RECON

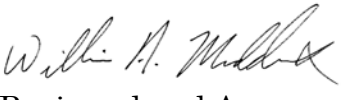
Air Quality Analysis for the D Street Park Project Chula Vista, California

Prepared for
City of Chula Vista
Development Services Department
276 Fourth Avenue
Chula Vista, CA 91910
Contact: Ms. Cheryl Goddard

Prepared by
RECON Environmental, Inc.
1927 Fifth Avenue
San Diego, CA 92101
P 619.308.9333

RECON Number 8819
August 18, 2017

Primary Author
Jack T. Emerson, Air Quality Analyst



Reviewed and Approved by
William A. Maddux, Senior Air Quality Specialist

TABLE OF CONTENTS

FIGURES

TABLE OF CONTENTS (cont.)

TABLES

ATTACHMENTS

Acronyms

°F	degrees Fahrenheit
µg/m3	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB	Assembly Bill
ARB	Air Resources Board
ASF	age-sensitivity factors
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
City	City of Chula Vista
CO	carbon monoxide
DPM	diesel particulate matter
H&SC	Health & Safety Code
HQ	Hazard Quotient
I-5	Interstate 5
mg/kg	milligram per kilogram
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
OEHHA	Office of Environmental Health Hazard Assessment
Pb	lead
PM_{10}	particulate matter less than 10 microns
$PM_{2.5}$	particulate matter less than 2.5 microns
ppb	parts per billion
ppm	parts per million
RAQS	Regional Air Quality Strategy
REL	Reference Exposure Level
ROG	reactive organic gases
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SIP	State Implementation Plan
SO_2	sulfur dioxide
SO_X	oxides of sulfur
TAC	toxic air contaminants
TCM	Transportation Control Measures
TIA	Traffic Impact Analysis
U.S. EPA	United States Environmental Protection Agency
USC	United States Code
VOC	volatile organic compounds

Executive Summary

This report evaluates potential local and regional air quality impacts associated with the proposed D Street Park Project (project) located along the segment of D Street to the west of Woodlawn Avenue in the city of Chula Vista, California. The project would include removal of approximately 18,000 square feet of pavement to make room for park uses, and approximately 10,000 square feet of pavement refinishing and restriping to create 28 parking spaces and a trash enclosure. Miscellaneous improvements associated with the project would include extension of water lines as needed to provide for irrigation of park landscaping, sidewalk improvements along the northern boundary of the project site, and installation of park amenities such as benches and an active recreation area.

The project site is designated as RMH (Residential-Medium High) land use in the City of Chula Vista's (City's) General Plan. The project proposes a public park, which is a lower intensity land use than is typical of the RMH land use designation. Because the project would be consistent with the general plan land use designation, the project would be consistent with the growth anticipated by the general plan. The project would, therefore, not result in an increase in emissions that are not already accounted for in the regional air quality strategy (RAQS). Thus, the project would not interfere with implementation of the RAQS or other air quality plans.

Emissions associated with construction and operation of the project were calculated in order to determine if the project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, and to determine if the project would 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. As calculated in this analysis, project construction and operations emissions would not exceed the applicable City significance thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. As project emissions would be well below these limits, project construction would not result in regional emissions that would exceed any ambient air quality standards or contribute to existing violations.

The evaluation conducted in this Air Toxics Risk Evaluation was based on assumptions regarding emissions from diesel-fueled truck traffic on Interstate 5. Cancer risks were calculated for 9-year, 30-year, and 70-year exposure scenarios based on emission rates from the 2014 Emissions Factor Model (EMFAC2014) and the California Department of Transportation's Emissions Factor Model (CT-EMFAC2014). Traffic volumes for Interstate 5 were obtained from the San Diego Association of Governments' traffic information forecast model. Based on the predicted ground level concentrations, the excess cancer risk at the proposed active recreation area would be approximately 4.2 in one million and the non-cancer chronic risk would be less than the health hazard index.

It should be noted that the variability in parameters such as absorption rates, breathing rates, body weight, frequency of exposure, and fraction of time spent at D Street Park exist

even in a narrowly defined age group or sensitive receptor subpopulation. This creates a level of uncertainty in calculating exposures and associated risks for individuals within a particular receptor population that presumably would receive the same intake doses. Thus, for this analysis the Office of Environmental Health Hazard Assessment (OEHHA) standard default factors, which represent the upper limit of these exposure parameters, generally overestimate risks. Thus, the risks reported represent an upper-bound of estimated risk and are considered conservative. Assumptions regarding the exposure frequency and duration have been revised to reflect a worst-case scenario for the maximally exposed individual receptor associated with a neighborhood park. The OEHHA has not published recommended assumptions for exposure frequencies and durations for neighborhood parks. Use of OEHHA recommended exposure frequencies and duration for residential uses would increase the estimated cancer risk.

The project does not include industrial or agricultural uses that are typically associated with objectionable odors. The project would involve the use of diesel-powered equipment during construction. Diesel exhaust may occasionally be noticeable at adjacent properties; however, construction activities would be temporary and the odors would dissipate quickly in an outdoor environment. Therefore, this impact would be less than significant.

1.0 Introduction

The purpose of this report is to assess potential short-term and long-term local and regional air quality impacts resulting from development of the proposed D Street Park Project (project). The project would include removal of the segment of D Street to the west of Woodlawn Avenue and the development of a community park.

The project site is located within the San Diego Air Basin (SDAB), one of 15 air basins that geographically divide the state of California. The SDAB is currently classified as a federal non-attainment area for ozone and a state non-attainment area for particulate matter less than 10 microns (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), and ozone.

Air quality impacts can result from the construction and operation of the project. Construction impacts are short term and result from fugitive dust, equipment exhaust, and indirect effects associated with construction workers and deliveries. Operational impacts can occur on two levels: regional impacts resulting from growth-inducing development or local effects stemming from sensitive receivers being placed close to pollution sources. In the case of this project, operational impacts are due to emissions to the air basin from mobile sources associated with vehicular travel along the roadways within the project area as well as potential health risks from the site's location adjacent to a major freeway, Interstate 5 (I-5).

The analysis of impacts is based on federal and state Ambient Air Quality Standards (AAQS) and is assessed in accordance with the guidelines, policies, and standards established by the San Diego Air Pollution Control District (SDAPCD) and the City of Chula Vista (City). Project consistency with the adopted air quality plan for the area is also evaluated to ensure the project would not conflict with, or obstruct the implementation of the regional air quality plan. Measures are recommended, as required, to reduce potentially significant impacts.

2.0 Project Description

The D Street Park Project (project) is located along the segment of D Street to the west of Woodlawn Avenue in the city of Chula Vista, California (Figure 1). The project is approximately 0.64 acre and is generally rectangular with a length of approximately 450 feet and a width of approximately 62 feet (Figure 2). The project would include removal of approximately 18,000 square feet of pavement to make room for active and passive park uses, and approximately 10,000 square feet of pavement refinishing and restriping to create 28 parking spaces and a trash enclosure (Figure 3). Active recreational uses would be near the center of the project site, set back approximately 225 feet from the western edge of the project site. Approximately 160 feet of D Street would be resurfaced and reoriented to accommodate parking. Miscellaneous improvements associated with the project would include extension of water lines as needed to provide for irrigation of park landscaping, sidewalk improvements along the northern boundary of the project site, and installation of park amenities such as benches and an active recreation area.

Project Location

FIGURE 1
Regional Location

RECON

M:\JOBS5\8819\common_gis\fig1.mxd 8/14/2017 fmm

Image Source: Nearmap (flown June 2017)

Project Boundary

RECON

M:\JOBS5\8819\common_gis\fig2.mxd 8/14/2017 fmm

FIGURE 2

Project Location on Aerial Photograph

Project Boundary

RECON

M:\JOBS5\8819\common_gis\fig3.mxd 8/14/2017 fmm

FIGURE 3

Proposed Site Plan

The site was graded previously for the development of D Street. The project would not include any buildings. Project construction is likely to be limited to pavement demolition, minor utilities trenching, pavement resurfacing/restriping, minor sidewalk rehabilitation/improvement, landscaping, and installation of park amenities. Project construction may occur concurrently with the development of the 701 D Street Project on the north-adjacent parcel.

3.0 Regulatory Framework

3.1 Federal Regulations

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

Six criteria pollutants of primary concern have been designated: ozone, carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), lead (Pb), and respirable particulate matter (PM_{10} and $PM_{2.5}$). The primary NAAQS ". . . in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health . . . " and the secondary standards ". . . protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air" [42 USC 7409(b)(2)]. The U.S. EPA classifies specific geographic areas as either "attainment" or "nonattainment" areas for each pollutant based on the comparison of measured data with the NAAQS. States are required to adopt enforceable plans, known as a State Implementation Plan (SIP), to achieve and maintain air quality meeting the NAAQS. State plans also must control emissions that drift across state lines and harm air quality in downwind states. The NAAQS are presented in Table 1 (California Air Resources Board [CARB] 2016).

Table 1
Ambient Air Quality Standards

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

See footnotes on next page.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SOURCE: CARB 2016.

An area within a state is designated as either attainment or non-attainment for a particular pollutant. States are required to adopt enforceable plans, known as SIP, to achieve and maintain air quality meeting the NAAQS. State plans also must control emissions that drift across state lines and harm air quality in downwind states. Once a non-attainment area has achieved the NAAQS for a particular pollutant, it is redesignated as an attainment area for that pollutant. To be redesignated, the area must meet air quality standards for three consecutive years. After redesignation to attainment, the area is known as a maintenance area and must develop a plan demonstrating how the air quality standards will be maintained.

3.2 State Regulations

3.2.1 Criteria Pollutants

The California Clean Air Act (CCAA) was enacted in 1988 (California Health & Safety Code [H&SC] §39000 et seq.). Under the CCAA, CARB has developed the California Ambient Air Quality Standards (CAAQS) and generally has set more stringent limits on the criteria pollutants than the NAAQS (see Table 1). In addition to the federal criteria pollutants, the CAAQS also specify standards for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride (see Table 1).

The state of California is divided geographically into 15 air basins for managing the air resources of the state on a regional basis. Areas within each air basin are considered to share the same air masses and, therefore, are expected to have similar ambient air quality. Similar to the CAA, the state classifies these specific geographic areas as either "attainment" or "nonattainment" areas for each pollutant based on the comparison of measured data with the CAAQS. The SDAB is a non-attainment area for the state ozone, PM_{10}, and $PM_{2.5}$ standards.

3.2.2 Toxic Air Contaminants

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

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

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

The Children's Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air monitoring network, and develop any additional air toxic control measures needed to protect children's health. Locally, toxic air pollutants are regulated through the SDAPCD's Regulation XII. Of particular concern statewide are diesel-exhaust particulate matter emissions. Diesel-exhaust particulate matter was established as a TAC in 1998, and is estimated to represent a majority of the cancer risk from TACs statewide (based on the statewide average). Diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a complex scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB and are listed as carcinogens either under the state's Proposition 65 or under the federal Hazardous Air Pollutants Program.

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

In April 2005, CARB published the Air Quality and Land Use Handbook: A Community Health Perspective (CARB 2005). The handbook makes recommendations directed at protecting sensitive land uses from air pollutant emissions while balancing a myriad of other land use issues (e.g., housing, transportation needs, economics, etc.). It notes that the handbook is not regulatory or binding on local agencies and recognizes that application takes a qualitative approach. As reflected in the CARB Handbook, there is currently no adopted standard for the significance of health effects from mobile sources. Therefore, the CARB has provided guidelines for the siting of land uses near heavily traveled roadways. Of pertinence to this study, the CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 or more vehicles per day should be avoided when possible.

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

3.2.3 State Implementation Plan

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

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

3.2.4 California Environmental Quality Act

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

3.3 San Diego Air Pollution Control District

The SDAPCD is the agency that regulates air quality in the SDAB. The SDAPCD prepared the Regional Air Quality Strategy (RAQS) to address state requirements, pursuant to the CCAA of 1988 (California H&SC §39000 et seq.). The CCAA requires areas that are designated nonattainment of state ambient air quality standards for ozone, CO, SO_2, or NO_2 to prepare and implement state plans to attain the standards by the earliest practicable date (H&SC §40911(a)). With the exception of state ozone standards, each of these standards has been attained in the SDAB (County of San Diego 2016).

Included in the RAQS are the Transportation Control Measures (TCMs) prepared by the San Diego Association of Governments (SANDAG) that control emissions from mobile sources (County of San Diego 2016). The RAQS and TCM set forth the steps needed to accomplish attainment of CAAQS for ozone. The most recent update of the RAQS and corresponding TCMs were adopted in 2016.

The SDAPCD has also established a set of rules and regulations initially adopted on January 1, 1969, and periodically reviewed and updated. These rules and regulations are available for review on the agency's website.

3.3.1 Environmental Health Risk Criteria

In accordance with AB 2588, any new facility proposed that would have the potential to emit toxic air contaminants would be required to assess air toxic problems that would result from the facility's emissions (County of San Diego 2010). If air emissions from a specific facility include toxic substances or exceed identified limits, the facility is required by the SDAPCD to provide information regarding emission inventories and health risk assessments. If adverse health impacts exceeding public notification levels are identified, the facility would provide public notice, and if the facility poses a potentially significant public health risk, the facility must submit a risk reduction audit and plan to demonstrate how the facility would reduce health risks. SDAPCD public notification thresholds are specified by SDPACE Rule 1210. The public notification thresholds are:

i. Maximum incremental cancer risks equal to or greater than 10 in one million, or
ii. Cancer burden equal to or greater than 1.0, or
iii. Total acute non-cancer health hazard index equal to or greater than 1.0, or
iv. Total chronic non-cancer health hazard index equal to or greater than 1.0.

4.0 Environmental Setting

4.1 Geographic Setting

The project is located in the city of Chula Vista, about 2.5 miles east of the Pacific Ocean. The eastern portion of the SDAB is surrounded by mountains to the north, east, and south. These mountains tend to restrict airflow and concentrate pollutants in the valleys and low-lying areas below.

4.2 Climate

The project site, like the rest of San Diego County, has a Mediterranean climate characterized by warm, dry summers and mild, wet winters. Based on meteorological data recorded at the Chula Vista Civic Center, which is approximately 0.8 mile east of the project site, the local temperature range is relatively limited, with winter low temperatures along the coast averaging about 45 degrees Fahrenheit (°F), and summer high temperatures average about 72°F. The average annual precipitation is 9.7 inches, falling primarily from December to March. Snowfall is infrequent (Western Regional Climate Center [WRCC] 2016).

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

interacting with the daily local cycle produce periodic temperature inversions that influence the dispersal or containment of air pollutants in the SDAB. Beneath the inversion layer pollutants become "trapped" as their ability to disperse diminishes. The mixing depth is the area under the inversion layer. Generally, the morning inversion layer is lower than the afternoon inversion layer. The greater differences between the morning and afternoon mixing depths correspond to increased dispersion of pollutants in the atmosphere.

Throughout the year, the height of the temperature inversion in the afternoon varies between approximately 1,500 and 2,500 feet above mean sea level. In winter, the morning inversion layer is about 800 feet above mean sea level. In summer, the morning inversion layer is about 1,100 feet above mean sea level. Therefore, air quality generally tends to be better in the winter than in the summer.

The prevailing westerly wind pattern is sometimes interrupted by regional "Santa Ana" conditions. A Santa Ana occurs when a strong high pressure develops over the Nevada–Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds over the mountains and out to sea. Strong Santa Ana winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin to the north are blown out over the ocean, and low pressure over Baja California draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event occurs, the combination of transported and locally produced contaminants produce the worst air quality measurements recorded in the basin.

4.3 Existing Air Quality

Air quality at a particular location is a function of the kinds, amounts, and dispersal rates of pollutants being emitted into the air locally and throughout the basin. The major factors affecting pollutant dispersion are wind speed and direction, the vertical dispersion of pollutants (which is affected by inversions), and the local topography. Air quality is commonly expressed as the number of days in which air pollution levels exceed state standards set by the CARB or federal standards set by the U.S. EPA. The SDAPCD maintains 10 air quality monitoring stations located throughout the greater San Diego metropolitan region. Air pollutant concentrations and meteorological information are continuously recorded at these stations. Measurements are then used by scientists to help forecast daily air pollution levels.

The nearest active monitoring station is the Chula Vista Monitoring Station, approximately 5.2 miles northwest of the project site. The Chula Vista Monitoring Station measures ozone, NO_2, PM_{10}, and $PM_{2.5}$. Table 2 provides a summary of measurements collected at the Chula Vista Monitoring Station for the years 2014 through 2016.

Table 2 Air Quality Measurements at the Chula Vista Monitoring Station			
Pollutant/Standard	2014	2015	2016
Ozone			
Days State 1-hour Standard Exceeded (0.09 ppm)	0	0	0
Days State 8-hour Standard Exceeded (0.07 ppm)	1	0	0
Days Federal 8-hour Standard Exceeded (0.075 ppm)	1	0	0
Max. 1-hr (ppm)	0.093	0.088	0.073
Max 8-hr (ppm)	0.072	0.066	0.068
Nitrogen Dioxide			
Days State 1-hour Standard Exceeded (0.18 ppm)	0	0	0
Days Federal 1-hour Standard Exceeded (0.100 ppm)	0	0	0
Max 1-hr (ppm)	0.055	0.049	0.054
Annual Average (ppm)	0.011	0.010	0.009
PM_{10}			
Days State 24-hour Standard Exceeded (50 µg/m^3)	0	0	0
Days Federal 24-hour Standard Exceeded (150 µg/m^3)	0	0	0
State Max Daily (µg/m^3)	39.0	45.0	48.0
State Annual Average (µg/m^3)	23.4	19.8	21.8
Federal Max Daily (µg/m^3)	38.0	46.0	48.0
Federal Annual Average (µg/m^3)	22.9	19.7	21.6
$PM_{2.5}$			
Measured Days Federal 24-hour Standard Exceeded (35 µg/m^3)	0	0	0
Max Daily (µg/m^3)	26.5	33.5	23.9
State Annual Average (µg/m^3)	9.3	8.4	8.7
Federal Annual Average (µg/m^3)	9.2	8.3	8.7
SOURCE: CARB 2017. ppm = parts per million; µg/m^3 = micrograms per cubic meter			

4.3.1 Ozone

Nitrogen oxides and hydrocarbons (reactive organic gases [ROG]) are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone, which is the primary air pollution problem in the SDAB. Because sunlight plays such an important role in its formation, ozone pollution—or smog—is mainly a concern during the daytime in summer months. The SDAB is currently designated a federal and state non-attainment area for ozone. During the past 25 years, San Diego had experienced a decline in the number of days with unhealthy levels of ozone despite the region's growth in population and vehicle miles traveled (County of San Diego 2013).

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

In order to address adverse health effects due to prolonged exposure, the U.S. EPA phased out the national 1-hour ozone standard and replaced it with the more protective 8-hour ozone standard. The SDAB is currently a non-attainment area for the previous (1997)

national 8-hour standard, and is recommended as a non-attainment area for the revised (2008) national 8-hour standard of 0.075 parts per million (ppm).

Not all of the ozone within the SDAB is derived from local sources. Under certain meteorological conditions, such as during Santa Ana wind events, ozone and other pollutants are transported from the Los Angeles Basin and combine with ozone formed from local emission sources to produce elevated ozone levels in the SDAB.

Local agencies can control neither the source nor the transportation of pollutants from outside the air basin. The SDAPCD's policy, therefore, has been to control local sources effectively enough to reduce locally produced contamination to clean air standards. Through the use of air pollution control measures outlined in the RAQS, the SDAPCD has effectively reduced ozone levels in the SDAB.

Actions that have been taken in the SDAB to reduce ozone concentrations include:

- **Transportation control measures if vehicle travel and emissions exceed attainment demonstration levels.** Transportation control measures are strategies that will reduce transportation-related emissions by reducing vehicle use or improving traffic flow.

- **Enhanced motor vehicle inspection and maintenance program.** The smog check program is overseen by the Bureau of Automotive Repair. The program requires most vehicles to pass a smog test once every two years before registering in the state of California. The smog check program monitors the amount of pollutants automobiles produce. One focus of the program is identifying "gross polluters," or vehicles that exceed two times the allowable emissions for a particular model. Regular maintenance and tune-ups, changing the oil, and checking tire inflation can improve gas mileage and lower air pollutant emissions. It can also reduce traffic congestion due to preventable breakdowns, further lowering emissions.

- **Air Quality Improvement Program.** This program, established by AB 118, is a voluntary incentive program administered by the CARB to fund clean vehicle and equipment projects, research on biofuels production and the air quality impacts of alternative fuels, and workforce training.

4.3.2 Carbon Monoxide

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

Small-scale, localized concentrations of CO above the state and national standards have the potential to occur at intersections with stagnation points such as those that occur on major

highways and heavily traveled and congested roadways. Localized high concentrations of CO are referred to as "CO hot spots" and are a concern at congested intersections, where automobile engines burn fuel less efficiently and their exhaust contains more CO.

4.3.3 Particulate Matter

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

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

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

4.3.3.1 PM_{10}

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

4.3.3.2 $PM_{2.5}$

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

4.3.4 Other Criteria Pollutants

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

5.0 Thresholds of Significance

Thresholds used to evaluate potential impacts to air quality are based on applicable criteria in the State CEQA Guidelines Appendix G. The project would have a significant air quality impact if it would:

1. Obstruct or conflict with the implementation of the RAQS;
2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation;
3. 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 (including the release of emissions which exceed quantitative thresholds for ozone precursors);
4. Expose sensitive receptors to substantial pollutant concentration including air toxics such as diesel particulates; or
5. Create objectionable odors affecting a substantial number of people.

Emissions resulting from implementation of the project would be due primarily to construction-generated emissions and traffic associated with daily operation. The City evaluates a project's potential to violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase of a criteria pollutant based on the quantitative emission thresholds established by the South Coast Air Quality Management District (SCAQMD). These significance thresholds define emission levels below which a project would not have a significant impact on ambient air quality. It should be noted that the use of these significance thresholds is conservative, as the SCAQMD's significance thresholds are based on air quality in the South Coast Air Basin; the South Coast Air Basin experiences some of the worst air quality conditions in the nation and is designated a non-attainment area for PM_{10}, $PM_{2.5}$, and ozone, with a classification of extreme nonattainment for ozone, whereas the SDAB is attainment for PM_{10}, $PM_{2.5}$ and is classified as marginal nonattainment under ozone. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 3, the City's Air Quality Significance Thresholds, are exceeded.

Table 3 Air Quality Significance Thresholds		
Pollutant	Construction (pounds per day)	Operation (pounds per day)
NO_x	100	55
VOC	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_x	150	150
CO	550	550
Lead	3	3
SOURCE: SCAQMD 2015. NOx = oxides of nitrogen; VOC = volatile organic compounds; PM_{10} = 10-micron particulate matter; $PM_{2.5}$ = 10-micron particulate matter; SOx = oxides of sulfur; CO = carbon monoxide		

In addition to a comparison with the quantitative thresholds for regional emissions in Table 3, the project was evaluated for local air quality impacts, such as whether concentrations of carbon monoxide that would exceed the NAAQS or CAAQS, consistency with assumptions of the San Diego RAQS, and potential odors impacts.

5.1 Environmental Health Risk Criteria

The Environmental Element of the City's General Plan contains policies intended to improve local air quality by minimizing the release of air pollutants and toxic air contaminants and limiting the exposure of people to such pollutants (City of Chula Vista 2015). Policy E 6.10 states:

> The siting of new sensitive receivers within 500 feet of highways resulting from development or redevelopment projects shall require the preparation of a health risk assessment as part of the CEQA review of the project. Attendant health risks identified in the Health Risk Assessment (HRA) shall be feasibly mitigated to the maximum extent practicable, in accordance with CEQA, in order to help ensure that applicable federal and state standards are not exceeded.

The SDAPCD does not specify thresholds for evaluating CEQA projects or for projects that do not require a permit to operate (e.g., non-stationary sources). In general, for permitted projects, the SDAPCD does not identify a significant impact if the potential health risks from the project would not exceed the health risk public notification thresholds specified by SDAPCD Rule 1210. Health risk public notification thresholds are discussed in Section 3.3.1. For the purposes of evaluating the potential health risks associated with the air toxics addressed in this assessment, a significant impact would occur if the worst-case incremental cancer risk is greater than or equal to 10 in one million, or if the worst-case total acute or chronic health hazard index is greater than or equal to one.

6.0 Methodology and Assumptions

Air emissions were calculated using California Emissions Estimator Model (CalEEMod) 2016.3.1 (California Air Pollution Control Officers Association 2016). The CalEEMod program is a tool used to estimate air emissions resulting from land development projects based on California-specific emission factors. The model estimates mass emissions from two basics sources: construction sources and operational sources (i.e., area and mobile sources).

Inputs to CalEEMod include such items as the air basin containing the project, land uses, trip generation rates, trip lengths, vehicle fleet mix (percentage of autos, medium truck, etc.), trip destination (i.e., percent of trips from home to work, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters. The CalEEMod output files contained in Attachment 1 indicate the specific outputs for each model run. Emissions of NO_x, CO, SO_x, PM_{10}, $PM_{2.5}$, and ROG are calculated. Emission factors are not available for lead, and consequently, lead emissions are not calculated. The SDAB is currently in attainment of the state and federal lead standards. Furthermore, fuel used in construction equipment and most other vehicles is not leaded.

6.1 Construction-related Emissions

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

- Fugitive dust from grading activities;
- Construction equipment exhaust; and
- Construction-related trips by workers and material-hauling trucks.

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

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

Air emission estimates in CalEEMod are based on the duration of construction phases; construction equipment type, quantity, and usage; grading area; season; and ambient

temperature, among other parameters. Project construction would occur in six stages: demolition, site preparation, grading, drainage and utilities, construction, and paving. Specific construction phasing and equipment parameters were developed by City staff and are summarized in Table 4 below.

Table 4
Construction Schedule and Equipment

Phase	Length (Days)	Equipment	Horsepower	Load Factor
Demolition	5 days	1 Dozer	247	0.40
		1 Loader	203	0.36
		1 Excavator	158	0.38
		1Concrete Saw	81	0.73
Site Preparation	5 days	1 Dozer	247	0.40
		1 Excavator	158	0.38
		1 Compactor	8	0.43
Grading	12 days	1 Dozer	247	0.40
		1 Loader	203	0.36
		1 Excavator	158	0.38
		1 Compactor	8	0.43
Drainage and Utilities	10 days	1 Excavator	158	0.38
		1 Backhoe	97	0.37
		1 Loader	203	0.36
Construction	3 days	1 Forklift	89	0.20
Paving	2 days	1 Compactor	8	0.43
		1 Paver	130	0.42
		2 Paving Equipment	132	0.36
		2 Rollers	80	0.38

Construction emissions were modeled assuming construction would begin in January 2018 and is estimated to last approximately 2 months. Demolition debris from pavement removal was estimated based on the depth and area of the segment of D Street that would be removed. As the project site is flat, grading cut and fill soil would be balanced on-site. Standard dust control measures would be implemented as a part of project construction in accordance with SDAPCD rules and regulations. Fugitive dust emissions were calculated using CalEEMod default values, and did not take into account the required dust control measures. Thus, the emissions estimates are conservative.

6.2 Operation-related Emissions

Operation emissions are long term and include mobile and area sources. Sources of operational emissions include:

- Vehicle trips generated by the project;
- Natural gas use for space and water heating;
- Consumer products and architectural coatings; and
- Landscaping equipment.

GHG emissions from vehicles come from the combustion of fossil fuels in vehicle engines. Mobile emissions are estimated in CalEEMod by first calculating trip rate, trip length, trip purpose (e.g., home to work, home to shop, home to other), and trip type percentages for each land use type and quantity. Project trip generation rates were developed from the Institute of Transportation Engineers' 9th Edition Trip Generation Handbook, which indicates that city parks typically generate 1.89 weekday trips per acre, 22.75 Saturday trips per acre, and 16.74 Sunday trips per acre (Institute of Transportation Engineers 2012). Therefore, the project would generate up to 15 daily trips. Standard countywide trip lengths for each trip type were used to determine total project vehicle miles traveled (California Air Pollution Control Officers Association 2016). The vehicle emission factors and fleet mix used in CalEEMod are derived from CARB's Emission Factors 2014 (EMFAC2014) model and account for the effects of applicable regulations such as the Advanced Clean Cars Program.

The project is a city park and would not include any space heating or water heating needs. Operation of the project is not anticipated to involve natural gas use.

Area sources of emissions can include the use of hearths (fireplaces), consumer products, architectural coatings, and landscaping equipment. There are no hearths or woodstoves associated with the project. Use of consumer products and landscaping equipment is estimated based on land use. Landscaping maintenance includes fuel combustion emission from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers as well as air compressors, generators, and pumps. Emission calculations take into account building area, equipment emission factors, and the number of operational days (summer days).

6.3 Environmental Health Risk

The AERMOD dispersion model was used to calculate concentrations at the project site associated with emissions of TACs from I-5. Surface and upper air meteorological data from the Lindberg Field and Naval Air Station Miramar monitoring stations were used in the AERMOD model. The high-end excess cancer risk was calculated based on guidance from the Office of Environmental Health Hazard Assessment (OEHHA; 2015), using the 95th percentile exposure assumptions for inhalation risks (CARB 2015). The risks were calculated based on 9, 30, and 70 years of exposure for excess cancer risks and chronic non-cancer hazards for ages ranging from the last trimester of birth through age 70.

One source of uncertainty in calculating exposures is the assumption that individuals within a particular receptor population (or subpopulation) will receive the same intake doses. Variability in parameters such as absorption rates, breathing rates, body weight, skin surface area, and frequency of exposure will exist even in a narrowly defined age group or sensitive receptor subpopulation. This range of uncertainty and variability is difficult to assess. In this analysis, OEHHA standard default factors representing the upper limit of these exposure parameters will generally overestimate risks. Thus, the risks reported in this analysis represent an upper-bound of estimated risk.

6.3.1 Exposure Assessment

The purpose of the exposure assessment is to estimate the extent of public exposure to emitted substances (OEHHA 2015). Under the OEHHA and U.S. EPA guidance, risk assessments for TACs consist of dispersion modeling of air toxic emissions to predict their downwind concentrations at the ground level. The methodology uses the model results in estimating potential health risks associated with exposure at the predicted concentrations.

The exposure assessment determines the quantities or concentrations of the risk agents received by the potentially exposed populations and receptors. The exposure assessment's emphasis is on calculating risk to maximally exposed individuals or small populations. This assessment is performed by determining the concentrations of chemicals at a location of interest and combining this information with the time that individuals or populations are exposed to the chemicals.

According to the OEHHA guidelines, an inhalation pathway cancer risk analysis must be evaluated for every health risk assessment (OEHHA 2015). Exposure through inhalation is a function of the breathing rate, the exposure frequency, and the concentration of a substance in the air (OEHHA 2015). 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 of birth, 0 to less than 2 (0<2), 2 to less than 9 (2<9), 2 to less than 16 (2<16), 16 to less than 30 (16<30), and 16 to 70 years of age.[1] These age-specific groupings are used with the age-sensitivity factors for cancer risk assessment. A first tier (Tier 1) evaluation uses the high-end point estimate (i.e., the 95th percentiles) breathing rates for the inhalation.

Additionally, OEHHA has developed age-sensitivity factors (ASF). ASFs are used to account for the increased susceptibility of infants and children to carcinogens, as compared to adults. The ASF calculation procedure includes the use of age-specific weighting factors in calculating cancer risks from exposures of infants, children and adolescents, to reflect their anticipated special sensitivity to carcinogens. OEHHA recommends weighting cancer risk by a factor of 10 for exposures that occur from the third trimester of pregnancy to 2 years of age, and by a factor of 3 for exposures that occur from 2 years through 16 years of age. An age sensitivity factor of 1 is applied to all other age groups.

This analysis is considered to be conservative as the potential methods used tend to overestimate rather than underestimate health risks. In addition, individuals are evaluated under scenarios using the high-end point estimates for breathing rates. These higher breathing rates result in incremental cancer risk estimates that represent the upper-range of predictions and, therefore, health risks that may be associated with exposure to vehicles emissions from I-5. Furthermore, the toxicity values (i.e., the values for each chemical at

[1]The D Street Park Project would develop a park within a residential neighborhood; OEHHA guidance does not specify breathing rates for park uses. Guidance for residential exposure was assessed as the D Street Park would in an exposed population that is most similar to the population typical in a residential area (as compared to an occupational exposure).

which an adverse health risk is predicted) are designed to protect health with an adequate margin of safety and are, therefore, conservative. Thus, the health risks calculated in this analysis represent the upper-bound of risks rather than actual values for any specific individual.

The vehicle emission factors used in the dispersion modeling and concentration estimates are based on EMFAC2014 model. Therefore, the emission factors take into account improvements in technology and rules for future emission reductions for on-road vehicles that have been implemented by CARB, but do not, and cannot take into account any future reductions that are proposed but not yet implemented. The methodology for calculating emissions based on the freeway traffic mix and by various speeds was developed from the California Department of Transportation's (Caltrans) 2014 Emissions Factor Model (CT-EMFAC2014).

Based on the Caltrans' report, Annual Average Daily Truck Traffic on California State Highways (2013), in the vicinity of the project, 3.92 percent of the traffic volumes on I-5 are trucks with more than two axels. The remaining vehicles are classified as automobiles with two axels. This percentage of trucks was further broken down by type 1 and type 2 trucks per the CT-EMFAC method, which resulted in a final vehicle classifications mix of 96.1 percent non-trucks, of which 0.7 percent were diesel fueled; 2.1 percent being in the Truck 1 category, of which 37.7 percent were diesel fueled; and 1.8 percent classified as truck 2, of which 93.6 percent were diesel fueled. The vehicle classification mix was used in developing emission rates entered into AERMOD to determine ground level PM_{10} concentrations from vehicle exhaust. To estimate potential incremental cancer risks and the potential for adverse chronic non-cancer health hazards to exposures, the dose through inhalation in air of TACs was calculated for the inhalation pathway. The equation for dose through inhalation (Dose-air) is as follows:

Dose-air = $(C_{air} \times DBR \times A \times EF \times 10^{-6})$;
Where:

Dose-air	=	Chronic daily intake, milligram per kilogram (mg/kg) body weight per day
C_{air}	=	Ground-level concentration of TAC to which the receptor is exposed, micrograms/cubic meter
DBR	=	Daily breathing rate, normalized to body weight (liters per kilogram body weight per day (as listed in the Table 5.6 Point Estimates of Residential Breathing Rates [OEHHA 2015]
A	=	Inhalation absorption factor (OEHHA recommended factor of 1)
EF	=	Exposure frequency, days/year; (OEHHA recommended factor of 0.96 for resident and 0.68 for workers)

The 30-year residential exposure scenario is the recommended assessment scenario identified in the OEHHA guidelines, with the 9- and 70-year exposures disclosing the low and high end of risk. Exposure frequency and breathing rate represent worst-case values for these exposure parameters. OEHHA guidelines recommend exposure frequency for residential uses be assumed to be exposed for 24 hours per day, 350 days per year (7 days per week, 50 weeks per year) and the worker exposure frequency be assumed to be 250 days

per year (5 days per week, 50 weeks per year) for the exposure period. Exposure frequency for the D Street Park would be assumed to be 250 days per year for the exposure period; however, is also disclosed for a 350-day-per-year exposure scenario. The 95th percentile breathing rate was used to calculate exposure to TACs for the purpose of calculating excess cancer risk. For the purpose of calculating chronic and acute hazard index, the upper bound breathing rate was used.

6.3.2 Dose–Response Assessment

The dose-response assessment is the process of characterizing the relationship between exposure to an agent and incidence of an adverse health effect in exposed populations (OEHHA 2015). The assessment involves establishing a toxicity value or criterion to use in assessing potential health risk. The toxicity criterion, or health guidance value, for carcinogens is the cancer potency factor that describes the potential risk of developing cancer over a 70-year lifetime. It is assumed in cancer risk assessments that risk is directly proportional to dose and that there is no threshold below which the risk of carcinogenesis is null (OEHHA 2015). Cancer potency factors are typically expressed as an high end probability of developing cancer assuming continuous lifetime exposure to a substance at a dose of one milligram per kilogram of body weight, and are expressed in units of inverse dose as a potency slope [i.e., $(mg/kg/day)^{-1}$]. The cancer potency factors in this assessment have been recommended by OEHHA (OEHHA 2015).

Non-cancer health risks (chronic and acute) are characterized by comparing the exposure to a concentration at or below a level where adverse effects are not likely to occur following specified exposure conditions. These concentrations or doses are called Reference Exposure Levels (RELs). As stated in the OEHHA guidance, it should be emphasized that exceeding the REL does not necessarily indicate that an adverse health effect will occur. Unlike cancer health effects, non-cancer health effects are generally assumed to have thresholds for adverse effects. In other words, no injury from a pollutant will occur until exposure to that pollutant has reached or exceeded a certain concentration (i.e., threshold). RELs take into account the exposure of sensitive populations and are thus intended to be health protective. A Chronic REL is a level above which prolonged exposure may have an adverse health effects. An Acute REL is a level set above the level at which short-term exposure may have an adverse health effect. The Hazard Quotient (HQ) for a substance is calculated as the exposure concentration divided by the REL.

6.3.3 Risk Characterization

Risk characterization is the final step of risk assessment. In this step, modeled concentrations and exposure information, which are determined through the exposure assessment, are combined with potency factors and RELs that are developed through the dose-response assessment (OEHHA 2015). In this assessment, the health risk characterization process involves integrating the exposure and the cancer potency factors to estimate two levels of potential health effects: carcinogenic and non-carcinogenic. The following sections present the approach to calculating carcinogenic and non-carcinogenic risks in this assessment.

6.3.3.1 Carcinogenic Risk Characterization Methodology

Carcinogenic risk characterization assumed that chemicals causing cancer do not have a threshold (i.e., a carcinogen produces a risk of causing cancer at any level of exposure). It should be noted that people are exposed to numerous chemicals from natural and artificial sources, and this background exposure may exceed the risk threshold considered to be acceptable for a particular cancer-causing mechanism. Moreover, some people may be more susceptible to cancer than others, which means that background levels of exposure may already exceed the risk threshold values for those individuals and not for others that are equally exposed. Therefore, this assessment focuses on the incremental potential cancer risk associated with exposure to emissions and does not account for natural background or individual habits.

In assessing the carcinogenic effects resulting from exposures to environmental contaminants, the inhalation cancer risk (Risk-inh), is calculated using the following equation:

Risk-inh = (Dose-air x CPF x ASF x FT) ;
Where:

Risk-inh	=	Inhalation Cancer Risk
Dose-air	=	Chronic daily intake, mg/kg body weight per day
CPF	=	Inhalation cancer potency factor $(mg/kg\text{-}day)^{-1}$ (OEHHA recommended 1.1 $(mg/kg\text{-}day)^{-1}$ particulate matter from diesel-fueled engines)
ASF	=	Age Sensitivity Factor (OEHHA recommended 10 for ages 0-2, 3 for ages 2-16, 1 for ages 16-30)
FT	=	Fraction of time spent at D Street Park (unitless)

Cancer risk is calculated by multiplying the inhalation dose by the inhalation cancer potency factor to yield the potential inhalation excess cancer risk. The cancer risk is expressed as the increased chance of contracting cancer during a 9-year, 30-year, and 70-year exposure period for the age ranges of 0-9, 0-30, and 0-70. Each of these age groups also include the third trimester of a fetus.

OEHHA guidelines recommend fraction of time spent at home be assumed to be between 17 and 21 hours of each day. The D Street Park is unlikely to accommodate any individual for more than a few hours per day. As discussed previously, an exposure frequency of 250 days per year is assumed for D Street Park. This analysis assumes that the average duration of a visit would be 4 hours; however, it is also disclosed for the duration of a typical residential exposure scenario.

6.3.3.2 Non-carcinogenic Risk Characterization Methodology

In this analysis, non-carcinogenic impacts are evaluated for chronic inhalation exposure. Estimates of health impacts from non-carcinogenic concentrations are expressed as a HQ

for individual substances, such as diesel particulate. An HQ of one or less indicates that adverse health effects are not expected to result from exposure to emissions of that substance. Reference exposure levels are defined as the concentration at which no adverse health effects are anticipated. Generally, the inhalation pathway is the largest contributor to the total dose. The HQ is calculated with the following equation:

Ground-Level Concentration (micrograms per cubic meter [µg/m^3])/Reference Exposure Level (µg/m^3) = Hazard Quotient

7.0 Air Quality Assessment

7.1 Construction-related Emissions

Table 5 shows the total projected construction maximum daily emission levels for each criteria pollutant. The CalEEMod output files for construction emissions are contained in Attachment 1.

Table 5
Summary of Worst-case Construction Emissions
(pounds per day)

Year	Pollutant					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2018	2	23	15	>1	6	2
Maximum Daily Emissions	**2**	**23**	**15**	**>1**	**6**	**2**
Significance Threshold	*75*	*100*	*550*	*150*	*150*	*55*

ROG = reactive organic gas; NOx = oxides of nitrogen; CO = carbon monoxide; SO_X = oxides of sulfur; PM_{10} = 10-micron particulate matter; $PM_{2.5}$ = 2.5-micron particulate matter

For assessing the significance of the air quality emissions resulting during construction of the project, the construction emissions were compared to the significance thresholds shown in Table 5. As shown, maximum daily construction emissions are projected to be less than the applicable thresholds for all criteria pollutants.

7.2 Operation-related Emissions

Table 5 shows the total projected maximum daily emission levels during project operation for each criteria pollutant. The CalEEMod output files for construction emissions are contained in Attachment 1.

Table 6 Project Operational Emissions (pounds per day)						
Source	Pollutant					
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Mobile Sources	>0.1	0.1	0.3	>0.1	0.1	>0.1
Energy Sources	0	0	0	0	0	0
Area Sources	>0.1	0	>0.1	0	0	0
Total	>0.1	0.1	0.3	>0.1	0.1	>0.1
Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
NOTE: Totals may vary due to independent rounding. ROG = reactive organic gas; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = oxides of sulfur; PM_{10} = 10-micron particulate matter; $PM_{2.5}$ = 2.5-micron particulate matter						

As shown, maximum daily construction emissions are projected to be less than the applicable thresholds for all criteria pollutants.

7.3 Environmental Risk Assessment Results

7.3.1 Cancer Risk

The maximum excess cancer risks were predicted for a receptor located in the proposed active recreation area. Based on the dispersion modeling, which is shown on Figure 4, the annual ground level concentration of DPM at this location would be approximately 0.04 µg/m^3. Based on this concentration, maximum excess cancer risks for the 30-year exposure scenario were estimated to be 4.2 in one million; 2.9 in one million for the 9-year exposure scenario; and 5.0 in one million for the 70-year scenario. Thus, the incremental cancer risk from DPM exposure at the active recreation area is anticipated to be below the 10 in one million significance threshold for all scenarios. Modeling results are included in Attachment 2.

The project would include the development of a neighborhood park. Assumptions regarding the exposure frequency and duration have been revised to reflect a worst-case scenario for the maximally exposed individual receptor associated with a neighborhood park. If health risks were estimated following OEHHA's recommended exposure frequency and duration for residential uses, 17 to 21 hours per day for 350 days per year, the excess cancer risk would be approximately 27.3 in one million for the 30-year exposure, 19.5 in one million for the 9-year exposure, and 32.1 in one million for the 70-year exposure. This exposure would not be anticipated to occur; however, it is included for disclosure.

Image Source: Nearmap (flown June 2017)

Project Boundary

0 Feet 150

PM10 Ground Level Concentrations

- 0.02 µg/m^3
- 0.03 µg/m^3
- 0.04 µg/m^3
- 0.05 µg/m^3
- 0.06 µg/m^3
- 0.07 µg/m^3
- 0.08 µg/m^3

RECON

M:\JOBS5\8819\common_gis\fig4.mxd 8/14/2017 fmm

FIGURE 4

PM10 Ground Level Concentrations

The following discussion of background risks is provided for informational purposes. Based on the CARB's California Almanac of Emissions and Air Quality – 2009 Edition (CARB 2009), the relative cancer risk attributable to diesel particulate emissions in San Diego County was estimated at 420 in one million for the year 2000, which represents a 52 percent drop in excess cancer risks since 1990 (CARB 2009). The reduction over time is primarily attributed to regulatory requirements and technological developments that have resulted in the reduction of toxics emitted in diesel exhaust. Based on the risk estimates, the project results of 4.2 in one million excess cancer risk for the maximally exposed individual receptor in comparison with the background risks within San Diego County, this would contribute approximately 1.0 percent of the estimated existing risk to the overall cumulative risk predicted in San Diego County.

7.3.2 Non-Cancer Risk

Based on an annual ground level concentration of 0.04 µg/m^3, the chronic non-cancer risk predicted at the project site was 0.008. This is below the level of 1.0 at which adverse non-cancer health risks would be anticipated.

7.4 Impact Analysis

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

The CCAA requires areas that are designated as non-attainment of state ambient air quality standards for ozone, CO, SO_2, and NO_2 to prepare and implement plans to attain the standards by the earliest practicable date. The SDAB is designated non-attainment for the state ozone standard. Accordingly, the RAQS was developed to identify feasible emission control measures and provide expeditious progress toward attaining the state standards for ozone, PM_{10}, and $PM_{2.5}$; however, the CCAA only requires, in this case, a plan for ozone. The two pollutants addressed in the RAQS are ROG and NOx, which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and growth create challenges in controlling emissions and by extension to maintaining and improving air quality. The RAQS, in conjunction with the transportation control measures, were most recently adopted in 2016 as the air quality plan for the region.

The CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed in general plans. As such, projects that propose development that is consistent with the growth anticipated by SANDAG's growth projections and/or the City's General Plan would be consistent with the RAQS. In the event that a project would propose development that is less dense than anticipated by the growth projections, the project would likewise be consistent with the RAQS. In the event a project proposes development that is greater than anticipated in the growth projections, further analysis would be warranted to determine if the project would exceed the growth projections used in the RAQS for the specific subregional area.

The project site is designated as RMH (Residential-Medium High) in the City's General Plan. The project proposes a public park, which is a lower intensity land use than is typical of the RMH land use designation. Thus, the project would be consistent with the General Plan land use designation and with the growth anticipated by the City's General Plan and SANDAG. The project would therefore not result in an increase in emissions that are not already accounted for in the RAQS. Thus, the project would not interfere with implementation of the RAQS or other air quality plans.

2. *Would the project result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

As shown in Tables 5 and 6, air emissions associated with project construction and operation would not exceed the applicable City significance thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. Therefore, as project air emissions would be below these limits, the project would not result in regional emissions exceeding the NAAQS or CAAQS or contributing to existing violations. Impacts to air quality standards would be less than significant.

3. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including release emissions which exceed quantitative thresholds for ozone precursors)?*

The region is classified as attainment for all criterion pollutants except ozone, PM_{10}, and $PM_{2.5}$. The SDAB is non-attainment for the 8-hour federal and state ozone standards. Ozone is not emitted directly, but is a result of atmospheric activity on precursors. NO_X and ROG are known as the chief "precursors" of ozone. These compounds react in the presence of sunlight to produce ozone.

As shown in Tables 5 and 6, emissions of ozone precursors (ROG and NO_X), PM_{10}, and $PM_{2.5}$ from construction and operation would be below the applicable thresholds. Therefore, the project would not generate emissions in quantities that would result in an exceedance of the NAAQS or CAAQS for ozone, PM_{10}, or $PM_{2.5}$, and impacts would be less than significant.

The project could be developed concurrently with the adjacent 701 D Street Project. The individual and cumulative emissions from both projects are summarized in Table 7.

Table 7
Construction Emissions
(pounds per day)

Maximum Daily Emissions	Pollutant					
	ROG	NO_x	CO	SO_X	PM_{10}	$PM_{2.5}$
D Street Park Project	2	23	15	>1	6	2
701 D Street Project	61	55	42	>1	21	13
Combined Emissions	63	78	57	>1	27	15
Significance Threshold	*75*	*100*	*550*	*150*	*150*	*55*

ROG = reactive organic gas; NOx = oxides of nitrogen; CO = carbon monoxide; SOx = oxides of sulfur; PM_{10} = 10-micron particulate matter; $PM_{2.5}$ = 2.5-micron particulate matter

4. *Would the project expose sensitive receptors to substantial pollutant concentration including air toxics such as diesel particulates?*

The term "sensitive receptor" refers to a person in the population who is more susceptible to health effects due to exposure to an air contaminant than the population at large or to a land use that may reasonably be associated with such a person. Examples include residences, schools, playgrounds, childcare centers, churches, athletic facilities, retirement homes, and long-term health care facilities.

Sensitive receptors in the project vicinity include multi-family developments to the east of the project site and the Bayscene Mobilehome Park to the south of the project site. Additionally, the 701 D Street Project would develop sensitive receptors to the north of the project site. Once complete, the project's outdoor recreation area would also be a sensitive receptor.

Construction-related Emissions

Project construction equipment would generate diesel exhaust emissions. Diesel exhaust has been identified by CARB as a carcinogen. Cancer risk is dependent on the exposure concentration (dose) and duration of exposure.

Due to the short-term nature of construction (approximately two months), project construction is not anticipated to result in substantial cancer risk. Construction impacts to sensitive receptors would be less than significant.

As exposure from diesel-fueled construction vehicles would be short-term (i.e., approximately two months), project construction equipment would not result in substantial cancer risk.

Operation-related Emissions

The project proposes a community park. Community parks are not typically associated with the emission of substantial pollutant concentrations. Additionally, as the project is not anticipated to generate substantial traffic volumes, the project would not result in substantial off-site emissions. Operation impacts to sensitive receptors would be less than significant.

Park Exposure

The proposed active recreation area would be a sensitive receptor. The Air Toxics Risk Evaluation conducted in this analysis was based on assumptions regarding emissions from diesel-fueled truck traffic on I-5. To provide an estimate of emissions to estimate a 9-year, 30-year, and 70-year exposure scenarios, emission rates were calculated from the EMFAC2014 model. SANDAG year 2020 traffic volumes on I-5 were used in this analysis. Based on the predicted ground level concentrations and assuming that the maximally exposed individual receptor is present 4 hours per day for 250 days per year, the excess

cancer risk would be approximately 4.2 in one million and the non-cancer chronic risk would be less than health hazard index. Thus, the potential increase in cancer risk and the non-cancer chronic risks would be less than significant.

If health risks were estimated following OEHHA's recommended exposure frequency and duration for residential uses, 17 to 21 hours per day for 350 days per year, the excess cancer risk would be approximately 27.3 in one million for the 30-year exposure, 19.5 in one million for the 9-year exposure, and 32.1 in one million for the 70-year exposure. This exposure would not be anticipated to occur; however, it is included for completeness of disclosure.

5. Would the project create objectionable odors affecting a substantial number of people?

The project would involve the use of diesel-powered construction equipment. Diesel exhaust may be noticeable temporarily at adjacent properties; however, construction activities would be temporary. The project does not include industrial or agricultural uses that are typically associated with objectionable odors. Therefore, this impact would be less than significant.

8.0 Conclusions

The primary goal of the RAQS is to reduce ozone precursor emissions. The project site is designated as RMH (Residential-Medium High) land use in the City's General Plan. The project proposes a public park, which is a lower intensity land use than is typical of the RMH land use designation. Because the project would be consistent with the City's General Plan land use designation, the project would be consistent with the growth anticipated by the City's General Plan and SANDAG. The proposed project would, therefore, not result in an increase in emissions that are not already accounted for in the RAQS. Thus, the project would not interfere with implementation of the RAQS or other air quality plans.

As shown in Tables 5 and 6, emissions associated with construction and operation of the project would not exceed the applicable City significance thresholds. These thresholds are designed to provide limits below which project emissions would not significantly change regional air quality. Therefore, as project emissions would be well below these limits, project construction would not result in regional emissions that would exceed NAAQS or CAAQS or contribute to existing violations. Impacts to regional air quality would be less than significant.

The evaluation conducted in this Air Toxics Risk Evaluation was based on assumptions regarding emissions from diesel-fueled truck traffic on I-5. To provide an estimate of emissions to estimate a 9-year, 30-year, and 70-year exposure scenarios, emission rates were calculated from the EMFAC2014 model. SANDAG year 2020 traffic volumes on I-5 were used in this analysis. Based on the predicted ground level concentrations, the excess cancer risk would be approximately 4.2 in one million and the non-cancer chronic risk would be less than significant. The excess cancer risk would be below the 10 in one million significance threshold.

It should be noted that the variability in parameters such as absorption rates, breathing rates, body weight, frequency of exposure, and fraction of time spent at D Street Park exist even in a narrowly defined age group or sensitive receptor subpopulation. This creates a level of uncertainty in calculating exposures and associated risks for individuals within a particular receptor population that presumably would receive the same intake doses. For this analysis the OEHHA standard default factors, which represent the upper limit of these exposure parameters, generally overestimates risks. Assumptions regarding the exposure frequency and duration have been revised to reflect a worst-case scenario for the maximally exposed individual receptor associated with a neighborhood park.

The project does not include industrial or agricultural uses that are typically associated with objectionable odors. The project would involve the use of diesel-powered construction equipment. Diesel exhaust may be noticeable temporarily at adjacent properties; however, construction activities would be temporary. Therefore, this impact would be less than significant.

9.0 References Cited

California Air Pollution Control Officers Association

2016 California Emissions Estimator Model (CalEEMod). User's Guide Version 2016.3.1 September.

California Air Resources Board (CARB)

2000 Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. California Air Resources Board. Stationary Source Division, Mobile Source Control Division. October.

2005 Air Quality and Land Use Handbook: A Community Health Perspective. California Air Resources Board. April.

2009 The California Almanac of Emissions and Air Quality - 2009 Edition.

2015 2014 EMission FACtors (EMFAC) model, version 1.07, update March 15.

2016 Ambient Air Quality Standards. California Air Resources Board. May 4.

2017 California Air Quality Data Statistics. California Air Resources Board Internet Site. http://www.arb.ca.gov/adam/welcome.html. Top 4 Summary and Hourly Listing. Accessed August 8, 2017.

Chula Vista, City of

2015 Chula Vista General Plan Vision 2020. Amended October.

Institute of Transportation Engineers (ITE)

2012 Trip Generation Handbook. 9th Edition.

San Diego, County of
2013 Air Quality in San Diego County. 2013 Annual Report. San Diego Air Pollution Control District.

2016 2016 Revision of the Regional Air Quality Strategy for San Diego County, Available at http://www.sdapcd.org/content/dam/sdc/apcd/PDF/Air%20Quality%20Planning/2016%20RAQS.pdf

South Coast Air Quality Management District (SCAQMD)
2015 California Environmental Quality Act (CEQA) Air Quality Handbook. March.

Office of Environmental Health Hazard Assessment(OEHHA)
2015 Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (Guidance Manual), February.

U.S. Environmental Protection Agency (EPA)
2016 Criteria Air Pollutants, Particulate Matter. Accessed at https://www3.epa.gov/airquality/particlepollution/index.html. Last updated February 23.

Western Regional Climate Center
2016 Western U.S. Climate Historical Summaries: Chula Vista, California (041758). Last updated May 31.

ATTACHMENTS

ATTACHMENT 1

CalEEMod Output – Project Emissions

Summary Book

Air Quality

Air Quality Emissions Estimate		Pollutant (lbs/day)					
		ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Summer	Construction	2	23	15	0	6	2
	Area	0	0	0	0	0	0
	Energy	0	0	0	0	0	0
	Mobile	0	0	0	0	0	0
Winter	Construction	2	23	15	0	6	2
	Area	0	0	0	0	0	0
	Energy	0	0	0	0	0	0
	Mobile	0	0	0	0	0	0

Unmitigated Air Quality Emissions Estimate	Pollutant (lbs/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Maximum Daily Construction Emissions	**2**	**23**	**15**	**0**	**6**	**2**
Maximum Daily Operation Emissions	**0**	**0**	**0**	**0**	**0**	**0**

D Street Park Project

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.64	Acre	0.64	27,878.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Construction Phase - Estimated construction schedule; Standard work week, Monday-Friday 7 a.m. to 5 p.m.

Off-road Equipment - Estimated Equipment.

Demolition - D Street is estimted to have 6-inches of concrete across the entire 0.66 acre site = approximately 14,500 cubic feet; assuming 145 lbs/cf, approximately 1,050 tons.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	3.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	2.00	12.00
tblConstructionPhase	NumDays	5.00	2.00

tblConstructionPhase	NumDays	1.00	5.00
tblGrading	AcresOfGrading	2.50	0.64
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.9000	22.5338	15.1589	0.0390	5.0201	0.9643	5.8607	0.8170	0.9093	1.6126	0.0000	4,019.3444	4,019.3444	0.6743	0.0000	4,036.2018
Maximum	**1.9000**	**22.5338**	**15.1589**	**0.0390**	**5.0201**	**0.9643**	**5.8607**	**0.8170**	**0.9093**	**1.6126**	**0.0000**	**4,019.3444**	**4,019.3444**	**0.6743**	**0.0000**	**4,036.2018**

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					
2018	1.9000	22.5338	15.1589	0.0390	5.0201	0.9643	5.8607	0.8170	0.9093	1.6126	0.0000	4,019.3444	4,019.3444	0.6743	0.0000	4,036.2018
Maximum	**1.9000**	**22.5338**	**15.1589**	**0.0390**	**5.0201**	**0.9643**	**5.8607**	**0.8170**	**0.9093**	**1.6126**	**0.0000**	**4,019.3444**	**4,019.3444**	**0.6743**	**0.0000**	**4,036.2018**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.4400e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0296	0.1111	0.3104	8.7000e-004	0.0659	1.0000e-003	0.0669	0.0176	9.5000e-004	0.0186		88.3000	88.3000	5.2000e-003		88.4300
Total	**0.0310**	**0.1111**	**0.3105**	**8.7000e-004**	**0.0659**	**1.0000e-003**	**0.0669**	**0.0176**	**9.5000e-004**	**0.0186**		**88.3002**	**88.3002**	**5.2000e-003**	**0.0000**	**88.4301**

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	1.4400e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0296	0.1111	0.3104	8.7000e-004	0.0659	1.0000e-003	0.0669	0.0176	9.5000e-004	0.0186		88.3000	88.3000	5.2000e-003		88.4300

Total	**0.0310**	**0.1111**	**0.3105**	**8.7000e-004**	**0.0659**	**1.0000e-003**	**0.0669**	**0.0176**	**9.5000e-004**	**0.0186**		**88.3002**	**88.3002**	**5.2000e-003**	**0.0000**	**88.4301**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	1/5/2018	5	5	
2	Site Preparation	Site Preparation	1/6/2018	1/12/2018	5	5	
3	Grading	Grading	1/13/2018	1/30/2018	5	12	
4	Drainage and Utilities	Trenching	1/31/2018	2/13/2018	5	10	
5	Construction	Building Construction	2/14/2018	2/16/2018	5	3	
6	Paving	Paving	2/17/2018	2/20/2018	5	2	

Acres of Grading (Site Preparation Phase): 0.64

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Preparation	Excavators	1	8.00	158	0.38

Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	1.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Plate Compactors	1	8.00	8	0.43
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Drainage and Utilities	Excavators	1	8.00	158	0.38
Drainage and Utilities	Rubber Tired Loaders	1	8.00	203	0.36
Drainage and Utilities	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Construction	Cranes	1	4.00	231	0.29
Construction	Forklifts	1	6.00	89	0.20
Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Paving	Rollers	2	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	104.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Drainage and Utilities	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Construction	4	12.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Paving		11	28.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

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					4.5499	0.0000	4.5499	0.6890	0.0000	0.6890			0.0000			0.0000
Off-Road	1.5837	15.8780	11.0348	0.0211		0.8138	0.8138		0.7700	0.7700		2,083.2158	2,083.2158	0.5099		2,095.9637
Total	**1.5837**	**15.8780**	**11.0348**	**0.0211**	**4.5499**	**0.8138**	**5.3636**	**0.6890**	**0.7700**	**1.4590**		**2,083.2158**	**2,083.2158**	**0.5099**		**2,095.9637**

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	0.1904	6.6159	1.3645	0.0167	0.3635	0.0260	0.3895	0.0996	0.0249	0.1245		1,819.4895	1,819.4895	0.1604		1,823.4992
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	0.0553	0.0399	0.4450	1.1700e-003	0.1068	7.7000e-004	0.1076	0.0283	7.1000e-004	0.0290		116.6392	116.6392	3.9900e-003		116.7390
Total	**0.2457**	**6.6558**	**1.8095**	**0.0179**	**0.4703**	**0.0268**	**0.4971**	**0.1279**	**0.0256**	**0.1536**		**1,936.1286**	**1,936.1286**	**0.1644**		**1,940.2382**

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					4.5499	0.0000	4.5499	0.6890	0.0000	0.6890			0.0000			0.0000
Off-Road	1.5837	15.8780	11.0348	0.0211		0.8138	0.8138		0.7700	0.7700	0.0000	2,083.2158	2,083.2158	0.5099		2,095.9637
Total	**1.5837**	**15.8780**	**11.0348**	**0.0211**	**4.5499**	**0.8138**	**5.3636**	**0.6890**	**0.7700**	**1.4590**	**0.0000**	**2,083.2158**	**2,083.2158**	**0.5099**		**2,095.9637**

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	0.1904	6.6159	1.3645	0.0167	0.3635	0.0260	0.3895	0.0996	0.0249	0.1245		1,819.4895	1,819.4895	0.1604		1,823.4992
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	0.0553	0.0399	0.4450	1.1700e-003	0.1068	7.7000e-004	0.1076	0.0283	7.1000e-004	0.0290		116.6392	116.6392	3.9900e-003		116.7390
Total	**0.2457**	**6.6558**	**1.8095**	**0.0179**	**0.4703**	**0.0268**	**0.4971**	**0.1279**	**0.0256**	**0.1536**		**1,936.1286**	**1,936.1286**	**0.1644**		**1,940.2382**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					0.8885	0.0000	0.8885	0.4284	0.0000	0.4284			0.0000			0.0000
Off-Road	1.2207	14.4231	8.0741	0.0160		0.6445	0.6445		0.5929	0.5929		1,609.8180	1,609.8180	0.5012		1,622.3470
Total	**1.2207**	**14.4231**	**8.0741**	**0.0160**	**0.8885**	**0.6445**	**1.5330**	**0.4284**	**0.5929**	**1.0214**		**1,609.8180**	**1,609.8180**	**0.5012**		**1,622.3470**

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	0.0426	0.0307	0.3423	9.0000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		89.7225	89.7225	3.0700e-003		89.7992
Total	**0.0426**	**0.0307**	**0.3423**	**9.0000e-004**	**0.0822**	**5.9000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**89.7225**	**89.7225**	**3.0700e-003**		**89.7992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8885	0.0000	0.8885	0.4284	0.0000	0.4284			0.0000			0.0000
Off-Road	1.2207	14.4231	8.0741	0.0160		0.6445	0.6445		0.5929	0.5929	0.0000	1,609.8180	1,609.8180	0.5012		1,622.3470

Total	**1.2207**	**14.4231**	**8.0741**	**0.0160**	**0.8885**	**0.6445**	**1.5330**	**0.4284**	**0.5929**	**1.0214**	**0.0000**	**1,609.8180**	**1,609.8180**	**0.5012**		**1,622.3470**

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	0.0426	0.0307	0.3423	9.0000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		89.7225	89.7225	3.0700e-003		89.7992
Total	**0.0426**	**0.0307**	**0.3423**	**9.0000e-004**	**0.0822**	**5.9000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**89.7225**	**89.7225**	**3.0700e-003**		**89.7992**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.8233	18.1016	12.9979	0.0239		0.9633	0.9633		0.9083	0.9083		2,352.2772	2,352.2772	0.5865		2,366.9403
Total	**1.8233**	**18.1016**	**12.9979**	**0.0239**	**0.7528**	**0.9633**	**1.7160**	**0.4138**	**0.9083**	**1.3221**		**2,352.2772**	**2,352.2772**	**0.5865**		**2,366.9403**

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	0.0766	0.0552	0.6162	1.6200e-003	0.1479	1.0600e-003	0.1489	0.0392	9.8000e-004	0.0402		161.5004	161.5004	5.5300e-003		161.6386
Total	**0.0766**	**0.0552**	**0.6162**	**1.6200e-003**	**0.1479**	**1.0600e-003**	**0.1489**	**0.0392**	**9.8000e-004**	**0.0402**		**161.5004**	**161.5004**	**5.5300e-003**		**161.6386**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.8233	18.1016	12.9979	0.0239		0.9633	0.9633		0.9083	0.9083	0.0000	2,352.2772	2,352.2772	0.5865		2,366.9403
Total	**1.8233**	**18.1016**	**12.9979**	**0.0239**	**0.7528**	**0.9633**	**1.7160**	**0.4138**	**0.9083**	**1.3221**	**0.0000**	**2,352.2772**	**2,352.2772**	**0.5865**		**2,366.9403**

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	0.0766	0.0552	0.6162	1.6200e-003	0.1479	1.0600e-003	0.1489	0.0392	9.8000e-004	0.0402		161.5004	161.5004	5.5300e-003		161.6386
Total	**0.0766**	**0.0552**	**0.6162**	**1.6200e-003**	**0.1479**	**1.0600e-003**	**0.1489**	**0.0392**	**9.8000e-004**	**0.0402**		**161.5004**	**161.5004**	**5.5300e-003**		**161.6386**

3.5 Drainage and Utilities - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9518	10.7218	7.0557	0.0141		0.4938	0.4938		0.4543	0.4543		1,422.1265	1,422.1265	0.4427		1,433.1947
Total	**0.9518**	**10.7218**	**7.0557**	**0.0141**		**0.4938**	**0.4938**		**0.4543**	**0.4543**		**1,422.1265**	**1,422.1265**	**0.4427**		**1,433.1947**

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	0.0341	0.0245	0.2739	7.2000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		71.7780	71.7780	2.4600e-003		71.8394
Total	**0.0341**	**0.0245**	**0.2739**	**7.2000e-004**	**0.0657**	**4.7000e-004**	**0.0662**	**0.0174**	**4.4000e-004**	**0.0179**		**71.7780**	**71.7780**	**2.4600e-003**		**71.8394**

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	0.9518	10.7218	7.0557	0.0141		0.4938	0.4938		0.4543	0.4543	0.0000	1,422.1265	1,422.1265	0.4427		1,433.1947
Total	**0.9518**	**10.7218**	**7.0557**	**0.0141**		**0.4938**	**0.4938**		**0.4543**	**0.4543**	**0.0000**	**1,422.1265**	**1,422.1265**	**0.4427**		**1,433.1947**

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	0.0341	0.0245	0.2739	7.2000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		71.7780	71.7780	2.4600e-003		71.8394
Total	**0.0341**	**0.0245**	**0.2739**	**7.2000e-004**	**0.0657**	**4.7000e-004**	**0.0662**	**0.0174**	**4.4000e-004**	**0.0179**		**71.7780**	**71.7780**	**2.4600e-003**		**71.8394**

3.6 Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9512	9.8507	6.8428	0.0102		0.6145	0.6145		0.5653	0.5653		1,031.1916	1,031.1916	0.3210		1,039.2172
Total	**0.9512**	**9.8507**	**6.8428**	**0.0102**		**0.6145**	**0.6145**		**0.5653**	**0.5653**		**1,031.1916**	**1,031.1916**	**0.3210**		**1,039.2172**

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	0.0258	0.6588	0.1745	1.3900e-003	0.0339	5.1500e-003	0.0390	9.7400e-003	4.9300e-003	0.0147		149.0949	149.0949	0.0118		149.3904
Worker	0.0511	0.0368	0.4108	1.0800e-003	0.0986	7.1000e-004	0.0993	0.0262	6.5000e-004	0.0268		107.6670	107.6670	3.6800e-003		107.7591
Total	**0.0769**	**0.6956**	**0.5852**	**2.4700e-003**	**0.1324**	**5.8600e-003**	**0.1383**	**0.0359**	**5.5800e-003**	**0.0415**		**256.7619**	**256.7619**	**0.0155**		**257.1494**

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	0.9512	9.8507	6.8428	0.0102		0.6145	0.6145		0.5653	0.5653	0.0000	1,031.1916	1,031.1916	0.3210		1,039.2172

Total	**0.9512**	**9.8507**	**6.8428**	**0.0102**		**0.6145**	**0.6145**		**0.5653**	**0.5653**	**0.0000**	**1,031.1916**	**1,031.1916**	**0.3210**		**1,039.2172**

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	0.0258	0.6588	0.1745	1.3900e-003	0.0339	5.1500e-003	0.0390	9.7400e-003	4.9300e-003	0.0147		149.0949	149.0949	0.0118		149.3904
Worker	0.0511	0.0368	0.4108	1.0800e-003	0.0986	7.1000e-004	0.0993	0.0262	6.5000e-004	0.0268		107.6670	107.6670	3.6800e-003		107.7591
Total	**0.0769**	**0.6956**	**0.5852**	**2.4700e-003**	**0.1324**	**5.8600e-003**	**0.1383**	**0.0359**	**5.5800e-003**	**0.0415**		**256.7619**	**256.7619**	**0.0155**		**257.1494**

3.7 Paving - 2018

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	1.6615	16.4949	14.2003	0.0222		0.9311	0.9311		0.8609	0.8609		2,155.5450	2,155.5450	0.6325		2,171.3563
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6615**	**16.4949**	**14.2003**	**0.0222**		**0.9311**	**0.9311**		**0.8609**	**0.8609**		**2,155.5450**	**2,155.5450**	**0.6325**		**2,171.3563**

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	0.1192	0.0858	0.9585	2.5200e-003	0.2300	1.6600e-003	0.2317	0.0610	1.5300e-003	0.0625		251.2229	251.2229	8.6000e-003		251.4378
Total	**0.1192**	**0.0858**	**0.9585**	**2.5200e-003**	**0.2300**	**1.6600e-003**	**0.2317**	**0.0610**	**1.5300e-003**	**0.0625**		**251.2229**	**251.2229**	**8.6000e-003**		**251.4378**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6615	16.4949	14.2003	0.0222		0.9311	0.9311		0.8609	0.8609	0.0000	2,155.5450	2,155.5450	0.6325		2,171.3563
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6615**	**16.4949**	**14.2003**	**0.0222**		**0.9311**	**0.9311**		**0.8609**	**0.8609**	**0.0000**	**2,155.5450**	**2,155.5450**	**0.6325**		**2,171.3563**

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	0.1192	0.0858	0.9585	2.5200e-003	0.2300	1.6600e-003	0.2317	0.0610	1.5300e-003	0.0625		251.2229	251.2229	8.6000e-003		251.4378
Total	**0.1192**	**0.0858**	**0.9585**	**2.5200e-003**	**0.2300**	**1.6600e-003**	**0.2317**	**0.0610**	**1.5300e-003**	**0.0625**		**251.2229**	**251.2229**	**8.6000e-003**		**251.4378**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0296	0.1111	0.3104	8.7000e-004	0.0659	1.0000e-003	0.0669	0.0176	9.5000e-004	0.0186		88.3000	88.3000	5.2000e-003		88.4300
Unmitigated	0.0296	0.1111	0.3104	8.7000e-004	0.0659	1.0000e-003	0.0669	0.0176	9.5000e-004	0.0186		88.3000	88.3000	5.2000e-003		88.4300

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.21	14.56	10.71	9,552	9,552
Total	1.21	14.56	10.71	9,552	9,552

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4400e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Unmitigated	1.4400e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Total	**1.4500e-003**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**		**1.5000e-004**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Total	**1.4500e-003**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**		**1.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

D Street Park Project

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.64	Acre	0.64	27,878.40	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2018
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Construction Phase - Estimated construction schedule; Standard work week, Monday-Friday 7 a.m. to 5 p.m.

Off-road Equipment - Estimated Equipment.

Demolition - D Street is estimted to have 6-inches of concrete across the entire 0.66 acre site = approximately 14,500 cubic feet; assuming 145 lbs/cf, approximately 1,050 tons.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	3.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	2.00	12.00
tblConstructionPhase	NumDays	5.00	2.00

tblConstructionPhase	NumDays	1.00	5.00
tblGrading	AcresOfGrading	2.50	0.64
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	1.9099	22.6095	15.1096	0.0386	5.0201	0.9643	5.8613	0.8170	0.9093	1.6132	0.0000	3,982.0150	3,982.0150	0.6801	0.0000	3,999.0177
Maximum	**1.9099**	**22.6095**	**15.1096**	**0.0386**	**5.0201**	**0.9643**	**5.8613**	**0.8170**	**0.9093**	**1.6132**	**0.0000**	**3,982.0150**	**3,982.0150**	**0.6801**	**0.0000**	**3,999.0177**

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					
2018	1.9099	22.6095	15.1096	0.0386	5.0201	0.9643	5.8613	0.8170	0.9093	1.6132	0.0000	3,982.0150	3,982.0150	0.6801	0.0000	3,999.0177
Maximum	**1.9099**	**22.6095**	**15.1096**	**0.0386**	**5.0201**	**0.9643**	**5.8613**	**0.8170**	**0.9093**	**1.6132**	**0.0000**	**3,982.0150**	**3,982.0150**	**0.6801**	**0.0000**	**3,999.0177**

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.4400e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0290	0.1144	0.3121	8.3000e-004	0.0659	1.0100e-003	0.0670	0.0176	9.6000e-004	0.0186		83.6693	83.6693	5.2500e-003		83.8006
Total	**0.0304**	**0.1144**	**0.3122**	**8.3000e-004**	**0.0659**	**1.0100e-003**	**0.0670**	**0.0176**	**9.6000e-004**	**0.0186**		**83.6694**	**83.6694**	**5.2500e-003**	**0.0000**	**83.8008**

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	1.4400e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0290	0.1144	0.3121	8.3000e-004	0.0659	1.0100e-003	0.0670	0.0176	9.6000e-004	0.0186		83.6693	83.6693	5.2500e-003		83.8006

Total	**0.0304**	**0.1144**	**0.3122**	**8.3000e-004**	**0.0659**	**1.0100e-003**	**0.0670**	**0.0176**	**9.6000e-004**	**0.0186**		**83.6694**	**83.6694**	**5.2500e-003**	**0.0000**	**83.8008**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2018	1/5/2018	5	5	
2	Site Preparation	Site Preparation	1/6/2018	1/12/2018	5	5	
3	Grading	Grading	1/13/2018	1/30/2018	5	12	
4	Drainage and Utilities	Trenching	1/31/2018	2/13/2018	5	10	
5	Construction	Building Construction	2/14/2018	2/16/2018	5	3	
6	Paving	Paving	2/17/2018	2/20/2018	5	2	

Acres of Grading (Site Preparation Phase): 0.64

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Rubber Tired Loaders	1	8.00	203	0.36
Demolition	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Site Preparation	Excavators	1	8.00	158	0.38

Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	1.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Plate Compactors	1	8.00	8	0.43
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Rubber Tired Loaders	1	8.00	203	0.36
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Drainage and Utilities	Excavators	1	8.00	158	0.38
Drainage and Utilities	Rubber Tired Loaders	1	8.00	203	0.36
Drainage and Utilities	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Construction	Cranes	1	4.00	231	0.29
Construction	Forklifts	1	6.00	89	0.20
Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Plate Compactors	1	8.00	8	0.43
Paving	Rollers	2	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	104.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	4	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Drainage and Utilities	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Construction	4	12.00	5.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Paving		11	28.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2018

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					4.5499	0.0000	4.5499	0.6890	0.0000	0.6890			0.0000			0.0000
Off-Road	1.5837	15.8780	11.0348	0.0211		0.8138	0.8138		0.7700	0.7700		2,083.2158	2,083.2158	0.5099		2,095.9637
Total	**1.5837**	**15.8780**	**11.0348**	**0.0211**	**4.5499**	**0.8138**	**5.3636**	**0.6890**	**0.7700**	**1.4590**		**2,083.2158**	**2,083.2158**	**0.5099**		**2,095.9637**

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	0.1959	6.6867	1.4671	0.0165	0.3635	0.0266	0.3901	0.0996	0.0255	0.1251		1,789.2966	1,789.2966	0.1664		1,793.4566
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	0.0625	0.0448	0.4221	1.1000e-003	0.1068	7.7000e-004	0.1076	0.0283	7.1000e-004	0.0290		109.5026	109.5026	3.7900e-003		109.5974
Total	**0.2584**	**6.7314**	**1.8892**	**0.0176**	**0.4703**	**0.0274**	**0.4977**	**0.1279**	**0.0262**	**0.1541**		**1,898.7992**	**1,898.7992**	**0.1702**		**1,903.0540**

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					4.5499	0.0000	4.5499	0.6890	0.0000	0.6890			0.0000			0.0000
Off-Road	1.5837	15.8780	11.0348	0.0211		0.8138	0.8138		0.7700	0.7700	0.0000	2,083.2158	2,083.2158	0.5099		2,095.9637
Total	**1.5837**	**15.8780**	**11.0348**	**0.0211**	**4.5499**	**0.8138**	**5.3636**	**0.6890**	**0.7700**	**1.4590**	**0.0000**	**2,083.2158**	**2,083.2158**	**0.5099**		**2,095.9637**

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	0.1959	6.6867	1.4671	0.0165	0.3635	0.0266	0.3901	0.0996	0.0255	0.1251		1,789.2966	1,789.2966	0.1664		1,793.4566
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	0.0625	0.0448	0.4221	1.1000e-003	0.1068	7.7000e-004	0.1076	0.0283	7.1000e-004	0.0290		109.5026	109.5026	3.7900e-003		109.5974
Total	**0.2584**	**6.7314**	**1.8892**	**0.0176**	**0.4703**	**0.0274**	**0.4977**	**0.1279**	**0.0262**	**0.1541**		**1,898.7992**	**1,898.7992**	**0.1702**		**1,903.0540**

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Fugitive Dust					0.8885	0.0000	0.8885	0.4284	0.0000	0.4284			0.0000			0.0000
Off-Road	1.2207	14.4231	8.0741	0.0160		0.6445	0.6445		0.5929	0.5929		1,609.8180	1,609.8180	0.5012		1,622.3470
Total	**1.2207**	**14.4231**	**8.0741**	**0.0160**	**0.8885**	**0.6445**	**1.5330**	**0.4284**	**0.5929**	**1.0214**		**1,609.8180**	**1,609.8180**	**0.5012**		**1,622.3470**

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	0.0481	0.0344	0.3247	8.5000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		84.2327	84.2327	2.9200e-003		84.3057
Total	**0.0481**	**0.0344**	**0.3247**	**8.5000e-004**	**0.0822**	**5.9000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**84.2327**	**84.2327**	**2.9200e-003**		**84.3057**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.8885	0.0000	0.8885	0.4284	0.0000	0.4284			0.0000			0.0000
Off-Road	1.2207	14.4231	8.0741	0.0160		0.6445	0.6445		0.5929	0.5929	0.0000	1,609.8180	1,609.8180	0.5012		1,622.3470

Total	**1.2207**	**14.4231**	**8.0741**	**0.0160**	**0.8885**	**0.6445**	**1.5330**	**0.4284**	**0.5929**	**1.0214**	**0.0000**	**1,609.8180**	**1,609.8180**	**0.5012**		**1,622.3470**

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	0.0481	0.0344	0.3247	8.5000e-004	0.0822	5.9000e-004	0.0827	0.0218	5.5000e-004	0.0223		84.2327	84.2327	2.9200e-003		84.3057
Total	**0.0481**	**0.0344**	**0.3247**	**8.5000e-004**	**0.0822**	**5.9000e-004**	**0.0827**	**0.0218**	**5.5000e-004**	**0.0223**		**84.2327**	**84.2327**	**2.9200e-003**		**84.3057**

3.4 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.8233	18.1016	12.9979	0.0239		0.9633	0.9633		0.9083	0.9083		2,352.2772	2,352.2772	0.5865		2,366.9403
Total	**1.8233**	**18.1016**	**12.9979**	**0.0239**	**0.7528**	**0.9633**	**1.7160**	**0.4138**	**0.9083**	**1.3221**		**2,352.2772**	**2,352.2772**	**0.5865**		**2,366.9403**

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	0.0866	0.0620	0.5845	1.5200e-003	0.1479	1.0600e-003	0.1489	0.0392	9.8000e-004	0.0402		151.6189	151.6189	5.2500e-003		151.7503
Total	**0.0866**	**0.0620**	**0.5845**	**1.5200e-003**	**0.1479**	**1.0600e-003**	**0.1489**	**0.0392**	**9.8000e-004**	**0.0402**		**151.6189**	**151.6189**	**5.2500e-003**		**151.7503**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7528	0.0000	0.7528	0.4138	0.0000	0.4138			0.0000			0.0000
Off-Road	1.8233	18.1016	12.9979	0.0239		0.9633	0.9633		0.9083	0.9083	0.0000	2,352.2772	2,352.2772	0.5865		2,366.9403
Total	**1.8233**	**18.1016**	**12.9979**	**0.0239**	**0.7528**	**0.9633**	**1.7160**	**0.4138**	**0.9083**	**1.3221**	**0.0000**	**2,352.2772**	**2,352.2772**	**0.5865**		**2,366.9403**

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	0.0866	0.0620	0.5845	1.5200e-003	0.1479	1.0600e-003	0.1489	0.0392	9.8000e-004	0.0402		151.6189	151.6189	5.2500e-003		151.7503
Total	**0.0866**	**0.0620**	**0.5845**	**1.5200e-003**	**0.1479**	**1.0600e-003**	**0.1489**	**0.0392**	**9.8000e-004**	**0.0402**		**151.6189**	**151.6189**	**5.2500e-003**		**151.7503**

3.5 Drainage and Utilities - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9518	10.7218	7.0557	0.0141		0.4938	0.4938		0.4543	0.4543		1,422.1265	1,422.1265	0.4427		1,433.1947
Total	**0.9518**	**10.7218**	**7.0557**	**0.0141**		**0.4938**	**0.4938**		**0.4543**	**0.4543**		**1,422.1265**	**1,422.1265**	**0.4427**		**1,433.1947**

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	0.0385	0.0275	0.2598	6.8000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		67.3862	67.3862	2.3400e-003		67.4446
Total	**0.0385**	**0.0275**	**0.2598**	**6.8000e-004**	**0.0657**	**4.7000e-004**	**0.0662**	**0.0174**	**4.4000e-004**	**0.0179**		**67.3862**	**67.3862**	**2.3400e-003**		**67.4446**

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	0.9518	10.7218	7.0557	0.0141		0.4938	0.4938		0.4543	0.4543	0.0000	1,422.1265	1,422.1265	0.4427		1,433.1947
Total	**0.9518**	**10.7218**	**7.0557**	**0.0141**		**0.4938**	**0.4938**		**0.4543**	**0.4543**	**0.0000**	**1,422.1265**	**1,422.1265**	**0.4427**		**1,433.1947**

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	0.0385	0.0275	0.2598	6.8000e-004	0.0657	4.7000e-004	0.0662	0.0174	4.4000e-004	0.0179		67.3862	67.3862	2.3400e-003		67.4446
Total	**0.0385**	**0.0275**	**0.2598**	**6.8000e-004**	**0.0657**	**4.7000e-004**	**0.0662**	**0.0174**	**4.4000e-004**	**0.0179**		**67.3862**	**67.3862**	**2.3400e-003**		**67.4446**

3.6 Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9512	9.8507	6.8428	0.0102		0.6145	0.6145		0.5653	0.5653		1,031.1916	1,031.1916	0.3210		1,039.2172
Total	**0.9512**	**9.8507**	**6.8428**	**0.0102**		**0.6145**	**0.6145**		**0.5653**	**0.5653**		**1,031.1916**	**1,031.1916**	**0.3210**		**1,039.2172**

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	0.0269	0.6599	0.1930	1.3600e-003	0.0339	5.2400e-003	0.0391	9.7400e-003	5.0100e-003	0.0148		145.3490	145.3490	0.0126		145.6634
Worker	0.0577	0.0413	0.3897	1.0200e-003	0.0986	7.1000e-004	0.0993	0.0262	6.5000e-004	0.0268		101.0793	101.0793	3.5000e-003		101.1669
Total	**0.0846**	**0.7012**	**0.5827**	**2.3800e-003**	**0.1324**	**5.9500e-003**	**0.1384**	**0.0359**	**5.6600e-003**	**0.0416**		**246.4282**	**246.4282**	**0.0161**		**246.8303**

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	0.9512	9.8507	6.8428	0.0102		0.6145	0.6145		0.5653	0.5653	0.0000	1,031.1916	1,031.1916	0.3210		1,039.2172

Total	**0.9512**	**9.8507**	**6.8428**	**0.0102**		**0.6145**	**0.6145**		**0.5653**	**0.5653**	**0.0000**	**1,031.1916**	**1,031.1916**	**0.3210**		**1,039.2172**

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	0.0269	0.6599	0.1930	1.3600e-003	0.0339	5.2400e-003	0.0391	9.7400e-003	5.0100e-003	0.0148		145.3490	145.3490	0.0126		145.6634
Worker	0.0577	0.0413	0.3897	1.0200e-003	0.0986	7.1000e-004	0.0993	0.0262	6.5000e-004	0.0268		101.0793	101.0793	3.5000e-003		101.1669
Total	**0.0846**	**0.7012**	**0.5827**	**2.3800e-003**	**0.1324**	**5.9500e-003**	**0.1384**	**0.0359**	**5.6600e-003**	**0.0416**		**246.4282**	**246.4282**	**0.0161**		**246.8303**

3.7 Paving - 2018

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	1.6615	16.4949	14.2003	0.0222		0.9311	0.9311		0.8609	0.8609		2,155.5450	2,155.5450	0.6325		2,171.3563
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6615**	**16.4949**	**14.2003**	**0.0222**		**0.9311**	**0.9311**		**0.8609**	**0.8609**		**2,155.5450**	**2,155.5450**	**0.6325**		**2,171.3563**

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	0.1346	0.0964	0.9092	2.3700e-003	0.2300	1.6600e-003	0.2317	0.0610	1.5300e-003	0.0625		235.8516	235.8516	8.1700e-003		236.0560
Total	**0.1346**	**0.0964**	**0.9092**	**2.3700e-003**	**0.2300**	**1.6600e-003**	**0.2317**	**0.0610**	**1.5300e-003**	**0.0625**		**235.8516**	**235.8516**	**8.1700e-003**		**236.0560**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6615	16.4949	14.2003	0.0222		0.9311	0.9311		0.8609	0.8609	0.0000	2,155.5450	2,155.5450	0.6325		2,171.3563
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6615**	**16.4949**	**14.2003**	**0.0222**		**0.9311**	**0.9311**		**0.8609**	**0.8609**	**0.0000**	**2,155.5450**	**2,155.5450**	**0.6325**		**2,171.3563**

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	0.1346	0.0964	0.9092	2.3700e-003	0.2300	1.6600e-003	0.2317	0.0610	1.5300e-003	0.0625		235.8516	235.8516	8.1700e-003		236.0560
Total	**0.1346**	**0.0964**	**0.9092**	**2.3700e-003**	**0.2300**	**1.6600e-003**	**0.2317**	**0.0610**	**1.5300e-003**	**0.0625**		**235.8516**	**235.8516**	**8.1700e-003**		**236.0560**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0290	0.1144	0.3121	8.3000e-004	0.0659	1.0100e-003	0.0670	0.0176	9.6000e-004	0.0186		83.6693	83.6693	5.2500e-003		83.8006
Unmitigated	0.0290	0.1144	0.3121	8.3000e-004	0.0659	1.0100e-003	0.0670	0.0176	9.6000e-004	0.0186		83.6693	83.6693	5.2500e-003		83.8006

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	1.21	14.56	10.71	9,552	9,552
Total	1.21	14.56	10.71	9,552	9,552

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.574135	0.045525	0.189369	0.116519	0.019283	0.005646	0.014833	0.022073	0.001871	0.002173	0.006385	0.000739	0.001452

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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

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					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.4400e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Unmitigated	1.4400e-003	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Total	**1.4500e-003**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**		**1.5000e-004**

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.4400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000		1.4000e-004	1.4000e-004	0.0000		1.5000e-004
Total	**1.4500e-003**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.4000e-004**	**1.4000e-004**	**0.0000**		**1.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

ATTACHMENT 2

Health Risk Assessment Calculations Summary Output

Health Risk Assessment Calculations

Assessed as a Park

Maximum Exposure in Model	**3rd Trimester**	**0<2**	**2<9**	**2<16**	**16<30**	**16-70**
Cair	4.00E-02	4.00E-02	4.00E-02	4.00E-02	4.00E-02	4.00E-02
DBR	361	1090	861	745	335	290
A	1	1	1	1	1	1
EF	0.68	0.68	0.68	0.68	0.68	0.68
Dose-air	9.82E-06	2.96E-05	2.34E-05	2.03E-05	9.11E-06	7.89E-06
CPF	1.10	1.10	1.10	1.10	1.10	1.10
ASF	10	10	3	3	1	1
ED	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
Fraction of Time at Park	0.17	0.17	0.17	0.17	0.17	0.17
Risk in 1 mill	**0.06**	**1.55**	**1.29**	**2.23**	**0.33**	**1.12**
	5.00	5.00	5.00	5.00	5.00	5.00
Chronic Exposure	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**

0-9	2.9
0-30	4.2
0-70	5.0

Assessed as a Residential Use

Maximum Exposure in Model	**3rd Trimester**	**0<2**	**2<9**	**2<16**	**16<30**	**16-70**
Cair	4.00E-02	4.00E-02	4.00E-02	4.00E-02	4.00E-02	4.00E-02
DBR	361	1090	861	745	335	290
A	1	1	1	1	1	1
EF	0.96	0.96	0.96	0.96	0.96	0.96
Dose-air	1.39E-05	4.19E-05	3.31E-05	2.86E-05	1.29E-05	1.11E-05
CPF	1.10	1.10	1.10	1.10	1.10	1.10
ASF	10	10	3	3	1	1
ED	0.25	2	7	14	14	54
AT	70	70	70	70	70	70
Fraction of Time at Home	0.85	0.85	0.72	0.72	0.73	0.73
Risk in 1 mill	**0.46**	**11.18**	**7.86**	**13.59**	**2.07**	**6.90**
	5.00	5.00	5.00	5.00	5.00	5.00
Chronic Exposure	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**	**0.008**

0-9	19.5
0-30	27.3
0-70	32.1

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 8.8.1
** Lakes Environmental Software Inc.
** Date: 10/9/2015
** File: C:\AERMOD\7937\701 D St\701 D St.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\AERMOD\7937\701 D St\701 D St.isc
   MODELOPT CONC FLAT
   AVERTIME 1 ANNUAL
   URBANOPT 100 Test
   POLLUTID PM_10
   FLAGPOLE 5.00
   RUNORNOT RUN
   ERRORFIL "701 D St.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
** ------------------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC I-5 S of E St
** PREFIX
** Length of Side = 30.00
** Configuration = Adjacent
** Emission Rate = 0.002012
** Vertical Dimension = 7.26
** SZINIT = 3.38
** Nodes = 2
** 490785.349, 3610844.637, 8.50, 3.63, 13.95
** 490623.000, 3611321.210, 10.96, 3.63, 13.95
** ------------------------------------------------------------------------
   LOCATION L0001738     VOLUME   490780.512 3610858.836 0.0
   LOCATION L0001739     VOLUME   490770.838 3610887.233 0.0
   LOCATION L0001740     VOLUME   490761.164 3610915.630 0.0
   LOCATION L0001741     VOLUME   490751.491 3610944.028 0.0
   LOCATION L0001742     VOLUME   490741.817 3610972.425 0.0
   LOCATION L0001743     VOLUME   490732.143 3611000.823 0.0
   LOCATION L0001744     VOLUME   490722.469 3611029.220 0.0
   LOCATION L0001745     VOLUME   490712.795 3611057.618 0.0
   LOCATION L0001746     VOLUME   490703.121 3611086.015 0.0
   LOCATION L0001747     VOLUME   490693.447 3611114.413 0.0
```

```
   LOCATION L0001748     VOLUME   490683.774 3611142.810 0.0
   LOCATION L0001749     VOLUME   490674.100 3611171.208 0.0
   LOCATION L0001750     VOLUME   490664.426 3611199.605 0.0
   LOCATION L0001751     VOLUME   490654.752 3611228.003 0.0
   LOCATION L0001752     VOLUME   490645.078 3611256.400 0.0
   LOCATION L0001753     VOLUME   490635.404 3611284.798 0.0
   LOCATION L0001754     VOLUME   490625.730 3611313.195 0.0
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC I-5 North of E St
** PREFIX
** Length of Side = 50.00
** Configuration = Adjacent
** Emission Rate = 0.002012
** Vertical Dimension = 7.26
** SZINIT = 3.38
** Nodes = 2
** 490622.731, 3611320.876, 10.96, 3.63, 23.26
** 490137.819, 3612882.363, 10.12, 3.63, 23.26
** ----------------------------------------------------------------
   LOCATION L0001755     VOLUME   490615.316 3611344.752 0.0
   LOCATION L0001756     VOLUME   490600.487 3611392.502 0.0
   LOCATION L0001757     VOLUME   490585.659 3611440.253 0.0
   LOCATION L0001758     VOLUME   490570.830 3611488.003 0.0
   LOCATION L0001759     VOLUME   490556.001 3611535.754 0.0
   LOCATION L0001760     VOLUME   490541.173 3611583.504 0.0
   LOCATION L0001761     VOLUME   490526.344 3611631.255 0.0
   LOCATION L0001762     VOLUME   490511.515 3611679.005 0.0
   LOCATION L0001763     VOLUME   490496.687 3611726.756 0.0
   LOCATION L0001764     VOLUME   490481.858 3611774.506 0.0
   LOCATION L0001765     VOLUME   490467.029 3611822.257 0.0
   LOCATION L0001766     VOLUME   490452.201 3611870.007 0.0
   LOCATION L0001767     VOLUME   490437.372 3611917.758 0.0
   LOCATION L0001768     VOLUME   490422.543 3611965.508 0.0
   LOCATION L0001769     VOLUME   490407.715 3612013.259 0.0
   LOCATION L0001770     VOLUME   490392.886 3612061.009 0.0
   LOCATION L0001771     VOLUME   490378.057 3612108.760 0.0
   LOCATION L0001772     VOLUME   490363.229 3612156.510 0.0
   LOCATION L0001773     VOLUME   490348.400 3612204.261 0.0
   LOCATION L0001774     VOLUME   490333.571 3612252.011 0.0
   LOCATION L0001775     VOLUME   490318.743 3612299.762 0.0
   LOCATION L0001776     VOLUME   490303.914 3612347.512 0.0
   LOCATION L0001777     VOLUME   490289.085 3612395.263 0.0
   LOCATION L0001778     VOLUME   490274.256 3612443.013 0.0
   LOCATION L0001779     VOLUME   490259.428 3612490.764 0.0
   LOCATION L0001780     VOLUME   490244.599 3612538.514 0.0
   LOCATION L0001781     VOLUME   490229.770 3612586.265 0.0
   LOCATION L0001782     VOLUME   490214.942 3612634.015 0.0
   LOCATION L0001783     VOLUME   490200.113 3612681.766 0.0
   LOCATION L0001784     VOLUME   490185.284 3612729.516 0.0
   LOCATION L0001785     VOLUME   490170.456 3612777.267 0.0
   LOCATION L0001786     VOLUME   490155.627 3612825.017 0.0
   LOCATION L0001787     VOLUME   490140.798 3612872.768 0.0
** End of LINE VOLUME Source ID = SLINE2
** Source Parameters **
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0001738     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001739     0.0001183529      3.63     13.95      3.38
```

```
   SRCPARAM L0001740     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001741     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001742     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001743     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001744     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001745     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001746     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001747     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001748     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001749     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001750     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001751     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001752     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001753     0.0001183529      3.63     13.95      3.38
   SRCPARAM L0001754     0.0001183529      3.63     13.95      3.38
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
   SRCPARAM L0001755     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001756     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001757     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001758     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001759     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001760     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001761     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001762     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001763     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001764     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001765     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001766     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001767     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001768     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001769     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001770     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001771     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001772     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001773     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001774     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001775     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001776     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001777     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001778     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001779     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001780     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001781     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001782     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001783     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001784     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001785     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001786     0.0000609697      3.63     23.26      3.38
   SRCPARAM L0001787     0.0000609697      3.63     23.26      3.38
** ------------------------------------------------------------------
   URBANSRC L0001738
   URBANSRC L0001739
   URBANSRC L0001740
   URBANSRC L0001741
   URBANSRC L0001742
   URBANSRC L0001743
   URBANSRC L0001744
   URBANSRC L0001745
   URBANSRC L0001746
```

```
   URBANSRC L0001747
   URBANSRC L0001748
   URBANSRC L0001749
   URBANSRC L0001750
   URBANSRC L0001751
   URBANSRC L0001752
   URBANSRC L0001753
   URBANSRC L0001754
   URBANSRC L0001755
   URBANSRC L0001756
   URBANSRC L0001757
   URBANSRC L0001758
   URBANSRC L0001759
   URBANSRC L0001760
   URBANSRC L0001761
   URBANSRC L0001762
   URBANSRC L0001763
   URBANSRC L0001764
   URBANSRC L0001765
   URBANSRC L0001766
   URBANSRC L0001767
   URBANSRC L0001768
   URBANSRC L0001769
   URBANSRC L0001770
   URBANSRC L0001771
   URBANSRC L0001772
   URBANSRC L0001773
   URBANSRC L0001774
   URBANSRC L0001775
   URBANSRC L0001776
   URBANSRC L0001777
   URBANSRC L0001778
   URBANSRC L0001779
   URBANSRC L0001780
   URBANSRC L0001781
   URBANSRC L0001782
   URBANSRC L0001783
   URBANSRC L0001784
   URBANSRC L0001785
   URBANSRC L0001786
   URBANSRC L0001787
   SRCGROUP ALL
SO FINISHED
**
**************************************
** AERMOD Receptor Pathway
**************************************
**
**
RE STARTING
   GRIDCART UCART1 STA
                   XYINC 490352.65 21 20.00 3611658.88 21 20.00
                   FLAG    1     5.00     5.00     5.00     5.00     5.00     5.00
                   FLAG    1     5.00     5.00     5.00     5.00     5.00     5.00
                   FLAG    1     5.00     5.00     5.00     5.00     5.00     5.00
                   FLAG    1     5.00     5.00     5.00
                   FLAG    2     5.00     5.00     5.00     5.00     5.00     5.00
                   FLAG    2     5.00     5.00     5.00     5.00     5.00     5.00
                   FLAG    2     5.00     5.00     5.00     5.00     5.00     5.00
                   FLAG    2     5.00     5.00     5.00
```

```
FLAG    3     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    3     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    3     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    3     5.00     5.00     5.00
FLAG    4     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    4     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    4     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    4     5.00     5.00     5.00
FLAG    5     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    5     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    5     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    5     5.00     5.00     5.00
FLAG    6     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    6     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    6     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    6     5.00     5.00     5.00
FLAG    7     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    7     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    7     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    7     5.00     5.00     5.00
FLAG    8     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    8     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    8     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    8     5.00     5.00     5.00
FLAG    9     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    9     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    9     5.00     5.00     5.00     5.00     5.00     5.00
FLAG    9     5.00     5.00     5.00
FLAG   10     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   10     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   10     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   10     5.00     5.00     5.00
FLAG   11     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   11     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   11     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   11     5.00     5.00     5.00
FLAG   12     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   12     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   12     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   12     5.00     5.00     5.00
FLAG   13     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   13     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   13     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   13     5.00     5.00     5.00
FLAG   14     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   14     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   14     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   14     5.00     5.00     5.00
FLAG   15     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   15     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   15     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   15     5.00     5.00     5.00
FLAG   16     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   16     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   16     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   16     5.00     5.00     5.00
FLAG   17     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   17     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   17     5.00     5.00     5.00     5.00     5.00     5.00
FLAG   17     5.00     5.00     5.00
```

```
                    FLAG   18     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   18     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   18     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   18     5.00     5.00     5.00
                    FLAG   19     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   19     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   19     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   19     5.00     5.00     5.00
                    FLAG   20     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   20     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   20     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   20     5.00     5.00     5.00
                    FLAG   21     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   21     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   21     5.00     5.00     5.00     5.00     5.00     5.00
                    FLAG   21     5.00     5.00     5.00
   GRIDCART UCART1 END
** DESCRREC "" ""
   DISCCART    490591.07   3611906.64    5.00
   DISCCART    490579.82   3611883.66    5.00
   DISCCART    490581.32   3611866.22    5.00
   DISCCART    490582.74   3611846.33    5.00
   DISCCART    490584.89   3611827.84    5.00
   DISCCART    490587.29   3611809.01    5.00
   DISCCART    490589.69   3611789.79    5.00
   DISCCART    490591.69   3611769.76    5.00
   DISCCART    490628.75   3611918.59    5.00
   DISCCART    490634.93   3611899.66    5.00
   DISCCART    490656.13   3611858.19    5.00
   DISCCART    490675.45   3611865.73    5.00
   DISCCART    490643.41   3611809.18    5.00
   DISCCART    490690.53   3611819.55    5.00
   DISCCART    490642.47   3611787.51    5.00
   DISCCART    490635.87   3611847.35    5.00
** BEGIN OF RISK GRID RECEPTORS
** X Grid Origin = 490635.87
** Y Grid Origin = 3611847.35
** No. of Tiers = 1
** Tier 1: Segment Distance = 5.00
** Tier 1: Tier Spacing = 20.00
** ----------
   DISCCART    490630.88   3611842.25    5.00
   DISCCART    490630.88   3611852.25    5.00
   DISCCART    490640.88   3611842.25    5.00
   DISCCART    490640.88   3611852.25    5.00
** END OF RISK GRID RECEPTORS
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE "N:\AIR_GHG_NOISE_Technical\001_AIR\Analysis_Models\Lakes\Met Data\AERMOD_MET156459_23188_3190_2008_2013\MET156459_2008_
2013.SFC"
   PROFFILE "N:\AIR_GHG_NOISE_Technical\001_AIR\Analysis_Models\Lakes\Met Data\AERMOD_MET156459_23188_3190_2008_2013\MET156459_2008_
2013.PFL"
   SURFDATA 23188 2008 SAN_DIEGO/LINDBERGH_FIELD
   UAIRDATA 3190 2008
```

```
   PROFBASE 1.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 1 1ST
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "701 D St.AD\01H1GALL.PLT" 31
   PLOTFILE ANNUAL ALL "701 D St.AD\AN00GALL.PLT" 32
   SUMMFILE "701 D St.sum"
OU FINISHED


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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            1 Warning Message(s)
 A Total of            0 Informational Message(s)


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


    ********   WARNING MESSAGES   ********
 CO W320      22       URBOPT: Input Parameter May Be Out-of-Range for Parameter       URB-POP

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************
```

```
                                          ***     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 URBAN Dispersion Algorithm for the SBL for    50 Source(s),
  for Total of    1 Urban Area(s):
  Urban Population =       100.0 ;  Urban Roughness Length =  1.000 m

**Model Allows User-Specified Options:
        1. Stack-tip Downwash.
        2. Model Assumes Receptors on FLAT Terrain.
        3. Use Calms Processing Routine.
        4. Use Missing Data Processing Routine.
        5. No Exponential Decay.
        6. Urban Roughness Length of 1.0 Meter Used.

**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:  PM_10

**Model Calculates  1 Short Term Average(s) of:   1-HR
    and Calculates ANNUAL Averages

**This Run Includes:     50 Source(s);       1 Source Group(s); and     461 Receptor(s)

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

**The AERMET Input Meteorological Data Version Date:  14134

**Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
         Model Outputs Separate Summary File of High Ranked Values (SUMMFILE 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) =     1.00 ;  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.
```

```
**Detailed Error/Message File:   701 D St.err
**File for Summary of Results:   701 D St.sum
```

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001738	0	0.11835E-03	490780.5	3610858.8	1.0	3.63	13.95	3.38	YES	
L0001739	0	0.11835E-03	490770.8	3610887.2	1.0	3.63	13.95	3.38	YES	
L0001740	0	0.11835E-03	490761.2	3610915.6	1.0	3.63	13.95	3.38	YES	
L0001741	0	0.11835E-03	490751.5	3610944.0	1.0	3.63	13.95	3.38	YES	
L0001742	0	0.11835E-03	490741.8	3610972.4	1.0	3.63	13.95	3.38	YES	
L0001743	0	0.11835E-03	490732.1	3611000.8	1.0	3.63	13.95	3.38	YES	
L0001744	0	0.11835E-03	490722.5	3611029.2	1.0	3.63	13.95	3.38	YES	
L0001745	0	0.11835E-03	490712.8	3611057.6	1.0	3.63	13.95	3.38	YES	
L0001746	0	0.11835E-03	490703.1	3611086.0	1.0	3.63	13.95	3.38	YES	
L0001747	0	0.11835E-03	490693.4	3611114.4	1.0	3.63	13.95	3.38	YES	
L0001748	0	0.11835E-03	490683.8	3611142.8	1.0	3.63	13.95	3.38	YES	
L0001749	0	0.11835E-03	490674.1	3611171.2	1.0	3.63	13.95	3.38	YES	
L0001750	0	0.11835E-03	490664.4	3611199.6	1.0	3.63	13.95	3.38	YES	
L0001751	0	0.11835E-03	490654.8	3611228.0	1.0	3.63	13.95	3.38	YES	
L0001752	0	0.11835E-03	490645.1	3611256.4	1.0	3.63	13.95	3.38	YES	
L0001753	0	0.11835E-03	490635.4	3611284.8	1.0	3.63	13.95	3.38	YES	
L0001754	0	0.11835E-03	490625.7	3611313.2	1.0	3.63	13.95	3.38	YES	
L0001755	0	0.60970E-04	490615.3	3611344.8	1.0	3.63	23.26	3.38	YES	
L0001756	0	0.60970E-04	490600.5	3611392.5	1.0	3.63	23.26	3.38	YES	
L0001757	0	0.60970E-04	490585.7	3611440.3	1.0	3.63	23.26	3.38	YES	
L0001758	0	0.60970E-04	490570.8	3611488.0	1.0	3.63	23.26	3.38	YES	
L0001759	0	0.60970E-04	490556.0	3611535.8	1.0	3.63	23.26	3.38	YES	
L0001760	0	0.60970E-04	490541.2	3611583.5	1.0	3.63	23.26	3.38	YES	
L0001761	0	0.60970E-04	490526.3	3611631.3	1.0	3.63	23.26	3.38	YES	
L0001762	0	0.60970E-04	490511.5	3611679.0	1.0	3.63	23.26	3.38	YES	
L0001763	0	0.60970E-04	490496.7	3611726.8	1.0	3.63	23.26	3.38	YES	
L0001764	0	0.60970E-04	490481.9	3611774.5	1.0	3.63	23.26	3.38	YES	
L0001765	0	0.60970E-04	490467.0	3611822.3	1.0	3.63	23.26	3.38	YES	
L0001766	0	0.60970E-04	490452.2	3611870.0	1.0	3.63	23.26	3.38	YES	
L0001767	0	0.60970E-04	490437.4	3611917.8	1.0	3.63	23.26	3.38	YES	
L0001768	0	0.60970E-04	490422.5	3611965.5	1.0	3.63	23.26	3.38	YES	
L0001769	0	0.60970E-04	490407.7	3612013.3	1.0	3.63	23.26	3.38	YES	
L0001770	0	0.60970E-04	490392.9	3612061.0	1.0	3.63	23.26	3.38	YES	
L0001771	0	0.60970E-04	490378.1	3612108.8	1.0	3.63	23.26	3.38	YES	
L0001772	0	0.60970E-04	490363.2	3612156.5	1.0	3.63	23.26	3.38	YES	
L0001773	0	0.60970E-04	490348.4	3612204.3	1.0	3.63	23.26	3.38	YES	
L0001774	0	0.60970E-04	490333.6	3612252.0	1.0	3.63	23.26	3.38	YES	
L0001775	0	0.60970E-04	490318.7	3612299.8	1.0	3.63	23.26	3.38	YES	
L0001776	0	0.60970E-04	490303.9	3612347.5	1.0	3.63	23.26	3.38	YES	
L0001777	0	0.60970E-04	490289.1	3612395.3	1.0	3.63	23.26	3.38	YES	

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001778	0	0.60970E-04	490274.3	3612443.0	1.0	3.63	23.26	3.38	YES	
L0001779	0	0.60970E-04	490259.4	3612490.8	1.0	3.63	23.26	3.38	YES	
L0001780	0	0.60970E-04	490244.6	3612538.5	1.0	3.63	23.26	3.38	YES	
L0001781	0	0.60970E-04	490229.8	3612586.3	1.0	3.63	23.26	3.38	YES	
L0001782	0	0.60970E-04	490214.9	3612634.0	1.0	3.63	23.26	3.38	YES	
L0001783	0	0.60970E-04	490200.1	3612681.8	1.0	3.63	23.26	3.38	YES	
L0001784	0	0.60970E-04	490185.3	3612729.5	1.0	3.63	23.26	3.38	YES	
L0001785	0	0.60970E-04	490170.5	3612777.3	1.0	3.63	23.26	3.38	YES	
L0001786	0	0.60970E-04	490155.6	3612825.0	1.0	3.63	23.26	3.38	YES	
L0001787	0	0.60970E-04	490140.8	3612872.8	1.0	3.63	23.26	3.38	YES	

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	L0001738 , L0001739 , L0001740 , L0001741 , L0001742 , L0001743 , L0001744 , L0001745 , L0001746 , L0001747 , L0001748 , L0001749 , L0001750 , L0001751 , L0001752 , L0001753 , L0001754 , L0001755 , L0001756 , L0001757 , L0001758 , L0001759 , L0001760 , L0001761 , L0001762 , L0001763 , L0001764 , L0001765 , L0001766 , L0001767 , L0001768 , L0001769 , L0001770 , L0001771 , L0001772 , L0001773 , L0001774 , L0001775 , L0001776 , L0001777 , L0001778 , L0001779 , L0001780 , L0001781 , L0001782 , L0001783 , L0001784 , L0001785 , L0001786 , L0001787 ,

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
	100.	L0001738 , L0001739 , L0001740 , L0001741 , L0001742 , L0001743 , L0001744 , L0001745 ,
		L0001746 , L0001747 , L0001748 , L0001749 , L0001750 , L0001751 , L0001752 , L0001753 ,
		L0001754 , L0001755 , L0001756 , L0001757 , L0001758 , L0001759 , L0001760 , L0001761 ,
		L0001762 , L0001763 , L0001764 , L0001765 , L0001766 , L0001767 , L0001768 , L0001769 ,
		L0001770 , L0001771 , L0001772 , L0001773 , L0001774 , L0001775 , L0001776 , L0001777 ,
		L0001778 , L0001779 , L0001780 , L0001781 , L0001782 , L0001783 , L0001784 , L0001785 ,
		L0001786 , L0001787 ,

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

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

490352.6, 490372.6, 490392.6, 490412.6, 490432.6, 490452.6, 490472.6, 490492.6, 490512.6, 490532.6,
490552.6, 490572.6, 490592.6, 490612.6, 490632.6, 490652.6, 490672.6, 490692.6, 490712.6, 490732.6,
490752.6,

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

3611658.9, 3611678.9, 3611698.9, 3611718.9, 3611738.9, 3611758.9, 3611778.9, 3611798.9, 3611818.9, 3611838.9,
3611858.9, 3611878.9, 3611898.9, 3611918.9, 3611938.9, 3611958.9, 3611978.9, 3611998.9, 3612018.9, 3612038.9,
3612058.9,

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	490352.65	490372.65	490392.65	490412.65	490432.65	490452.65	490472.65	490492.65	490512.65
3612058.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3612038.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3612018.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611998.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611978.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611958.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611938.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611918.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611898.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611878.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611858.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611838.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611818.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611798.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611778.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611758.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611738.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611718.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611698.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611678.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611658.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	490532.65	490552.65	490572.65	490592.65	490612.65	490632.65	490652.65	490672.65	490692.65
3612058.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3612038.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3612018.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611998.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611978.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611958.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611938.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611918.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611898.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611878.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611858.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611838.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611818.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611798.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611778.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611758.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611738.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611718.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611698.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611678.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
3611658.88	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

* RECEPTOR FLAGPOLE HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)		
	490712.65	490732.65	490752.65
3612058.88	5.00	5.00	5.00
3612038.88	5.00	5.00	5.00
3612018.88	5.00	5.00	5.00
3611998.88	5.00	5.00	5.00
3611978.88	5.00	5.00	5.00
3611958.88	5.00	5.00	5.00
3611938.88	5.00	5.00	5.00
3611918.88	5.00	5.00	5.00
3611898.88	5.00	5.00	5.00
3611878.88	5.00	5.00	5.00
3611858.88	5.00	5.00	5.00
3611838.88	5.00	5.00	5.00
3611818.88	5.00	5.00	5.00
3611798.88	5.00	5.00	5.00
3611778.88	5.00	5.00	5.00
3611758.88	5.00	5.00	5.00
3611738.88	5.00	5.00	5.00
3611718.88	5.00	5.00	5.00
3611698.88	5.00	5.00	5.00
3611678.88	5.00	5.00	5.00
3611658.88	5.00	5.00	5.00

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(	490591.1,	3611906.6,	1.0,	1.0,	5.0);	(	490579.8,	3611883.7,	1.0,	1.0,	5.0);
(	490581.3,	3611866.2,	1.0,	1.0,	5.0);	(	490582.7,	3611846.3,	1.0,	1.0,	5.0);
(	490584.9,	3611827.8,	1.0,	1.0,	5.0);	(	490587.3,	3611809.0,	1.0,	1.0,	5.0);
(	490589.7,	3611789.8,	1.0,	1.0,	5.0);	(	490591.7,	3611769.8,	1.0,	1.0,	5.0);
(	490628.8,	3611918.6,	1.0,	1.0,	5.0);	(	490634.9,	3611899.7,	1.0,	1.0,	5.0);
(	490656.1,	3611858.2,	1.0,	1.0,	5.0);	(	490675.5,	3611865.7,	1.0,	1.0,	5.0);
(	490643.4,	3611809.2,	1.0,	1.0,	5.0);	(	490690.5,	3611819.5,	1.0,	1.0,	5.0);
(	490642.5,	3611787.5,	1.0,	1.0,	5.0);	(	490635.9,	3611847.3,	1.0,	1.0,	5.0);
(	490630.9,	3611842.2,	1.0,	1.0,	5.0);	(	490630.9,	3611852.2,	1.0,	1.0,	5.0);
(	490640.9,	3611842.2,	1.0,	1.0,	5.0);	(	490640.9,	3611852.2,	1.0,	1.0,	5.0);

**MODELOPTs: NonDFAULT CONC FLAT FLGPOL

* 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)
L0001761	490492.6	3611658.9	-6.44
L0001761	490512.6	3611658.9	-19.18
L0001761	490532.6	3611658.9	-21.67
L0001761	490552.6	3611658.9	-11.86
L0001761	490512.6	3611678.9	-0.45
L0001761	490532.6	3611678.9	-1.97
L0001762	490472.6	3611658.9	-6.24
L0001762	490492.6	3611658.9	-22.42
L0001762	490512.6	3611658.9	-29.85
L0001762	490532.6	3611658.9	-20.83
L0001762	490552.6	3611658.9	-4.21
L0001762	490472.6	3611678.9	-11.14
L0001762	490492.6	3611678.9	-31.14
L0001762	490512.6	3611678.9	-48.87
L0001762	490532.6	3611678.9	-28.87
L0001762	490552.6	3611678.9	-8.87
L0001762	490472.6	3611698.9	-6.36
L0001762	490492.6	3611698.9	-22.61
L0001762	490512.6	3611698.9	-30.10
L0001762	490532.6	3611698.9	-21.00
L0001762	490552.6	3611698.9	-4.32
L0001762	490492.6	3611718.9	-5.90
L0001762	490512.6	3611718.9	-10.12
L0001762	490532.6	3611718.9	-4.88
L0001763	490492.6	3611678.9	-1.96
L0001763	490512.6	3611678.9	0.46
L0001763	490472.6	3611698.9	-13.20
L0001763	490492.6	3611698.9	-21.84
L0001763	490512.6	3611698.9	-17.89
L0001763	490532.6	3611698.9	-4.51
L0001763	490452.6	3611718.9	-5.27
L0001763	490472.6	3611718.9	-24.71
L0001763	490492.6	3611718.9	-41.16
L0001763	490512.6	3611718.9	-32.21
L0001763	490532.6	3611718.9	-13.19
L0001763	490452.6	3611738.9	-4.33
L0001763	490472.6	3611738.9	-23.09
L0001763	490492.6	3611738.9	-37.23
L0001763	490512.6	3611738.9	-29.96
L0001763	490532.6	3611738.9	-12.06

**MODELOPTs: NonDFAULT CONC FLAT FLGPOL

* 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)
L0001763	490472.6	3611758.9	-9.89
L0001763	490492.6	3611758.9	-17.63
L0001763	490512.6	3611758.9	-14.14
L0001763	490532.6	3611758.9	-1.79
L0001764	490452.6	3611738.9	-3.94
L0001764	490472.6	3611738.9	-13.21
L0001764	490492.6	3611738.9	-12.78
L0001764	490512.6	3611738.9	-2.92
L0001764	490452.6	3611758.9	-16.88
L0001764	490472.6	3611758.9	-31.87
L0001764	490492.6	3611758.9	-31.02
L0001764	490512.6	3611758.9	-15.48
L0001764	490432.6	3611778.9	-0.61
L0001764	490452.6	3611778.9	-20.48
L0001764	490472.6	3611778.9	-39.81
L0001764	490492.6	3611778.9	-38.36
L0001764	490512.6	3611778.9	-18.91
L0001764	490532.6	3611778.9	0.97
L0001764	490452.6	3611798.9	-11.97
L0001764	490472.6	3611798.9	-23.95
L0001764	490492.6	3611798.9	-23.35
L0001764	490512.6	3611798.9	-10.74
L0001764	490472.6	3611818.9	-4.69
L0001764	490492.6	3611818.9	-4.34
L0001765	490452.6	3611778.9	-4.31
L0001765	490472.6	3611778.9	-6.27
L0001765	490492.6	3611778.9	0.37
L0001765	490432.6	3611798.9	-8.43
L0001765	490452.6	3611798.9	-22.56
L0001765	490472.6	3611798.9	-25.97
L0001765	490492.6	3611798.9	-15.33
L0001765	490432.6	3611818.9	-15.46
L0001765	490452.6	3611818.9	-35.24
L0001765	490472.6	3611818.9	-43.45
L0001765	490492.6	3611818.9	-24.17
L0001765	490512.6	3611818.9	-4.26
L0001765	490432.6	3611838.9	-11.82
L0001765	490452.6	3611838.9	-28.03
L0001765	490472.6	3611838.9	-32.46
L0001765	490492.6	3611838.9	-19.47

**MODELOPTs: NonDFAULT CONC FLAT FLGPOL

* 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)
L0001765	490512.6	3611838.9	-1.45
L0001765	490432.6	3611858.9	0.22
L0001765	490452.6	3611858.9	-10.66
L0001765	490472.6	3611858.9	-12.96
L0001765	490492.6	3611858.9	-5.31
L0001766	490412.6	3611838.9	0.32
L0001766	490432.6	3611838.9	-13.25
L0001766	490452.6	3611838.9	-18.88
L0001766	490472.6	3611838.9	-12.77
L0001766	490412.6	3611858.9	-8.92
L0001766	490432.6	3611858.9	-27.51
L0001766	490452.6	3611858.9	-38.87
L0001766	490472.6	3611858.9	-26.73
L0001766	490492.6	3611858.9	-8.06
L0001766	490412.6	3611878.9	-9.47
L0001766	490432.6	3611878.9	-28.54
L0001766	490452.6	3611878.9	-41.12
L0001766	490472.6	3611878.9	-27.72
L0001766	490492.6	3611878.9	-8.60
L0001766	490412.6	3611898.9	-1.04
L0001766	490432.6	3611898.9	-15.14
L0001766	490452.6	3611898.9	-21.13
L0001766	490472.6	3611898.9	-14.63
L0001766	490492.6	3611898.9	-0.31
L0001766	490452.6	3611918.9	-1.13
L0001767	490412.6	3611878.9	-3.94
L0001767	490432.6	3611878.9	-10.85
L0001767	490452.6	3611878.9	-8.24
L0001767	490392.6	3611898.9	-1.47
L0001767	490412.6	3611898.9	-18.90
L0001767	490432.6	3611898.9	-30.55
L0001767	490452.6	3611898.9	-25.72
L0001767	490472.6	3611898.9	-10.00
L0001767	490392.6	3611918.9	-5.27
L0001767	490412.6	3611918.9	-25.26
L0001767	490432.6	3611918.9	-45.16
L0001767	490452.6	3611918.9	-34.69
L0001767	490472.6	3611918.9	-14.71
L0001767	490392.6	3611938.9	-0.55
L0001767	490412.6	3611938.9	-17.49

**MODELOPTs: NonDFAULT CONC FLAT FLGPOL

* 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)
L0001767	490432.6	3611938.9	-28.37
L0001767	490452.6	3611938.9	-23.94
L0001767	490472.6	3611938.9	-8.89
L0001767	490412.6	3611958.9	-2.03
L0001767	490432.6	3611958.9	-8.62
L0001767	490452.6	3611958.9	-6.14
L0001768	490412.6	3611918.9	-2.34
L0001768	490432.6	3611918.9	-2.30
L0001768	490392.6	3611938.9	-9.98
L0001768	490412.6	3611938.9	-21.60
L0001768	490432.6	3611938.9	-21.53
L0001768	490452.6	3611938.9	-9.82
L0001768	490372.6	3611958.9	0.32
L0001768	490392.6	3611958.9	-19.39
L0001768	490412.6	3611958.9	-38.10
L0001768	490432.6	3611958.9	-37.92
L0001768	490452.6	3611958.9	-19.18
L0001768	490472.6	3611958.9	0.53
L0001768	490392.6	3611978.9	-17.26
L0001768	490412.6	3611978.9	-33.38
L0001768	490432.6	3611978.9	-33.25
L0001768	490452.6	3611978.9	-17.07
L0001768	490392.6	3611998.9	-5.21
L0001768	490412.6	3611998.9	-15.20
L0001768	490432.6	3611998.9	-15.14
L0001768	490452.6	3611998.9	-5.06
L0001769	490372.6	3611978.9	-0.90
L0001769	490392.6	3611978.9	-12.47
L0001769	490412.6	3611978.9	-15.28
L0001769	490432.6	3611978.9	-7.54
L0001769	490372.6	3611998.9	-12.11
L0001769	490392.6	3611998.9	-29.18
L0001769	490412.6	3611998.9	-34.81
L0001769	490432.6	3611998.9	-21.23
L0001769	490452.6	3611998.9	-2.83
L0001769	490372.6	3612018.9	-14.50
L0001769	490392.6	3612018.9	-33.93
L0001769	490412.6	3612018.9	-42.53
L0001769	490432.6	3612018.9	-24.45
L0001769	490452.6	3612018.9	-4.72

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

* 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)
L0001769	490372.6	3612038.9	-6.58
L0001769	490392.6	3612038.9	-20.29
L0001769	490412.6	3612038.9	-23.92
L0001769	490432.6	3612038.9	-14.26
L0001769	490392.6	3612058.9	-1.96
L0001769	490412.6	3612058.9	-4.12
L0001770	490372.6	3612018.9	-3.27
L0001770	490392.6	3612018.9	-7.88
L0001770	490412.6	3612018.9	-3.47
L0001770	490352.6	3612038.9	-4.09
L0001770	490372.6	3612038.9	-20.02
L0001770	490392.6	3612038.9	-27.88
L0001770	490412.6	3612038.9	-20.34
L0001770	490432.6	3612038.9	-4.50
L0001770	490352.6	3612058.9	-9.72
L0001770	490372.6	3612058.9	-29.66
L0001770	490392.6	3612058.9	-47.87
L0001770	490412.6	3612058.9	-30.13
L0001770	490432.6	3612058.9	-10.19
L0001771	490372.6	3612058.9	0.16

**MODELOPTs: NonDFAULT CONC FLAT FLGPOL

*** 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
```

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,

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

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

  Surface file: N:\AIR_GHG_NOISE_Technical\001_AIR\Analysis_Models\Lakes\Met Data\AERMOD_MET1564   Met Version: 14134
  Profile file: N:\AIR_GHG_NOISE_Technical\001_AIR\Analysis_Models\Lakes\Met Data\AERMOD_MET1564
  Surface format: FREE
  Profile format: FREE
  Surface station no.:   23188   Upper air station no.:   3190
                Name: SAN_DIEGO/LINDBERGH_FIELD   Name: UNKNOWN
                Year: 2008   Year: 2008

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
08	01	01	1	01	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	1.15	1.00	0.00	0.	10.0	282.5	2.0
08	01	01	1	02	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	1.15	1.00	0.00	0.	10.0	282.0	2.0
08	01	01	1	03	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	1.15	1.00	0.00	0.	10.0	281.4	2.0
08	01	01	1	04	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	1.15	1.00	0.00	0.	10.0	280.9	2.0
08	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	1.15	1.00	0.00	0.	10.0	280.4	2.0
08	01	01	1	06	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	1.15	1.00	0.00	0.	10.0	280.4	2.0
08	01	01	1	07	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	1.15	1.00	0.00	0.	10.0	280.4	2.0
08	01	01	1	08	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	1.15	0.50	0.00	0.	10.0	281.4	2.0
08	01	01	1	09	19.4	0.239	0.297	0.007	49.	280.	-63.8	0.13	1.15	0.30	2.36	337.	10.0	283.8	2.0
08	01	01	1	10	19.3	0.188	0.334	0.006	70.	197.	-31.4	0.13	1.15	0.23	1.76	341.	10.0	287.0	2.0
08	01	01	1	11	63.2	-9.000	-9.000	-9.000	152.	-999.	-99999.0	0.14	1.15	0.21	0.00	0.	10.0	290.4	2.0
08	01	01	1	12	71.9	0.255	0.811	0.007	269.	309.	-20.9	0.12	1.15	0.20	2.36	306.	10.0	292.0	2.0
08	01	01	1	13	71.0	0.336	0.939	0.009	424.	467.	-48.5	0.12	1.15	0.20	3.36	313.	10.0	292.5	2.0
08	01	01	1	14	60.7	0.251	0.955	0.010	521.	306.	-23.8	0.12	1.15	0.21	2.36	319.	10.0	292.5	2.0
08	01	01	1	15	41.9	0.251	0.875	0.011	579.	301.	-34.1	0.13	1.15	0.24	2.36	332.	10.0	293.1	2.0
08	01	01	1	16	23.6	0.186	0.735	0.011	610.	194.	-24.9	0.12	1.15	0.33	1.76	304.	10.0	293.8	2.0
08	01	01	1	17	11.2	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.14	1.15	0.60	0.00	0.	10.0	289.9	2.0
08	01	01	1	18	-1.2	0.040	-9.000	-9.000	-999.	19.	5.0	0.12	1.15	1.00	0.90	312.	10.0	288.8	2.0
08	01	01	1	19	-2.2	0.055	-9.000	-9.000	-999.	31.	7.0	0.15	1.15	1.00	1.16	7.	10.0	288.1	2.0
08	01	01	1	20	-3.1	0.066	-9.000	-9.000	-999.	41.	8.5	0.15	1.15	1.00	1.40	2.	10.0	287.5	2.0
08	01	01	1	21	-1.7	0.050	-9.000	-9.000	-999.	27.	6.4	0.16	1.15	1.00	1.03	34.	10.0	286.4	2.0
08	01	01	1	22	-4.2	0.073	-9.000	-9.000	-999.	48.	8.6	0.13	1.15	1.00	1.59	341.	10.0	285.4	2.0
08	01	01	1	23	-4.0	0.068	-9.000	-9.000	-999.	42.	7.1	0.15	1.15	1.00	1.43	16.	10.0	284.9	2.0
08	01	01	1	24	-3.1	0.065	-9.000	-9.000	-999.	40.	8.2	0.13	1.15	1.00	1.42	342.	10.0	283.8	2.0

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
08	01	01	01	10.0	1	-999.	-99.00	282.6	99.0	-99.00	-99.00

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

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   6 YEARS FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0001738   , L0001739   , L0001740   , L0001741   , L0001742   ,
L0001743   , L0001744   , L0001745   , L0001746   , L0001747   , L0001748   , L0001749   , L0001750   ,
L0001751   , L0001752   , L0001753   , L0001754   , L0001755   , L0001756   , L0001757   , L0001758   ,
L0001759   , L0001760   , L0001761   , L0001762   , L0001763   , L0001764   , L0001765   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)								
	490352.65	490372.65	490392.65	490412.65	490432.65	490452.65	490472.65	490492.65	490512.65
3612058.88	0.06874	0.05582	0.07275	0.06808	0.07525	0.07974	0.06539	0.05568	0.04860
3612038.88	0.06222	0.05990	0.06235	0.06200	0.05948	0.08578	0.06939	0.05854	0.05078
3612018.88	0.07283	0.05405	0.05793	0.06078	0.08212	0.07231	0.07395	0.06169	0.05315
3611998.88	0.06807	0.06725	0.06490	0.06584	0.06343	0.05933	0.07908	0.06519	0.05572
3611978.88	0.06398	0.06316	0.05724	0.06009	0.06112	0.08084	0.08511	0.06911	0.05853
3611958.88	0.06046	0.06258	0.07345	0.07067	0.06931	0.06457	0.07185	0.07353	0.06163
3611938.88	0.05742	0.06970	0.05697	0.06080	0.06230	0.06152	0.07874	0.07857	0.06505
3611918.88	0.05474	0.06541	0.06877	0.05641	0.06066	0.07245	0.07833	0.08438	0.06889
3611898.88	0.05237	0.06179	0.06219	0.06166	0.06475	0.06450	0.06190	0.07586	0.07320
3611878.88	0.05025	0.05865	0.07128	0.05517	0.05897	0.06169	0.08630	0.07594	0.07814
3611858.88	0.04834	0.05590	0.06689	0.06738	0.06730	0.06904	0.06658	0.06220	0.08371
3611838.88	0.04660	0.05347	0.06317	0.06273	0.05874	0.06171	0.06276	0.08574	0.07349
3611818.88	0.04502	0.05131	0.05993	0.07295	0.07397	0.08396	0.07346	0.06834	0.07517
3611798.88	0.04357	0.04936	0.05712	0.06850	0.06717	0.06284	0.06461	0.06386	0.08396
3611778.88	0.04223	0.04759	0.05464	0.06461	0.06881	0.05746	0.06141	0.06393	0.08204
3611758.88	0.04100	0.04599	0.05243	0.06130	0.07485	0.07236	0.06756	0.06762	0.06493
3611738.88	0.03987	0.04452	0.05045	0.05842	0.07016	0.05660	0.06058	0.06324	0.06388
3611718.88	0.03882	0.04317	0.04866	0.05589	0.06618	0.06781	0.07861	0.07287	0.07059
3611698.88	0.03785	0.04194	0.04704	0.05364	0.06279	0.07690	0.06068	0.06404	0.06520
3611678.88	0.03695	0.04080	0.04556	0.05164	0.05984	0.07198	0.07473	0.06065	0.05282
3611658.88	0.03612	0.03975	0.04421	0.04984	0.05728	0.06794	0.06765	0.06553	0.06789

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 6 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0001738 , L0001739 , L0001740 , L0001741 , L0001742 ,
L0001743 , L0001744 , L0001745 , L0001746 , L0001747 , L0001748 , L0001749 , L0001750 ,
L0001751 , L0001752 , L0001753 , L0001754 , L0001755 , L0001756 , L0001757 , L0001758 ,
L0001759 , L0001760 , L0001761 , L0001762 , L0001763 , L0001764 , L0001765 , . . . ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	490532.65	490552.65	490572.65	490592.65	490612.65	490632.65	490652.65	490672.65	490692.65
3612058.88	0.04318	0.03888	0.03540	0.03253	0.03012	0.02806	0.02629	0.02474	0.02337
3612038.88	0.04491	0.04031	0.03661	0.03357	0.03102	0.02887	0.02701	0.02539	0.02396
3612018.88	0.04678	0.04183	0.03788	0.03466	0.03197	0.02971	0.02776	0.02607	0.02458
3611998.88	0.04878	0.04345	0.03923	0.03580	0.03297	0.03058	0.02855	0.02678	0.02523
3611978.88	0.05094	0.04518	0.04065	0.03701	0.03401	0.03150	0.02936	0.02752	0.02590
3611958.88	0.05327	0.04703	0.04217	0.03829	0.03511	0.03246	0.03022	0.02829	0.02660
3611938.88	0.05581	0.04901	0.04379	0.03964	0.03627	0.03348	0.03112	0.02909	0.02733
3611918.88	0.05858	0.05116	0.04551	0.04107	0.03749	0.03454	0.03206	0.02994	0.02809
3611898.88	0.06163	0.05347	0.04736	0.04260	0.03879	0.03566	0.03305	0.03082	0.02889
3611878.88	0.06501	0.05599	0.04935	0.04422	0.04016	0.03684	0.03409	0.03175	0.02972
3611858.88	0.06877	0.05874	0.05149	0.04596	0.04161	0.03810	0.03518	0.03272	0.03060
3611838.88	0.07300	0.06176	0.05380	0.04782	0.04316	0.03942	0.03634	0.03375	0.03153
3611818.88	0.07781	0.06510	0.05632	0.04983	0.04482	0.04083	0.03757	0.03484	0.03250
3611798.88	0.08328	0.06881	0.05906	0.05198	0.04659	0.04233	0.03887	0.03599	0.03353
3611778.88	0.07225	0.07299	0.06207	0.05432	0.04849	0.04393	0.04026	0.03721	0.03462
3611758.88	0.08107	0.07770	0.06539	0.05686	0.05054	0.04565	0.04173	0.03851	0.03578
3611738.88	0.08037	0.08313	0.06909	0.05963	0.05275	0.04749	0.04331	0.03989	0.03701
3611718.88	0.06589	0.08925	0.07323	0.06267	0.05515	0.04947	0.04500	0.04137	0.03832
3611698.88	0.06411	0.07839	0.07792	0.06602	0.05776	0.05161	0.04682	0.04295	0.03972
3611678.88	0.07330	0.07935	0.08328	0.06976	0.06061	0.05393	0.04879	0.04465	0.04122
3611658.88	0.06728	0.06460	0.08933	0.07393	0.06374	0.05646	0.05091	0.04649	0.04284

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   6 YEARS FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0001738   , L0001739   , L0001740   , L0001741   , L0001742   ,
L0001743   , L0001744   , L0001745   , L0001746   , L0001747   , L0001748   , L0001749   , L0001750   ,
L0001751   , L0001752   , L0001753   , L0001754   , L0001755   , L0001756   , L0001757   , L0001758   ,
L0001759   , L0001760   , L0001761   , L0001762   , L0001763   , L0001764   , L0001765   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS)		
	490712.65	490732.65	490752.65
3612058.88	0.02214	0.02104	0.02003
3612038.88	0.02269	0.02154	0.02050
3612018.88	0.02326	0.02207	0.02099
3611998.88	0.02385	0.02261	0.02149
3611978.88	0.02446	0.02317	0.02201
3611958.88	0.02510	0.02376	0.02255
3611938.88	0.02577	0.02437	0.02311
3611918.88	0.02646	0.02501	0.02370
3611898.88	0.02719	0.02567	0.02431
3611878.88	0.02795	0.02637	0.02495
3611858.88	0.02875	0.02710	0.02562
3611838.88	0.02958	0.02786	0.02632
3611818.88	0.03047	0.02866	0.02705
3611798.88	0.03140	0.02951	0.02782
3611778.88	0.03238	0.03040	0.02864
3611758.88	0.03342	0.03135	0.02950
3611738.88	0.03452	0.03234	0.03041
3611718.88	0.03570	0.03341	0.03137
3611698.88	0.03695	0.03454	0.03239
3611678.88	0.03830	0.03574	0.03348
3611658.88	0.03974	0.03704	0.03465

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** THE ANNUAL AVERAGE CONCENTRATION VALUES AVERAGED OVER 6 YEARS FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0001738 , L0001739 , L0001740 , L0001741 , L0001742 ,
L0001743 , L0001744 , L0001745 , L0001746 , L0001747 , L0001748 , L0001749 , L0001750 ,
L0001751 , L0001752 , L0001753 , L0001754 , L0001755 , L0001756 , L0001757 , L0001758 ,
L0001759 , L0001760 , L0001761 , L0001762 , L0001763 , L0001764 , L0001765 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
490591.07	3611906.64	0.04232	490579.82	3611883.66	0.04691
490581.32	3611866.22	0.04819	490582.74	3611846.33	0.04980
490584.89	3611827.84	0.05114	490587.29	3611809.01	0.05250
490589.69	3611789.79	0.05398	490591.69	3611769.76	0.05579
490628.75	3611918.59	0.03509	490634.93	3611899.66	0.03530
490656.13	3611858.19	0.03477	490675.45	3611865.73	0.03207
490643.41	3611809.18	0.03966	490690.53	3611819.55	0.03270
490642.47	3611787.51	0.04138	490635.87	3611847.35	0.03833
490630.88	3611842.25	0.03949	490630.88	3611852.25	0.03882
490640.88	3611842.25	0.03787	490640.88	3611852.25	0.03724

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0001738   , L0001739   , L0001740   , L0001741   , L0001742   ,
L0001743   , L0001744   , L0001745   , L0001746   , L0001747   , L0001748   , L0001749   , L0001750   ,
L0001751   , L0001752   , L0001753   , L0001754   , L0001755   , L0001756   , L0001757   , L0001758   ,
L0001759   , L0001760   , L0001761   , L0001762   , L0001763   , L0001764   , L0001765   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS) 490352.65	490372.65	490392.65	490412.65	490432.65
3612058.9	1.12831 (11120504)	1.46075 (10110601)	1.55206 (10110601)	1.48153 (10110601)	1.27408 (10110601)
3612038.9	1.15064 (11120504)	1.30282 (10110601)	1.57367 (10110601)	1.58626 (10110601)	1.33905 (10110601)
3612018.9	1.17469 (11120504)	1.22149 (10110601)	1.56910 (10110601)	1.68411 (10110601)	1.49547 (10110601)
3611998.9	1.17479 (11120504)	1.17697 (11120504)	1.42206 (10110601)	1.60883 (10110601)	1.51450 (10110601)
3611978.9	1.17139 (11120504)	1.20356 (11120504)	1.36170 (10110601)	1.64215 (10110601)	1.63408 (10110601)
3611958.9	1.17532 (11120504)	1.19310 (11120504)	1.29447 (10110601)	1.51952 (10110601)	1.60601 (10110601)
3611938.9	1.17882 (11120504)	1.22471 (11120504)	1.15593 (11120504)	1.48829 (10110601)	1.67431 (10110601)
3611918.9	1.18064 (11120504)	1.23367 (11120504)	1.22570 (11120504)	1.42966 (10110601)	1.72068 (10110601)
3611898.9	1.17933 (11120504)	1.24056 (11120504)	1.25829 (11120504)	1.27049 (10110601)	1.59059 (10110601)
3611878.9	1.17176 (11120504)	1.24483 (11120504)	1.29443 (11120504)	1.22288 (11120504)	1.56524 (10110601)
3611858.9	1.15547 (11120504)	1.24690 (11120504)	1.30724 (11120504)	1.29763 (11120504)	1.41225 (10110601)
3611838.9	1.12835 (11120504)	1.24201 (11120504)	1.31427 (11120504)	1.33733 (11120504)	1.33362 (10110601)
3611818.9	1.08881 (11120504)	1.22730 (11120504)	1.32126 (11120504)	1.37776 (11120504)	1.31959 (11120504)
3611798.9	1.03621 (11120504)	1.20021 (11120504)	1.32003 (11120504)	1.39434 (11120504)	1.38602 (11120504)
3611778.9	0.97097 (11120504)	1.15866 (11120504)	1.30745 (11120504)	1.40285 (11120504)	1.40148 (11120504)
3611758.9	0.89468 (11120504)	1.10178 (11120504)	1.28074 (11120504)	1.40698 (11120504)	1.47788 (11120504)
3611738.9	0.80999 (11120504)	1.03010 (11120504)	1.23696 (11120504)	1.39723 (11120504)	1.49133 (11120504)
3611718.9	0.72029 (11120504)	0.94564 (11120504)	1.17504 (11120504)	1.37150 (11120504)	1.50395 (11120504)
3611698.9	0.67105 (09012002)	0.85172 (11120504)	1.09568 (11120504)	1.32528 (11120504)	1.49975 (11120504)
3611678.9	0.62850 (09012002)	0.75261 (11120504)	1.00147 (11120504)	1.25730 (11120504)	1.47438 (11120504)
3611658.9	0.58109 (09012002)	0.69824 (09012002)	0.89672 (11120504)	1.16862 (11120504)	1.42552 (11120504)

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0001738   , L0001739   , L0001740   , L0001741   , L0001742   ,
L0001743   , L0001744   , L0001745   , L0001746   , L0001747   , L0001748   , L0001749   , L0001750   ,
L0001751   , L0001752   , L0001753   , L0001754   , L0001755   , L0001756   , L0001757   , L0001758   ,
L0001759   , L0001760   , L0001761   , L0001762   , L0001763   , L0001764   , L0001765   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS) 490452.65	490472.65	490492.65	490512.65	490532.65
3612058.9	0.94388 (10110601)	0.69216 (12011206)	0.62268 (12011206)	0.57107 (10021624)	0.57058 (12122504)
3612038.9	1.05516 (10110601)	0.75181 (10110601)	0.64667 (12011206)	0.58751 (10021624)	0.57869 (12122504)
3612018.9	1.14039 (10110601)	0.83499 (10110601)	0.67241 (12011206)	0.60495 (10021624)	0.58713 (12122504)
3611998.9	1.21853 (10110601)	0.93262 (10110601)	0.70056 (12011206)	0.62876 (12011206)	0.59592 (12122504)
3611978.9	1.37012 (10110601)	1.03290 (10110601)	0.73445 (10110601)	0.65434 (12011206)	0.60512 (12122504)
3611958.9	1.42086 (10110601)	1.13926 (10110601)	0.82090 (10110601)	0.68189 (12011206)	0.61970 (10021624)
3611938.9	1.55214 (10110601)	1.24172 (10110601)	0.92054 (10110601)	0.71174 (12011206)	0.64021 (10021624)
3611918.9	1.56896 (10110601)	1.38501 (10110601)	1.02522 (10110601)	0.74355 (12011206)	0.66371 (12011206)
3611898.9	1.66575 (10110601)	1.44877 (10110601)	1.11469 (10110601)	0.80481 (10110601)	0.69364 (12011206)
3611878.9	1.74968 (10110601)	1.61200 (10110601)	1.24806 (10110601)	0.90147 (10110601)	0.72561 (12011206)
3611858.9	1.66074 (10110601)	1.62120 (10110601)	1.33248 (10110601)	1.01617 (10110601)	0.76059 (12011206)
3611838.9	1.67400 (10110601)	1.73512 (10110601)	1.49837 (10110601)	1.11299 (10110601)	0.79904 (12011206)
3611818.9	1.67264 (10110601)	1.69496 (10110601)	1.54737 (10110601)	1.25597 (10110601)	0.88565 (10110601)
3611798.9	1.48831 (10110601)	1.74764 (10110601)	1.68254 (10110601)	1.37112 (10110601)	1.00455 (10110601)
3611778.9	1.40750 (10110601)	1.77237 (10110601)	1.81620 (10110601)	1.53153 (10110601)	1.11035 (10110601)
3611758.9	1.41726 (11120504)	1.62963 (10110601)	1.78230 (10110601)	1.59882 (10110601)	1.23435 (10110601)
3611738.9	1.42496 (11120504)	1.57878 (10110601)	1.85138 (10110601)	1.75458 (10110601)	1.39101 (10110601)
3611718.9	1.51673 (11120504)	1.51019 (10110601)	1.74861 (10110601)	1.77763 (10110601)	1.48925 (10110601)
3611698.9	1.58475 (11120504)	1.44210 (11120504)	1.73695 (10110601)	1.88802 (10110601)	1.65870 (10110601)
3611678.9	1.61145 (11120504)	1.57524 (11120504)	1.68736 (10110601)	1.82066 (10110601)	1.73430 (10110601)
3611658.9	1.61539 (11120504)	1.65916 (11120504)	1.50201 (10110601)	1.87235 (10110601)	1.88088 (10110601)

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0001738   , L0001739   , L0001740   , L0001741   , L0001742   ,
L0001743   , L0001744   , L0001745   , L0001746   , L0001747   , L0001748   , L0001749   , L0001750   ,
L0001751   , L0001752   , L0001753   , L0001754   , L0001755   , L0001756   , L0001757   , L0001758   ,
L0001759   , L0001760   , L0001761   , L0001762   , L0001763   , L0001764   , L0001765   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS) 490552.65	490572.65	490592.65	490612.65	490632.65
3612058.9	0.59276 (12122504)	0.62054 (12122504)	0.64350 (12122504)	0.65180 (12122504)	0.63922 (12122504)
3612038.9	0.60094 (12122504)	0.63005 (12122504)	0.65494 (12122504)	0.66499 (12122504)	0.65333 (12122504)
3612018.9	0.60931 (12122504)	0.63975 (12122504)	0.66669 (12122504)	0.67861 (12122504)	0.66796 (12122504)
3611998.9	0.61789 (12122504)	0.64965 (12122504)	0.67873 (12122504)	0.69267 (12122504)	0.68312 (12122504)
3611978.9	0.62668 (12122504)	0.65974 (12122504)	0.69109 (12122504)	0.70720 (12122504)	0.69885 (12122504)
3611958.9	0.63571 (12122504)	0.67005 (12122504)	0.70377 (12122504)	0.72221 (12122504)	0.71517 (12122504)
3611938.9	0.64501 (12122504)	0.68056 (12122504)	0.71679 (12122504)	0.73773 (12122504)	0.73213 (12122504)
3611918.9	0.65460 (12122504)	0.69130 (12122504)	0.73015 (12122504)	0.75379 (12122504)	0.74975 (12122504)
3611898.9	0.66452 (12122504)	0.70226 (12122504)	0.74385 (12122504)	0.77041 (12122504)	0.76808 (12122504)
3611878.9	0.67481 (12122504)	0.71345 (12122504)	0.75792 (12122504)	0.78762 (12122504)	0.78715 (12122504)
3611858.9	0.68552 (12122504)	0.72489 (12122504)	0.77236 (12122504)	0.80545 (12122504)	0.80702 (12122504)
3611838.9	0.71059 (10021624)	0.73659 (12122504)	0.78718 (12122504)	0.82394 (12122504)	0.82774 (12122504)
3611818.9	0.74280 (12011206)	0.74856 (12122504)	0.80239 (12122504)	0.84312 (12122504)	0.84937 (12122504)
3611798.9	0.78150 (12011206)	0.76084 (12122504)	0.81800 (12122504)	0.86304 (12122504)	0.87196 (12122504)
3611778.9	0.82234 (12011206)	0.77339 (12122504)	0.83402 (12122504)	0.88374 (12122504)	0.89559 (12122504)
3611758.9	0.86841 (12011206)	0.78641 (12122504)	0.85045 (12122504)	0.90526 (12122504)	0.92034 (12122504)
3611738.9	0.98055 (10110601)	0.80786 (10021624)	0.86731 (12122504)	0.92765 (12122504)	0.94630 (12122504)
3611718.9	1.11997 (10110601)	0.85234 (12011206)	0.88459 (12122504)	0.95098 (12122504)	0.97355 (12122504)
3611698.9	1.23872 (10110601)	0.90467 (12011206)	0.90236 (12122504)	0.97529 (12122504)	1.00222 (12122504)
3611678.9	1.41190 (10110601)	0.95776 (10110601)	0.92032 (12122504)	1.00066 (12122504)	1.03243 (12122504)
3611658.9	1.53203 (10110601)	1.10454 (10110601)	0.93913 (12122504)	1.02717 (12122504)	1.06432 (12122504)

**MODELOPTs: NonDFAULT CONC FLAT FLGPOL

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): L0001738 , L0001739 , L0001740 , L0001741 , L0001742 ,
L0001743 , L0001744 , L0001745 , L0001746 , L0001747 , L0001748 , L0001749 , L0001750 ,
L0001751 , L0001752 , L0001753 , L0001754 , L0001755 , L0001756 , L0001757 , L0001758 ,
L0001759 , L0001760 , L0001761 , L0001762 , L0001763 , L0001764 , L0001765 , . . . ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 490652.65	490672.65	490692.65	490712.65	490732.65
3612058.9	0.65721 (12020924)	0.68231 (12020924)	0.68312 (12020924)	0.65919 (12020924)	0.62271 (12091501)
3612038.9	0.66985 (12020924)	0.69552 (12020924)	0.69577 (12020924)	0.67042 (12020924)	0.63401 (12091501)
3612018.9	0.68297 (12020924)	0.70919 (12020924)	0.70880 (12020924)	0.68195 (12020924)	0.64552 (12091501)
3611998.9	0.69659 (12020924)	0.72336 (12020924)	0.72224 (12020924)	0.69377 (12020924)	0.65724 (12091501)
3611978.9	0.71075 (12020924)	0.73804 (12020924)	0.73609 (12020924)	0.70591 (12020924)	0.66915 (12091501)
3611958.9	0.72548 (12020924)	0.75326 (12020924)	0.75037 (12020924)	0.71836 (12020924)	0.68125 (12091501)
3611938.9	0.74081 (12020924)	0.76904 (12020924)	0.76509 (12020924)	0.73113 (12020924)	0.69353 (12091501)
3611918.9	0.75678 (12020924)	0.78541 (12020924)	0.78027 (12020924)	0.74423 (12020924)	0.70598 (12091501)
3611898.9	0.77342 (12020924)	0.80240 (12020924)	0.79592 (12020924)	0.75766 (12020924)	0.71858 (12091501)
3611878.9	0.79080 (12020924)	0.82003 (12020924)	0.81204 (12020924)	0.77144 (12020924)	0.73132 (12091501)
3611858.9	0.80894 (12020924)	0.83834 (12020924)	0.82866 (12020924)	0.78556 (12020924)	0.74420 (12091501)
3611838.9	0.82790 (12020924)	0.85736 (12020924)	0.84577 (12020924)	0.80004 (12020924)	0.75720 (12091501)
3611818.9	0.84774 (12020924)	0.87711 (12020924)	0.86340 (12020924)	0.81488 (12020924)	0.77032 (12091501)
3611798.9	0.86852 (12020924)	0.89763 (12020924)	0.88154 (12020924)	0.83010 (12020924)	0.78353 (12091501)
3611778.9	0.89029 (12020924)	0.91894 (12020924)	0.90021 (12020924)	0.84569 (12020924)	0.79684 (12091501)
3611758.9	0.91314 (12020924)	0.94108 (12020924)	0.91940 (12020924)	0.86169 (12020924)	0.81026 (12091501)
3611738.9	0.93714 (12020924)	0.96408 (12020924)	0.93913 (12020924)	0.87809 (12020924)	0.82378 (12091501)
3611718.9	0.96236 (12020924)	0.98796 (12020924)	0.95940 (12020924)	0.89492 (12020924)	0.83742 (12091501)
3611698.9	0.98890 (12020924)	1.01273 (12020924)	0.98021 (12020924)	0.91220 (12020924)	0.85120 (12091501)
3611678.9	1.01685 (12020924)	1.03843 (12020924)	1.00155 (12020924)	0.92996 (12020924)	0.86516 (12091501)
3611658.9	1.04630 (12020924)	1.06505 (12020924)	1.02343 (12020924)	0.94823 (12020924)	0.87934 (12091501)

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0001738   , L0001739   , L0001740   , L0001741   , L0001742   ,
L0001743   , L0001744   , L0001745   , L0001746   , L0001747   , L0001748   , L0001749   , L0001750   ,
L0001751   , L0001752   , L0001753   , L0001754   , L0001755   , L0001756   , L0001757   , L0001758   ,
L0001759   , L0001760   , L0001761   , L0001762   , L0001763   , L0001764   , L0001765   , . . .   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

Y-COORD (METERS)	X-COORD (METERS) 490752.65
3612058.9	0.61194 (12091501)
3612038.9	0.62127 (12091501)
3612018.9	0.63070 (12091501)
3611998.9	0.64022 (12091501)
3611978.9	0.64983 (12091501)
3611958.9	0.65952 (12091501)
3611938.9	0.66929 (12091501)
3611918.9	0.67913 (12091501)
3611898.9	0.68904 (12091501)
3611878.9	0.69902 (12091501)
3611858.9	0.70907 (12091501)
3611838.9	0.71921 (12091501)
3611818.9	0.72943 (12091501)
3611798.9	0.73975 (12091501)
3611778.9	0.75020 (12091501)
3611758.9	0.76079 (12091501)
3611738.9	0.77155 (12091501)
3611718.9	0.78253 (12091501)
3611698.9	0.79374 (12091501)
3611678.9	0.80525 (12091501)
3611658.9	0.81709 (12091501)

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL   ***
INCLUDING SOURCE(S):   L0001738   , L0001739   , L0001740   , L0001741   , L0001742   ,
L0001743   , L0001744   , L0001745   , L0001746   , L0001747   , L0001748   , L0001749   , L0001750   ,
L0001751   , L0001752   , L0001753   , L0001754   , L0001755   , L0001756   , L0001757   , L0001758   ,
L0001759   , L0001760   , L0001761   , L0001762   , L0001763   , L0001764   , L0001765   , . . .   ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
490591.07	3611906.64	0.73562	(12122504)	490579.82	3611883.66	0.72690	(12122504)
490581.32	3611866.22	0.74116	(12122504)	490582.74	3611846.33	0.75741	(12122504)
490584.89	3611827.84	0.77538	(12122504)	490587.29	3611809.01	0.79524	(12122504)
490589.69	3611789.79	0.81651	(12122504)	490591.69	3611769.76	0.83843	(12122504)
490628.75	3611918.59	0.75327	(12122504)	490634.93	3611899.66	0.76496	(12122504)
490656.13	3611858.19	0.81747	(12020924)	490675.45	3611865.73	0.83300	(12020924)
490643.41	3611809.18	0.84641	(12122504)	490690.53	3611819.55	0.86609	(12020924)
490642.47	3611787.51	0.87356	(12122504)	490635.87	3611847.35	0.81572	(12122504)
490630.88	3611842.25	0.82546	(12122504)	490630.88	3611852.25	0.81512	(12122504)
490640.88	3611842.25	0.81424	(12122504)	490640.88	3611852.25	0.80371	(12122504)

**MODELOPTs: NonDFAULT CONC FLAT FLGPOL

*** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER 6 YEARS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.08933	AT (490572.65, 3611658.88, 1.00, 1.00, 5.00)	GC	UCART1
	2ND HIGHEST VALUE IS	0.08925	AT (490552.65, 3611718.88, 1.00, 1.00, 5.00)	GC	UCART1
	3RD HIGHEST VALUE IS	0.08630	AT (490472.65, 3611878.88, 1.00, 1.00, 5.00)	GC	UCART1
	4TH HIGHEST VALUE IS	0.08578	AT (490452.65, 3612038.88, 1.00, 1.00, 5.00)	GC	UCART1
	5TH HIGHEST VALUE IS	0.08574	AT (490492.65, 3611838.88, 1.00, 1.00, 5.00)	GC	UCART1
	6TH HIGHEST VALUE IS	0.08511	AT (490472.65, 3611978.88, 1.00, 1.00, 5.00)	GC	UCART1
	7TH HIGHEST VALUE IS	0.08438	AT (490492.65, 3611918.88, 1.00, 1.00, 5.00)	GC	UCART1
	8TH HIGHEST VALUE IS	0.08396	AT (490452.65, 3611818.88, 1.00, 1.00, 5.00)	GC	UCART1
	9TH HIGHEST VALUE IS	0.08396	AT (490512.65, 3611798.88, 1.00, 1.00, 5.00)	GC	UCART1
	10TH HIGHEST VALUE IS	0.08371	AT (490512.65, 3611858.88, 1.00, 1.00, 5.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF PM_10   IN MICROGRAMS/M**3   **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL HIGH	1ST HIGH VALUE IS	1.88802	ON 10110601: AT (490512.65, 3611698.88, 1.00, 1.00, 5.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART
                     GP = GRIDPOLR
                     DC = DISCCART
                     DP = DISCPOLR

**MODELOPTs: NonDFAULT CONC   FLAT   FLGPOL

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

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

A Total of   0 Fatal Error Message(s)
A Total of   1 Warning Message(s)
A Total of   891 Informational Message(s)

A Total of   52608 Hours Were Processed

A Total of   626 Calm Hours Identified

A Total of   265 Missing Hours Identified (0.50 Percent)

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

   ********   WARNING MESSAGES   ********
CO W320   22   URBOPT: Input Parameter May Be Out-of-Range for Parameter   URB-POP

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

Non-T VMT	75847908.35
DSL VMT	985948.0211
GAS VMT	74861960.33
DSL	1.3%
GAS	98.7%

Speed	VMT	VMT @ Speed Ratio	DSL VMT	DSL Ratio	Gas Ratio	Average DSL PM10 EF	Average GAS PM10 EF	Combined
5	131,133.0	0.2%	4,019.1	0.0%	0.2%	0.19550	0.01046	0.20596
10	367,656.5	0.5%	13,871.3	0.0%	0.5%	0.15519	0.00668	0.16187
15	897,808.7	1.2%	25,421.1	0.0%	1.2%	0.11004	0.00450	0.11454
20	2,917,917.6	3.9%	116,326.5	0.2%	3.7%	0.07928	0.00319	0.08247
25	8,717,036.3	11.6%	98,954.2	0.1%	11.5%	0.06450	0.00239	0.06689
30	7,400,459.6	9.9%	88,412.1	0.1%	9.8%	0.05555	0.00188	0.05743
35	8,427,511.4	11.3%	100,281.6	0.1%	11.1%	0.04950	0.00156	0.05107
40	5,338,305.2	7.1%	69,691.4	0.1%	7.0%	0.04597	0.00137	0.04734
45	3,622,267.6	4.8%	47,183.8	0.1%	4.8%	0.04475	0.00126	0.04601
50	2,606,119.2	3.5%	37,574.8	0.1%	3.4%	0.04572	0.00122	0.04694
55	2,095,544.8	2.8%	39,610.6	0.1%	2.7%	0.04889	0.00125	0.05014
60	2,306,047.8	3.1%	44,005.7	0.1%	3.0%	0.05405	0.00134	0.05539
65	30,034,152.7	40.1%	300,595.9	0.4%	39.7%	0.05758	0.00140	0.05897
70	0.0	0	0	0	0	0	0	0
75	0.0	0	0	0	0	0	0	0
80	0.0	0	0	0	0	0	0	0
85	0.0	0	0	0	0	0	0	0
90	0.0	0	0	0	0	0	0	0
	74,861,960.3	100.0%	985,948.0	1.3%	98.7%			

T1 VMT	1881018.254
Ratio to To	0.023250417
DSL	1086771.408
GAS	794246.8454
DSL	57.8%
GAS	42.2%

Speed	VMT	VMT @ Speed Ratio	DSL VMT	DSL Ratio	Gas Ratio	Average DSL PM10 EF	Average GAS PM10 EF	Combined
5	41,650.5	2.2%	19,110.4	1.0%	1.2%	0.043115	0.043115	0.086230
10	122,326.0	6.5%	63,550.7	3.4%	3.1%	0.031381	0.031381	0.062763
15	271,471.8	14.4%	137,632.6	7.3%	7.1%	0.023605	0.023605	0.047210
20	305,539.9	16.2%	150,889.8	8.0%	8.2%	0.018394	0.018394	0.036787
25	280,620.6	14.9%	161,492.4	8.6%	6.3%	0.014886	0.014886	0.029771
30	241,668.5	12.8%	136,320.0	7.2%	5.6%	0.012586	0.012586	0.025172
35	111,306.3	5.9%	71,941.4	3.8%	2.1%	0.011071	0.011071	0.022142
40	51,113.1	2.7%	39,493.5	2.1%	0.6%	0.010107	0.010107	0.020214
45	56,931.2	3.0%	42,626.4	2.3%	0.8%	0.009565	0.009565	0.019130
50	270,218.6	14.4%	164,594.1	8.8%	5.6%	0.009383	0.009383	0.018766
55	128,171.8	6.8%	99,120.1	5.3%	1.5%	0.009550	0.009550	0.019100
60	0.0	0	0.0	0	0	0.000000	0.000000	0.000000
65	0.0	0	0.0	0	0	0.000000	0.000000	0.000000
70	0.0	0	0.0	0	0	0.000000	0.000000	0.000000
75	0.0	0	0.0	0	0	0.000000	0.000000	0.000000
80	0.0	0	0.0	0	0	0.000000	0.000000	0.000000
85	0.0	0	0.0	0	0	0.000000	0.000000	0.000000
90	0.0	0	0.0	0	0	0.000000	0.000000	0.000000
	1,881,018.3	1.0	1,086,771.4	57.8%	42.2%			

T2 VMT	3173634.15
Ration to T	0.03922786
DSL	3011069.45
GAS	162564.698
DSL	94.9%
GAS	5.1%

Speed	VMT	VMT @ Speed Ratio	DSL VMT	DSL Ratio	Gas Ratio	Average DSL PM10 EF	Average GAS PM10 EF	Combined
5	20,675.5	0.7%	19,359.9	0.6%	0.0%	0.148668	0.006678	0.155346
10	85,727.0	2.7%	79,122.7	2.5%	0.2%	0.137626	0.004224	0.141850
15	103,798.9	3.3%	95,512.1	3.0%	0.3%	0.100942	0.002818	0.103760
20	174,891.8	5.5%	166,061.1	5.2%	0.3%	0.076102	0.003195	0.079298
25	151,064.7	4.8%	141,111.2	4.4%	0.3%	0.063895	0.002720	0.066615
30	214,012.1	6.7%	202,215.1	6.4%	0.4%	0.057144	0.001154	0.058298
35	332,956.2	10.5%	317,530.4	10.0%	0.5%	0.052195	0.002152	0.054347
40	343,027.0	10.8%	324,769.8	10.2%	0.6%	0.049008	0.001976	0.050983
45	395,958.5	12.5%	378,986.1	11.9%	0.5%	0.047569	0.001844	0.049413
50	412,292.1	13.0%	395,603.5	12.5%	0.5%	0.047885	0.001747	0.049632
55	527,647.1	16.6%	505,428.3	15.9%	0.7%	0.049653	0.001680	0.051334
60	319,856.4	10.1%	297,476.0	9.4%	0.7%	0.051288	0.001678	0.052966
65	91,727.1	2.9%	87,893.2	2.8%	0.1%	0.051290	0.001739	0.053029
70	0	0	0	0	0	0	0	0
75	0	0	0	0	0	0	0	0
80	0	0	0	0	0	0	0	0
85	0	0	0	0	0	0	0	0
90	0	0	0	0	0	0	0	0
	3,173,634.2	100.0%	3,011,069.5	94.9%	5.1%			

2013 Daily Truck Traffic

RTE	DIST	CNTY	POST MILE	LEG	DESCRIPTION	VEHICLE AADT TOTAL	TRUCK AADT TOTAL	TRUCK % TOT VEH	TRUCK By Axle 2	TRUCK By Axle 3	AADT By Axle 4	TOTAL By Axle 5+	% TRUCK By Axle 2	% TRUCK By Axle 3	AADT By Axle 4	By Axle 5+	EAL 2-WAY (1000)	YEAR VER/ EST
005	11	SD	R 14.077	B	SAN DIEGO, JCT. RTE. 75 SOUTH	160000	6560	4.10	3693	945	302	1620	56.30	14.40	4.60	24.70	819	85E
005	11	SD	R 14.077	A	SAN DIEGO, JCT. RTE. 75 SOUTH	162000	6480	4.00	3959	778	253	1490	61.10	12.00	3.90	23.00	761	78E
Total/Average						322000	13040	4.0%	7652	1723	555	3110	58.7%	13.2%	4.3%	23.8%		