60, 3674641.90, 396.94, 585.19, 1.50) SR
AYI18001	10TH HIGHEST VALUE IS	0.00766 AT (496850.90, 3674646.00, 396.50, 519.70, 1.50) GC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR

```

          DC = DISCCART
          DP = DISCPOLR
^ *** AERMOD - VERSION 18081 *** *** PM10 Exhaust Mitigated ***
    01/21/20
*** AERMET - VERSION 15181 *** ***
    11:04:14

PAGE 21
*** MODELOPTs:   RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of          0 Fatal Error Message(s)
A Total of          4 Warning Message(s)
A Total of         378 Informational Message(s)

A Total of          8784 Hours Were Processed

A Total of          250 Calm Hours Identified

A Total of          128 Missing Hours Identified ( 1.46 Percent)

***** FATAL ERROR MESSAGES *****
      *** NONE ***

***** WARNING MESSAGES *****
RE W216    120      RECAT: FLAG Input Inconsistent With Option: Defaults Used      AYI18001
ME W186    142      MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used      0.40
MX W403    142      PFLCNV: Turbulence data is being used w/o ADJ_U* option      SigA Data
MX W402    142      PFLCNV: Turbulence data being used with ADJ_U* w/o DFAULT      Option

*****
*** AERMOD Finishes Successfully ***
*****

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ATTACHMENT C

Health Risk Calculations - Construction PM₁₀ Exhaust (Unmitigated and Mitigated)

Air Quality Health Risk Calculations (Worst-Case)
Liberty Bell Unmitigated

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.2033				
	Number of Workdays	370				
	Emissions per day (lb/day)	1.098918919				
	Emission Rate (Grams/Second)	0.005761693				
	Project Site Size (Acres)	8.49				
	Project Site Size (meters)	34357.81103				
	Length of Smalles Side (meters)	185.3586012				
	Emission Rate over Grading Area	1.67697E-07				
From AERMOD	Concentration Annual (Ug/M^3)	1.27				
			Construction Days converted to			
			years			
Duration	Construction Days 370		1.01369863			
Age (Years)	3rd Trimester (0.25)		0-2	2-9	2-16	16-30
			16-70			
Cair (annual) - From F15	1.27	1.27	1.27	1.27	1.27	1.27
Breathing Rate per agegroup BR/BW (Page 5-25)	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00044013	0.00132893	0.00104973	0.00090830	0.00040843	0.00035357
Construction Days	370	1.01369863				
potency factor for Diesel	1.1	1.1	1.1	1.1	1.1	1.1
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	1.01369863	1.01369863	1.01369863	1.01369863	1.01369863
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	1.46972E-05	0.000179938	3.6119E-05	3.12528E-05	4.74948E-06	4.11149E-06
	14.69723829	179.9384116	36.11897035	31.25276761	4.749480686	4.111490743
Cancer Risk Per Million 9-years	230.75					
Cancer Risk Per Million 30-years	230.64					
Cancer Risk Per Million 70-years	230.00					

Air Quality Health Risk Calculations (Worst-Case)
Liberty Bell Mtigated

From CalEE Annual Output	Emission per day (Ton/Total Construction Duration)	0.00123				
	Number of Workdays	370				
	Emissions per day (lb/day)	0.006648649				
	Emission Rate (Grams/Second)	3.48592E-05				
	Project Site Size (Acres)	8.49				
	Project Site Size (meters)	34357.81103				
	Length of Smalles Side (meters)	185.3586012				
	Emission Rate over Grading Area	1.01459E-09				
From AERMOD	Concentration Annual (Ug/M^3)	0.0077				
			Construction Days converted to			
			years			
Duration	Construction Days	370	1.01369863			
Age (Years)	3rd Trimester (0.25)		0-2	2-9	2-16	16-30
			16-70			
Cair (annual) - From F15	0.0077		0.0077	0.0077	0.0077	0.0077
Breathing Rate per agegroup BR/BW (Page 5-25)	361		1090	861	745	335
A (Default is 1)	1		1	1	1	1
Exposure Frequency = EF (days/365days)	0.96		0.96	0.96	0.96	0.96
10^-6 Microgram to Milligram / liters to m3	0.000001		0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00000267		0.00000806	0.00000636	0.00000551	0.00000248
			0.00000214			
Construction Days	370		1.01369863			
potency factor for Diesel	1.1		1.1	1.1	1.1	1.1
Age Sensitivity Factor	10		10	3	3	1
			1			1
ED	0.25		1.01369863	1.01369863	1.01369863	1.01369863
AT	70		70	70	70	70
FAH	0.85		0.85	0.72	0.72	0.73
Risk for Each Age Group	8.91092E-08		1.09097E-06	2.18989E-07	1.89485E-07	2.87961E-08
	0.08910924		1.090965173	0.218989033	0.189485284	0.028796064
			0.024927936			
Cancer Risk Per Million 9-years	1.40					
Cancer Risk Per Million 30-years	1.40					
Cancer Risk Per Million 70-years	1.39					

ATTACHMENT D

Health Risk Fueling Station Input/Outputs - Calculations

Attachment D – AERMOD Modeling Parameters – CAPCOA Scenario 6B

Scenario 6B - Phase I and Phase II, with Vent Valves

90% Overall Efficiency for Breathing and Refueling

Historical Emission Factors (lbs/1000 gal)	Current Emission Factors (lbs/1000 gal)	Process	Method of Derivation
	0.084	Loading	Aeroenvironment Study ⁴ indicated no emissions, but assumes emissions of 1% of uncontrolled emissions due to equipment failures or defects. $1\% \times 8.4 = 0.084$
	0.025	Breathing	Even though the Aeroenvironment Study ⁴ was not a leak tight test, it was assumed that the reported 75% emissions reductions (0.08 down to 0.02 lbs/gal) can be used to derive the effectiveness of vent valves. Thus, the breathing loss reduced by 75% equals $(0.1) (100-75\%) = 0.025$
	0.74	Refueling	Same as Scenario 6A
	0.42 ³	Spillage	JAWMA ³
	1.27	Total	

REFERENCES

1. BAAQMD continuous testing from 1/5/93-1/25/93 and from 2/11/93-2/22/93.
2. California Air Resources Board, "A Report to the Legislature on Gasoline Vapor Recovery Systems for Vehicle Fueling at Service Stations (Phase II Systems)", March, 1983.
3. James J. Morgester, Robert L. Fricker, G. Henry Jordan, "Comparison of Spill Frequencies and Amounts at Vapor Recovery and Conventional Service Stations in California", Journal of Air & Waste Management Association, Vol. 42, No 3, pp 284-289, March 1992.
4. Aeroenvironment, Inc., Prepared for WSPA, "Underground Storage Tank Vent Line Emissions from Retail Gasoline Outlets", Report # AV-FR-92-01-204R2, p. 3-23, May 1994.
5. Based on discussions among experts, the breathing emission factor for aboveground tanks should be higher than underground tanks due to the effects of diurnal changes, temperature fluctuations, sun and wind exposure that doesn't occur for underground tanks. The value chosen was not based on empirical data.

Point Source Loading Stack Exit Velocity (Per 1 MGD Unit Volume)

Annual Gasoline Throughput = 1,000,000 gal/yr
 Density of Liquid Gasoline = 6 lbs / gal
 Density of Gasoline/Air Vapor Mixture = 0.105 lb / ft³
 Radius of Stack = 1" = 0.0833 ft
 Area of Stack = $\pi r^2 = 0.0218 \text{ ft}^2$

$$\begin{aligned}
 \text{Average Emission Rate} &= \text{Emission Factor} \times \frac{1 \text{ MGalFuel}}{\text{year}} \\
 &= 0.084 \frac{\text{lb}}{1000 \text{ gal}} * 1,000,000 \frac{\text{gal}}{\text{year}} * \frac{1 \text{ yr}}{8760 \text{ hr}} * \frac{1 \text{ hr}}{3600 \text{ second}} * 454 \frac{\text{grams}}{\text{lb}} \\
 &= 0.00121 \text{ grams /second}
 \end{aligned}$$

$$\begin{aligned}
 \text{Average Vent Stack Exit Velocity} &= \frac{\text{MassEmissionRate}}{\text{Area} * \text{Density of Gas}} \\
 &= \frac{.000002665 \frac{\text{lb}}{\text{second}}}{0.218 \text{ ft}^2 * 0.105 \frac{\text{lbs}}{\text{ft}^3}} = 0.00116 \frac{\text{ft}}{\text{second}} * 0.3048 \frac{\text{m}}{\text{ft}} = .000355 \text{ m/second}
 \end{aligned}$$

Point Source Breathing Stack Exit Velocity (Per 1 MGPD Unit Volume)

Annual Gasoline Throughput	= 1,000,000 gal/yr
Density of Liquid Gasoline	= 6 lbs / gal
Density of Gasoline/Air Vapor Mixture	= 0.105 lb / ft ³
Radius of Stack	= 1" = 0.0833 ft
Area of Stack	= πr^2 = 0.0218 ft ²

$$\text{Average Emission Rate} = \text{Emission Factor} \times \frac{1 \text{ MGalFuel}}{\text{year}}$$

$$= 0.025 \frac{\text{lb}}{1000 \text{ gal}} * 1,000,000 \frac{\text{gal}}{\text{year}} * \frac{1 \text{ yr}}{8760 \text{ hr}} * \frac{1 \text{ hr}}{3600 \text{ second}} * 454 \frac{\text{grams}}{\text{lb}}$$

$$= 0.000359 \text{ grams/second}$$

$$\text{Average Vent Stack Exit Velocity} = \frac{\text{MassEmissionRate}}{\text{Area} * \text{Density of Gas}}$$

$$= \frac{.000000793 \frac{\text{lb}}{\text{second}}}{0.218 \text{ ft}^2 * 0.105 \frac{\text{lbs}}{\text{ft}^3}} = 0.000346 \frac{\text{ft}}{\text{second}} * 0.3048 \frac{\text{m}}{\text{ft}} = .000106 \text{ m/second}$$

Point Source Loading Benzene Emission Rates (Per 1 MGPD Unit Volume)

$$\text{Average Emission Rate} = \text{Emission Factor} \times \frac{1 \text{ MGalFuel}}{\text{year}}$$

$$= 0.084 \frac{\text{lb}}{1000 \text{ gal}} * 1,000,000 \frac{\text{gal}}{\text{year}} * \frac{1 \text{ yr}}{8760 \text{ hr}} * \frac{1 \text{ hr}}{3600 \text{ second}} * 454 \frac{\text{grams}}{\text{lb}}$$

$$= 0.00121 \text{ grams Gasoline /second}$$

Benzene in gasoline Vapor is 0.3%

$$\text{Average Benzene Emission Rate} = \text{Emission Rate Gasoline} \times 0.3\%$$

$$= 0.00121 \text{ grams Gasoline /second} * 0.003 = 0.00000363 \text{ grams benzene/second}$$

Point Source Loading Benzene Emission Rates (Per 1 MGPD Unit Volume)

$$\text{Average Emission Rate} = \text{Emission Factor} \times \frac{1 \text{ MGalFuel}}{\text{year}}$$

$$= 0.025 \frac{\text{lb}}{1000 \text{ gal}} * 1,000,000 \frac{\text{gal}}{\text{year}} * \frac{1 \text{ yr}}{8760 \text{ hr}} * \frac{1 \text{ hr}}{3600 \text{ second}} * 454 \frac{\text{grams}}{\text{lb}}$$

$$= 0.000359 \text{ grams/second}$$

Benzene in gasoline Vapor is 0.3%

$$\text{Average Benzene Emission Rate} = \text{Emission Rate Gasoline} \times 0.3\%$$

$$= 0.000359 \text{ grams Gasoline /second} * 0.003 = 0.00000108 \text{ grams benzene/second}$$

Refueling Mass Benzene Emission Rates (Per 1 MGD Unit Volume)

$$\begin{aligned} \text{Average Emission Rate} &= \text{Emission Factor} \times \frac{1 \text{ MGalFuel}}{\text{year}} \\ &= 0.74 \frac{\text{lb}}{1000 \text{ gal}} * 1,000,000 \frac{\text{gal}}{\text{year}} * \frac{1 \text{ yr}}{8760 \text{ hr}} * \frac{1 \text{ hr}}{3600 \text{ second}} * 454 \frac{\text{grams}}{\text{lb}} \\ &= 0.01065 \text{ grams/second} \end{aligned}$$

Benzene in gasoline Vapor is 0.3%

$$\begin{aligned} \text{Average Benzene Emission Rate} &= \text{Emission Rate Gasoline} \times 0.3\% \\ &= 0.01065 \text{ grams Gasoline /second} * 0.003 = 0.0000320 \text{ grams benzene/second} \end{aligned}$$

Spillage Mass Benzene Emission Rates (Per 1 MGD Unit Volume)

$$\begin{aligned} \text{Average Emission Rate} &= \text{Emission Factor} \times \frac{1 \text{ MGalFuel}}{\text{year}} \\ &= 0.42 \frac{\text{lb}}{1000 \text{ gal}} * 1,000,000 \frac{\text{gal}}{\text{year}} * \frac{1 \text{ yr}}{8760 \text{ hr}} * \frac{1 \text{ hr}}{3600 \text{ second}} * 454 \frac{\text{grams}}{\text{lb}} \\ &= 0.00605 \text{ grams/second} \end{aligned}$$

Benzene in gasoline Liquid is 1%

$$\begin{aligned} \text{Average Benzene Emission Rate} &= \text{Emission Rate Gasoline} \times 1\% \\ &= 0.00605 \text{ grams Gasoline /second} * 0.01 = 0.0000605 \text{ grams benzene/second} \end{aligned}$$

ATTACHMENT E

AERMOD for Benzene Fueling Stations

1 AERMOD PRIME - (DATED 18081)

AERMODPrMSPx VERSION
(C) COPYRIGHT 1998-2017, Trinity Consultants

Run Began on 11/14/2018 at 16:22:27

** BREEZE AERMOD
** Trinity Consultants
** VERSION 8.1

CO STARTING
CO TITLEONE Benzene
CO MODELOPT DFAULT CONC NODRYDPLT NOWETDPLT
CO RUNORNOT RUN
CO AVERTIME ANNUAL
CO POLLUTID OTHER
CO FLAGPOLE 1.5
CO FINISHED

SO STARTING					
SO ELEVUNIT	METERS				
SO LOCATION	BH8ND000	VOLUME	496912	3674735.8	395.57
** SRCDESCR	Spillage				
SO LOCATION	BH8ND001	VOLUME	496920.1	3674735.6	395.57
** SRCDESCR	Spillage				
SO LOCATION	BH8ND002	VOLUME	496912.2	3674730.9	395.62
** SRCDESCR	Spillage				
SO LOCATION	BH8ND003	VOLUME	496920.2	3674730.9	395.62
** SRCDESCR	Spillage				
SO LOCATION	BH8ND004	VOLUME	496912.7	3674724.7	395.69
** SRCDESCR	Spillage				
SO LOCATION	BH8ND005	VOLUME	496912.5	3674719.9	395.73
** SRCDESCR	Spillage				
SO LOCATION	BH8ND006	VOLUME	496919.7	3674724.6	395.69
** SRCDESCR	Spillage				
SO LOCATION	BH8ND007	VOLUME	496919.7	3674720	395.71
** SRCDESCR	Spillage				
SO LOCATION	BH8ND008	VOLUME	496912.5	3674713.5	395.79
** SRCDESCR	Spillage				
SO LOCATION	BH8ND009	VOLUME	496912.2	3674708.9	395.80
** SRCDESCR	Spillage				
SO LOCATION	BH8ND00A	VOLUME	496920	3674713.6	395.74
** SRCDESCR	Spillage				
SO LOCATION	BH8ND00B	VOLUME	496919.7	3674709	395.77
** SRCDESCR	Spillage				
SO LOCATION	BH8ND00C	VOLUME	496912	3674735.8	395.57
** SRCDESCR	Refueling				
SO LOCATION	BH8ND00D	VOLUME	496920.1	3674735.6	395.57
** SRCDESCR	Refueling				
SO LOCATION	BH8ND00E	VOLUME	496912.2	3674730.9	395.62
** SRCDESCR	Refueling				
SO LOCATION	BH8ND00F	VOLUME	496920.2	3674730.9	395.62
** SRCDESCR	Refueling				
SO LOCATION	BH8ND00G	VOLUME	496912.7	3674724.7	395.69
** SRCDESCR	Refueling				
SO LOCATION	BH8ND00H	VOLUME	496912.5	3674719.9	395.73
** SRCDESCR	Refueling				
SO LOCATION	BH8ND00I	VOLUME	496919.7	3674724.6	395.69
** SRCDESCR	Refueling				
SO LOCATION	BH8ND00J	VOLUME	496919.7	3674720	395.71
** SRCDESCR	Refueling				
SO LOCATION	BH8ND00K	VOLUME	496912.5	3674713.5	395.79
** SRCDESCR	Refueling				
SO LOCATION	BH8ND00L	VOLUME	496912.2	3674708.9	395.80
** SRCDESCR	Refueling				
SO LOCATION	BH8ND00M	VOLUME	496920	3674713.6	395.74

Attach E - AERMOD Benzene HR

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** SRCDSCR Refueling
SO LOCATION BH8ND00N VOLUME 496919.7 3674709 395.77
** SRCDSCR Refueling
SO LOCATION BH8ND00P POINT 496927.8 3674705.4 395.77
** SRCDSCR Loading
SO LOCATION BH8ND00Q POINT 496927.8 3674705.4 395.77
** SRCDSCR Breathing
SO SRCPARAM BH8ND000 5.04E-6 1 3 4
SO SRCPARAM BH8ND001 5.04E-6 1 3 4
SO SRCPARAM BH8ND002 5.04E-6 1 3 4
SO SRCPARAM BH8ND003 5.04E-6 1 3 4
SO SRCPARAM BH8ND004 5.04E-6 1 3 4
SO SRCPARAM BH8ND005 5.04E-6 1 3 4
SO SRCPARAM BH8ND006 5.04E-6 1 3 4
SO SRCPARAM BH8ND007 5.04E-6 1 3 4
SO SRCPARAM BH8ND008 5.04E-6 1 3 4
SO SRCPARAM BH8ND009 5.04E-6 1 3 4
SO SRCPARAM BH8ND00A 5.04E-6 1 3 4
SO SRCPARAM BH8ND00B 5.04E-6 1 3 4
SO SRCPARAM BH8ND00C 2.667E-6 1 3 4
SO SRCPARAM BH8ND00D 2.667E-6 1 3 4
SO SRCPARAM BH8ND00E 2.667E-6 1 3 4
SO SRCPARAM BH8ND00F 2.667E-6 1 3 4
SO SRCPARAM BH8ND00G 2.667E-6 1 3 4
SO SRCPARAM BH8ND00H 2.667E-6 1 3 4
SO SRCPARAM BH8ND00I 2.667E-6 1 3 4
SO SRCPARAM BH8ND00J 2.667E-6 1 3 4
SO SRCPARAM BH8ND00K 2.667E-6 1 3 4
SO SRCPARAM BH8ND00L 2.667E-6 1 3 4
SO SRCPARAM BH8ND00M 2.667E-6 1 3 4
SO SRCPARAM BH8ND00N 2.667E-6 1 3 4
SO SRCPARAM BH8ND00P 3.63E-06 3.66 291 0.00035 0.05
SO SRCPARAM BH8ND00Q 3.63E-06 3.66 291 0.00035 0.05
SO BUILDHGT BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDHGT BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDHGT BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDHGT BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDHGT BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDHGT BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDWID BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDWID BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDWID BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDWID BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDWID BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDWID BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDLLEN BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDLLEN BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDLLEN BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDLLEN BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDLLEN BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDLLEN BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDLLEN BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO XBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO XBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO XBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO XBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO XBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO XBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO XBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO YBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO YBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO YBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO YBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO YBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO YBADJ BH8ND00P 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDHGT BH8ND00Q 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDHGT BH8ND00Q 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDHGT BH8ND00Q 0.00 0.00 0.00 0.00 0.00 0.00
SO BUILDHGT BH8ND00Q 0.00 0.00 0.00 0.00 0.00 0.00

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Attach E - AERMOD Benzene HR

SO BUILDHGT	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDHGT	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDWID	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO BUILDLEN	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO XBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO YBADJ	BH8ND00Q	0.00	0.00	0.00	0.00	0.00	0.00
SO SRCGROUP	ALL						
SO FINISHED							

RE STARTING

RE ELEVUNIT METERS

RE GRIDCART AYI18001 STA

** GRDESCR contour receptors

RE GRIDCART	AYI18001	XYINC	496167.9	21	68.3	3675465.6	21	-68.3									
RE GRIDCART	AYI18001	ELEV	1	387.8	388.2	388.8	389.4	390.1	390.5	391.7	394.6	396.4	397.6	399.6			
RE GRIDCART	AYI18001	ELEV	1	401.1	403.7	409.3	409.6	414.8	425.2	442.7	465.1	482.1	483.6				
RE GRIDCART	AYI18001	ELEV	2	388.0	388.4	389.0	389.1	389.7	390.4	391.5	393.6	395.2	396.2	397.6			
RE GRIDCART	AYI18001	ELEV	2	399.4	401.4	402.6	408.8	414.5	420.5	441.8	461.4	470.7	482.7				
RE GRIDCART	AYI18001	ELEV	3	389.4	389.2	389.7	389.8	389.7	390.2	391.2	393.2	396.3	396.9	396.7			
RE GRIDCART	AYI18001	ELEV	3	396.8	400.1	404.3	409.8	413.9	418.6	429.1	442.9	458.6	470.7				
RE GRIDCART	AYI18001	ELEV	4	391.4	391.0	390.6	390.3	390.1	390.9	390.7	392.3	395.3	396.9	396.8			
RE GRIDCART	AYI18001	ELEV	4	396.2	398.8	403.2	408.7	416.7	415.0	416.6	421.6	435.0	447.8				
RE GRIDCART	AYI18001	ELEV	5	393.0	392.5	391.7	391.1	390.6	391.0	391.1	391.4	393.0	394.3	395.0			
RE GRIDCART	AYI18001	ELEV	5	395.4	396.8	399.9	402.6	406.7	407.3	408.5	410.7	412.8	420.6				
RE GRIDCART	AYI18001	ELEV	6	395.2	393.8	392.9	392.1	391.5	391.3	391.7	391.8	391.8	392.1	392.9			
RE GRIDCART	AYI18001	ELEV	6	394.1	395.0	396.0	397.5	400.1	402.4	402.9	403.5	403.2	404.9				
RE GRIDCART	AYI18001	ELEV	7	396.5	395.1	394.0	393.1	392.4	392.2	392.4	392.6	392.7	392.9	393.1			
RE GRIDCART	AYI18001	ELEV	7	393.3	394.0	394.6	395.2	396.4	398.8	400.2	401.2	401.6	402.3				
RE GRIDCART	AYI18001	ELEV	8	397.3	395.8	395.0	394.2	393.4	393.2	393.3	393.5	393.5	393.6	393.6			
RE GRIDCART	AYI18001	ELEV	8	393.8	394.5	395.2	396.1	396.8	396.6	397.8	399.2	400.2	401.4				
RE GRIDCART	AYI18001	ELEV	9	397.3	396.5	396.2	395.3	394.4	394.1	394.3	394.3	394.3	394.2	394.1			
RE GRIDCART	AYI18001	ELEV	9	394.3	395.0	395.9	396.7	397.3	397.3	397.4	397.8	398.9	399.4				
RE GRIDCART	AYI18001	ELEV	10	403.4	403.1	399.2	396.5	395.5	395.2	395.4	395.3	395.2	394.9	394.7			
RE GRIDCART	AYI18001	ELEV	10	394.6	395.3	396.4	397.1	397.6	397.8	397.9	398.2	398.5	399.0				
RE GRIDCART	AYI18001	ELEV	11	410.0	407.0	403.6	399.2	396.6	396.7	396.8	396.3	396.1	395.6	395.3			
RE GRIDCART	AYI18001	ELEV	11	395.2	395.5	396.8	397.4	397.8	398.1	398.6	398.8	399.1	399.6				
RE GRIDCART	AYI18001	ELEV	12	421.1	411.7	405.9	402.4	398.6	397.6	397.6	397.4	396.8	396.1	395.9			
RE GRIDCART	AYI18001	ELEV	12	395.7	395.6	396.9	397.5	398.0	398.7	399.1	399.6	399.9	400.1				
RE GRIDCART	AYI18001	ELEV	13	417.1	418.3	412.8	406.1	401.1	399.4	399.6	398.5	396.8	396.5	396.5			
RE GRIDCART	AYI18001	ELEV	13	396.4	396.2	397.0	397.6	398.4	399.2	399.7	400.0	400.4	400.7				
RE GRIDCART	AYI18001	ELEV	14	425.1	424.6	421.9	409.8	402.7	402.2	402.6	400.8	397.9	397.3	397.4			
RE GRIDCART	AYI18001	ELEV	14	397.3	397.0	397.0	398.0	398.8	399.5	400.1	400.5	400.8	401.0				
RE GRIDCART	AYI18001	ELEV	15	435.3	434.1	420.4	411.1	405.7	408.4	407.0	403.7	401.3	399.5	398.8			
RE GRIDCART	AYI18001	ELEV	15	398.4	398.1	397.9	398.6	399.6	400.5	401.0	401.2	401.4	401.5				
RE GRIDCART	AYI18001	ELEV	16	440.8	445.4	426.8	412.7	416.3	422.0	415.4	407.5	402.9	401.2	400.3			
RE GRIDCART	AYI18001	ELEV	16	399.7	399.2	399.6	400.0	400.7	401.1	401.6	401.9	402.0	402.1				
RE GRIDCART	AYI18001	ELEV	17	453.5	441.5	435.4	420.1	433.9	444.2	426.7	412.6	404.5	402.1	401.1			

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Attach E - AERMOD Benzene HR
RE GRIDCART AYI18001 ELEV 17 401.2 401.0 400.9 401.1 401.5 401.9 402.3 402.6 402.6 402.5
RE GRIDCART AYI18001 ELEV 18 463.6 449.9 436.1 438.9 453.6 453.6 429.9 414.3 407.3 403.0 402.5
RE GRIDCART AYI18001 ELEV 18 401.9 401.7 401.4 401.9 402.3 402.7 403.2 404.7 404.2 402.9
RE GRIDCART AYI18001 ELEV 19 472.0 464.0 446.4 437.1 453.0 457.0 441.7 419.9 412.0 407.3 403.8
RE GRIDCART AYI18001 ELEV 19 402.5 402.2 402.1 402.2 402.9 406.1 409.3 411.0 410.1 407.0
RE GRIDCART AYI18001 ELEV 20 472.6 459.5 448.1 440.7 452.1 453.7 439.2 435.7 424.8 416.7 407.3
RE GRIDCART AYI18001 ELEV 20 403.4 403.0 402.9 402.5 404.8 413.4 423.4 420.0 424.4 416.3
RE GRIDCART AYI18001 ELEV 21 468.9 457.8 467.0 446.9 454.6 455.0 456.9 454.7 442.7 427.0 414.1
RE GRIDCART AYI18001 ELEV 21 407.5 405.6 404.2 402.9 405.6 415.2 432.4 427.0 432.8 431.5
RE GRIDCART AYI18001 HILL 1 502.7 502.7 464.4 464.4 390.1 490.0 490.0 490.0 490.0 492.3 492.3
RE GRIDCART AYI18001 HILL 1 492.3 492.3 492.3 492.3 492.3 492.3 492.3 490.0 488.8 488.6
RE GRIDCART AYI18001 HILL 2 515.5 513.8 502.7 502.7 389.7 490.0 490.0 490.0 490.0 492.3 492.3
RE GRIDCART AYI18001 HILL 2 492.3 492.3 492.3 492.3 492.3 492.3 492.3 490.0 490.0 484.4
RE GRIDCART AYI18001 HILL 3 519.7 519.7 519.7 516.3 513.8 490.0 490.0 490.0 490.0 492.3 492.3
RE GRIDCART AYI18001 HILL 3 492.3 492.3 492.3 492.3 492.3 528.1 492.3 492.3 492.3 488.6
RE GRIDCART AYI18001 HILL 4 519.7 519.7 519.7 519.7 519.7 519.6 513.8 490.0 490.0 490.0 492.3
RE GRIDCART AYI18001 HILL 4 492.3 492.3 492.3 492.3 492.3 528.1 528.1 550.8 528.1 492.3
RE GRIDCART AYI18001 HILL 5 519.7 519.7 519.7 519.7 519.7 519.7 519.7 515.0 490.0 490.0 492.3
RE GRIDCART AYI18001 HILL 5 492.3 492.3 492.3 528.1 528.1 550.8 550.8 550.8 550.8 550.8
RE GRIDCART AYI18001 HILL 6 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 490.0 492.3
RE GRIDCART AYI18001 HILL 6 492.3 492.3 528.1 528.1 550.8 550.8 550.8 550.8 550.8 550.8
RE GRIDCART AYI18001 HILL 7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 492.3
RE GRIDCART AYI18001 HILL 7 492.3 492.3 528.1 550.8 550.8 550.8 550.8 550.8 550.8 585.1
RE GRIDCART AYI18001 HILL 8 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7
RE GRIDCART AYI18001 HILL 8 492.3 492.3 492.3 550.8 550.8 550.8 550.8 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 9 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7
RE GRIDCART AYI18001 HILL 9 519.6 492.3 492.3 532.1 550.8 550.8 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 10 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7
RE GRIDCART AYI18001 HILL 10 519.7 490.0 492.3 532.0 550.8 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 11 519.7 519.7 492.3 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7
RE GRIDCART AYI18001 HILL 11 519.7 519.7 490.0 531.6 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 12 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7 519.7
RE GRIDCART AYI18001 HILL 12 519.7 519.7 513.7 585.2 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 13 519.7 519.7 519.7 519.7 519.8 523.5 519.7 519.7 519.7 519.7 519.7
RE GRIDCART AYI18001 HILL 13 519.7 519.7 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 14 519.7 519.7 519.7 523.5 523.5 523.5 519.7 519.7 519.7 519.7 519.7
RE GRIDCART AYI18001 HILL 14 519.7 585.1 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 15 519.7 519.7 519.8 523.5 523.5 523.5 519.7 519.7 519.7 519.7 519.7
RE GRIDCART AYI18001 HILL 15 519.7 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 16 519.7 519.7 519.8 523.5 523.5 519.7 519.7 523.5 523.5 519.7 519.7
RE GRIDCART AYI18001 HILL 16 519.7 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 17 519.7 519.7 519.7 523.5 519.7 519.7 519.7 523.5 523.5 523.5 519.7
RE GRIDCART AYI18001 HILL 17 585.1 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 18 519.7 519.7 523.5 519.7 519.7 519.7 519.7 523.5 523.5 523.5 523.5
RE GRIDCART AYI18001 HILL 18 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 19 519.7 519.7 519.7 523.5 519.7 519.7 519.7 523.5 523.5 523.5 523.5
RE GRIDCART AYI18001 HILL 19 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 20 519.7 519.7 523.5 523.5 519.7 519.7 519.7 519.7 519.7 523.3 523.5
RE GRIDCART AYI18001 HILL 20 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 HILL 21 519.7 523.5 519.7 523.5 519.7 519.7 519.7 513.7 519.7 519.7 523.5
RE GRIDCART AYI18001 HILL 21 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2 585.2
RE GRIDCART AYI18001 END
RE DISCCART 497046.6 3674641.9 396.94 585.19 1.5
** SENSITIV
** RCPDESCR R1
RE DISCCART 497042.4 3674551.4 397.01 585.19 1.5
** SENSITIV
** RCPDESCR R2
RE DISCCART 496681.6 3674783.7 396.18 519.68 1.5
** SENSITIV
** RCPDESCR R3
RE FINISHED

ME STARTING
ME SURFFILE "C:\Users\XEONRT\AMAZON~1\LDN\18-63L~1\Aermod\ESCOND~1\ESCONDIDO-2012-V15181.SFC"
** SURFFILE "C:\Users\XEONRT\AMAZON~1\LDN\18-63L~1\Aermod\ESCOND~1\ESCONDIDO-2012-V15181.SFC"
ME PROFFILE "C:\Users\XEONRT\AMAZON~1\LDN\18-63L~1\Aermod\ESCOND~1\ESCONDIDO-2012-V15181.PFL"

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Attach E - AERMOD Benzene HR
** PROFILE "C:\Users\XEONRT\AMAZON~1\LDN\18-63L~1\Aermod\ESCOND~1\ESCONDIDO-2012-V15181.PFL"
ME SURFDATA 53120 2012
ME UAIRDATA 3190 2012
ME SITEDATA 00001002 2012
ME PROFBASE 205 METERS
ME STARTEND 2012 1 1 1 2012 12 31 24
ME FINISHED

OU STARTING
OU FILEFORM FIX
OU PLOTFILE ANNUAL ALL ALL`ANNUAL.plt 10000
OU FINISHED

** *****
** It is recommended that the user not edit any data below this line
** *****

** BUILDING BLD 0 0 395.63 5 4
** BUILDING IDN AYI18000
** BUILDING NAM Building
** BUILDING REC 496898.7 3674730.3 7.3 15.2 -179.2

** TERRFILE C:\USERS\XEONRT\AMAZON~1\LDN\18-63L~1\AERMOD\NEDU53~1\NEDU53643667.TIF 2 0 WGS84 11 0 495726.0
3673542.0 495727.5 3676944.5 498716.6 3676943.6 498716.2 3673541.1
** AMPTYPE NED
** AMPDATUM 2
** AMPZONE 11
** AMPHEMISPHERE N

** PROJECTIONWKT
PROJCS["UTM_6326_Zone11",GEOGCS["WGS_84",DATUM["World_Geodetic_System_1984",SPHEROID["WGS_1984",6378137,298.2572235
63],TOWGS84[0,0,0,0,0,0,0,0]],PRIMEM["Greenwich",0],UNIT["Degree",0.0174532925199433]],PROJECTION["Universal_Transver
se_Mercator"],PARAMETER["Zone",11],UNIT["Meter",1,AUTHORITY["EPSG","9001"]]]
** PROJECTION UTM
** DATUM WGE
** UNITS METER
** ZONE 11
** HEMISPHERE N
** ORIGINLON 0
** ORIGINLAT 0
** PARALLEL1 0
** PARALLEL2 0
** AZIMUTH 0
** SCALEFACT 0
** FALSEEAST 0
** FALSENORTH 0

** POSTFMT UNIFORM
** TEMPLATE Regulatory,0
** AERMODEXE AERMOD_BREEZE_18081_64.EXE
** AERMAPEXE AERMAP_EPA_18081_64.EXE

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 0 Informational Message(s)

***** FATAL ERROR MESSAGES *****
*** NONE ***

```

Attach E - AERMOD Benzene HR

***** WARNING MESSAGES *****

RE W216	253	RECART: FLAG Input Inconsistent With Option: Defaults Used	AYI18001
ME W186	275	MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used	0.40
MX W403	275	PFLCNV: Turbulence data is being used w/o ADJ_U* option	SigA Data
MX W402	275	PFLCNV: Turbulence data being used with ADJ_U* w/o DFAULT	Option

 *** SETUP Finishes Successfully ***

▲ *** AERMOD - VERSION 18081 *** *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 *** ***
 16:22:27

PAGE 1
 *** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** MODEL SETUP OPTIONS SUMMARY ***

**Model Is Setup For Calculation of Average CONCentration Values.

-- DEPOSITION LOGIC --
 **NO GAS DEPOSITION Data Provided.
 **NO PARTICLE DEPOSITION Data Provided.
 **Model Uses NO DRY DEPLETION. DRYDPLT = F
 **Model Uses NO WET DEPLETION. WETDPLT = F

**Model Uses RURAL Dispersion Only.

**Model Uses Regulatory DEFAULT Options:
 1. Stack-tip Downwash.
 2. Model Accounts for ELEVated Terrain Effects.
 3. Use Calms Processing Routine.
 4. Use Missing Data Processing Routine.
 5. No Exponential Decay.

**Other Options Specified:
 CCVR_Sub - Meteorological data includes CCVR substitutions
 TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Accepts FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates ANNUAL Averages Only

**This Run Includes: 26 Source(s); 1 Source Group(s); and 444 Receptor(s)
 with: 2 POINT(s), including
 0 POINTCAP(s) and 0 POINTHOR(s)
 and: 24 VOLUME source(s)
 and: 0 AREA type source(s)
 and: 0 LINE source(s)
 and: 0 OPENPIT source(s)
 and: 0 BUOYANT LINE source(s) with 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 15181

**Output Options Selected:
 Model Outputs Tables of ANNUAL Averages by Receptor
 Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

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**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 205.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0

Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07

Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.6 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

▲ *** AERMOD - VERSION 18081 *** *** Benzene ***
11/14/18
*** AERMET - VERSION 15181 *** ***
16:22:27

PAGE 2

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** POINT SOURCE DATA ***

CAP/	EMIS RATE	NUMBER	EMISSION RATE		BASE	STACK	STACK	STACK	STACK	BLDG	URBAN
SOURCE	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	TEMP.	EXIT VEL.	DIAMETER	EXISTS	SOURCE
HOR	SCALAR	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)		
ID											
VARY BY											

BH8ND00P	0	0.36300E-05	496927.8	3674705.4	395.8	3.66	291.00	0.00	0.05	NO	NO
NO											
BH8ND00Q	0	0.36300E-05	496927.8	3674705.4	395.8	3.66	291.00	0.00	0.05	NO	NO
NO											

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11/14/18
*** AERMET - VERSION 15181 *** ***
16:22:27

PAGE 3

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** VOLUME SOURCE DATA ***

SOURCE	NUMBER	EMISSION RATE		BASE	RELEASE	INIT.	INIT.	URBAN	EMISSION RATE
ID	PART.	(GRAMS/SEC)	X	Y	ELEV.	HEIGHT	SY	SZ	SOURCE
	CATS.		(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	SCALAR VARY
									BY

BH8ND000	0	0.50400E-05	496912.0	3674735.8	395.6	1.00	3.00	4.00	NO
BH8ND001	0	0.50400E-05	496920.1	3674735.6	395.6	1.00	3.00	4.00	NO
BH8ND002	0	0.50400E-05	496912.2	3674730.9	395.6	1.00	3.00	4.00	NO
BH8ND003	0	0.50400E-05	496920.2	3674730.9	395.6	1.00	3.00	4.00	NO
BH8ND004	0	0.50400E-05	496912.7	3674724.7	395.7	1.00	3.00	4.00	NO
BH8ND005	0	0.50400E-05	496912.5	3674719.9	395.7	1.00	3.00	4.00	NO
BH8ND006	0	0.50400E-05	496919.7	3674724.6	395.7	1.00	3.00	4.00	NO
BH8ND007	0	0.50400E-05	496919.7	3674720.0	395.7	1.00	3.00	4.00	NO

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BH8ND008	0	0.50400E-05	496912.5	3674713.5	395.8	1.00	3.00	4.00	NO
BH8ND009	0	0.50400E-05	496912.2	3674708.9	395.8	1.00	3.00	4.00	NO
BH8ND00A	0	0.50400E-05	496920.0	3674713.6	395.7	1.00	3.00	4.00	NO
BH8ND00B	0	0.50400E-05	496919.7	3674709.0	395.8	1.00	3.00	4.00	NO
BH8ND00C	0	0.26670E-05	496912.0	3674735.8	395.6	1.00	3.00	4.00	NO
BH8ND00D	0	0.26670E-05	496920.1	3674735.6	395.6	1.00	3.00	4.00	NO
BH8ND00E	0	0.26670E-05	496912.2	3674730.9	395.6	1.00	3.00	4.00	NO
BH8ND00F	0	0.26670E-05	496920.2	3674730.9	395.6	1.00	3.00	4.00	NO
BH8ND00G	0	0.26670E-05	496912.7	3674724.7	395.7	1.00	3.00	4.00	NO
BH8ND00H	0	0.26670E-05	496912.5	3674719.9	395.7	1.00	3.00	4.00	NO
BH8ND00I	0	0.26670E-05	496919.7	3674724.6	395.7	1.00	3.00	4.00	NO
BH8ND00J	0	0.26670E-05	496919.7	3674720.0	395.7	1.00	3.00	4.00	NO
BH8ND00K	0	0.26670E-05	496912.5	3674713.5	395.8	1.00	3.00	4.00	NO
BH8ND00L	0	0.26670E-05	496912.2	3674708.9	395.8	1.00	3.00	4.00	NO
BH8ND00M	0	0.26670E-05	496920.0	3674713.6	395.7	1.00	3.00	4.00	NO
BH8ND00N	0	0.26670E-05	496919.7	3674709.0	395.8	1.00	3.00	4.00	NO

▲ *** AERMOD - VERSION 18081 *** *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 *** ***
 16:22:27

PAGE 4
 *** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
-----	-----
ALL	BH8ND000 , BH8ND001 , BH8ND002 , BH8ND003 , BH8ND004 , BH8ND005 , BH8ND006 ,
BH8ND007	,
	BH8ND008 , BH8ND009 , BH8ND00A , BH8ND00B , BH8ND00C , BH8ND00D , BH8ND00E ,
BH8ND00F	,
	BH8ND00G , BH8ND00H , BH8ND00I , BH8ND00J , BH8ND00K , BH8ND00L , BH8ND00M ,
BH8ND00N	,
	BH8ND00P , BH8ND00Q ,

▲ *** AERMOD - VERSION 18081 *** *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 *** ***
 16:22:27

PAGE 5
 *** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

*** X-COORDINATES OF GRID ***
 (METERS)

496167.9, 496236.2, 496304.5, 496372.8, 496441.1, 496509.4, 496577.7, 496646.0, 496714.3, 496782.6,
 496850.9, 496919.2, 496987.5, 497055.8, 497124.1, 497192.4, 497260.7, 497329.0, 497397.3, 497465.6,
 497533.9,

*** Y-COORDINATES OF GRID ***
 (METERS)

3675465.6, 3675397.3, 3675329.0, 3675260.7, 3675192.4, 3675124.1, 3675055.8, 3674987.5, 3674919.2, 3674850.9,
 3674782.6, 3674714.3, 3674646.0, 3674577.7, 3674509.4, 3674441.1, 3674372.8, 3674304.5, 3674236.2, 3674167.9,
 3674099.6,

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Attach E - AERMOD Benzene HR

11/14/18

*** AERMET - VERSION 15181 ***
16:22:27

PAGE 6

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)		496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70
496646.00	496714.30							

3674099.60		468.90	457.80	467.00	446.90	454.60	455.00	456.90
454.70	442.70							
3674167.90		472.60	459.50	448.10	440.70	452.10	453.70	439.20
435.70	424.80							
3674236.20		472.00	464.00	446.40	437.10	453.00	457.00	441.70
419.90	412.00							
3674304.50		463.60	449.90	436.10	438.90	453.60	453.60	429.90
414.30	407.30							
3674372.80		453.50	441.50	435.40	420.10	433.90	444.20	426.70
412.60	404.50							
3674441.10		440.80	445.40	426.80	412.70	416.30	422.00	415.40
407.50	402.90							
3674509.40		435.30	434.10	420.40	411.10	405.70	408.40	407.00
403.70	401.30							
3674577.70		425.10	424.60	421.90	409.80	402.70	402.20	402.60
400.80	397.90							
3674646.00		417.10	418.30	412.80	406.10	401.10	399.40	399.60
398.50	396.80							
3674714.30		421.10	411.70	405.90	402.40	398.60	397.60	397.60
397.40	396.80							
3674782.60		410.00	407.00	403.60	399.20	396.60	396.70	396.80
396.30	396.10							
3674850.90		403.40	403.10	399.20	396.50	395.50	395.20	395.40
395.30	395.20							
3674919.20		397.30	396.50	396.20	395.30	394.40	394.10	394.30
394.30	394.30							
3674987.50		397.30	395.80	395.00	394.20	393.40	393.20	393.30
393.50	393.50							
3675055.80		396.50	395.10	394.00	393.10	392.40	392.20	392.40
392.60	392.70							
3675124.10		395.20	393.80	392.90	392.10	391.50	391.30	391.70
391.80	391.80							
3675192.40		393.00	392.50	391.70	391.10	390.60	391.00	391.10
391.40	393.00							
3675260.70		391.40	391.00	390.60	390.30	390.10	390.90	390.70
392.30	395.30							
3675329.00		389.40	389.20	389.70	389.80	389.70	390.20	391.20
393.20	396.30							
3675397.30		388.00	388.40	389.00	389.10	389.70	390.40	391.50
393.60	395.20							
3675465.60		387.80	388.20	388.80	389.40	390.10	390.50	391.70
394.60	396.40							

▲ *** AERMOD - VERSION 18081 *** Benzene

11/14/18

*** AERMET - VERSION 15181 ***
16:22:27

PAGE 7

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

Attach E - AERMOD Benzene HR
 *** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)					X-COORD (METERS)			
497260.70	497329.00	496782.60	496850.90	496919.20	496987.50	497055.80	497124.10	497192.40

3674099.60	427.00	414.10	407.50	405.60	404.20	402.90	405.60
415.20	432.40						
3674167.90	416.70	407.30	403.40	403.00	402.90	402.50	404.80
413.40	423.40						
3674236.20	407.30	403.80	402.50	402.20	402.10	402.20	402.90
406.10	409.30						
3674304.50	403.00	402.50	401.90	401.70	401.40	401.90	402.30
402.70	403.20						
3674372.80	402.10	401.10	401.20	401.00	400.90	401.10	401.50
401.90	402.30						
3674441.10	401.20	400.30	399.70	399.20	399.60	400.00	400.70
401.10	401.60						
3674509.40	399.50	398.80	398.40	398.10	397.90	398.60	399.60
400.50	401.00						
3674577.70	397.30	397.40	397.30	397.00	397.00	398.00	398.80
399.50	400.10						
3674646.00	396.50	396.50	396.40	396.20	397.00	397.60	398.40
399.20	399.70						
3674714.30	396.10	395.90	395.70	395.60	396.90	397.50	398.00
398.70	399.10						
3674782.60	395.60	395.30	395.20	395.50	396.80	397.40	397.80
398.10	398.60						
3674850.90	394.90	394.70	394.60	395.30	396.40	397.10	397.60
397.80	397.90						
3674919.20	394.20	394.10	394.30	395.00	395.90	396.70	397.30
397.30	397.40						
3674987.50	393.60	393.60	393.80	394.50	395.20	396.10	396.80
396.60	397.80						
3675055.80	392.90	393.10	393.30	394.00	394.60	395.20	396.40
398.80	400.20						
3675124.10	392.10	392.90	394.10	395.00	396.00	397.50	400.10
402.40	402.90						
3675192.40	394.30	395.00	395.40	396.80	399.90	402.60	406.70
407.30	408.50						
3675260.70	396.90	396.80	396.20	398.80	403.20	408.70	416.70
415.00	416.60						
3675329.00	396.90	396.70	396.80	400.10	404.30	409.80	413.90
418.60	429.10						
3675397.30	396.20	397.60	399.40	401.40	402.60	408.80	414.50
420.50	441.80						
3675465.60	397.60	399.60	401.10	403.70	409.30	409.60	414.80
425.20	442.70						

▲ *** AERMOD - VERSION 18081 *** *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 *** ***
 16:22:27

PAGE 8
 *** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)				X-COORD (METERS)
497397.30	497465.60	497533.90		

Attach E - AERMOD Benzene HR

- - - - -

3674099.60	427.00	432.80	431.50
3674167.90	420.00	424.40	416.30
3674236.20	411.00	410.10	407.00
3674304.50	404.70	404.20	402.90
3674372.80	402.60	402.60	402.50
3674441.10	401.90	402.00	402.10
3674509.40	401.20	401.40	401.50
3674577.70	400.50	400.80	401.00
3674646.00	400.00	400.40	400.70
3674714.30	399.60	399.90	400.10
3674782.60	398.80	399.10	399.60
3674850.90	398.20	398.50	399.00
3674919.20	397.80	398.90	399.40
3674987.50	399.20	400.20	401.40
3675055.80	401.20	401.60	402.30
3675124.10	403.50	403.20	404.90
3675192.40	410.70	412.80	420.60
3675260.70	421.60	435.00	447.80
3675329.00	442.90	458.60	470.70
3675397.30	461.40	470.70	482.70
3675465.60	465.10	482.10	483.60

*** AERMOD - VERSION 18081 *** Benzene

11/14/18

*** AERMET - VERSION 15181 ***

16:22:27

PAGE 9

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70
496646.00	496714.30						

- - - - -

3674099.60	519.70	523.50	519.70	523.50	519.70	519.70	519.70
513.70	519.70						
3674167.90	519.70	519.70	523.50	523.50	519.70	519.70	519.70
519.70	519.70						
3674236.20	519.70	519.70	519.70	523.50	519.70	519.70	519.70
523.50	523.50						
3674304.50	519.70	519.70	523.50	519.70	519.70	519.70	519.70
523.50	523.50						
3674372.80	519.70	519.70	519.70	523.50	519.70	519.70	519.70
523.50	523.50						
3674441.10	519.70	519.70	519.80	523.50	523.50	519.70	519.70
523.50	523.50						
3674509.40	519.70	519.70	519.80	523.50	523.50	523.50	519.70
519.70	519.70						
3674577.70	519.70	519.70	519.70	523.50	523.50	523.50	519.70
519.70	519.70						
3674646.00	519.70	519.70	519.70	519.80	523.50	519.70	519.70
519.70	519.70						
3674714.30	519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70	519.70						
3674782.60	519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70	519.70						
3674850.90	519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70	519.70						
3674919.20	519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70	519.70						

Attach E - AERMOD Benzene HR								
3674987.50		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70	519.70							
3675055.80		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70	519.70							
3675124.10		519.70	519.70	519.70	519.70	519.70	519.70	519.70
519.70	519.70							
3675192.40		519.70	519.70	519.70	519.70	519.70	519.70	519.70
515.00	490.00							
3675260.70		519.70	519.70	519.70	519.70	519.70	519.60	513.80
490.00	490.00							
3675329.00		519.70	519.70	519.70	516.30	513.80	490.00	490.00
490.00	490.00							
3675397.30		515.50	513.80	502.70	502.70	389.70	490.00	490.00
490.00	490.00							
3675465.60		502.70	502.70	464.40	464.40	390.10	490.00	490.00
490.00	490.00							

^ *** AERMOD - VERSION 18081 *** *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 *** ***
 16:22:27

PAGE 10
 *** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)		496782.60	496850.90	496919.20	496987.50	497055.80	497124.10	497192.40
497260.70	497329.00							

3674099.60		519.70	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20							
3674167.90		523.30	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20							
3674236.20		523.50	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20							
3674304.50		523.50	523.50	585.20	585.20	585.20	585.20	585.20
585.20	585.20							
3674372.80		523.50	519.70	585.10	585.20	585.20	585.20	585.20
585.20	585.20							
3674441.10		519.70	519.70	519.70	585.20	585.20	585.20	585.20
585.20	585.20							
3674509.40		519.70	519.70	519.70	585.20	585.20	585.20	585.20
585.20	585.20							
3674577.70		519.70	519.70	519.70	585.10	585.20	585.20	585.20
585.20	585.20							
3674646.00		519.70	519.70	519.70	519.70	585.20	585.20	585.20
585.20	585.20							
3674714.30		519.70	519.70	519.70	519.70	513.70	585.20	585.20
585.20	585.20							
3674782.60		519.70	519.70	519.70	519.70	490.00	531.60	585.20
585.20	585.20							
3674850.90		519.70	519.70	519.70	490.00	492.30	532.00	550.80
585.20	585.20							
3674919.20		519.70	519.70	519.60	492.30	492.30	532.10	550.80
550.80	585.20							
3674987.50		519.70	519.70	492.30	492.30	492.30	550.80	550.80
550.80	550.80							
3675055.80		519.70	492.30	492.30	492.30	528.10	550.80	550.80
550.80	550.80							
3675124.10		490.00	492.30	492.30	492.30	528.10	528.10	550.80
550.80	550.80							
3675192.40		490.00	492.30	492.30	492.30	492.30	528.10	528.10

550.80	550.80							
3675260.70		490.00	492.30	492.30	492.30	492.30	492.30	492.30
528.10	528.10							
3675329.00		492.30	492.30	492.30	492.30	492.30	492.30	492.30
528.10	492.30							
3675397.30		492.30	492.30	492.30	492.30	492.30	492.30	492.30
492.30	492.30							
3675465.60		492.30	492.30	492.30	492.30	492.30	492.30	492.30

PAGE 11
*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

* HILL HEIGHT SCALES IN METERS *

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^ *** AERMOD - VERSION 18081 *** *** Benzene ***
  11/14/18
  *** AERMET - VERSION 15181 *** ***
  16:22:27

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*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

Y-COORD (METERS)					X-COORD (METERS)			
		496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70
496646.00		496714.30						

Page 13

Attach E - AERMOD Benzene HR								
3674167.90		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674236.20		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674304.50		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674372.80		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674441.10		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674509.40		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674577.70		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674646.00		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674714.30		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674782.60		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674850.90		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674919.20		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674987.50		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675055.80		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675124.10		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675192.40		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675260.70		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675329.00		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675397.30		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675465.60		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
▲ *** AERMOD - VERSION 18081 ***		*** Benzene					***	
11/14/18								
*** AERMET - VERSION 15181 ***							***	
16:22:27								

PAGE 13
 *** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

Y-COORD (METERS)					X-COORD (METERS)			
	496782.60	496850.90	496919.20	496987.50	497055.80	497124.10	497192.40	
497260.70	497329.00							

3674099.60	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50								
3674167.90	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50								
3674236.20	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50								
3674304.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50								
3674372.80	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50

1.50	1.50							
3674441.10		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674509.40		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674577.70		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674646.00		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674714.30		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674782.60		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674850.90		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674919.20		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3674987.50		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675055.80		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675124.10		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675192.40		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675260.70		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675329.00		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675397.30		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							
3675465.60		1.50	1.50	1.50	1.50	1.50	1.50	1.50
1.50	1.50							

PAGE 14

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

Y-COORD (METERS)	497397.30	497465.60	497533.90	X-COORD (METERS)
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3674099.60	1.50	1.50	1.50
3674167.90	1.50	1.50	1.50
3674236.20	1.50	1.50	1.50
3674304.50	1.50	1.50	1.50
3674372.80	1.50	1.50	1.50
3674441.10	1.50	1.50	1.50
3674509.40	1.50	1.50	1.50
3674577.70	1.50	1.50	1.50
3674646.00	1.50	1.50	1.50
3674714.30	1.50	1.50	1.50
3674782.60	1.50	1.50	1.50
3674850.90	1.50	1.50	1.50
3674919.20	1.50	1.50	1.50
3674987.50	1.50	1.50	1.50
3675055.80	1.50	1.50	1.50
3675124.10	1.50	1.50	1.50
3675192.40	1.50	1.50	1.50

Attach E - AERMOD Benzene HR

3675260.70		1.50	1.50	1.50
3675329.00		1.50	1.50	1.50
3675397.30		1.50	1.50	1.50
3675465.60		1.50	1.50	1.50

*** AERMOD - VERSION 18081 *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 ***
 16:22:27

PAGE 15

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *
 LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS) YR (METERS)	DISTANCE (METERS)
BH8ND007	496919.2 3674714.3	-0.73
BH8ND008	496919.2 3674714.3	0.30
BH8ND00A	496919.2 3674714.3	-5.39
BH8ND00B	496919.2 3674714.3	-1.13
BH8ND00J	496919.2 3674714.3	-0.73
BH8ND00K	496919.2 3674714.3	0.30
BH8ND00M	496919.2 3674714.3	-5.39
BH8ND00N	496919.2 3674714.3	-1.13

*** AERMOD - VERSION 18081 *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 ***
 16:22:27

PAGE 16

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
 (1=YES; 0=NO)

1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1
1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1 1 1

METEOROLOGICAL DATA PROCESSED BETWEEN START DATE: 2012 1 1 1
 AND END DATE: 2012 12 31 24

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
 (METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

Attach E - AERMOD Benzene HR
 *** AERMOD - VERSION 18081 *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 ***
 16:22:27

PAGE 17
 *** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: C:\Users\XEONRT\AMAZON~1\LDN\18-63L~1\Aermod\ESCOND~1\ESCONDIDO-2012-V15181.SFC Met Version:
 15181
 Profile file: C:\Users\XEONRT\AMAZON~1\LDN\18-63L~1\Aermod\ESCOND~1\ESCONDIDO-2012-V15181.PFL
 Surface format: FREE

Profile format: FREE

Surface station no.: 53120 Upper air station no.: 3190
 Name: UNKNOWN Name: UNKNOWN
 Year: 2012 Year: 2012

First 24 hours of scalar data																							
YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA				
				HT																			
12	01	01	1	01	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	51.	10.0	282.5					
10.0	12	01	01	1	02	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	64.	10.0	281.9				
10.0	12	01	01	1	03	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	31.	10.0	280.9				
10.0	12	01	01	1	04	-2.9	0.056	-9.000	-9.000	-999.	32.	5.5	0.15	1.10	1.00	1.18	130.	10.0	280.4				
10.0	12	01	01	1	05	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	47.	10.0	280.4				
10.0	12	01	01	1	06	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	39.	10.0	279.8				
10.0	12	01	01	1	07	-0.7	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	60.	10.0	279.2				
10.0	12	01	01	1	08	-0.5	0.029	-9.000	-9.000	-999.	12.	4.0	0.47	1.10	0.50	0.44	42.	10.0	280.4				
10.0	12	01	01	1	09	33.3	0.106	0.323	0.014	36.	83.	-3.2	0.47	1.10	0.30	0.44	44.	10.0	285.4				
10.0	12	01	01	1	10	85.9	0.121	0.634	0.011	106.	101.	-1.8	0.48	1.10	0.23	0.44	232.	10.0	291.4				
10.0	12	01	01	1	11	123.6	0.252	0.982	0.005	273.	303.	-11.5	0.48	1.10	0.21	1.34	242.	10.0	297.5				
10.0	12	01	01	1	12	141.2	0.255	1.253	0.005	496.	309.	-10.4	0.48	1.10	0.20	1.34	249.	10.0	299.8				
10.0	12	01	01	1	13	139.0	0.308	1.399	0.005	700.	410.	-18.6	0.48	1.10	0.20	1.78	244.	10.0	300.4				
10.0	12	01	01	1	14	118.4	0.303	1.510	0.005	1033.	401.	-20.9	0.48	1.10	0.21	1.78	241.	10.0	301.4				
10.0	12	01	01	1	15	79.3	0.291	1.390	0.005	1204.	377.	-27.6	0.48	1.10	0.24	1.78	260.	10.0	301.4				
10.0	12	01	01	1	16	24.5	0.162	0.951	0.005	1244.	167.	-15.4	0.51	1.10	0.34	0.89	292.	10.0	299.8				
10.0	12	01	01	1	17	-2.5	0.060	-9.000	-9.000	-999.	45.	7.5	0.51	1.10	0.61	0.89	282.	10.0	296.9				
10.0	12	01	01	1	18	-0.6	0.029	-9.000	-9.000	-999.	12.	3.4	0.47	1.10	1.00	0.44	10.	10.0	293.1				
10.0	12	01	01	1	19	-4.0	0.066	-9.000	-9.000	-999.	40.	6.3	0.11	1.10	1.00	1.48	329.	10.0	290.4				
10.0	12	01	01	1	20	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	65.	10.0	288.1				
10.0	12	01	01	1	21	-0.6	0.029	-9.000	-9.000	-999.	12.	3.3	0.47	1.10	1.00	0.44	61.	10.0	286.4				

Attach E - AERMOD Benzene HR

10.0
 12 01 01 1 22 -0.6 0.029 -9.000 -9.000 -999. 12. 3.3 0.47 1.10 1.00 0.44 33. 10.0 285.4
 10.0
 12 01 01 1 23 -0.6 0.029 -9.000 -9.000 -999. 12. 3.3 0.47 1.10 1.00 0.44 50. 10.0 284.2
 10.0
 12 01 01 1 24 -0.6 0.029 -9.000 -9.000 -999. 12. 3.3 0.47 1.10 1.00 0.44 42. 10.0 283.1
 10.0

First hour of profile data

YR MO DY HR HEIGHT F WDIR WSPD AMB_TMP sigmaA sigmaW sigmaV
 12 01 01 01 10.0 1 51. 0.44 282.6 30.0 -99.00 0.20

F indicates top of profile (=1) or below (=0)

▲ *** AERMOD - VERSION 18081 *** *** Benzene

11/14/18

*** AERMET - VERSION 15181 *** ***

16:22:27

PAGE 18

*** MODELOPTS: RegDFault CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S):

BH8ND004 , BH8ND000 , BH8ND001 , BH8ND002 , BH8ND003 ,
 BH8ND005 , BH8ND006 , BH8ND007 , BH8ND008 , BH8ND009 , BH8ND00A , BH8ND00B ,
 BH8ND00C , BH8ND00D , BH8ND00E , BH8ND00F , BH8ND00G , BH8ND00H , BH8ND00I , BH8ND00J ,
 BH8ND00K , BH8ND00L , BH8ND00M , BH8ND00N , BH8ND00P , BH8ND00Q ,

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3

**

Y-COORD (METERS)	496167.90	496236.20	496304.50	496372.80	496441.10	496509.40	496577.70
496646.00	496714.30						

3674099.60	0.00002	0.00002	0.00002	0.00002	0.00002	0.00001	0.00001
0.00002	0.00002						
3674167.90	0.00002	0.00002	0.00002	0.00003	0.00002	0.00002	0.00002
0.00003	0.00009						
3674236.20	0.00002	0.00002	0.00002	0.00004	0.00002	0.00002	0.00002
0.00016	0.00058						
3674304.50	0.00002	0.00002	0.00004	0.00003	0.00003	0.00003	0.00006
0.00041	0.00141						
3674372.80	0.00002	0.00003	0.00004	0.00019	0.00005	0.00004	0.00009
0.00062	0.00240						
3674441.10	0.00004	0.00003	0.00010	0.00070	0.00038	0.00016	0.00044
0.00171	0.00340						
3674509.40	0.00006	0.00006	0.00028	0.00107	0.00203	0.00158	0.00201
0.00345	0.00503						
3674577.70	0.00017	0.00018	0.00025	0.00133	0.00273	0.00334	0.00392
0.00542	0.00812						
3674646.00	0.00047	0.00042	0.00093	0.00225	0.00336	0.00418	0.00526
0.00710	0.01069						
3674714.30	0.00030	0.00106	0.00213	0.00295	0.00360	0.00465	0.00613
0.00858	0.01324						
3674782.60	0.00111	0.00160	0.00226	0.00285	0.00360	0.00456	0.00598
0.00831	0.01218						
3674850.90	0.00171	0.00197	0.00232	0.00282	0.00343	0.00421	0.00523
0.00671	0.00916						
3674919.20	0.00167	0.00191	0.00220	0.00254	0.00296	0.00352	0.00435

Attach E - AERMOD Benzene HR

0.00547	0.00687							
3674987.50		0.00153	0.00171	0.00193	0.00221	0.00259	0.00306	0.00365
0.00434	0.00516							
3675055.80		0.00136	0.00154	0.00175	0.00200	0.00228	0.00261	0.00299
0.00345	0.00396							
3675124.10		0.00127	0.00143	0.00159	0.00178	0.00198	0.00220	0.00249
0.00280	0.00310							
3675192.40		0.00118	0.00130	0.00143	0.00156	0.00170	0.00189	0.00210
0.00231	0.00259							
3675260.70		0.00108	0.00117	0.00127	0.00137	0.00149	0.00165	0.00179
0.00198	0.00217							
3675329.00		0.00097	0.00104	0.00113	0.00122	0.00132	0.00144	0.00156
0.00171	0.00183							
3675397.30		0.00087	0.00093	0.00101	0.00109	0.00118	0.00127	0.00137
0.00149	0.00157							
3675465.60		0.00080	0.00085	0.00092	0.00099	0.00107	0.00113	0.00121
0.00131	0.00135							

▲ *** AERMOD - VERSION 18081 *** *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 *** ***
 16:22:27

PAGE 19

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S):

BH8ND004	,	BH8ND000	,	BH8ND001	,	BH8ND002	,	BH8ND003	,
		BH8ND005	,	BH8ND006	,	BH8ND007	,	BH8ND008	,
BH8ND00C	,	BH8ND009	,	BH8ND00A	,	BH8ND00B	,		
		BH8ND00D	,	BH8ND00E	,	BH8ND00F	,	BH8ND00G	,
BH8ND00K	,	BH8ND00H	,	BH8ND00I	,	BH8ND00J	,		
		BH8ND00L	,	BH8ND00M	,	BH8ND00N	,	BH8ND00P	,
		BH8ND00Q	,						

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3

**

Y-COORD (METERS)					X-COORD (METERS)			
	496782.60	496850.90	496919.20	496987.50	497055.80	497124.10	497192.40	
497260.70	497329.00							

3674099.60		0.00005	0.00033	0.00095	0.00122	0.00134	0.00137	0.00105
0.00029	0.00003							
3674167.90		0.00023	0.00109	0.00170	0.00176	0.00169	0.00162	0.00129
0.00041	0.00009							
3674236.20		0.00123	0.00192	0.00218	0.00222	0.00211	0.00194	0.00173
0.00121	0.00081							
3674304.50		0.00244	0.00261	0.00281	0.00282	0.00267	0.00237	0.00211
0.00181	0.00157							
3674372.80		0.00326	0.00372	0.00379	0.00375	0.00344	0.00307	0.00261
0.00221	0.00192							
3674441.10		0.00451	0.00531	0.00575	0.00575	0.00489	0.00409	0.00328
0.00274	0.00228							
3674509.40		0.00689	0.00866	0.00937	0.00871	0.00732	0.00566	0.00427
0.00330	0.00261							
3674577.70		0.01118	0.01485	0.01700	0.01461	0.01061	0.00744	0.00537
0.00392	0.00304							
3674646.00		0.01705	0.02948	0.04307	0.02793	0.01529	0.00936	0.00632
0.00454	0.00344							
3674714.30		0.02387	0.06021	0.26046	0.04918	0.01942	0.01077	0.00698
0.00492	0.00370							
3674782.60		0.01951	0.03634	0.05865	0.03319	0.01686	0.01005	0.00671
0.00485	0.00367							

Attach E - AERMOD Benzene HR

3674850.90	0.01285	0.01781	0.02063	0.01713	0.01184	0.00817	0.00589
0.00444	0.00347						
3674919.20	0.00863	0.01043	0.01114	0.01016	0.00825	0.00636	0.00492
0.00390	0.00315						
3674987.50	0.00606	0.00683	0.00710	0.00676	0.00595	0.00497	0.00407
0.00338	0.00277						
3675055.80	0.00447	0.00483	0.00498	0.00485	0.00444	0.00393	0.00336
0.00278	0.00227						
3675124.10	0.00342	0.00364	0.00377	0.00367	0.00342	0.00307	0.00252
0.00200	0.00175						
3675192.40	0.00281	0.00290	0.00294	0.00285	0.00249	0.00200	0.00124
0.00108	0.00085						
3675260.70	0.00226	0.00232	0.00236	0.00225	0.00170	0.00082	0.00024
0.00033	0.00026						
3675329.00	0.00188	0.00192	0.00195	0.00178	0.00134	0.00062	0.00033
0.00019	0.00008						
3675397.30	0.00161	0.00161	0.00157	0.00144	0.00131	0.00066	0.00028
0.00013	0.00004						
3675465.60	0.00137	0.00132	0.00126	0.00109	0.00057	0.00054	0.00025
0.00008	0.00003						

▲ *** AERMOD - VERSION 18081 *** *** Benzene ***

11/14/18

*** AERMET - VERSION 15181 *** ***

16:22:27

PAGE 20

*** MODELOPTS: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

INCLUDING SOURCE(S): BH8ND000 , BH8ND001 , BH8ND002 , BH8ND003 ,

BH8ND004 ,

BH8ND005 , BH8ND006 , BH8ND007 , BH8ND008 , BH8ND009 , BH8ND00A , BH8ND00B ,

BH8ND00C ,

BH8ND00D , BH8ND00E , BH8ND00F , BH8ND00G , BH8ND00H , BH8ND00I , BH8ND00J ,

BH8ND00K ,

BH8ND00L , BH8ND00M , BH8ND00N , BH8ND00P , BH8ND00Q ,

*** NETWORK ID: AYI18001 ; NETWORK TYPE: GRIDCART ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)		
	497397.30	497465.60	497533.90
3674099.60	0.00005	0.00003	0.00003
3674167.90	0.00015	0.00008	0.00027
3674236.20	0.00064	0.00070	0.00088
3674304.50	0.00131	0.00124	0.00119
3674372.80	0.00167	0.00147	0.00130
3674441.10	0.00192	0.00163	0.00141
3674509.40	0.00215	0.00181	0.00156
3674577.70	0.00245	0.00203	0.00173
3674646.00	0.00273	0.00223	0.00186
3674714.30	0.00287	0.00233	0.00193
3674782.60	0.00290	0.00236	0.00196
3674850.90	0.00278	0.00227	0.00190
3674919.20	0.00259	0.00213	0.00180
3674987.50	0.00228	0.00192	0.00165
3675055.80	0.00193	0.00168	0.00148
3675124.10	0.00153	0.00142	0.00119
3675192.40	0.00060	0.00044	0.00019
3675260.70	0.00015	0.00007	0.00005
3675329.00	0.00004	0.00003	0.00003
3675397.30	0.00003	0.00002	0.00003

Attach E - AERMOD Benzene HR

3675465.60 | 0.00002 0.00002 0.00002
 *** AERMOD - VERSION 18081 *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 *** ***
 16:22:27

PAGE 21

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 1 YEARS FOR SOURCE GROUP: ALL

 INCLUDING SOURCE(S): BH8ND000 , BH8ND001 , BH8ND002 , BH8ND003 ,
 BH8ND004 , BH8ND005 , BH8ND006 , BH8ND007 , BH8ND008 , BH8ND009 , BH8ND00A , BH8ND00B ,
 BH8ND00C , BH8ND00D , BH8ND00E , BH8ND00F , BH8ND00G , BH8ND00H , BH8ND00I , BH8ND00J ,
 BH8ND00K , BH8ND00L , BH8ND00M , BH8ND00N , BH8ND00P , BH8ND00Q ,

*** SENSITIVE DISCRETE RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3			**		
X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
497046.60	3674641.90	0.01610	497042.40	3674551.40	0.00979
496681.60	3674783.70	0.01003			

*** AERMOD - VERSION 18081 *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 *** ***
 16:22:27

PAGE 22

*** MODELOPTs: RegDFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 1 YEARS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

NETWORK GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE
ALL	1ST HIGHEST VALUE IS 0.26046 AT (496919.20, 3674714.30, 395.70, 519.70, 1.50)	GC
AYI18001	2ND HIGHEST VALUE IS 0.06021 AT (496850.90, 3674714.30, 395.90, 519.70, 1.50)	GC
AYI18001	3RD HIGHEST VALUE IS 0.05865 AT (496919.20, 3674782.60, 395.20, 519.70, 1.50)	GC
AYI18001	4TH HIGHEST VALUE IS 0.04918 AT (496987.50, 3674714.30, 395.60, 519.70, 1.50)	GC
AYI18001	5TH HIGHEST VALUE IS 0.04307 AT (496919.20, 3674646.00, 396.40, 519.70, 1.50)	GC
AYI18001	6TH HIGHEST VALUE IS 0.03634 AT (496850.90, 3674782.60, 395.30, 519.70, 1.50)	GC
AYI18001	7TH HIGHEST VALUE IS 0.03319 AT (496987.50, 3674782.60, 395.50, 519.70, 1.50)	GC
AYI18001	8TH HIGHEST VALUE IS 0.02948 AT (496850.90, 3674646.00, 396.50, 519.70, 1.50)	GC
AYI18001	9TH HIGHEST VALUE IS 0.02793 AT (496987.50, 3674646.00, 396.20, 519.70, 1.50)	GC

Attach E - AERMOD Benzene HR

AYI18001
 10TH HIGHEST VALUE IS 0.02387 AT (496782.60, 3674714.30, 396.10, 519.70, 1.50) GC
 AYI18001

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR

▲ *** AERMOD - VERSION 18081 *** *** Benzene ***
 11/14/18
 *** AERMET - VERSION 15181 *** ***
 16:22:27

PAGE 23

*** MODELOPTs: RegDEFAULT CONC ELEV FLGPOL NODRYDPLT NOWETDPLT RURAL SigA Data

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
 A Total of 4 Warning Message(s)
 A Total of 378 Informational Message(s)
 A Total of 8784 Hours Were Processed
 A Total of 250 Calm Hours Identified
 A Total of 128 Missing Hours Identified (1.46 Percent)

***** FATAL ERROR MESSAGES *****
 *** NONE ***

***** WARNING MESSAGES *****
 RE W216 253 RECART: FLAG Input Inconsistent With Option: Defaults Used AYI18001
 ME W186 275 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.40
 MX W403 275 PFLCNV: Turbulence data is being used w/o ADJ_U* option SigA Data
 MX W402 275 PFLCNV: Turbulence data being used with ADJ_U* w/o DFAULT Option

 *** AERMOD Finishes Successfully ***

ATTACHMENT F

Health Risk Calculations – Fueling Station Operations – Benzene

Air Quality Health Risk Calculations
Liberty Fueling Stations HR Analysis - Receptor 1
Annual Concentration (µg/m3) **0.110124**

Based on Risk Assessment Guidelines - Guidance
Manual for Preparation of Health Risk
Assessments - February 2015
Unit Risk Factors
(<https://oehha.ca.gov/media/CPFs042909.pdf>)

Duration (Years)	70					
Age of Person Exposed (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual)	0.110124	0.110124	0.110124	0.110124	0.110124	0.110124
Breathing Rate per agegroup BR/BW	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10 ⁻⁶ Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00003816	0.00011523	0.00009102	0.00007876	0.00003542	0.00003066
Exposure Duration (years)	70					
potency factor for Benzene (mg/kg-day)-1	0.01	0.01	0.01	0.01	0.01	0.01
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	1.15857E-08	2.79853E-07	1.96612E-07	3.40246E-07	5.17072E-08	1.72651E-07
per million	0.0116	0.2799	0.1966	0.3402	0.0517	0.1727
Cancer Risk Per Million 9-years	0.488					
Cancer Risk Per Million 30-years	0.683					
Cancer Risk Per Million 70-years	0.804					

Air Quality Health Risk Calculations
Liberty Fueling Stations HR Analysis - Receptor 2
Annual Concentration (µg/m3) **0.0669636**

Based on Risk Assessment Guidelines - Guidance
Manual for Preparation of Health Risk
Assessments - February 2015
Unit Risk Factors
(<https://oehha.ca.gov/media/CPFs042909.pdf>)

Duration (Years)	70					
Age of Person Exposed (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual)	0.0669636	0.0669636	0.0669636	0.0669636	0.0669636	0.0669636
Breathing Rate per agegroup BR/BW	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10 ⁻⁶ Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00002321	0.00007007	0.00005535	0.00004789	0.00002154	0.00001864
Exposure Duration (years)	70					
potency factor for Benzene (mg/kg-day)-1	0.01	0.01	0.01	0.01	0.01	0.01
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	7.04495E-09	1.70172E-07	1.19555E-07	2.06895E-07	3.14418E-08	1.04985E-07
per million	0.0070	0.1702	0.1196	0.2069	0.0314	0.1050
Cancer Risk Per Million 9-years	0.297					
Cancer Risk Per Million 30-years	0.416					
Cancer Risk Per Million 70-years	0.489					

Air Quality Health Risk Calculations
Liberty Fueling Stations HR Analysis - Receptor 3
Annual Concentration (µg/m3) **0.0686052**

Based on Risk Assessment Guidelines - Guidance
Manual for Preparation of Health Risk
Assessments - February 2015
Unit Risk Factors
(<https://oehha.ca.gov/media/CPFs042909.pdf>)

Duration (Years)	70					
Age of Person Exposed (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual)	0.0686052	0.0686052	0.0686052	0.0686052	0.0686052	0.0686052
Breathing Rate per agegroup BR/BW	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10 ⁻⁶ -6 Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00002378	0.00007179	0.00005671	0.00004907	0.00002206	0.00001910
Exposure Duration (years)	70					
potency factor for Benzene (mg/kg-day)-1	0.01	0.01	0.01	0.01	0.01	0.01
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	7.21766E-09	1.74343E-07	1.22486E-07	2.11967E-07	3.22126E-08	1.07559E-07
per million	0.0072	0.1743	0.1225	0.2120	0.0322	0.1076
Cancer Risk Per Million 9-years	0.304					
Cancer Risk Per Million 30-years	0.426					
Cancer Risk Per Million 70-years	0.501					

Air Quality Health Risk Calculations
Liberty Fueling Stations HR Analysis - Receptor (Worst Case Contour)
Annual Concentration (µg/m3) **0.356**

Based on Risk Assessment Guidelines - Guidance
Manual for Preparation of Health Risk
Assessments - February 2015

Unit Risk Factors
(<https://oehha.ca.gov/media/CPFs042909.pdf>)

Duration (Years)	70					
Age of Person Exposed (Years)	3rd Trimester (0.25)	0-2	2-9	2-16	16-30	16-70
Cair (annual)	0.356	0.356	0.356	0.356	0.356	0.356
Breathing Rate per agegroup BR/BW	361	1090	861	745	335	290
A (Default is 1)	1	1	1	1	1	1
Exposure Frequency = EF (days/365days)	0.96	0.96	0.96	0.96	0.96	0.96
10 ⁻⁶ Microgram to Milligram / liters to m3	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001
Dose-inh	0.00012338	0.00037252	0.00029426	0.00025461	0.00011449	0.00009911
Exposure Duration (years)	70					
potency factor for Benzene (mg/kg-day)-1	0.01	0.01	0.01	0.01	0.01	0.01
Age Sensitivity Factor	10	10	3	3	1	1
ED	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
FAH	0.85	0.85	0.72	0.72	0.73	0.73
Risk for Each Age Group	3.74532E-08	9.04688E-07	6.35592E-07	1.09992E-06	1.67155E-07	5.58133E-07
per million	0.0375	0.9047	0.6356	1.0999	0.1672	0.5581
Cancer Risk Per Million 9-years	1.578					
Cancer Risk Per Million 30-years	2.209					
Cancer Risk Per Million 70-years	2.600					

ATTACHMENT G

CALINE 4 Calculations CO Hotspots during Operations

VC and Mira De Valle PM.dat

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Valley Center Road and Mirar De Valle P
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 0.5 M/S Z0= 100. CM ALT= 91.4 (M)
BRG= WORST CASE VD= 0.0 CM/S
CLAS= 7 (G) VS= 0.0 CM/S
MIXH= 1000. M AMB= 1.7 PPM
SIGH= 5. DEGREES TEMP= 10.0 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. west section	-500	0	0	0	* AG	107	1.7	0.0	33.0
B. east section	500	0	0	0	* AG	461	1.7	0.0	33.0
C. south sectio	0	-500	0	0	* AG	1472	1.7	0.0	33.0
D. north sectio	0	500	0	0	* AG	1187	1.7	0.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	* X	* Y	* Z
1. Recpt 1	50	50	5.9
2. Recpt 2	-50	50	5.9
3. Recpt 3	-50	-50	5.9
4. Recpt 4	50	-50	5.9

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	* BRG (DEG)	* PRED CONC (PPM)	* CONC/ LINK (PPM)	A	B	C	D
1. Recpt 1	191.	1.9	0.0	0.0	0.2	0.0	0.0
2. Recpt 2	169.	1.9	0.0	0.0	0.2	0.0	0.0
3. Recpt 3	80.	1.9	0.0	0.1	0.1	0.0	0.0
4. Recpt 4	349.	1.9	0.0	0.0	0.0	0.2	0.0