KUNZMAN ASSOCIATES, INC.

TERRACINA

AIR QUALITY AND GLOBAL CLIMATE CHANGE IMPACT ANALYSIS

June 3, 2013

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

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June 3, 2013

Prepared by:

Greg Tonkovich, AICP,
Carl Ballard, LEED GA, and
William Kunzman, P.E.

1111 Town & Country Road, Suite 34
Orange, California 92868
(714) 973-8383

www.traffic-engineer.com

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I. Introduction and Setting

A. Purpose and Objectives

This study was performed to address the possibility of regional and local air quality impacts and global climate change impacts. The objectives of the study include:

- documentation of the atmospheric setting
- discussion of criteria pollutants and greenhouse gases
- discussion of the air quality and global climate change regulatory framework
- discussion of the air quality and greenhouse gases thresholds of significance
- analysis of the construction related air quality and greenhouse gas emissions
- analysis of the operations related air quality and greenhouse gas emissions
- recommendations for mitigation measures
- analysis of the conformity of the proposed project with the SCAQMD AQMP

The City of Lake Elsinore is the lead agency responsible for preparation of this air quality analysis, in accordance with the California Environmental Quality Act authorizing legislation. Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with terms unique to air quality and global climate change, a definition of terms has been provided in Appendix A.

B. Project Location

The project site is located adjacent to Terra Cotta Road between Lakeshore Drive and Nichols Road in the City of Lake Elsinore. A vicinity map showing the project location is provided on Figure 1.

According to the SCAQMD's MATES-III study, the project area has an estimated cancer risk of 267 in one million chance of cancer, which is below the average cancer risk for Riverside County of 410 in one million persons.

C. Project Description

The project site is proposed to be developed with 468 single-family detached residential dwelling units for Option A. Option B is proposed to be developed with 448 single-family detached residential dwelling units and 51 multi-family attached residential dwelling units. Both Options A and B will designate approximately 36.2 acres of the approximately 151 acre project site as permanent open space. Figure 2 illustrates the Option A project site plan and Figure 3 illustrates the Option B project site plan.

D. Phasing and Timing

The proposed project has been analyzed based on construction starting around May, 2014. After rough grading is completed for the entire site, the project is anticipated to be constructed in phases over three years, however in order to provide a worst-case analysis, this analysis has been based on all building construction occurring in one phase and completed by the end of 2016.

Figure 1
Project Location Map

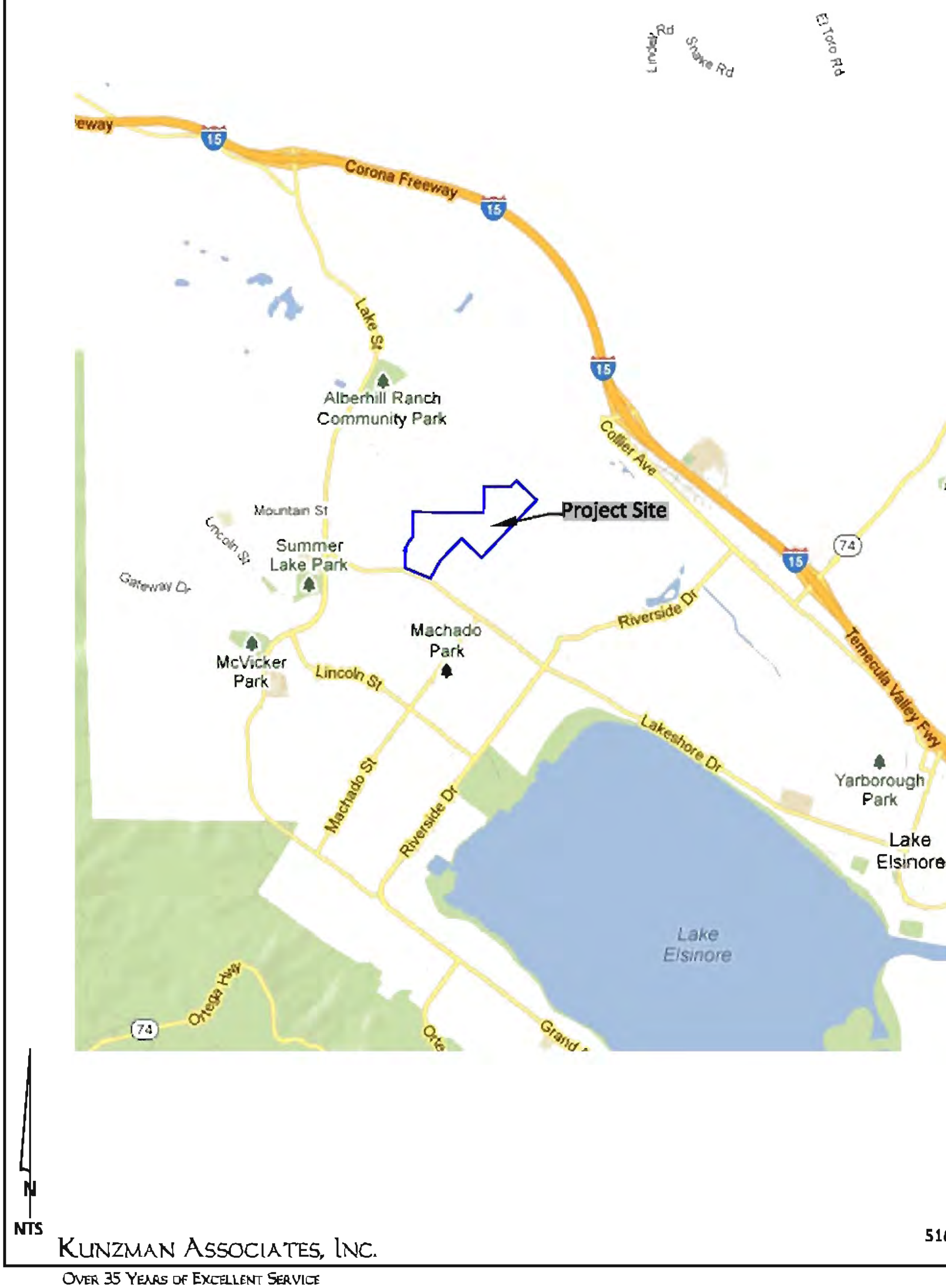

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Figure 2
Option A Site Plan

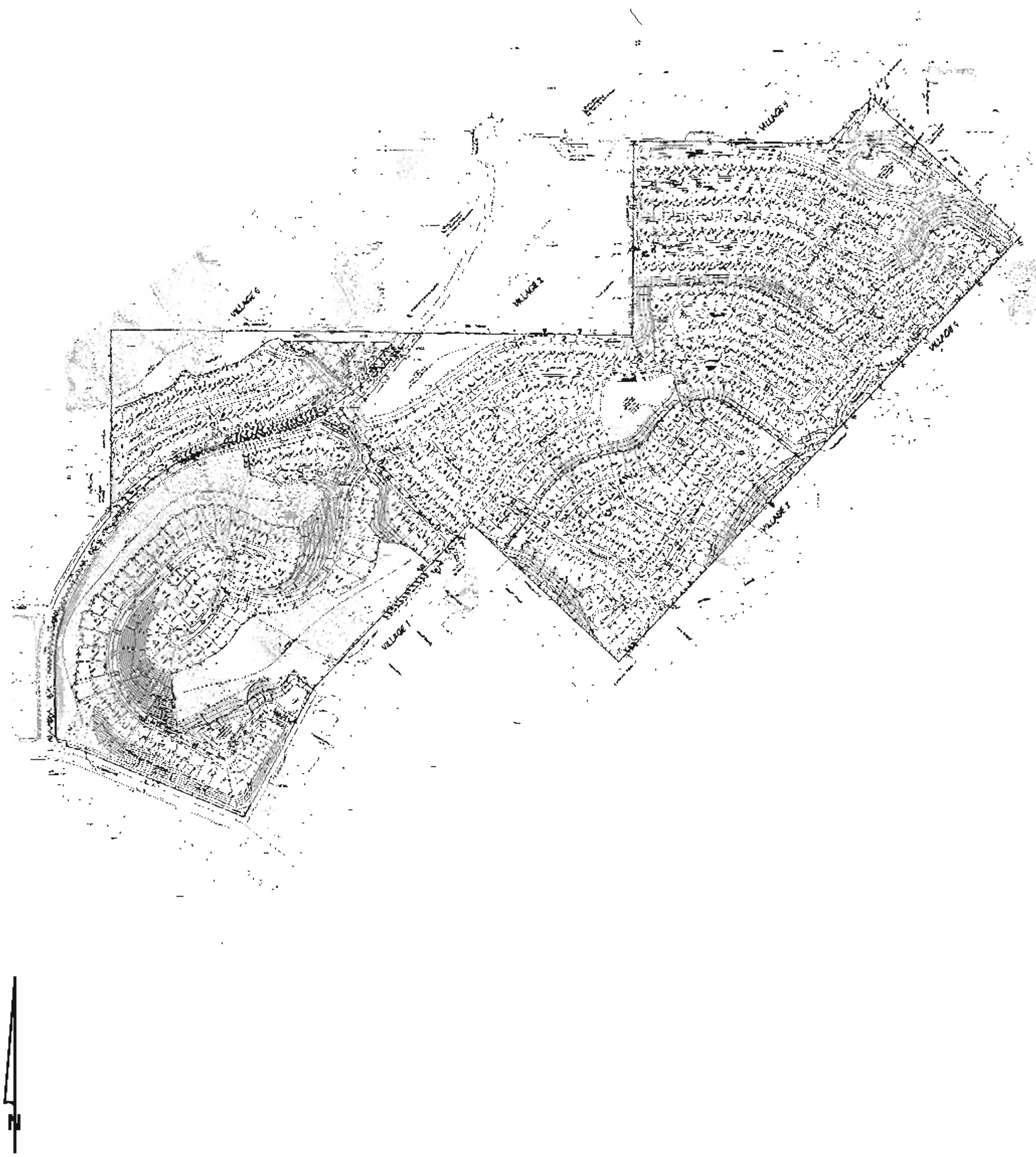

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Figure 3
Option B Site Plan

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II. Atmospheric Setting

A. Regional – Western Riverside County

The project site is located within the western portion of Riverside County, which is part of the South Coast Air Basin (Basin) that includes all of Orange County as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. Temperature inversions are the prime factor in the accumulation of contaminants in the Basin. The mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds. The topography and climate of Southern California combine to create an area of high air pollution potential in the Basin. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cup over the cool marine layer, which prevents pollution from dispersing upward. This inversion allows pollutants to accumulate within the lower layer. Light winds during the summer further limit ventilation from occurring.

Due to the low average wind speeds in the summer and a persistent daytime temperature inversion, emissions of hydrocarbons and oxides of nitrogen have an opportunity to combine with sunlight in a complex series of reactions. These reactions produce a photochemical oxidant commonly known as smog. Since the Basin experiences more days of sunlight than any other major urban area in the United States, except Phoenix, the smog potential in the region is higher than in most other areas of the nation.

B. Local – Lake Elsinore

The major factors affecting local air pollution conditions in the Lake Elsinore planning area are the extent and types of both region-wide and local emissions, climate, and meteorology. The general climate of Lake Elsinore is characterized by sparse winter rainfall and hot summers tempered by cool ocean breezes. The climate in and around Lake Elsinore, as well as most of Southern California, is controlled largely by the strength and position of the subtropical high pressure cell over the Pacific Ocean. This high-pressure cell produces a typical Mediterranean climate with warm summers, mild winters, and moderate rainfall. This pattern is infrequently interrupted by periods of extremely hot weather brought in by Santa Ana winds. Most of the area's precipitation occurs intermittently between November and April; the area is still dominated by sunny or partly sunny conditions during these months. Cyclic land and sea breezes are the primary factors affecting the region's mild climate. The daytime winds are normally sea breezes, predominantly from the west, that flow at relatively low velocities.

Just south of Lake Elsinore, the Lake Elsinore Convergence Zone acts as an invisible boundary that obstructs much of the inland basin air pollutants from continuing south beyond the Lake Elsinore area. Coastal winds within the Lake Elsinore Convergence Zone are a primary factor for the obstruction. They allow air pollutants to be dispersed just south of the convergence zone and accumulate within the Lake Elsinore area, including surrounding communities to the north and east.

The temperature and precipitation levels for the City of Lake Elsinore are shown below in Table 1. Table 1 shows that August is typically the warmest month and December is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table 1

Lake Elsinore Monthly Climate Data[1]

Descriptor	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Max. Temperature	66	68	72	77	84	91	98	99	94	83	73	65
Avg. Min. Temperature	39	41	43	47	52	57	62	63	59	52	44	38
Avg. Total Precipitation (in.)	3.04	3.01	1.77	0.62	0.14	0.02	0.21	0.01	0.24	0.61	0.86	2.01

[1] Source: http://www.weather.com/weather/wxclimatology/monthly/graph/USCA0580

III. Pollutants

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

A. Criteria Pollutants

The criteria pollutants consist of: ozone, nitrogen oxides, carbon monoxide, sulfur oxides, lead, and particulate matter. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants.

1. Nitrogen Oxides

Nitrogen Oxides (NOx) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NOx is colorless and odorless, concentrations of nitrogen dioxide (NO_2) can often be seen as a reddish-brown layer over many urban areas. NOx form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NOx are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NOx reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO_2, which cause respiratory problems. NOx and the pollutants formed from NOx can be transported over long distances, following the patterns of prevailing winds. Therefore controlling NOx is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

2. Ozone

Ozone is not usually emitted directly into the air but at ground-level is created by a chemical reaction between NOx and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NOx and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NOx and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NOx and VOC emissions.

3. <u>Carbon Monoxide</u>

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

4. <u>Sulfur Oxides</u>

Sulfur Oxide (SOx) gases are formed when fuel containing sulfur, such as coal and oil is burned, and from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

5. <u>Lead</u>

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers.

6. Particulate Matter

Particle matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. Particle matter is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM10) are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM2.5) have been designated as a subset of PM10 due to their increased health impacts and its ability to remain suspended in the air longer and travel further.

B. Other Pollutants of Concern

1. Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important of these toxic air contaminants, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to toxic air contaminants can result from emissions from normal operations as well as accidental releases. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

Toxic air contaminants are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of toxic air contaminants with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to the 2005 California Almanac of Emissions and Air Quality, the majority of the estimated health risk from toxic air contaminants can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). Diesel particulate matter is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The identification of diesel particulate matter as a toxic air contaminant in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in diesel particulate matter by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances.

California's identification of diesel particulate matter as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to diesel particulate matter is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

2. Asbestos

Asbestos is listed as a TAC by ARB and as a Hazardous Air Pollutant by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestoform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in Riverside County. The nearest likely locations of naturally occurring asbestos, as identified in the General Location Guide for Ultramafic Rocks in California prepared by the California Division of Mines and Geology, is located in Santa Barbara County. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

C. Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO_2 and nitrous oxide (NOx) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

1. Water Vapor

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved in is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to "hold" more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there is also dynamics that put the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up).

2. Carbon Dioxide

The natural production and absorption of CO_2 is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid 1700s. Each of these activities has increased in scale and distribution. CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC) indicates that concentrations were 379 ppm in 2005, an increase of more than 30 percent. Left unchecked, the IPCC projects that concentration of carbon dioxide in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources. This could result in an average global temperature rise of at least two degrees Celsius.

3. Methane

CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO_2. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO_2, N_2O, and Chlorofluorocarbons (CFCs). CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

4. Nitrous Oxide

Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and in race cars.

5. Chlorofluorocarbons

CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

6. Hydrofluorocarbons

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 HFC-134a are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

7. Perfluorocarbons

PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). Concentrations of CF_4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

8. Sulfur Hexafluoride

SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 has the highest global warming potential of any gas evaluated; 23,900 times that of CO_2.

Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

9. Aerosols

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

10. Global Warming Potential

GHGs have varying global warming potential (GWP). The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere; it is the cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to the reference gas, CO_2. One teragram of carbon dioxide equivalent (Tg CO_2e) is essentially the emissions of the gas multiplied by the global warming potential. One teragram is equal to one million metric tons. The carbon dioxide equivalent is a good way to assess emissions because it gives weight to the global warming potential of the gas. A summary of the atmospheric lifetime and the global warming potential of selected gases are summarized in Table 2. As shown in Table 2, the global warming potential of GHGs ranges from 1 to 23,900.

Table 2

Global Warming Potentials and Atmospheric Lifetimes[1]

Gas	Atmospheric Lifetime	Global Warming Potential[2] (100 Year Horizon)
Carbon Dioxide	50-200	1
Methane	12 ± 3	21
Nitrous Oxide	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Tetrafluoromethane	50,000	6,500
PFC: Hexafluoroethane	10,000	9,200
Sulfur Hexafluoride	3,200	23,900

[1] Source: United States Environmental Protection Agency, 2006.

[2] Compared to the same quantity of CO_2 emissions.

IV. Air Quality Management

A. Regulatory Setting

The proposed project is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality are discussed below.

1. International

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global climate change and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—CFCs, halons, carbon tetrachloride, and methyl chloroform—were to be phased out, with the first three by 2000 and methyl chloroform by 2005.

2. Federal - United States Environmental Protection Agency

The United States Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The National Ambient Air Quality Standards (NAAQS) pollutants were identified using medical evidence and are shown below in Table 3.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The State Implementation Plan (SIP) must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the State Implementation Plan (SIP).

As indicated below in Table 4, the Basin has been designated by the EPA as a non-attainment area for ozone (O_3) and suspended particulates (PM10 and PM2.5).

Currently, the Basin is in attainment with the ambient air quality standards for carbon monoxide (CO), lead, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2).

In 2011, the Basin exceeded federal standards for either ozone or PM2.5 at one or more locations on a total of 124 days, based on the current federal standards for 8-hour ozone and 24-hour PM2.5. Despite substantial improvements in air quality over the past few decades, some air monitoring stations in the Basin still exceed the NAAQS for ozone more frequently than any other stations in the U.S. In 2011, three of the top five stations that exceeded the 8-hour ozone NAAQS were located in the Basin (Central San Bernardino Mountains, East San Bernardino Valley, and Metropolitan Riverside County).

PM2.5 in the Basin has improved significantly in recent years, with 2010 and 2011 being the cleanest years on record. In 2011, only one station in the Basin (Metropolitan Riverside County at Mira Loma) exceeded the annual PM2.5 NAAQS and the 98th percentile form of the 24-hour PM2.5 NAAQS, as well as the 3-year design values for these standards. Basin-wide, the federal PM2.5 24-hour standard level was exceeded in 2011 on 17 sampling days.

The Basin is currently in attainment for the federal standards for carbon monoxide (CO), lead, sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). While the concentration level of the new 1-hour NO_2 federal standard (100 ppb) was exceeded in the Basin at two stations (Central Los Angeles and Long Beach) on the same day in 2011, the NAAQS NO_2 design value has not been exceeded. Therefore, the Basin remains in attainment of the NO_2 NAAQS.

The EPA designated the Los Angeles County portion of the Basin as nonattainment for the recently revised (2008) federal lead standard (0.15 μg/m3, rolling 3-month average), due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard in the 2007-2009 period of data used. For the most recent 2009-2011 data period, only one of these stations (Vernon) still exceeded the lead standard.

In Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO_2 and other greenhouse gases as pollutants under the federal Clean Air Act (CAA).

In response to the FY2008 Consolidations Appropriations Act (H.R. 2764; Public Law 110-161), EPA proposed a rule on March 10, 2009 that requires mandatory reporting of GHG emissions from large sources in the United States. On September 22, 2009, the Final Mandatory Reporting of GHG Rule was signed and published in the Federal Register on October 30, 2009. The rule became effective on December 29, 2009. This rule requires suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions will not themselves impose any requirements on industry or other entities. However, it is a prerequisite to finalizing the EPA's proposed GHG emission standards for light-duty vehicles, which were jointly proposed by the EPA and Department of Transportation on September 15, 2009.

3. State – California Air Resources Board

The California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the State Implementation Plan (SIP). The California Ambient Air Quality Standards (CAAQS) for criteria pollutants are shown in Table 3. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g. hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The South Coast Air Basin has been designated by the CARB as a nonattainment area for ozone, PM10 and PM2.5. Currently, the South Coast Air Basin is in attainment with the ambient air quality standards for CO, lead, SO_2, NO_2, and sulfates and is unclassified for visibility reducing particles and Hydrogen Sulfide.

On June 20, 2002, the CARB revised the PM10 annual average standard to 20 µg/m3 and established an annual average standard for PM2.5 of 12 µg/m3. These standards were approved by the Office of Administrative Law in June 2003 and are now effective. On September 27, 2007 CARB approved the South Coast Air Basin and the Coachella Valley 2007 Air Quality Management Plan for Attaining the Federal 8-hour Ozone and PM2.5 Standards. The plan projects attainment for the 8-hour Ozone standard by 2024 and the PM2.5 standard by 2015.

The CARB is also responsible for regulations pertaining to toxic air contaminants. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into the South Coast Air Basin. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

CARB also proposed interim statewide CEQA thresholds for GHG emissions and released Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act, on October 24, 2008. The State currently has no regulations that establish ambient air quality standards for GHGs. However, the State has passed laws directing CARB to develop actions to reduce GHG emissions, which are listed below.

Assembly Bill 1493

California Assembly Bill 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO_2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-3-05

The California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following reduction targets:

- 2010: Reduce greenhouse gas emissions to 2000 levels
- 2020: Reduce greenhouse gas emissions to 1990 levels
- 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Assembly Bill 32

In 2006, the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and best management practices that are technologically feasible and cost effective.

On December 6, 2007 CARB released the calculated Year 1990 GHG emissions of 427 million metric tons of CO_2e ($MMTCO_2e$). The 2020 target of 427 $MMTCO_2e$ requires the reduction of 169 $MMTCO_2e$, or approximately 30 percent from the State's projected 2020 business as usual emissions of 596 $MMTCO_2e$ and the reduction of 42 $MMTCO_2e$, or almost 10 percent from the 2002-2004 average GHG emissions. Under AB 32, CARB was required to adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 cap by 2020. Early measures CARB took to lower GHG emissions included requiring operators of the largest industrial facilities that emit 25,000 metric tons of CO_2 in a calendar year to submit verification of GHG emissions by December 1, 2010. The CARB Board also approved nine discrete early action measures that include regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port operations and other sources that became enforceable on or before January 1, 2010.

On December 11, 2008 the CARB Board approved a Scoping Plan, with final adoption May 11, 2009 that proposed a variety of measures including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, a market-based cap-and-trade system, and a fee regulation to fund the program. In current pending litigation, Association of Irritated Residents v. California Air Resources Board, a California State trial court found that the analysis of the alternatives identified in the AB 32 Scoping Plan Functional Equivalent Document (FED) was not sufficient for informed decision-making and public review under CEQA. In response, CARB has appealed the decision. In addition, CARB prepared the *Supplement to the AB 32 Scoping Plan Functional Equivalent Document,* June 13, 2011. On August 24, 2011 CARB recertified the complete AB 32 Scoping Plan Functional Equivalent Environmental Document revised by the Final Supplement. In December, 2011 the Final Supplement was accepted as sufficient to fulfill the trial court's March order.

Senate Bill 1368

Senate Bill 1368 (SB 1368) is the companion Bill of AB 32 and was adopted September, 2006. SB 1368 requires the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007 and for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas-fired plant. Furthermore, the legislation states that all electricity provided to the State, including imported electricity, must be generated by plants that meet the standards set by California Public Utilities Commission (CPUC) and California Energy Commission (CEC).

Executive Order S-1-07

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

Senate Bill 97

Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Resource Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance are provided and no specific mitigation measures are identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bills 1078, 107, and X1-2 and Executive Orders S-14-08 and S-21-09

Senate Bill 1078 (SB 1078) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) changed the target date to 2010. Executive Order S-14-08 was signed on November 2008 and expands the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 375

Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2012, SCAG adopted the 2012-2035 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which meets the CARB emission reduction requirements. The Housing Element Update is required by the State to be completed within 18 months after RTP/SCS adoption or by October 2013.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as "transit priority projects."

Senate Bill X7-7

Senate Bill X7-7 (SB X7-7), enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB X7-7 requires the Department of Water Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. In addition SB X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage.

Assembly Bill 939 and Senate Bill 1374

Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in

GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009.

California Code of Regulations (CCR) Title 24, Part 11
CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and construction of new, nonresidential buildings over 10,000 square feet.

4. Regional

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District
The SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when necessary. The SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. A revised draft of the 2012 AQMP was released on September, 2012, and was adopted by the SCAQMD Board on December 7, 2012. The 2012 AQMP is now awaiting approval from CARB and the U.S. EPA. The 2012 AQMP is being prepared in order to meet the federal Clean Air Act requirement that all 24-hour PM2.5 non-attainment areas prepare a SIP, which was required to be submitted to the U.S. EPA by December 14, 2012 and demonstrate attainment with the 24-hour PM2.5 standard by 2014. The 2012 AQMP demonstrates attainment of the federal 24-hour PM2.5 standard by 2014 in the Basin through adoption of all feasible measures, and therefore, no extension of the attainment date is needed.

The 2007 AQMP demonstrated attainment with the 1997 8-hour ozone (80 ppb) standard by 2023, through implementation of future improvements in control techniques and technologies. These "black box" emissions reductions represent 65 percent of the remaining NOx emission reductions by 2023 in order to show attainment with the 1997 8-hour ozone NAAQS. Given the magnitude of these needed emissions reductions, additional NOx control measures have been provided in this AQMP even though the primary purpose of this AQMP is to show compliance with 24-hour PM2.5 emissions standards.

The 2012 AQMP is designed to satisfy the California Clean Air Act's (CCAA) emission reductions of 5 percent per year or adoption of all feasible measures requirements and fulfill the EPA's requirement to update transportation conformity emissions budgets based on the latest approved motor vehicle emissions model and planning assumptions. The 2012 AQMP updates and revises the previous 2007 AQMP. The 2012 AQMP was prepared to comply with the Federal and State CCAA and amendments, to accommodate growth, to reduce the high pollutant levels in the Basin, to meet Federal and State ambient air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. The purpose of the 2012 AQMP for the Basin is to set forth a comprehensive program that will lead this area into compliance with all federal and state air-quality planning requirements.

The 2012 AQMP builds upon the approaches taken in the 2007 AQMP for the attainment of federal PM and ozone standards, and highlights the significant amount of reductions needed and the need to engage in interagency coordinated planning of mobile sources to meet all of the federal criteria pollutant standards. Compared with the 2007 AQMP, the 2012 AQMP utilizes revised emissions inventory projections that use 2008 as the base year. On-road emissions are calculated using CARB EMFAC2011 emission factors and the transportation activity data provided by SCAG from their 2012 Regional Transportation Plan (2012 RTP). Off-road emissions were updated using CARB's 2011 In-Use Off-Road Fleet Inventory Model. Since the 2007 AQMP was finalized new area source categories such as LPG transmission losses, storage tank and pipeline cleaning and degassing, and architectural colorants, were created and included in the emissions inventories. The 2012 AQMP also includes analysis of several additional sources of GHG emissions such as landfills and could also assist in reaching the GHG target goals in the AB32 Scoping Plan.

The control measures in the 2012 AQMP consist of three components: 1) Basin-wide and episodic short-term PM2.5 measures; 2) Section 182(e)(5) implementation measures; and 3) Transportation control measures. Many of the control measures are not based on command and control regulations, but instead focus on incentives, outreach, and education to bring about emissions reductions through voluntary participation and behavioral changes. More broadly, a transition to zero- and near-zero emission technologies is necessary to meet 2023 and 2032 air quality standards and 2050 climate goals. Many of the same technologies will address both air quality and climate needs.

In order to assist local agencies with direction on GHG emissions, the SCAQMD organized a working group and adopted Rules 2700, 2701, 2702, and 3002 which are described below.

SCAQMD Stakeholder Working Group

Since neither CARB nor the OPR has developed GHG emissions threshold, the SCAQMD formed a Working Group to develop significance thresholds related to GHG emissions. At the September 28, 2010 Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual thresholds of 10,000 MTCO2e for industrial uses.

Rules 2700 and 2701

The SCAQMD adopted Rules 2700 and 2701 on December 5, 2008, which establishes the administrative structure for a voluntary program designed to quantify GHG emission reductions. Rule 2701 provides specific protocols for private parties to follow to generate certified GHG emission reductions for projects within the district. Approved protocols include forest projects, urban tree planting, and manure management. The SCAQMD is currently developing additional protocols for other reduction measures. For a GHG emission reduction project to qualify, it must be verified and certified by the SCAQMD Executive Officer, who has 60 days to approve or deny the Plan. Upon approval of the Plan, the Executive Officer issues required to issue a certified receipt of the GHG emission reductions within 90 days.

Rule 2702

The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the Governing Board. Priority will be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the cap-and-trade program identified for implementation in CARB's Scoping Plan, or a Federal cap and trade program.

Rule 3002

The SCAQMD amended Rule 3002 on November 5, 2010 to include facilities that emit greater than 100,000 tons per year of CO_2e are required to apply for a Title V permit by July 1, 2011. A Title V permit is for facilities that are considered major sources of emissions.

Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the South Coast Air Basin. Instead, this is controlled through local jurisdictions in accordance to the California Environmental Quality Act (CEQA). In order to assist local jurisdictions with air quality compliance issues the CEQA Air Quality Handbook (SCAQMD CEQA Handbook), prepared by the SCAQMD, 1993, with the most current updates found at http://www.aqmd.gov/ceqa/hdbk.html, was developed in accordance with the projections and programs of the AQMP. The purpose of the SCAQMD CEQA Handbook is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that the SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. The SCAQMD intends that by providing this guidance, the air quality impacts of plans and development proposals will be analyzed accurately and consistently throughout the South Coast Air Basin, and adverse impacts will be minimized.

Southern California Association of Governments
The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the Federally designated MPO for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the Regional Transportation Plan and Regional Transportation Improvement Plan (RTIP), which addresses regional development and growth forecasts. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The Regional Transportation Plan, Regional Transportation Improvement Plan, and AQMP are based on projections originating within the City and County General Plans.

5. Local – City of Lake Elsinore

Local jurisdictions, such as the City of Lake Elsinore, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for the implementation of transportation control measures as outlined in the 2007 AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

In accordance with the CEQA requirements, the City does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the City and region will meet federal and state standards. Instead, the County relies on the expertise of the SCAQMD and utilizes the SCAQMD CEQA Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

The City of Lake Elsinore General Plan contains the following air quality-related goals and policies that are applicable to the proposed project:

Goal 2 Work with regional and state governments to develop effective mitigation measures to improve air quality.

Policy 2.1 Support the SCAQMD in its development of improved ambient air quality monitoring capabilities and establishment of standards, thresholds, and rules to address, and where necessary mitigate, the air quality impacts of new development.

The City of Lake Elsinore has also adopted a Climate Action Plan that has adopted a GHG emissions reduction target based on a community-wide emissions reduction to 6.6 $MTCO_2e$ per service population per year by 2020. This is a 22.3 percent reduction from the 2008 rate of 8.5 $MTCO_2e$ per service population. The City of Lake Elsinore Climate Action Plan contains the following GHG-related measures that are applicable to the proposed project:

T-1.2 Pedestrian Infrastructure. Through the development review process, require the installation of sidewalks along new and reconstructed streets. Also require new subdivisions and large developments to provide sidewalks or paths to internally link all uses where applicable and provide connections to neighborhood activity centers, major destinations, and transit facilities contiguous with the project site; implement through conditions of approval.

T-1.4 Bicycle Infrastructure. Through the development review process, require new development, as applicable, to implement and connect to the network of Class I, II and III bikeways, trails and safety features identified in the General Plan, Bike Lane Master Plan, Trails Master Plan and Western Riverside County Non-Motorized Transportation plan; implement through conditions of approval. The City will also continue to pursue and utilize funding when needed to implement portions of these plans.

T-1.5 Bicycle Parking Standards. Through the development review process, enforce the following short-term and long-term bicycle parking standards for new non-residential development (consistent with 2010 California Green Building Code [CalGreen], Section 5.106.4), and implement through conditions of approval:

- *Short-Term Bicycle Parking:* If the project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitor entrance, readily visible to passers-by, for 5% of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.

- *Long-Term Bicycle Parking:* For buildings with over 10 tenant occupants, provide secure bicycle parking for 5% of tenant-occupied motorized vehicle parking capacity, with a minimum of one space.

T-3.1 Mixed-Use, High Density, Infill and Transit Oriented Development. As part of the General Plan Update process, revise the Land Use Map and Municipal Code to allow for and/or increase the amount of mixed use, high density, infill and transit oriented development. Mixed-use projects should be targeted in the Historic and Ballpark Districts, as well as other areas where services are within walking distance. High density projects should be located in urbanized areas adjacent to services and transportation. Update the Municipal Code for consistency between zoning regulations and General Plan land use designations.

E-1.1 Tree Planting Requirements. Through the development review process, require new development to plant at minimum one 15-gallon nondeciduous, umbrella-form tree per 30 linear feet of boundary length near buildings, per the Municipal Code. Trees shall be planted in strategic locations around buildings or to shade pavement in parking lots and streets.

E-1.3 Energy Efficient Building Standards. Adopt an ordinance requiring that all new construction exceed the California Energy Code requirements, based on the 2008 Energy Efficiency Standards by 15% (consistent with CalGreen Tier 1), through either the performance based or prescriptive approach described in the California Green Building Code; implement through conditions of approval. Alternately, a solar photovoltaic system and/or solar water heating may be used to assist in meeting all or a portion of the 15% requirement.

E-4.1 Landscaping Ordinance. Through the development review process, enforce the City's Assembly Bill 1881 Landscaping Ordinance; implement through conditions of approval.

E-4.2 Indoor Water Conservation Requirements. Amend the City's Uniform Building Code to require development projects to reduce indoor water consumption by 30% (consistent with CalGreen Tier 1, Section A5.303.2.3.1), and implement through conditions of approval.

B. Monitored Air Quality

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Basin provided in the Revised Draft 2012 Air Quality Management Plan, prepared by SCAQMD, September 2012, indicate that collectively, mobile sources account for 59 percent of the VOC, 88 percent of the NOx emissions and 40 percent of directly emitted PM2.5, with another 10 percent of PM2.5 from road dust.

The SCAQMD has divided the South Coast Air Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project site is located in the Lake Elsinore Air Monitoring Area (Area 25), which is located in the southwest corner of Riverside County and covers from the Orange and San Diego County Lines to Canyon Lake. The nearest air monitoring station to the project site is the Lake Elsinore West Flint Street Air Monitoring Station (Lake Elsinore Station). The Lake Elsinore Station is located approximately 3 miles southeast of the project site at 506 W Flint Street, Lake Elsinore. Table 5 presents the monitored pollutant levels from the Lake Elsinore Station. However, it should be noted that due to the air monitoring station distance from the project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the project site.

The monitoring data presented in Table 5 shows that ozone and particulate matter (PM10 and PM2.5) are the air pollutants of primary concern in the project area, which are detailed below.

Ozone

During the 2009 to 2011 monitoring period, the State 1-hour concentration standard for ozone has been exceeded between 31 and 51 days each year at the Lake Elsinore Station. The State 8-hour ozone standard has been exceeded between 40 and 65 days each year over the past three years at the Lake Elsinore Station. The Federal 8-hour ozone standard was exceeded between 31 and 51 days each year over the past three years at the Lake Elsinore Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

Carbon Monoxide

CO is another important pollutant that is due mainly to motor vehicles. The Lake Elsinore Station did not record an exceedance of the state or federal 1-hour or 8-hour CO standards for the last three years.

Nitrogen Dioxide

The Lake Elsinore Station did not record an exceedance of the State or Federal NO_2 standards for the last three years.

Particulate Matter

The State 24-hour concentration standards for PM10 were not available for the past three years at the Lake Elsinore Station, however the annual PM10 concentrations exceeded the State's standard for each of the past three years. Over the past three years the Federal 24-hour and annual standards for PM10 have not been exceeded at the Lake Elsinore Station.

The Federal 24 hour standard for PM2.5 was only exceeded for two days in 2011 over the past three years at the Lake Elsinore Station. The annual average PM2.5 concentrations were not available for year 2010 at the Lake Elsinore Station, however year 2009 was below the federal standard and exceed the state standard and year 2011 was below both the federal and state standards.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM10 and PM2.5). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM10 and PM2.5. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

Table 3

State and Federal Criteria Pollutant Standards

Air Pollutant	Concentration / Averaging Time: California Standards	Concentration / Averaging Time: Federal Primary Standards	Most Relevant Effects
Ozone (O_3)	0.09 ppm/1-hour 0.07 ppm/8-hour	0.075 ppm/8-hour	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm/1-hour 9.0 ppm/8-hour	35.0 ppm/1-hour 9.0 ppm/8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	0.18 ppm/1-hour 0.03 ppm/annual	0.053 ppm/annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO_2)	0.25 ppm/1-hour 0.04 ppm/24-hour	35.0 ppm/1-hour 9.0 ppm/8-hour 0.5 ppm/3-hour (Secondary Stnd.)	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	50 $\mu g/m^3$/24-hour 20 $\mu g/m^3$/annual	150 $\mu g/m^3$/24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter ($PM_{2.5}$)	12 $\mu g/m^3$ / annual	35 $\mu g/m^3$/24-hour 15 $\mu g/m^3$/annual	
Sulfates	25 $\mu g/m^3$/24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) property damage.
Lead	1.5 $\mu g/m^3$/30-day	1.5 $\mu g/m^3$/ calendar quarter	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer-visibility of 10 miles or more due to particles when humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

[1] Source: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf .

Table 4

South Coast Air Basin Attainment Status

Pollutant	Averaging Time	National Standards[1]	Attainment Date[2]	California Standards[3]
1979 1-Hour Ozone[4]	1-Hour (0.12 ppm)	Nonattainment (Extreme)	11/15/2010 (Not attained[4])	Extreme Nonattainment
1997 8-Hour Ozone[5]	8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024	Nonattainment
2008 8-Hour Ozone	8-Hour (0.075 ppm)	Nonattainment (Extreme)	12/31/2032	
CO	1-Hour (35 ppm) 8-Hour (9 ppm)	Attainment (Maintenance)	6/11/2007 (Attained)	Maintenance
NO_2[6]	1-Hour (100 ppb) Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (Attained)	Attainment
SO_2[7]	1-Hour (75 ppb)	Designations Pending	Pending	Attainment
	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/ Attainment	3/19/1979 (Attained)	
PM10	24-Hour (150 µg/m^3)	Nonattainment (Serious)[8]	12/31/2006 (Redesignation request submitted)[8]	Nonattainment
PM2.5	24-Hour (35 µg/m^3)	Unclassifiable/ Attainment	Attained	Unclassified
Lead	3-Months Rolling (0.15 µg/m^3)	Nonattainment (Partial)[9]	12/31/2015	Nonattainment

[1] Obtained from Draft 2012 AQMP, SCAQMD, 2012. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassified/Attainment or Unclassifiable.

[2] A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration.

[3] Obtained from http://www.arb.ca.gov/desig/adm/adm.htm.

[4] 1-hour O_3 standard (0.13 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data has some continuing obligations under the former standard.

[5] 1997 8-hour O_3 standard (0.08 ppm) was reduced (0.075 ppm), effective May 27, 2008; the 1997 O3 standard and most related implementation rules remain in place until the 1997 standard is revoked by U.S. EPA.

[6] New NO_2 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO_2 standard retained.

[7] The 1971 annual and 24-hour SO_2 standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO_2 1-hour standard. Area designations expected in 2012, with SSAB designated Unclassifiable/Attainment.

[8] Annual PM10 standard was revoked, effective December 18, 2006; redesignation request to Attainment of the 24-hour PM10 standard is pending with U.S. EPA

[9] Partial Nonattainment designation - Los Angeles County portion of Basin only.

Table 5

Local Area Air Quality Levels from the Lake Elsinore Air Monitoring Station [1]

Pollutant (Standard) [2]	Year		
	2009	2010	2011
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.146	0.131	0.145
Days > CAAQS (0.09 ppm)	**51**	**31**	**36**
Maximum 8-Hour Concentration (ppm)	0.105	0.091	0.106
Days > NAAQS (0.08 ppm)	**35**	**24**	**28**
Days > CAAQS (0.070 ppm)	**65**	**40**	**45**
Carbon Monoxide:			
Maximum 1-Hour Concentration (ppm)	1.00	0.90	1.60
Days > NAAQS (20 ppm)	0	0	0
Maximum 8-Hour Concentration (ppm)	0.73	0.67	0.67
Days > NAAQS (9 ppm)	0	0	0
Nitrogen Dioxide:			
Maximum 1-Hour Concentration (ppm)	0.055	0.051	0.05
Days > NAAQS (0.25 ppm)	0	0	0
Inhalable Particulates (PM10):			
Maximum 24-Hour Concentration (ug/m^3)	75.2	54.4	99.8
Days > NAAQS (150 ug/m^3)	0	0	0
Days > CAAQS (50 ug/m^3)	--[3]	--[3]	--[3]
Annual Arithmetic Mean (AAM) (ug/m^3)	28.0	23.7	24.7
Annual > NAAQS (50 ug/m^3)	no	no	no
Annual > CAAQS (20 ug/m^3)	**yes**	**yes**	**yes**
Ultra-Fine Particulates (PM2.5):			
Maximum 24-Hour Concentration (pg/m^3)	34.2	29.8	40.7
Days > NAAQS (35 ug/m^3)	0	0	**2**
Annual Arithmetic Mean (AAM) (ug/m^3)	12.5	--[3]	10.8
Annual > NAAQS (15 ug/m3)	no	--[3]	no
Annual > CAAQS (12 ug/m^3)	**yes**	--[3]	no

[1] Source: http://www.arb.ca.gov/adam/

[2] CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million

[3] No data available.

V. Air Quality Standards

A. Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominate pollution generators in the basin, often occurs hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, the SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the South Coast Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table 6.

B. Local Air Quality

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. The SCAQMD has also provided Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The Localized Significant Threshold Methodology found that the primary emissions of concern are NO_2, CO, PM10, and PM2.5.

The significance thresholds for the local emissions of NO_2 and CO are determined by subtracting the highest background concentration from the last three years of these pollutants from Table 5 above, from the most restrictive ambient air quality standards for these pollutants that are outlined in the Localized Significant Thresholds. Since PM10 and PM2.5 currently exceed the most restrictive ambient air quality standards in the Basin, their thresholds has been directly on the Localized Significant Thresholds and background concentrations of PM10 and PM2.5 are not factored into the threshold. Table 6 shows the Localized Significant Thresholds for NO_2, CO, and PM10 and PM2.5 as well as the background concentrations and resultant significance concentrations.

C. Toxic Air Contaminants

According to the SCAQMD CEQA Handbook, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in a Hazard Index increase of 1 or greater.

In order to determine if the proposed project may have a significant impact related to hazardous air pollutants (HAP), the Health Risk Assessment Guidance for analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, (Diesel Analysis), prepared by SCAQMD, August 2003, recommends that if the proposed project is anticipated to create hazardous air pollutants through stationary sources or regular operations of diesel trucks on the project site, then the proximity of the nearest receptors to the source of the hazardous air pollutants and the toxicity of the hazardous air pollutants should be analyzed through a comprehensive facility-wide health risk assessment (HRA).

D. Odor Impacts

The SCAQMD CEQA Handbook states that an odor impact would occur if the proposed project creates an odor nuisance pursuant to SCAQMD Rule 402, which states:

> "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
>
> The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals."

If the proposed project results in a violation of Rule 402 with regards to odor impacts, then the proposed project would create a significant odor impact.

E. Greenhouse Gases

The City of Lake Elsinore has adopted a Climate Action Plan that has adopted a GHG emissions reduction target based on a community-wide emissions reduction to 6.6 MTCO2e per service population per year by 2020. This is a 22.3 percent reduction from the 2008 rate of 8.5 MTCO2e per service population. These efficiency-based targets were derived by dividing the statewide AB 32 targeted emissions levels for 2020 and statewide Executive Order S-3-05 targeted emissions level for 2030 by the 2020 and 2030 statewide service population respectively. These targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in 2020 and 2030 based on emissions levels necessary to achieve the statewide AB 32 and Executive Order S-3-05 GHG emissions reduction goals. Therefore, the proposed project would be considered to create a significant cumulative GHG emissions impact if the proposed project's GHG emissions are not 22.3 percent less than GHG emissions from business-as-usual conditions for a similar size project in year 2008.

Table 6

SCAQMD Air Quality Significance Thresholds[1]

Mass Daily Thresholds			
Pollutant		Construction (lbs/day)	Operation (lbs/day)
NOx		100	55
VOC		75	55
PM10		150	150
PM2.5		55	55
SOx		150	150
CO		550	550
Lead		3	3
Toxic Air Contaminants, Odor and GHG Thresholds			
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index > 1.0 (project increment)		
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402		
GHG	10,000 MT/yr CO2e for industrial facilities		
Local Air Quality Thresholds			
Pollutant	SCAQMD LSTs	Background Level	Significance Threshold
NO2 -1-hour average	0.18 ppm (338 µg/m^3)	103 µg/m^3	235 µg/m^3
PM10 -24-hour average Construction Operations	 10.4 µg/m^3 2.5 ug/m^3	 -- --	 10.4 µg/m^3 2.5 ug/m^3
PM2.5 -24-hour average Construction Operations	 10.4 µg/m^3 2.5 µg/m^3	 -- --	 10.4 µg/m^3 2.5 ug/m^3
SO2 1-hour average 24-hour average	 0.25 ppm 0.04 ppm	 -- --	 0.25 ppm 0.04 ppm
CO 1-hour average 8-hour average	 20 ppm (23,000 µg/m^3) 9 ppm (10,000 µg/m^3)	 1840 µg/m^3 744 µg/m^3	 21160 µg/m^3 9256 µg/m^3
Lead 30-day average Rolling 3-month average Quarterly average	 1.5 µg/m^3 0.15 µg/m^3 1.5 µg/m^3	 -- -- --	 1.5 µg/m^3 0.15 µg/m^3 1.5 µg/m^3

[1] Source: http://www.aqmd.gov/ceqa/handbook/signthres.pdf

VI. Short-Term Construction Impacts

Construction activities associated with the proposed project would have the potential to generate air emissions, toxic air contaminant emissions, and odor impacts. Assumptions for the phasing, duration, and required equipment for the construction of the proposed project were obtained from the project applicant. The construction activities for the proposed project are anticipated to include: site preparation and grading of approximately 115 acres (approximately 36.2 acres would remain permanent open space), construction of 468 single-family residential dwelling units for Option A or 448 single-family residential dwelling units and 51 multi-family residential dwelling units for Option B, paving of approximately 11.5 acres of on-site roads, and application of architectural coatings. The proposed project is anticipated to start construction mid-2013 and would be constructed over approximately 18 months.

A. Construction-Related Regional Impacts

The construction-related regional air quality impacts have been analyzed for both criteria pollutants and GHGs for both Option A and Option B.

1. Construction-Related Criteria Pollutants Analysis

The following provides a discussion of the methodology used to calculate regional construction air emissions and an analysis of the proposed project's short-term construction emissions for the criteria pollutants.

Methodology

Typical emission rates from construction activities were obtained from CalEEMod Version 2011.1.1. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2007 computer program to calculate the emission rates specific for the western portion of Riverside County for construction-related employee vehicle trips and the OFFROAD2007 computer program to calculate emission rates for heavy truck operations. EMFAC2007 and OFFROAD2007 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. The default trip lengths of 12.7 miles for construction worker trips and 7.4 miles for vendor trips were used in this analysis and were based on construction survey data performed by the SCAQMD. Using CalEEMod, the peak daily air pollutant emissions during each phase was calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions. The construction daily emissions printouts from CalEEMod are provided in Appendix B for Option A and Appendix C for Option B.

The phases of the construction activities which have been analyzed below are: 1) site preparation, 2) grading, 3) trenching, 4) building construction, 5) paving, and 6) application of architectural coatings.

Site Preparation
The site preparation phase would consist of removing any vegetation, tree stumps, and stones prior to grading. The site preparation for both Option A and B would be similar and was modeled as occurring over one month and starting in May 2014. The site preparation activities would require 18 worker trips per day. In order to account for the water trucks, 3 vendor truck trips per day were added to the site preparation phase. The on-site equipment would consist of 3 rubber tired dozers and 4 of either a tractor, loader, or backhoe, which is based on the CalEEMod default equipment mix.

Grading
The grading would occur after the completion of the site preparation phase. The grading for both Option A and Option B would be similar and was modeled based on the same assumptions, which were based on disturbing 114.8 acres (36.2 acres of the 151 acre project site would remain permanent open space), occurring over 6 months and would require 20 worker trips per day. In order to account for the water trucks, 3 vendor truck trips per day were added to the grading phase. The proposed grading is balanced, which would result in no dirt being imported or exported from the project site. The on-site simultaneously operating equipment would consist of 2 excavators, 1 grader, 1 rubber tired dozer, 4 scrappers, and 2 of either a tractor, loader, or backhoe, which is based on the CalEEMod default equipment mix plus an additional 2 scrappers to account for the quantity of material that will be required to move due to the project site consisting of rolling hills.

Trenching
The trenching for utilities would occur after the completion of the grading phase. The trenching activities for both Option A and B would be similar and was modeled as occurring over one month and would require 10 worker trips per day. In order to account for the water trucks, 3 vendor truck trips per day were added to the site preparation phase. The on-site simultaneously operating equipment would consist of 2 excavators, and 2 of either a tractor, loader, or backhoe, which is based on the CalEEMod default equipment mix.

Building Construction
The building construction would occur after the completion of the trenching phase. The building construction phase was modeled based on the construction of 468 single-family residential dwelling units for Option A or 448 single-family residential dwelling units and 51 multi-family residential dwelling units for Option B. Building construction would occur over 20 months and Option A would require up to 168 worker trips and 50 vendor trips per day and Option B would require up to 198 worker trips and 53 vendor trips per day. The on-site equipment would consist of 1 crane, 3 forklifts, 1 generator set, 1 welder, and 3 of either a tractor, loader, or backhoe, which is based on the CalEEMod default equipment mix.

Paving
The paving would occur after the completion of the building construction phase. The paving phase was modeled as occurring over 1.5 months and would require up to 15 worker trips per day. The on-site equipment would consist of 2 pavers, 2 paving equipment, and 2 rollers, which is based on the CalEEMod default equipment mix.

Architectural Coating

The application of architectural coatings would occur after the completion of the paving phase. The architectural coating phase would occur over 3.5 months. The on-site equipment would consist of 1 air compressor, which is based on the CalEEMod default equipment mix. Option A was modeled based on the CalEEMod default exterior area of 568,620 square feet and interior area of 1,705,860 square feet and would require up to 34 worker trips per day. Option B was modeled based on the CalEEMod default exterior area of 578,745 square feet and interior area of 1,736,235 square feet and would require up to 40 worker trips per day.

Project Impacts

The construction-related criteria pollutant emissions for each phase are shown below in Table 7 for Option A and Table 8 for Option B. Tables 7 and 8 show that NOx would exceed the SCAQMD construction thresholds during grading activities.

Mitigation is provided that would require that at least half of all diesel equipment operating on-site during the grading phase meet Tier 3 or higher emission standards (Tier emissions standards were developed by the federal government for new diesel equipment. Tier 0 represents all equipment prior to the Tier standards, Tier 1 was phased in between 1996 to 2000, Tier 2 and 3 standards were phased in between 2000 and 2008, and Tier 4 standards are being phased in between 2008 and 2015). The mitigated construction-related regional criteria pollutant emissions are shown below in Table 9 for Option A and Table 10 for Option B. Tables 9 and 10 show that with application of Mitigation Measure 1 the construction-related regional criteria pollutant emissions would be reduced to less than significant.

B. <u>Construction-Related Local Impacts</u>

Construction-related air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. The proposed project has been analyzed for the potential local air quality impacts created from: construction-related fugitive dust and diesel emissions; from toxic air contaminants; and from construction-related odor impacts.

1. <u>Local Air Quality Impacts from Construction</u>

The proposed project's construction-related air emissions from fugitive dust and on-site diesel emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in <u>Localized Significance Threshold Methodology</u>, prepared by SCAQMD, revised July 2008. The LST Methodology found the primary emissions of concern are NOx, CO, PM10, and PM2.5. In order to determine if any of these pollutants require a detailed analysis of the local air quality impacts, each phase of construction was screened using the SCAQMD's Mass Rate LST Look-up Tables. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily onsite emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. The emission thresholds were calculated based on the Lake Elsinore source receptor area, a disturbance of five acres per day, which is the largest acreage available in the Look-Up Tables. The on-site emissions were calculated from the CalEEMod model for the different construction phases and have been detailed above for the construction-related regional air quality impacts analysis. The nearest homes are located as near as 25 feet away from the project site. According to LST Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25 meter thresholds.

The screening data provided in Table 11 for Option A and Table 12 for Option B shows that NOx and CO emissions would not exceed the allowable limits for any phase of construction. Tables 11 and 12 also show that for both the site preparation and grading phases PM10 and PM2.5 emissions may exceed the local emissions thresholds at the nearest sensitive receptors.

The PM10 and PM2.5 24-hour averages were calculated with the AERMOD View Version 8.2.0. Both PM10 and PM2.5 have the same significance threshold of 10.4 µg per m^3 and other than the type and amount of emissions, both use the same model inputs in the AERMOD model. Some key factors in the model setup included the use of urban modeling option based on a population of 2,100,516 for Riverside County, and meteorological data provided by SCAQMD for Lake Elsinore from January 1, 2005 to December 31, 2007. Flagpole receptors heights were set to 0 meters. AERMAP was run with two 7.5 minute USGS DEM maps, with the Lake Elsinore area map for the west side of the project site and the Alberhill area map for the east side of the project site. These modeling options were selected to be consistent with guidance from SCAQMD.

The on-site emission rates of 21.68 pounds per day of PM10 from the grading phase and 13.54 pounds per day of PM2.5 from the site preparation phase have been used in this analysis and are based on the highest calculated on-site PM10 and PM2.5 emissions from all phases. In order to provide a worst-case scenario, an area source of 28.7 acres was used, which is based on ¼ of the total area to be graded and placed at the nearest location to the homes in the middle of the project site. The PM10 and PM2.5 emissions were analyzed based on a 24-hour averaging time with the emissions being produced for a 9-hour period between 7 a.m. and 4 p.m., which is when the grading operations are anticipated to occur.

Discrete receptors were placed at representative sensitive receptors on every side of the project site and grid receptors were used out to 500 meters (1,640 feet). Table 12 provides a summary of the calculated worst-case PM10 and PM2.5 construction emissions at seven analyzed discrete sensitive receptors, which were chosen as the most likely off-site residences to be impacted from grading emissions and at the point of maximum impact. Figure 3 shows the PM10 local air contours prior to mitigation from grading operations on the middle portion of the project site. The data provided in Table 12 shows that PM10 from the site preparation and grading phases would exceed the local emissions thresholds at Receptors X, which is located on the south side of the project site. Therefore, significant local PM10 concentrations would occur during site preparation and grading activities for the proposed project.

According to the project applicant, grading activities would require several days where the daily earth-moving volume would exceed 5,000 cubic yards. Therefore, the proposed project's grading activities would be considered a Large Operation as defined in SCAQMD's Rule 403. Mitigation Measure 2 is provided to ensure that the grading contractor adheres to the Large Operations requirements detailed in Rule 403. A list of the Large Operations control actions from Rule 403 are provided in Appendix D. However, the only the Large Operations control measures that were able to be quantified in the CalEEMod model were watering all disturbed area three times per day and limiting the speed on unpaved roads to 15 miles per hour.

The AERMOD Model was re-run based on the mitigated emission rates of 10.44 pound per day of PM10 and 7.26 pounds per day of PM2.5 and the results are shown below in Table 13. Appendix E provides the AERMOD printouts and Figure 4 shows the Mitigated PM10 local air contours from grading operations on the middle portion of the project site. Table 13 shows that with implementation of Mitigation Measure 2 would reduce the local PM10 and PM2.5 emissions at the nearest residences from grading activities to below the 10.4 μg per meter^3 threshold of significance discussed above in Section V.

Therefore, local construction emissions would be reduced to a less than significant level with mitigation.

2. Construction-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the short-term construction schedule, the proposed project would not result in a long-term (i.e., 70 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project.

3. Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement and diesel exhaust emissions. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed project.

Table 7

Option A Unmitigated Construction-Related Regional Criteria Pollutant Emissions [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Site Preparation						
On-Site[2]	9.37	74.88	43.05	0.07	21.68	13.54
Off-Site[3]	0.12	0.55	1.32	0.00	0.28	0.04
Total	**9.49**	**75.43**	**44.37**	**0.07**	**21.96**	**13.58**
Grading						
On-Site	16.06	132.39	68.96	0.15	18.13	9.10
Off-Site	0.15	0.59	1.75	0.00	0.38	0.04
Total	**16.21**	**132.98**	**70.71**	**0.15**	**18.51**	**9.14**
Trenching						
On-Site	2.82	20.08	16.23	0.03	1.26	1.26
Off-Site	0.08	0.51	0.83	0.00	0.18	0.03
Total	**2.90**	**20.59**	**17.06**	**0.03**	**1.44**	**1.29**
Building Construction						
On-Site	4.34	29.16	22.98	0.04	1.80	1.80
Off-Site	1.23	7.73	12.74	0.03	2.94	0.41
Total	**5.57**	**36.89**	**35.72**	**0.07**	**4.74**	**2.21**
Paving						
On-Site	5.47	28.21	20.38	0.03	2.35	2.35
Off-Site	0.06	0.07	0.78	0.00	0.20	0.01
Total	**5.53**	**28.28**	**21.16**	**0.03**	**2.55**	**2.36**
Architectural Coating						
On-Site	69.67	2.37	1.88	0.00	0.20	0.20
Off-Site	0.13	0.14	1.78	0.00	0.46	0.03
Total	**69.80**	**2.51**	**3.66**	**0.00**	**0.66**	**0.23**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	no	**yes**	no	no	no	no

[1] Source: CalEEMod Version 2011.11

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

Table 8

Option B Unmitigated Construction-Related Regional Criteria Pollutant Emissions [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Site Preparation						
On-Site[2]	9.37	74.88	43.05	0.07	21.68	13.54
Off-Site[3]	0.12	0.55	1.32	0.00	0.28	0.04
Total	**9.49**	**75.43**	**44.37**	**0.07**	**21.96**	**13.58**
Grading						
On-Site	16.06	132.39	68.96	0.15	18.13	9.10
Off-Site	0.15	0.59	1.75	0.00	0.38	0.04
Total	**16.21**	**132.98**	**70.71**	**0.15**	**18.51**	**9.14**
Trenching						
On-Site	2.82	20.08	16.23	0.03	1.26	1.26
Off-Site	0.08	0.51	0.83	0.00	0.18	0.03
Total	**2.90**	**20.59**	**17.06**	**0.03**	**1.44**	**1.29**
Building Construction						
On-Site	4.34	29.16	22.98	0.04	1.80	1.80
Off-Site	1.40	8.29	14.61	0.03	3.39	0.45
Total	**5.74**	**37.45**	**37.59**	**0.07**	**5.19**	**2.25**
Paving						
On-Site	5.47	28.21	20.38	0.03	2.35	2.35
Off-Site	0.06	0.07	0.78	0.00	0.20	0.01
Total	**5.53**	**28.28**	**21.16**	**0.03**	**2.55**	**2.36**
Architectural Coating						
On-Site	70.90	2.37	1.88	0.00	0.20	0.20
Off-Site	0.16	0.19	2.09	0.00	0.54	0.04
Total	**71.06**	**2.56**	**3.97**	**0.00**	**0.74**	**0.24**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	no	**yes**	no	no	no	no

[1] Source: CalEEMod Version 2011.11

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

Table 9

Option A Mitigated Construction-Related Regional Criteria Pollutant Emissions [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Site Preparation						
On-Site[2]	9.37	74.88	43.05	0.07	21.68	13.54
Off-Site[3]	0.12	0.55	1.32	0.00	0.28	0.04
Total	**9.49**	**75.43**	**44.37**	**0.07**	**21.96**	**13.58**
Grading						
On-Site	13.36	93.19	79.44	0.15	17.55	8.52
Off-Site	0.15	0.59	1.75	0.00	0.04	0.04
Total	**13.51**	**93.78**	**81.19**	**0.15**	**17.59**	**8.56**
Trenching						
On-Site	2.82	20.08	16.23	0.03	1.26	1.26
Off-Site	0.08	0.51	0.83	0.00	0.18	0.03
Total	**2.90**	**20.59**	**17.06**	**0.03**	**1.44**	**1.29**
Building Construction						
On-Site	4.34	29.16	22.98	0.04	1.80	1.80
Off-Site	1.23	7.73	12.74	0.03	2.94	0.41
Total	**5.57**	**36.89**	**35.72**	**0.07**	**4.74**	**2.21**
Paving						
On-Site	5.47	28.21	20.38	0.03	2.35	2.35
Off-Site	0.06	0.07	0.78	0.00	0.20	0.01
Total	**5.53**	**28.28**	**21.16**	**0.03**	**2.55**	**2.36**
Architectural Coating						
On-Site	69.67	2.37	1.88	0.00	0.20	0.20
Off-Site	0.13	0.14	1.78	0.00	0.46	0.03
Total	**69.80**	**2.51**	**3.66**	**0.00**	**0.66**	**0.23**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	no	no	no	no	no	no

[1] Source: CalEEMod Version 2011.11

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

Table 10

Option B Mitigated Construction-Related Regional Criteria Pollutant Emissions [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Site Preparation						
On-Site[2]	9.37	74.88	43.05	0.07	21.68	13.54
Off-Site[3]	0.12	0.55	1.32	0.00	0.28	0.04
Total	**9.49**	**75.43**	**44.37**	**0.07**	**21.96**	**13.58**
Grading						
On-Site	12.64	85.13	78.73	0.15	17.33	8.30
Off-Site	0.15	0.59	1.75	0.00	0.38	0.04
Total	**12.79**	**85.72**	**80.48**	**0.15**	**17.71**	**8.34**
Trenching						
On-Site	2.82	20.08	16.23	0.03	1.26	1.26
Off-Site	0.08	0.51	0.83	0.00	0.18	0.03
Total	**2.90**	**20.59**	**17.06**	**0.03**	**1.44**	**1.29**
Building Construction						
On-Site	4.34	29.16	22.98	0.04	1.80	1.80
Off-Site	1.40	8.29	14.61	0.03	3.39	0.45
Total	**5.74**	**37.45**	**37.59**	**0.07**	**5.19**	**2.25**
Paving						
On-Site	5.47	28.21	20.38	0.03	2.35	2.35
Off-Site	0.06	0.07	0.78	0.00	0.20	0.01
Total	**5.53**	**28.28**	**21.16**	**0.03**	**2.55**	**2.36**
Architectural Coating						
On-Site	70.90	2.37	1.88	0.00	0.20	0.20
Off-Site	0.16	0.19	2.09	0.00	0.54	0.04
Total	**71.06**	**2.56**	**3.97**	**0.00**	**0.74**	**0.24**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	no	no	no	no	no	no

[1] Source: CalEEMod Version 2011.11

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

Table 11

Screening of the Local Construction Emissions at the Nearest Existing Homes [1]

Phase	On-Site Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Option A				
Site Preparation	74.88	43.05	**21.68**	**13.54**
Grading	132.39	68.96	**18.13**	**9.10**
Trenching	20.08	16.23	1.26	1.26
Building Construction	29.16	22.98	1.80	1.80
Paving	28.21	20.38	2.35	2.35
Architectural Coating	2.37	1.88	0.20	0.20
Option B				
Site Preparation	74.88	43.05	**21.68**	**13.54**
Grading	132.39	68.96	**18.13**	**9.10**
Trenching	20.08	16.23	1.26	1.26
Building Construction	29.16	22.98	1.80	1.80
Paving	28.21	20.38	2.35	2.35
Architectural Coating	2.37	1.88	0.20	0.20
SCAQMD Threshold for 25 meters (82 feet) or less [2]	**371**	**1,965**	**13**	**8**
Exceeds Threshold?	no	no	**yes**	**yes**

[1] Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for five acres in Lake Elsinore.

[2] The estimated distance from the project site to the nearest existing homes, located north of Terra Cotta Road is 40 feet, however according to LST methodology any receptor located closer than 25 meters should be based on the 25 meter threshold.

Table 12

Unmitigated Construction Local PM10 and PM2.5 Concentrations at the Nearby Homes[1]

Sensitive Receptor No.	General Location	Receptor Location X	Receptor Location Y	24-hr Concentration ($\mu g/m^3$) PM10	24-hr Concentration ($\mu g/m^3$) PM2.5
1	North of Project Site	465,312	3,728,868	1.9	1.2
2	Northeast of Project Site	465,904	3,729,173	0.7	0.4
3	East of Project Site	465,564	3,728,440	**11.0**	6.9
4	Southeast of Project Site	465,299	3,728,416	7.0	4.4
5	Southeast of Project Site	465,180	3,728,439	5.7	3.6
6	Southeast of Project Site	465,056	3,728,308	1.3	0.8
7	South of Project Site	464,674	3,728,150	0.7	0.4
8	Southwest of Project Site	464,583	3,728,262	0.9	0.6
9	West of Project Site	464,684	3,728,535	4.2	2.6
10	West of Project Site	464,693	3,728,614	6.6	4.1
11	West of Project Site	464,696	3,728,670	9.8	6.1
PMI	Inner Corner of Project Site	465,218	3,728,512	**13.1**	8.2
SCAQMD Threshold of Significance at Sensitive Receptors				**10.4**	**10.4**

[1] Source: AERMOD View Version 8.2.0.

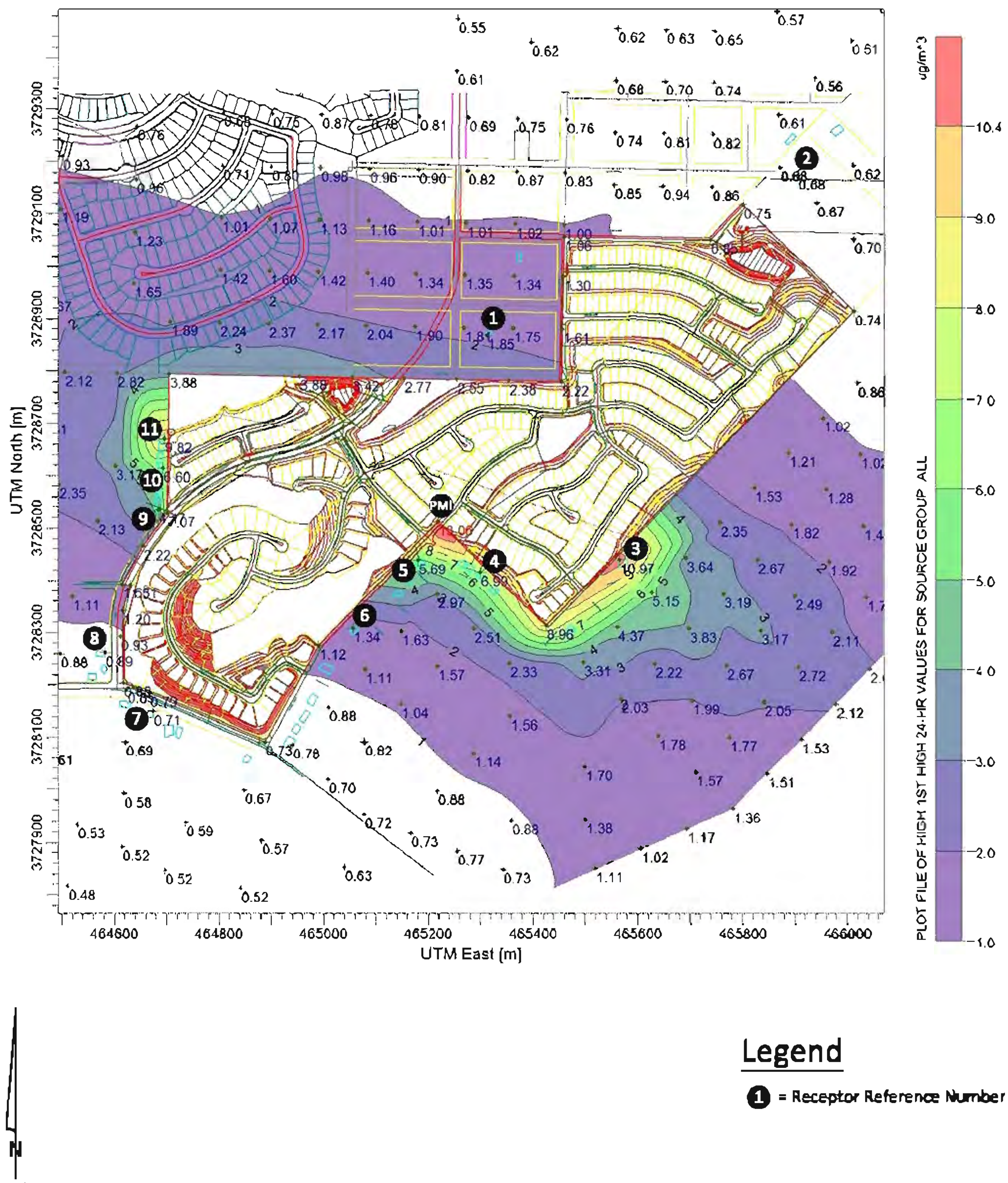
Table 13

Mitigated Construction Local PM10 and PM2.5 Concentrations at the Nearby Homes[1]

Sensitive Receptor No.	General Location	Receptor Location		24-hr Concentration (μg/m^3)	
		X	Y	PM10	PM2.5
1	North of Project Site	465,312	3,728,868	0.9	0.6
2	Northeast of Project Site	465,904	3,729,173	0.3	0.2
3	East of Project Site	465,564	3,728,440	5.3	3.7
4	Southeast of Project Site	465,299	3,728,416	3.4	2.3
5	Southeast of Project Site	465,180	3,728,439	2.7	1.9
6	Southeast of Project Site	465,056	3,728,308	0.6	0.4
7	South of Project Site	464,674	3,728,150	0.3	0.2
8	Southwest of Project Site	464,583	3,728,262	0.4	0.3
9	West of Project Site	464,684	3,728,535	2.0	1.4
10	West of Project Site	464,693	3,728,614	3.2	2.2
11	West of Project Site	464,696	3,728,670	4.7	3.3
PMI	Inner Corner of Project Site	465,218	3,728,512	6.3	3.0
SCAQMD Threshold of Significance at Sensitive Receptors				**10.4**	**10.4**

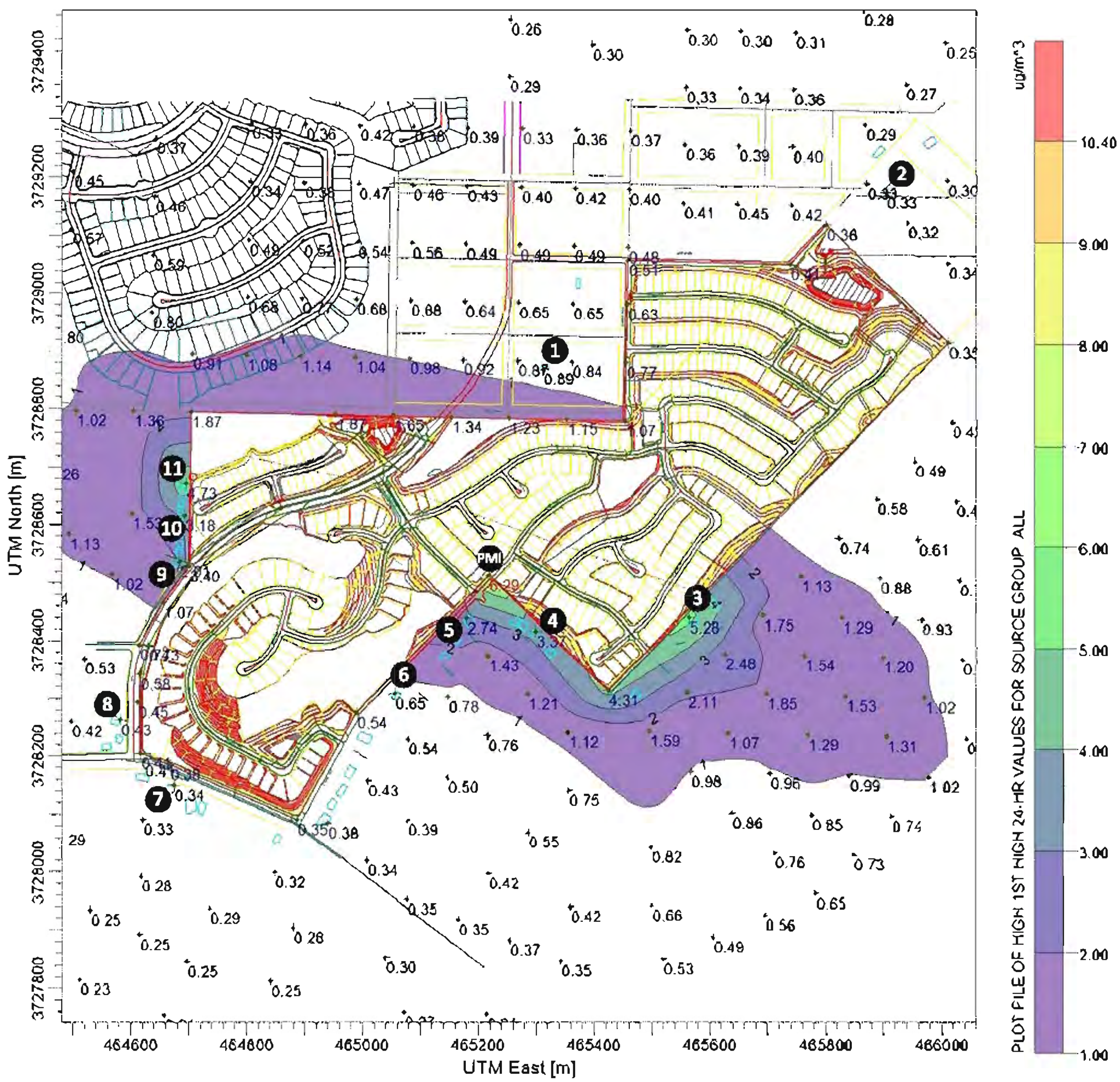
[1] Source: AERMOD View Version 8.2.0.

Figure 4
Unmitigated Local Construction-Related PM10 Concentrations



5164a/4

Figure 5
Unmitigated Local Construction-Related PM10 Concentrations



Legend

❶ = Receptor Reference Number

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NTS

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OVER 35 YEARS OF EXCELLENT SERVICE

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VII. Long-Term Air Quality Operational Impacts

The on-going operation of the proposed project would result in a long-term increase in air quality emissions. This increase would be due to emissions from the project-generated vehicle trips and through operational emissions from the on-going use of the proposed project. The following section provides an analysis of potential long-term air quality impacts due to: regional air quality and local air quality impacts with the on-going operations of the proposed project.

A. Operations-Related Regional Air Quality Impacts

The potential operations-related air emissions have been analyzed below for the criteria pollutants and cumulative impacts.

1. Operations-Related Criteria Pollutant Analysis

The operations-related criteria air quality impacts created by the proposed project have been analyzed through use of the CalEEMod model. The operating emissions were based on the year 2016, which is the anticipated opening year for the proposed project. The operations daily emissions printouts from the CalEEMod model are provided in Appendix B for Option A and Appendix C for Option B. The CalEEMod analyzes operational emissions from area sources, energy usage, and mobile sources, which are discussed below.

Mobile Sources
Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed by inputting the project-generated vehicular trips from the Terracina Traffic Impact Analysis (Traffic Analysis), prepared by Kunzman Associates, Inc. December 18, 2012, into the CalEEMod Model. The Trip Generation Analysis found that the proposed project would create 4,455 daily vehicle trips for Option A and 4,561 daily vehicle trips for Option B. The program then applies the emission factors for each trip which is provided by the EMFAC2007 model to determine the vehicular traffic pollutant emissions. The CalEEMod default trip lengths of 10.8 miles for home to work, 7.3 miles for home to shopping, and 7.5 miles for home to other locations were used in this analysis. The vehicle mix was revised in the CalEEMod model to reflect the vehicles that would be generated by a residential use and was limited to automobiles, light pickup trucks, heavy pickup trucks, motorcycles, and motorhomes. The vehicle mix also included 15 medium trucks per day to account for the delivery trucks that would service the proposed residential units.

Area Sources
Area sources include emissions from hearths, consumer products, landscape equipment and architectural coatings. The area source emissions were based on the on-going use of the proposed 468 single-family residential dwelling units for Option A or 448 single-family residential dwelling units and 51 multi-family residential dwelling units for Option B in the CalEEMod model. In order to account for SCAQMD Rule 445,

the CalEEMod model analyzed one natural gas only fireplace for each of the proposed single-family homes and no fireplaces for the proposed multi-family homes. No other changes were made to the default area source parameters.

Energy Usage

Energy usage includes emissions from the generation of electricity and natural gas used on-site. The energy usage emissions was based on the on-going use of the proposed 468 single-family residential dwelling units for Option A or 448 single-family residential dwelling units and 51 multi-family residential dwelling units for Option B in the CalEEMod model. No changes were made to the default energy usage parameters.

Project Impacts

The worst-case summer or winter VOC, NOx, CO, SO_2, PM10, and PM2.5 emissions created from the proposed project's long-term operations have been calculated and are summarized below in Table 14 for Option A and Table 15 for Option B. Tables 14 and 15 show that none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from operation of the proposed project.

2. <u>Cumulative Regional Air Quality Impacts</u>

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the project's air quality must be generic by nature.

The project area is out of attainment for both ozone and PM10 particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the South Coast Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. With respect to long-term emissions, this project would create a less than significant cumulative impact.

B. <u>Operations-Related Local Air Quality Impacts</u>

Project-related air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. The proposed project has been analyzed for the potential local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from on-site operations. The following analysis analyzes the vehicular CO emissions, local impacts from on-site operations, and odor impacts.

1. Local CO Emission Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented in above in Section V.

To determine if the proposed project could cause emission levels in excess of the CO standards discussed above in Section V, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" typically occur at high traffic volume intersections with a Level of Service E or worse.

The Traffic Impact Analysis found that with the proposed road improvements for both Option A and Option B, the proposed project would not decrease the Level of Service at any analyzed intersection and no analyzed intersection would operate at a Level of Service E or worse for; existing plus project conditions, existing plus ambient growth plus project conditions, and existing plus ambient growth plus project plus cumulative conditions. Therefore no CO "hot spot" modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed project.

2. Local Air Quality Impacts from On-Site Operations

The local air quality impacts from the operation of the proposed project would occur from emissions generated on-site. Sources of on-site operational emissions include architectural coatings off-gassing, landscaping equipment emissions, natural gas appliance emissions and on-site vehicular emissions. Because of the residential nature of the proposed project, the majority of the proposed project's operational emissions are from vehicles traveling on roadways away from the project site. These emissions are then spread over a vast area traversed by various mobile sources and do not result in localized air quality impacts in proximity to the project site. As such, localized operational modeling for project operations are not prepared for residential developments. Therefore, the on-going operations of the proposed project would create a less than significant operations-related impact to local air quality due to on-site emissions.

3. Operations-Related Toxic Air Contaminant Impacts

Particulate matter from diesel exhaust is the predominate toxic air contaminants (TAC) in urban areas and based on a statewide average in 2000 was estimated to represent about two-thirds of cancer risk from TACs. Some chemicals in diesel exhaust, such as benzene and formaldehyde have been listed as carcinogens by State Proposition 65 and the Federal Hazardous Air Pollutants program. Due to the nominal number of diesel truck trips generated by the proposed residential project, a less than significant toxic air contaminant impact would occur during the on-going operations of the proposed project and no mitigation would be required.

4. Operations-Related Odor Impacts

Potential sources that may emit odors during the on-going operations of the proposed project would include odor emissions from trash storage areas. Due to the distance of the nearest receptors from the project site and through compliance with SCAQMD's Rule 402 no significant impact related to odors would occur during the on-going operations of the proposed project.

Table 14

Option A Operational Criteria Pollutants Regional Air Emissions[1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO2	PM10	PM2.5
Area Sources[2]	20.64	0.46	39.67	0.00	0.84	0.83
Energy Usage[3]	0.56	4.79	2.04	0.03	0.39	0.39
Mobile Sources[4]	18.04	18.66	210.35	0.38	43.28	2.84
Total Emissions	**39.24**	**23.91**	**252.06**	**0.41**	**44.51**	**4.06**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	no	no	no	no	no	no

[1] Source: CalEEMod Version 2011.1.1

[2] Area sources consist of emissions from consumer products, architectural coatings, hearths and landscaping equipment.

[3] Energy usage consists of emissions from generation of electricity and on-site non-hearth natural gas usage.

[4] Mobile sources consist of emissions from vehicles and road dust.

Table 15

Option B Operational Criteria Pollutants Regional Air Emissions[1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO2	PM10	PM2.5
Area Sources[2]	21.01	0.49	42.29	0.00	0.83	0.82
Energy Usage[3]	0.56	4.80	2.04	0.03	0.39	0.39
Mobile Sources[4]	18.47	19.10	215.35	0.38	44.31	2.90
Total Emissions	**40.04**	**24.39**	**259.68**	**0.41**	**45.53**	**4.11**
SCAQMD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	no	no	no	no	no	no

[1] Source: CalEEMod Version 2011.1.1

[2] Area sources consist of emissions from consumer products, architectural coatings, hearths and landscaping equipment.

[3] Energy usage consists of emissions from generation of electricity and on-site non-hearth natural gas usage.

[4] Mobile sources consist of emissions from vehicles and road dust.

VIII. Global Climate Change Analysis

The proposed project would result in either the development and on-going use of 468 single-family residential dwelling units for Option A or 448 single-family residential dwelling units and 51 multi-family residential dwelling units for Option B. The proposed project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste disposal, water usage, and construction equipment.

The City of Lake Elsinore has also adopted a Climate Action Plan that requires a 22.3 percent reduction in GHG emissions per service population between years 2008 and 2020. The Climate Action Plan also provides specific measures that are to be incorporated in all new developments in the City of Lake Elsinore. In order to determine if the proposed project would comply with the Climate Action Plan Standards, the GHG emissions from the proposed project were analyzed for both; year 2010 (closest year available to 2008 in CalEEMod) without implementation of the GHG reduction measures provided in the Climate Action Plan; and year 2020 with implementation of the GHG reduction measures provided in the Climate Action Plan.

A. Methodology

The CalEEMod Version 2011.1.1 was used to calculate the GHG emissions from the proposed project. Each source of GHG emissions is described in greater detail below.

1. Area Sources

Area sources include emissions from hearths, consumer products, landscape equipment and architectural coatings. The area source emissions were based on the on-going use of the proposed 468 single-family residential dwelling units for Option A or 448 single-family residential dwelling units and 51 multi-family residential dwelling units for Option B in the CalEEMod model. In order to account for SCAQMD Rule 445, the CalEEMod model analyzed one natural gas only fireplace for each of the proposed single-family homes and no fireplaces for the proposed multi-family homes. No other changes were made to the default area source parameters.

2. Energy Usage

Energy usage includes emissions from the generation of electricity and natural gas used on-site. The energy usage emissions were based on the on-going use of the proposed 468 single-family residential dwelling units for Option A or 448 single-family residential dwelling units and 51 multi-family residential dwelling units for Option B in the CalEEMod model. No changes were made to the default energy usage parameters.

The year 2020 GHG analysis included implementation of Measure E-1.3 from the Climate Action Plan, which requires that all new construction exceed the 2008 Energy Efficiency Standards (Title 24 Standards) by 15 percent. In order to ensure compliance with this measure, Mitigation Measure 3 is provided below.

3. Mobile Sources

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed based on the project trip generation calculated in the Traffic Analysis of 4,455 daily vehicle trips for Option A and 4,561 daily vehicle trips for Option B. The CalEEMod default trip lengths of 10.8 miles for home to work, 7.3 miles for home to shopping, and 7.5 miles for home to other locations were used in this analysis. The vehicle mix was revised in the CalEEMod model to reflect the vehicles that would be generated by a residential use and was limited to automobiles, light pickup trucks, heavy pickup trucks, motorcycles, and motorhomes. The vehicle mix also included 15 medium trucks per day to account for the delivery trucks that would service the proposed residential units.

The year 2020 GHG analysis included implementation of Measure T-1.2 from the Climate Action Plan, which requires the installation of sidewalks along all new streets as well as internal paths to link to neighborhood activity centers, major destinations and transit facilities. In order to ensure compliance with this measure, Mitigation Measure 4 is provided below.

4. Waste

Waste includes the GHG emissions generated from the processing of waste from the proposed project as well as the GHG emissions from the waste once it is interred into a landfill. The analysis was based on the default CalEEMod waste generation rates of 549 tons of solid waste per year for Option A and 572 tons of solid waste per year for Option B.

5. Water

Water includes the water used for the interior of the building as well as for landscaping and is based on the GHG emissions associated with the energy used to transport and filter the water. The analysis was based on the default CalEEMod water usage rates of 30,492,084 gallons per year of indoor water usage and 19,223,270 gallons per year of outdoor water usage for Option A and 33,814,939 gallons per year of indoor water usage and 21,318,114 gallons per year of outdoor water usage for Option B.

The year 2020 GHG analysis included implementation of Measures E-4.1 and E-4.2 from the Climate Action Plan. Measure E-4.1 requires implementation of the City's Assembly Bill 1881 Landscape Ordinance, which limits turf area to 25 percent of the irrigated area, 80 percent of the plants shall be either native plants or low-water using plants, and spray nozzles must be less than one inch per hour. Measure E-4.1 was modeled in CalEEMod through a 75 percent reduction in turf area and use of water-efficient irrigation systems. Measure E-4.2, requires that new developments reduce indoor water consumption by 30 percent. This was modeled in CalEEMod through a water conservation strategy that reduces indoor water by 30 percent. In order to ensure compliance with these measures, Mitigation Measures 5 and 6 are provided below.

6. Construction

The construction-related GHG emissions were also included in the analysis and were based on a 30 year amortization rate as recommended in the SCAQMD GHG Working Group meeting on November 19, 2009. The construction-related GHG emissions were calculated by CalEEMod and detailed above in Section VI.

7. Vegetation

The year 2020 GHG analysis included implementation of Measure E-1.1 from the Climate Action Plan, which requires that all new developments plant a minimum one 15 gallon nondeciduous umbrella form tree per 30 linear feet of boundary length. The exact implementation of Measure E-1.1 will be determined in the Landscape Plan, however since the Landscape Plan has not yet been completed, this analysis estimated the number of trees based on the project site boundary, which is approximately 14, 100 linear feet and would result in the planting of 470 trees. In order to ensure compliance with this measure, Mitigation Measure 7 is provided below.

B. Project Greenhouse Gas Emissions

The GHG emissions have been calculated based on the parameters described above for year 2010 (closest year available to 2008 in CalEEMod) without implementation of the GHG reduction measures provided in the Climate Action Plan and year 2020 with implementation of the GHG reduction measures provided in the Climate Action Plan. A summary of the results are shown below in Table 16 for Option A and Table 17 for Option B and the CalEEMod Model run for Option A is provided in Appendix F and Option B is provided in Appendix G. Table 16 shows that Option A in year 2010 would generate 8,715.24 metric tons of CO_2e per year and Table 17 shows that Option B in 2010 would generate 8,874.56 metric tons of CO_2e per year. Without implementation of the project specific measures provided in the Climate Action Plan, the proposed project would not meet the Climate Action Plan's GHG emissions reduction target of 22.3 percent by 2020. This would result in a significant impact.

Mitigation Measures 3, 4, 5, 6, and 7 are provided that will require the applicant to implement the applicable measures to the proposed project in the Climate Action Plan. Table 16 shows that for the year 2020 with implementation of Mitigation Measures 3, 4, 5, 6, and 7, Option A would generate 6,721.83 metric tons of CO_2e per year, which represents a 22.9% reduction in GHG emissions and would be within the Climate Action Plan's target reduction of 22.3 percent. Table 17 shows that for the year 2020 with implementation of Mitigation Measures 3, 4, 5, 6, and 7, Option B would generate 6,850.32 metric tons of CO_2e per year, which represents a 22.8% reduction in GHG emissions and would be within the Climate Action Plan's target reduction of 22.3 percent. Therefore, project-related GHG emissions would be reduced to a less than significant level with mitigation.

C. Greenhouse Gas Plan Consistency

The proposed project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases. The applicable plan for the proposed project is the City of Lake Elsinore Climate Action Plan, adopted December 13, 2011. The Climate Action Plan provides specific measures to be implemented in new developments to reduce GHG emissions as well as a GHG emissions reduction target based on a community-wide emissions reduction to 6.6 MTCO2e per service population per year by 2020. This is a 22.3 percent reduction from the 2008 rate of 8.5 MTCO2e per service population. These efficiency-based targets were derived by dividing the statewide AB 32 targeted emissions levels for 2020 and statewide Executive Order S-3-05 targeted emissions level for 2030 by the 2020 and 2030 statewide service population respectively. These targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in 2020 and 2030 based on emissions levels necessary to achieve the statewide AB 32 and Executive Order S-3-05 GHG emissions reduction goals. Therefore, the proposed project would be considered to be inconsistent with the Climate Action Plan if the proposed project did not implement all applicable measures identified in the Climate Action Plan and if the proposed project's GHG emissions are not 22.3 percent less than GHG emissions from business-as-usual conditions for a similar size project in year 2008.

In the Section above, the applicable measures provided in the Climate Action Plan were identified and were developed into Mitigation Measures 3, 4, 5, 6, and 7. The Section above also found that with implementation of Mitigation Measures 3, 4, 5, 6, and 7, the mitigated project GHG emission level would be reduced by greater than 22.3 percent by 2020 for both Option A and Option B. Therefore, the proposed project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Table 16

Option A Project Related Greenhouse Gas Emissions[1]

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Year 2010 Emissions						
Area Sources[2]	0.00	348.79	348.79	0.02	0.01	351.14
Energy Usage[3]	0.00	1,992.17	1,992.17	0.06	0.04	2,004.47
Mobile Sources[4]	0.00	5,814.91	5,814.91	0.38	0.00	5,822.83
Solid Waste[5]	111.36	0.00	111.36	6.58	0.00	249.56
Water and Wastewater[6]	0.00	177.95	177.95	0.94	0.03	205.76
Construction[7]	0.00	81.34	81.34	0.01	0.00	81.48
Total 2010 Emissions	111.36	8,415.16	8,526.52	7.98	0.08	**8,715.24**
Year 2020 Emissions With Implementation of Mitigation Measures 3, 4, 5, 6, and 7.						
Area Sources[2]	0.00	348.79	348.79	0.02	0.01	351.08
Energy Usage[3]	0.00	1,837.19	1,837.19	0.06	0.03	1,848.54
Mobile Sources[4]	0.00	4,357.14	4,357.14	0.19	0.00	4,361.14
Solid Waste[5]	111.36	0.00	111.36	6.58	0.00	249.56
Water and Wastewater[6]	0.00	143.20	143.20	0.66	0.02	162.79
Construction[7]	0.00	81.34	81.34	0.01	0.00	81.48
Vegetation						-332.76
Total 2020 Emissions	111.36	6,767.66	6,879.02	7.52	0.06	**6,721.83**
Percent Reduction between 2020 and 2010 emissions						**22.9%**
City of Lake Elsinore Percent Reduction Threshold						**22.3%**

[1] Source: CalEEMod Version 2011.11

[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.

[3] Energy usage consist of GHG emissions from electricity and natural gas usage.

[4] Mobile sources consist of GHG emissions from vehicles.

[5] Solid waste includes the CO_2 and CH_4 emissions creat4ed from the solid waste placed in landfills.

[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

[7] Construction GHG emissions based on a 30 year amortization rate.

Table 17

Option B Project Related Greenhouse Gas Emissions[1]

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Year 2010 Emissions						
Area Sources[2]	0.00	335.16	335.16	0.02	0.01	337.44
Energy Usage[3]	0.00	2,010.68	2,010.68	0.06	0.04	2,023.10
Mobile Sources[4]	0.00	5,953.14	5,953.14	0.39	0.00	5,961.25
Solid Waste[5]	111.38	0.00	111.38	6.58	0.00	249.60
Water and Wastewater[6]	0.00	189.74	189.74	1.00	0.03	219.39
Construction[7]	0.00	83.65	83.65	0.01	0.00	83.78
Total 2010 Emissions	111.38	8,572.37	8,683.75	8.05	0.08	**8,874.56**
Year 2020 Emissions With Implementation of Mitigation Measures 3, 4, 5, 6, and 7.						
Area Sources[2]	0.00	335.16	335.16	0.02	0.01	337.37
Energy Usage[3]	0.00	1,862.43	1,862.43	0.06	0.03	1,873.95
Mobile Sources[4]	0.00	4,460.72	4,460.72	0.19	0.00	4,464.81
Solid Waste[5]	111.38	0.00	111.38	6.58	0.00	249.60
Water and Wastewater[6]	0.00	152.69	152.69	0.70	0.02	173.57
Construction[7]	0.00	83.65	83.65	0.01	0.00	83.78
Vegetation						-332.76
Total 2020 Emissions	111.38	6,894.65	7,006.03	7.56	0.06	**6,850.32**
Percent Reduction between 2020 and 2010 emissions						**22.8%**
City of Lake Elsinore Percent Reduction Threshold						**22.3%**

[1] Source: CalEEMod Version 2011.11

[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.

[3] Energy usage consist of GHG emissions from electricity and natural gas usage.

[4] Mobile sources consist of GHG emissions from vehicles.

[5] Solid waste includes the CO_2 and CH_4 emissions creat4ed from the solid waste placed in landfills.

[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

[7] Construction GHG emissions based on a 30 year amortization rate.

IX. Air Quality Compliance

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD Air Quality Management Plan (AQMP). Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

(2) Whether the project will exceed the assumptions in the AQMP in 2010 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

A. <u>Criterion 1 - Increase in the Frequency or Severity of Violations</u>

Based on the air quality modeling analysis contained in this Air Analysis, with implementation of Mitigation Measures 1, 2, and 3, short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. This Air Analysis also found that long-term operations impacts will not result in significant impacts based on the SCAQMD regional, local and toxic air contaminant thresholds of significance.

Therefore, the proposed project is not projected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

B. Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to insure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The Regional Comprehensive Plan and Guide (RCP&G) consists of three sections: Core Chapters, Ancillary Chapters, and Bridge Chapters. The Growth Management, Regional Mobility, Air Quality, Water Quality, and Hazardous Waste Management chapters constitute the Core Chapters of the document. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this project, the Alberhill District Land Use Plan defines the assumptions that are represented in the AQMP.

The project site is currently zoned R-1 and designated as both Low-Medium Residential and Low Density Residential in the General Plan Land Use Plan. Option A is consistent with the current land use designation and would not require a General Plan Amendment. Option A would require a zone change from R-1 to Specific Plan (SP), however the land use zoning would not change with adoption of this land use change. Option B would require a General Plan Amendment for the multi-family portion of the proposed project to Medium Density Residential. Although Option B is inconsistent with the Alberhill Specific Plan land use designation for the portion of the project site that would be developed with multi-family uses, it would be in substantial compliance with the Land Use Element Goals and Polices. As the proposed project would amend the Specific Plan (i.e., from Low Density Residential to Low-Medium Residential and from Low-Medium Residential to Medium Density Residential) to eliminate potential conflicts with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, Option B would have a less than significant impact relating to conflicting with applicable land use plans, policies, and regulations.

Therefore, the proposed project would not result in an inconsistency with the current land use designation. Therefore, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur.

X. Mitigation Measures

A. Construction Measures

Mitigation Measure 1. The project applicant shall require that the grading contractor require that at least half of all diesel equipment operating on-site during the grading phase meet Tier 3 or higher emission standards.

Mitigation Measure 2. The project applicant shall require that the site preparation and grading contractors to implement the fugitive dust control actions provided in SCAQMD's Rule 403 for "Large Operations". A list of the Large Operations control actions from Rule 403 are provided in Appendix D.

B. Operational Measures

Mitigation Measure 3. The project applicant shall implement Measure E-1.3 from the Climate Action Plan, which requires that all of the proposed structures exceed the 2008 Title 24 energy efficiency standards by a minimum of 15 percent.

Mitigation Measure 4. The project applicant shall implement Measure T-1.2 from the Climate Action Plan, which requires the installation of sidewalks along all new streets to link neighborhood activity centers, major destinations and transit facilities.

Mitigation Measure 5. The project applicant shall implement Measure E-4.1 from the Climate Action Plan, which requires that the Landscape Plan for the proposed project adhere to the City's Assembly Bill 1881 Landscape Ordinance.

Mitigation Measure 6. The project applicant shall implement Measure E-4.2 from the Climate Action Plan, which requires that new developments reduce indoor water consumption by 30 percent. This shall be achieved through the use of low-flow fixtures for all faucets, toilets and showers that are installed in the proposed project.

Mitigation Measure 7. The project applicant shall implement Measure E-1.1 from the Climate Action Plan, which requires that new developments plant a minimum one 15 gallon nondeciduous umbrella form tree per 30 linear feet of boundary length. This has been calculated to require the planting of a minimum of 470 trees on the project site.

XI. References

California Air Pollution Control Officers Association

2009 Health Risk Assessments for Proposed Land Use Projects

California Air Resources Board

2008 Resolution 08-43

2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act

2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions

2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document

2013 Historical Air Quality, Top 4 Summary

City of Lake Elsinore

2011 City of Lake Elsinore Alberhill District Specific Plan

2011 City of Lake Elsinore Climate Action Plan

2011 City of Lake Elsinore General Plan

Governor's Office of Planning and Research

2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2009 CEQA Guideline Sections to be Added or Amended

Kunzman Associates, Inc.

2013 Terracina Traffic Impact Analysis

Office of Environmental Health Hazard Assessment

2003 Air Toxics Hot Spots Program Risk Assessment Guidelines

South Coast Air Quality Management District

1993 CEQA Air Quality Handbook

2005 Rule 403 Fugitive Dust

2007 2007 Air Quality Management Plan

2008 Final Localized Significance Threshold Methodology, Revised

2008 Draft Report Multiple Air Toxics Exposure Study in the South Coast Air Basin, MATES III

2011 Appendix A Calculation Details for CalEEMod

2012 Revised Draft 2012 Air Quality Management Plan

Appendices

Appendix A – Glossary of Terms

Appendix B – CalEEMod Model Daily Emissions Printouts for Option A

Appendix C – CalEEMod Model Daily Emissions Printouts for Option B

Appendix D – SCAQMD Rule 403 Fugitive Dust Control Actions for Large Operations

Appendix E – AERMOD PM10 Construction Concentrations Printouts

Appendix F – CalEEMod Model Annual Emissions Printouts for Option A

Appendix G – CalEEMod Model Annual Emissions Printouts for Option B

APPENDIX A

Glossary of Terms

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LST	Localized Significant Thresholds
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PPM	Parts per million
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds

APPENDIX B

CalEEMod Model Daily Emissions Printouts for Option A

Lake Elsinore Terracina Option A

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	11.5	Acre
Single Family Housing	468	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Land Use - Option A - 468 SFR on 103.3 acres and 11.5 acres of other asphalt surfaces. Total area to be disturbed 114.8 acres. Permanent open space 36.2 acres. Total project site 151 acres.

Construction Phase - Project schedule provided by applicant

Off-road Equipment - Grading - 2 excavators, 1 grader, 1 rubber tired dozer, 4 scrappers, 2 tractor/lolader/backhoe

Off-road Equipment - Trenching - 2 excavators 8 hours/day and 2 of either tractor/loader/backhoe

Trips and VMT - 3 Vendor truck trips added to the Site Preparation, Grading and Trenching phases to account for the water trucks.

Grading - Total acres disturbed based on default timing (775 acres)

Architectural Coating - Per SCAQMD Rule 1113 as Amended June 3, 2011, by January 1, 2014 architectural coatings wll be limited to 50 grams VOC/Liter

Vehicle Trips - Option A Trip Rates set to match TIA of 9.52 daily trips for SFR

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Woodstoves - Per SCAQMD Rule 445 requirements, only gas fireplaces are allowed and will only be included in the single-family homes.

Construction Off-road Equipment Mitigation - Mitigation Measure 1 - Require 50% of grading equipment to Meet Tier 3 or higher standards. Mitigation Measure 2 - Water exposed areas 3x a day, limit vehicle speed to 15 mph.

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					
2014	16.21	132.96	70.71	0.15	18.33	5.81	21.96	9.94	5.81	13.57						
2015	5.58	36.60	35.72	0.07	2.65	2.08	4.73	0.12	2.08	2.20						
2016	69.80	33.32	34.73	0.07	2.65	2.36	4.50	0.12	2.36	2.37						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2014	13.51	93.76	81.19	0.15	7.31	5.23	10.72	3.88	5.23	7.30						
2015	5.58	36.60	35.72	0.07	2.65	2.08	4.73	0.12	2.08	2.20						
2016	69.80	33.32	34.73	0.07	2.65	2.36	4.50	0.12	2.36	2.37						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	20.64	0.46	39.67	0.00		0.00	0.84		0.00	0.83						
Energy	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
Mobile	18.04	16.80	210.35	0.38	41.81	1.46	43.28	1.37	1.46	2.84						
Total	**39.24**	**22.05**	**252.06**	**0.41**	**41.81**	**1.46**	**44.51**	**1.37**	**1.46**	**4.06**						

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	20.64	0.46	39.67	0.00		0.00	0.84		0.00	0.83						
Energy	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
Mobile	18.04	16.80	210.35	0.38	41.81	1.46	43.28	1.37	1.46	2.84						
Total	**39.24**	**22.05**	**252.06**	**0.41**	**41.81**	**1.46**	**44.51**	**1.37**	**1.46**	**4.06**						

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.07	0.00	18.07	9.93	0.00	9.93						
Off-Road	9.37	74.88	43.05	0.07		3.61	3.61		3.61	3.61						
Total	**9.37**	**74.88**	**43.05**	**0.07**	**18.07**	**3.61**	**21.68**	**9.93**	**3.61**	**13.54**						

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.08	0.09	1.10	0.00	0.23	0.01	0.24	0.01	0.01	0.02						
Total	**0.11**	**0.53**	**1.32**	**0.00**	**0.26**	**0.02**	**0.28**	**0.01**	**0.02**	**0.04**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.05	0.00	7.05	3.87	0.00	3.87						
Off-Road	8.65	66.81	42.35	0.07		3.39	3.39		3.39	3.39						
Total	**8.65**	**66.81**	**42.35**	**0.07**	**7.05**	**3.39**	**10.44**	**3.87**	**3.39**	**7.26**						

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.08	0.09	1.10	0.00	0.23	0.01	0.24	0.01	0.01	0.02						
Total	**0.11**	**0.53**	**1.32**	**0.00**	**0.26**	**0.02**	**0.28**	**0.01**	**0.02**	**0.04**						

3.3 Grading - 2014

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					12.34	0.00	12.34	3.31	0.00	3.31						
Off-Road	16.06	132.39	68.96	0.15		5.79	5.79		5.79	5.79						
Total	**16.06**	**132.39**	**68.96**	**0.15**	**12.34**	**5.79**	**18.13**	**3.31**	**5.79**	**9.10**						

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.11	0.13	1.53	0.00	0.33	0.01	0.34	0.01	0.01	0.02						
Total	**0.14**	**0.57**	**1.75**	**0.00**	**0.36**	**0.02**	**0.38**	**0.01**	**0.02**	**0.04**						

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					4.81	0.00	4.81	1.29	0.00	1.29						
Off-Road	13.36	93.19	79.44	0.15		5.21	5.21		5.21	5.21						
Total	**13.36**	**93.19**	**79.44**	**0.15**	**4.81**	**5.21**	**10.02**	**1.29**	**5.21**	**6.50**						

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.11	0.13	1.53	0.00	0.33	0.01	0.34	0.01	0.01	0.02						
Total	**0.14**	**0.57**	**1.75**	**0.00**	**0.36**	**0.02**	**0.38**	**0.01**	**0.02**	**0.04**						

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.82	20.08	16.23	0.03		1.26	1.26		1.26	1.26						
Total	**2.82**	**20.08**	**16.23**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**						

3.4 Trenching - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.05	0.05	0.61	0.00	0.13	0.00	0.14	0.00	0.00	0.01						
Total	**0.08**	**0.49**	**0.83**	**0.00**	**0.16**	**0.01**	**0.18**	**0.00**	**0.01**	**0.03**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.82	20.08	16.23	0.03		1.26	1.26		1.26	1.26						
Total	**2.82**	**20.08**	**16.23**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**						

3.4 Trenching - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.05	0.05	0.61	0.00	0.13	0.00	0.14	0.00	0.00	0.01						
Total	**0.08**	**0.49**	**0.83**	**0.00**	**0.16**	**0.01**	**0.18**	**0.00**	**0.01**	**0.03**						

3.5 Building Construction - 2015

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80						
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**						

3.5 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.53	6.67	3.37	0.01	0.46	0.21	0.67	0.04	0.21	0.24						
Worker	0.70	0.78	9.37	0.02	2.19	0.08	2.27	0.08	0.08	0.16						
Total	**1.23**	**7.45**	**12.74**	**0.03**	**2.65**	**0.29**	**2.94**	**0.12**	**0.29**	**0.40**						

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80						
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**						

3.5 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.53	6.67	3.37	0.01	0.46	0.21	0.67	0.04	0.21	0.24						
Worker	0.70	0.78	9.37	0.02	2.19	0.08	2.27	0.08	0.08	0.16						
Total	**1.23**	**7.45**	**12.74**	**0.03**	**2.65**	**0.29**	**2.94**	**0.12**	**0.29**	**0.40**						

3.5 Building Construction - 2016

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58						
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**						

3.5 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.49	6.09	3.15	0.01	0.46	0.19	0.65	0.04	0.19	0.22						
Worker	0.66	0.71	8.78	0.02	2.19	0.08	2.27	0.08	0.08	0.16						
Total	**1.15**	**6.80**	**11.93**	**0.03**	**2.65**	**0.27**	**2.92**	**0.12**	**0.27**	**0.38**						

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58						
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**						

3.5 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.49	6.09	3.15	0.01	0.46	0.19	0.65	0.04	0.19	0.22						
Worker	0.66	0.71	8.78	0.02	2.19	0.08	2.27	0.08	0.08	0.16						
Total	**1.15**	**6.80**	**11.93**	**0.03**	**2.65**	**0.27**	**2.92**	**0.12**	**0.27**	**0.38**						

3.6 Paving - 2016

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	4.58	28.21	20.38	0.03		2.35	2.35		2.35	2.35						
Paving	0.89					0.00	0.00		0.00	0.00						
Total	**5.47**	**28.21**	**20.38**	**0.03**		**2.35**	**2.35**		**2.35**	**2.35**						

3.6 Paving - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.06	0.06	0.78	0.00	0.20	0.01	0.20	0.01	0.01	0.01						
Total	**0.06**	**0.06**	**0.78**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**						

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	4.58	28.21	20.38	0.03		2.35	2.35		2.35	2.35						
Paving	0.89					0.00	0.00		0.00	0.00						
Total	**5.47**	**28.21**	**20.38**	**0.03**		**2.35**	**2.35**		**2.35**	**2.35**						

3.6 Paving - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.06	0.06	0.78	0.00	0.20	0.01	0.20	0.01	0.01	0.01						
Total	**0.06**	**0.06**	**0.78**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**						

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	69.30					0.00	0.00		0.00	0.00						
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20						
Total	**69.67**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**						

3.7 Architectural Coating - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.13	0.14	1.78	0.00	0.44	0.02	0.46	0.02	0.02	0.03						
Total	**0.13**	**0.14**	**1.78**	**0.00**	**0.44**	**0.02**	**0.46**	**0.02**	**0.02**	**0.03**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	69.30					0.00	0.00		0.00	0.00						
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20						
Total	**69.67**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**						

3.7 Architectural Coating - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.13	0.14	1.78	0.00	0.44	0.02	0.46	0.02	0.02	0.03						
Total	**0.13**	**0.14**	**1.78**	**0.00**	**0.44**	**0.02**	**0.46**	**0.02**	**0.02**	**0.03**						

4.0 Mobile Detail

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	18.04	16.80	210.35	0.38	41.81	1.46	43.28	1.37	1.46	2.84						
Unmitigated	18.04	16.80	210.35	0.38	41.81	1.46	43.28	1.37	1.46	2.84						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	4,455.36	4,455.36	4455.36	12,653,757	12,653,757
Total	4,455.36	4,455.36	4,455.36	12,653,757	12,653,757

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

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	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
NaturalGas Unmitigated	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Single Family Housing	51960.6	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
Total		**0.56**	**4.79**	**2.04**	**0.03**		**0.00**	**0.39**		**0.00**	**0.39**						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Single Family Housing	51.9606	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
Total		**0.56**	**4.79**	**2.04**	**0.03**		**0.00**	**0.39**		**0.00**	**0.39**						

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	20.64	0.46	39.67	0.00		0.00	0.84		0.00	0.83						
Unmitigated	20.64	0.46	39.67	0.00		0.00	0.84		0.00	0.83						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.80					0.00	0.00		0.00	0.00						
Consumer Products	16.68					0.00	0.00		0.00	0.00						
Hearth	0.91	0.00	0.05	0.00		0.00	0.63		0.00	0.62						
Landscaping	1.25	0.46	39.62	0.00		0.00	0.21		0.00	0.21						
Total	**20.64**	**0.46**	**39.67**	**0.00**		**0.00**	**0.84**		**0.00**	**0.83**						

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	1.80					0.00	0.00		0.00	0.00						
Consumer Products	16.68					0.00	0.00		0.00	0.00						
Hearth	0.91	0.00	0.05	0.00		0.00	0.63		0.00	0.62						
Landscaping	1.25	0.46	39.62	0.00		0.00	0.21		0.00	0.21						
Total	**20.64**	**0.46**	**39.67**	**0.00**		**0.00**	**0.84**		**0.00**	**0.83**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Lake Elsinore Terracina Option A

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	11.5	Acre
Single Family Housing	468	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Land Use - Option A - 468 SFR on 103.3 acres and 11.5 acres of other asphalt surfaces. Total area to be disturbed 114.8 acres. Permanent open space 36.2 acres. Total project site 151 acres.

Construction Phase - Project schedule provided by applicant

Off-road Equipment - Grading - 2 excavators, 1 grader, 1 rubber tired dozer, 4 scrappers, 2 tractor/lolader/backhoe

Off-road Equipment - Trenching - 2 excavators 8 hours/day and 2 of either tractor/loader/backhoe

Trips and VMT - 3 Vendor truck trips added to the Site Preparation, Grading and Trenching phases to account for the water trucks.

Grading - Total acres disturbed based on default timing (775 acres)

Architectural Coating - Per SCAQMD Rule 1113 as Amended June 3, 2011, by January 1, 2014 architectural coatings wll be limited to 50 grams VOC/Liter

Vehicle Trips - Option A Trip Rates set to match TIA of 9.52 daily trips for SFR

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Woodstoves - Per SCAQMD Rule 445 requirements, only gas fireplaces are allowed and will only be included in the single-family homes.

Construction Off-road Equipment Mitigation - Mitigation Measure 1 - Require 50% of grading equipment to Meet Tier 3 or higher standards. Mitigation Measure 2 - Water exposed areas 3x a day, limit vehicle speed to 15 mph.

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					
2014	16.21	132.99	70.55	0.15	18.33	5.81	21.96	9.94	5.81	13.57						
2015	5.59	36.88	35.04	0.07	2.65	2.09	4.74	0.12	2.09	2.20						
2016	69.80	33.55	34.10	0.07	2.65	2.36	4.51	0.12	2.36	2.37						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2014	13.51	93.79	81.02	0.15	7.31	5.23	10.72	3.88	5.23	7.30						
2015	5.59	36.88	35.04	0.07	2.65	2.09	4.74	0.12	2.09	2.20						
2016	69.80	33.55	34.10	0.07	2.65	2.36	4.51	0.12	2.36	2.37						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	20.64	0.46	39.67	0.00		0.00	0.84		0.00	0.83						
Energy	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
Mobile	16.98	18.66	189.69	0.34	41.81	1.46	43.28	1.37	1.46	2.84						
Total	**38.18**	**23.91**	**231.40**	**0.37**	**41.81**	**1.46**	**44.51**	**1.37**	**1.46**	**4.06**						

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	20.64	0.46	39.67	0.00		0.00	0.84		0.00	0.83						
Energy	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
Mobile	16.98	18.66	189.69	0.34	41.81	1.46	43.28	1.37	1.46	2.84						
Total	**38.18**	**23.91**	**231.40**	**0.37**	**41.81**	**1.46**	**44.51**	**1.37**	**1.46**	**4.06**						

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.07	0.00	18.07	9.93	0.00	9.93						
Off-Road	9.37	74.88	43.05	0.07		3.61	3.61		3.61	3.61						
Total	**9.37**	**74.88**	**43.05**	**0.07**	**18.07**	**3.61**	**21.68**	**9.93**	**3.61**	**13.54**						

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.08	0.10	0.96	0.00	0.23	0.01	0.24	0.01	0.01	0.02						
Total	**0.12**	**0.55**	**1.21**	**0.00**	**0.26**	**0.02**	**0.28**	**0.01**	**0.02**	**0.04**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.05	0.00	7.05	3.87	0.00	3.87						
Off-Road	8.65	66.81	42.35	0.07		3.39	3.39		3.39	3.39						
Total	**8.65**	**66.81**	**42.35**	**0.07**	**7.05**	**3.39**	**10.44**	**3.87**	**3.39**	**7.26**						

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.08	0.10	0.96	0.00	0.23	0.01	0.24	0.01	0.01	0.02						
Total	**0.12**	**0.55**	**1.21**	**0.00**	**0.26**	**0.02**	**0.28**	**0.01**	**0.02**	**0.04**						

3.3 Grading - 2014

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					12.34	0.00	12.34	3.31	0.00	3.31						
Off-Road	16.06	132.39	68.96	0.15		5.79	5.79		5.79	5.79						
Total	**16.06**	**132.39**	**68.96**	**0.15**	**12.34**	**5.79**	**18.13**	**3.31**	**5.79**	**9.10**						

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.11	0.14	1.33	0.00	0.33	0.01	0.34	0.01	0.01	0.02						
Total	**0.15**	**0.59**	**1.58**	**0.00**	**0.36**	**0.02**	**0.38**	**0.01**	**0.02**	**0.04**						

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					4.81	0.00	4.81	1.29	0.00	1.29						
Off-Road	13.36	93.19	79.44	0.15		5.21	5.21		5.21	5.21						
Total	**13.36**	**93.19**	**79.44**	**0.15**	**4.81**	**5.21**	**10.02**	**1.29**	**5.21**	**6.50**						

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.11	0.14	1.33	0.00	0.33	0.01	0.34	0.01	0.01	0.02						
Total	**0.15**	**0.59**	**1.58**	**0.00**	**0.36**	**0.02**	**0.38**	**0.01**	**0.02**	**0.04**						

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.82	20.08	16.23	0.03		1.26	1.26		1.26	1.26						
Total	**2.82**	**20.08**	**16.23**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**						

3.4 Trenching - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.04	0.06	0.53	0.00	0.13	0.00	0.14	0.00	0.00	0.01						
Total	**0.08**	**0.51**	**0.78**	**0.00**	**0.16**	**0.01**	**0.18**	**0.00**	**0.01**	**0.03**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.82	20.08	16.23	0.03		1.26	1.26		1.26	1.26						
Total	**2.82**	**20.08**	**16.23**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**						

3.4 Trenching - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.04	0.06	0.53	0.00	0.13	0.00	0.14	0.00	0.00	0.01						
Total	**0.08**	**0.51**	**0.78**	**0.00**	**0.16**	**0.01**	**0.18**	**0.00**	**0.01**	**0.03**						

3.5 Building Construction - 2015

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80						
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**						

3.5 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.56	6.87	3.90	0.01	0.46	0.21	0.67	0.04	0.21	0.25						
Worker	0.69	0.86	8.16	0.02	2.19	0.08	2.27	0.08	0.08	0.16						
Total	**1.25**	**7.73**	**12.06**	**0.03**	**2.65**	**0.29**	**2.94**	**0.12**	**0.29**	**0.41**						

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80						
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**						

3.5 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.56	6.87	3.90	0.01	0.46	0.21	0.67	0.04	0.21	0.25						
Worker	0.69	0.86	8.16	0.02	2.19	0.08	2.27	0.08	0.08	0.16						
Total	**1.25**	**7.73**	**12.06**	**0.03**	**2.65**	**0.29**	**2.94**	**0.12**	**0.29**	**0.41**						

3.5 Building Construction - 2016

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58						
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**						

3.5 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.52	6.24	3.67	0.01	0.46	0.19	0.65	0.04	0.19	0.23						
Worker	0.65	0.79	7.63	0.02	2.19	0.08	2.27	0.08	0.08	0.16						
Total	**1.17**	**7.03**	**11.30**	**0.03**	**2.65**	**0.27**	**2.92**	**0.12**	**0.27**	**0.39**						

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58						
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**						

3.5 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.52	6.24	3.67	0.01	0.46	0.19	0.65	0.04	0.19	0.23						
Worker	0.65	0.79	7.63	0.02	2.19	0.08	2.27	0.08	0.08	0.16						
Total	**1.17**	**7.03**	**11.30**	**0.03**	**2.65**	**0.27**	**2.92**	**0.12**	**0.27**	**0.39**						

3.6 Paving - 2016

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	4.58	28.21	20.38	0.03		2.35	2.35		2.35	2.35						
Paving	0.89					0.00	0.00		0.00	0.00						
Total	**5.47**	**28.21**	**20.38**	**0.03**		**2.35**	**2.35**		**2.35**	**2.35**						

3.6 Paving - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.06	0.07	0.68	0.00	0.20	0.01	0.20	0.01	0.01	0.01						
Total	**0.06**	**0.07**	**0.68**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**						

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	4.58	28.21	20.38	0.03		2.35	2.35		2.35	2.35						
Paving	0.89					0.00	0.00		0.00	0.00						
Total	**5.47**	**28.21**	**20.38**	**0.03**		**2.35**	**2.35**		**2.35**	**2.35**						

3.6 Paving - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.06	0.07	0.68	0.00	0.20	0.01	0.20	0.01	0.01	0.01						
Total	**0.06**	**0.07**	**0.68**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**						

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	69.30					0.00	0.00		0.00	0.00						
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20						
Total	**69.67**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**						

3.7 Architectural Coating - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.13	0.16	1.54	0.00	0.44	0.02	0.46	0.02	0.02	0.03						
Total	**0.13**	**0.16**	**1.54**	**0.00**	**0.44**	**0.02**	**0.46**	**0.02**	**0.02**	**0.03**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	69.30					0.00	0.00		0.00	0.00						
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20						
Total	**69.67**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**						

3.7 Architectural Coating - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.13	0.16	1.54	0.00	0.44	0.02	0.46	0.02	0.02	0.03						
Total	**0.13**	**0.16**	**1.54**	**0.00**	**0.44**	**0.02**	**0.46**	**0.02**	**0.02**	**0.03**						

4.0 Mobile Detail

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	16.98	18.66	189.69	0.34	41.81	1.46	43.28	1.37	1.46	2.84						
Unmitigated	16.98	18.66	189.69	0.34	41.81	1.46	43.28	1.37	1.46	2.84						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	4,455.36	4,455.36	4455.36	12,653,757	12,653,757
Total	4,455.36	4,455.36	4,455.36	12,653,757	12,653,757

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

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	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
NaturalGas Unmitigated	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Single Family Housing	51960.6	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
Total		**0.56**	**4.79**	**2.04**	**0.03**		**0.00**	**0.39**		**0.00**	**0.39**						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Single Family Housing	51.9606	0.56	4.79	2.04	0.03		0.00	0.39		0.00	0.39						
Total		**0.56**	**4.79**	**2.04**	**0.03**		**0.00**	**0.39**		**0.00**	**0.39**						

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	20.64	0.46	39.67	0.00		0.00	0.84		0.00	0.83						
Unmitigated	20.64	0.46	39.67	0.00		0.00	0.84		0.00	0.83						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.80					0.00	0.00		0.00	0.00						
Consumer Products	16.68					0.00	0.00		0.00	0.00						
Hearth	0.91	0.00	0.05	0.00		0.00	0.63		0.00	0.62						
Landscaping	1.25	0.46	39.62	0.00		0.00	0.21		0.00	0.21						
Total	**20.64**	**0.46**	**39.67**	**0.00**		**0.00**	**0.84**		**0.00**	**0.83**						

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	1.80					0.00	0.00		0.00	0.00						
Consumer Products	16.68					0.00	0.00		0.00	0.00						
Hearth	0.91	0.00	0.05	0.00		0.00	0.63		0.00	0.62						
Landscaping	1.25	0.46	39.62	0.00		0.00	0.21		0.00	0.21						
Total	**20.64**	**0.46**	**39.67**	**0.00**		**0.00**	**0.84**		**0.00**	**0.83**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

APPENDIX C

CalEEMod Model Daily Emissions Printouts for Option B

Lake Elsinore Terracina Option B

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	11.5	Acre
Apartments Low Rise	51	Dwelling Unit
Single Family Housing	448	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Land Use - Option B - 51 MFR on 17.8 acres; 448 SFR on 97 acres and 11.5 acres of other asphalt surfaces. Total area to be disturbed 114.8 acres. Permanent open space 36.2 acres. Total project site 151 acres.

Construction Phase - Project schedule provided by applicant

Off-road Equipment - Grading - 2 excavators, 1 grader, 1 rubber tired dozer, 4 scrappers, 2 tractor/lolader/backhoe

Off-road Equipment - Trenching - 2 excavators 8 hours/day and 2 of either tractor/loader/backhoe

Trips and VMT - 3 Vendor truck trips added to the Site Preparation, Grading and Trenching phases to account for the water trucks.

Grading - Total acres disturbed based on default timing (775 acres)

Architectural Coating - Per SCAQMD Rule 1113 as Amended June 3, 2011, by January 1, 2014 architectural coatings wll be limited to 50 grams VOC/Liter

Vehicle Trips - Option B Trip Rates set to match TIA of 9.52 daily trips for SFR and 5.81 daily trips for MFR

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Woodstoves - Per SCAQMD Rule 445 requirements, only gas fireplaces are allowed and will only be included in the single-family homes.

Construction Off-road Equipment Mitigation - Mitigation Measure 1 - Require 50% of grading equipment to Meet Tier 3 or higher standards. Mitigation Measure 2 - Water exposed areas 3x a day. limit vehicle speed to 15 mph

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

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					
2014	16.21	132.96	70.71	0.15	18.33	5.81	21.96	9.94	5.81	13.57						
2015	5.73	37.14	37.60	0.08	3.07	2.11	5.18	0.13	2.11	2.24						
2016	71.06	33.81	36.49	0.08	3.07	2.36	4.95	0.13	2.36	2.37						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2014	12.79	85.69	80.48	0.15	7.31	5.02	10.19	3.88	5.02	6.65						
2015	5.73	37.14	37.60	0.08	3.07	2.11	5.18	0.13	2.11	2.24						
2016	71.06	33.81	36.49	0.08	3.07	2.36	4.95	0.13	2.36	2.37						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	21.01	0.49	42.29	0.00		0.00	0.83		0.00	0.82						
Energy	0.56	4.80	2.04	0.03		0.00	0.39		0.00	0.39						
Mobile	18.47	17.20	215.35	0.38	42.81	1.50	44.31	1.40	1.50	2.90						
Total	**40.04**	**22.49**	**259.68**	**0.41**	**42.81**	**1.50**	**45.53**	**1.40**	**1.50**	**4.11**						

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	21.01	0.49	42.29	0.00		0.00	0.83		0.00	0.82						
Energy	0.56	4.80	2.04	0.03		0.00	0.39		0.00	0.39						
Mobile	18.47	17.20	215.35	0.38	42.81	1.50	44.31	1.40	1.50	2.90						
Total	**40.04**	**22.49**	**259.68**	**0.41**	**42.81**	**1.50**	**45.53**	**1.40**	**1.50**	**4.11**						

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.07	0.00	18.07	9.93	0.00	9.93						
Off-Road	9.37	74.88	43.05	0.07		3.61	3.61		3.61	3.61						
Total	**9.37**	**74.88**	**43.05**	**0.07**	**18.07**	**3.61**	**21.68**	**9.93**	**3.61**	**13.54**						

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.08	0.09	1.10	0.00	0.23	0.01	0.24	0.01	0.01	0.02						
Total	**0.11**	**0.53**	**1.32**	**0.00**	**0.26**	**0.02**	**0.28**	**0.01**	**0.02**	**0.04**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.05	0.00	7.05	3.87	0.00	3.87						
Off-Road	6.49	42.61	40.22	0.07		2.75	2.75		2.75	2.75						
Total	**6.49**	**42.61**	**40.22**	**0.07**	**7.05**	**2.75**	**9.80**	**3.87**	**2.75**	**6.62**						

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.08	0.09	1.10	0.00	0.23	0.01	0.24	0.01	0.01	0.02						
Total	**0.11**	**0.53**	**1.32**	**0.00**	**0.26**	**0.02**	**0.28**	**0.01**	**0.02**	**0.04**						

3.3 Grading - 2014

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					12.34	0.00	12.34	3.31	0.00	3.31						
Off-Road	16.06	132.39	68.96	0.15		5.79	5.79		5.79	5.79						
Total	**16.06**	**132.39**	**68.96**	**0.15**	**12.34**	**5.79**	**18.13**	**3.31**	**5.79**	**9.10**						

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.11	0.13	1.53	0.00	0.33	0.01	0.34	0.01	0.01	0.02						
Total	**0.14**	**0.57**	**1.75**	**0.00**	**0.36**	**0.02**	**0.38**	**0.01**	**0.02**	**0.04**						

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					4.81	0.00	4.81	1.29	0.00	1.29						
Off-Road	12.64	85.13	78.73	0.15		4.99	4.99		4.99	4.99						
Total	**12.64**	**85.13**	**78.73**	**0.15**	**4.81**	**4.99**	**9.80**	**1.29**	**4.99**	**6.28**						

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.11	0.13	1.53	0.00	0.33	0.01	0.34	0.01	0.01	0.02						
Total	**0.14**	**0.57**	**1.75**	**0.00**	**0.36**	**0.02**	**0.38**	**0.01**	**0.02**	**0.04**						

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.82	20.08	16.23	0.03		1.26	1.26		1.26	1.26						
Total	**2.82**	**20.08**	**16.23**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**						

3.4 Trenching - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.05	0.05	0.61	0.00	0.13	0.00	0.14	0.00	0.00	0.01						
Total	**0.08**	**0.49**	**0.83**	**0.00**	**0.16**	**0.01**	**0.18**	**0.00**	**0.01**	**0.03**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.82	20.08	16.23	0.03		1.26	1.26		1.26	1.26						
Total	**2.82**	**20.08**	**16.23**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**						

3.4 Trenching - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.03	0.44	0.22	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.05	0.05	0.61	0.00	0.13	0.00	0.14	0.00	0.00	0.01						
Total	**0.08**	**0.49**	**0.83**	**0.00**	**0.16**	**0.01**	**0.18**	**0.00**	**0.01**	**0.03**						

3.5 Building Construction - 2015

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80						
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**						

3.5 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.56	7.07	3.57	0.01	0.49	0.22	0.71	0.04	0.22	0.26						
Worker	0.83	0.92	11.04	0.02	2.58	0.09	2.68	0.10	0.09	0.19						
Total	**1.39**	**7.99**	**14.61**	**0.03**	**3.07**	**0.31**	**3.39**	**0.14**	**0.31**	**0.45**						

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80						
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**						

3.5 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.56	7.07	3.57	0.01	0.49	0.22	0.71	0.04	0.22	0.26						
Worker	0.83	0.92	11.04	0.02	2.58	0.09	2.68	0.10	0.09	0.19						
Total	**1.39**	**7.99**	**14.61**	**0.03**	**3.07**	**0.31**	**3.39**	**0.14**	**0.31**	**0.45**						

3.5 Building Construction - 2016

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58						
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**						

3.5 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.52	6.45	3.34	0.01	0.49	0.20	0.69	0.04	0.20	0.23						
Worker	0.78	0.84	10.35	0.02	2.58	0.10	2.68	0.10	0.10	0.19						
Total	**1.30**	**7.29**	**13.69**	**0.03**	**3.07**	**0.30**	**3.37**	**0.14**	**0.30**	**0.42**						

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58						
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**						

3.5 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.52	6.45	3.34	0.01	0.49	0.20	0.69	0.04	0.20	0.23						
Worker	0.78	0.84	10.35	0.02	2.58	0.10	2.68	0.10	0.10	0.19						
Total	**1.30**	**7.29**	**13.69**	**0.03**	**3.07**	**0.30**	**3.37**	**0.14**	**0.30**	**0.42**						

3.6 Paving - 2016

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	4.58	28.21	20.38	0.03		2.35	2.35		2.35	2.35						
Paving	0.89					0.00	0.00		0.00	0.00						
Total	**5.47**	**28.21**	**20.38**	**0.03**		**2.35**	**2.35**		**2.35**	**2.35**						

3.6 Paving - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.06	0.06	0.78	0.00	0.20	0.01	0.20	0.01	0.01	0.01						
Total	**0.06**	**0.06**	**0.78**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**						

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	4.58	28.21	20.38	0.03		2.35	2.35		2.35	2.35						
Paving	0.89					0.00	0.00		0.00	0.00						
Total	**5.47**	**28.21**	**20.38**	**0.03**		**2.35**	**2.35**		**2.35**	**2.35**						

3.6 Paving - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.06	0.06	0.78	0.00	0.20	0.01	0.20	0.01	0.01	0.01						
Total	**0.06**	**0.06**	**0.78**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**						

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	70.53					0.00	0.00		0.00	0.00						
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20						
Total	**70.90**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**						

3.7 Architectural Coating - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.16	0.17	2.09	0.00	0.52	0.02	0.54	0.02	0.02	0.04						
Total	**0.16**	**0.17**	**2.09**	**0.00**	**0.52**	**0.02**	**0.54**	**0.02**	**0.02**	**0.04**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	70.53					0.00	0.00		0.00	0.00						
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20						
Total	**70.90**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**						

3.7 Architectural Coating - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.16	0.17	2.09	0.00	0.52	0.02	0.54	0.02	0.02	0.04						
Total	**0.16**	**0.17**	**2.09**	**0.00**	**0.52**	**0.02**	**0.54**	**0.02**	**0.02**	**0.04**						

4.0 Mobile Detail

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	18.47	17.20	215.35	0.38	42.81	1.50	44.31	1.40	1.50	2.90						
Unmitigated	18.47	17.20	215.35	0.38	42.81	1.50	44.31	1.40	1.50	2.90						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	296.31	296.31	296.31	841,556	841,556
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	4,264.96	4,264.96	4264.96	12,112,998	12,112,998
Total	4,561.27	4,561.27	4,561.27	12,954,554	12,954,554

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	10.80	7.30	7.50	40.20	19.20	40.60
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

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	0.56	4.80	2.04	0.03		0.00	0.39		0.00	0.39						
NaturalGas Unmitigated	0.56	4.80	2.04	0.03		0.00	0.39		0.00	0.39						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Apartments Low Rise	2352.58	0.03	0.22	0.09	0.00		0.00	0.02		0.00	0.02						
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Single Family Housing	49740	0.54	4.58	1.95	0.03		0.00	0.37		0.00	0.37						
Total		**0.57**	**4.80**	**2.04**	**0.03**		**0.00**	**0.39**		**0.00**	**0.39**						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Apartments Low Rise	2.35258	0.03	0.22	0.09	0.00		0.00	0.02		0.00	0.02						
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Single Family Housing	49.74	0.54	4.58	1.95	0.03		0.00	0.37		0.00	0.37						
Total		**0.57**	**4.80**	**2.04**	**0.03**		**0.00**	**0.39**		**0.00**	**0.39**						

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	21.01	0.49	42.29	0.00		0.00	0.83		0.00	0.82						
Unmitigated	21.01	0.49	42.29	0.00		0.00	0.83		0.00	0.82						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.84					0.00	0.00		0.00	0.00						
Consumer Products	16.98					0.00	0.00		0.00	0.00						
Hearth	0.87	0.00	0.05	0.00		0.00	0.60		0.00	0.59						
Landscaping	1.33	0.49	42.25	0.00		0.00	0.23		0.00	0.23						
Total	**21.02**	**0.49**	**42.30**	**0.00**		**0.00**	**0.83**		**0.00**	**0.82**						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.84					0.00	0.00		0.00	0.00						
Consumer Products	16.98					0.00	0.00		0.00	0.00						
Hearth	0.87	0.00	0.05	0.00		0.00	0.60		0.00	0.59						
Landscaping	1.33	0.49	42.25	0.00		0.00	0.23		0.00	0.23						
Total	**21.02**	**0.49**	**42.30**	**0.00**		**0.00**	**0.83**		**0.00**	**0.82**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

Lake Elsinore Terracina Option B

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	11.5	Acre
Apartments Low Rise	51	Dwelling Unit
Single Family Housing	448	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Land Use - Option B - 51 MFR on 17.8 acres; 448 SFR on 97 acres and 11.5 acres of other asphalt surfaces. Total area to be disturbed 114.8 acres. Permanent open space 36.2 acres. Total project site 151 acres.

Construction Phase - Project schedule provided by applicant

Off-road Equipment - Grading - 2 excavators, 1 grader, 1 rubber tired dozer, 4 scrappers, 2 tractor/lolader/backhoe

Off-road Equipment - Trenching - 2 excavators 8 hours/day and 2 of either tractor/loader/backhoe

Trips and VMT - 3 Vendor truck trips added to the Site Preparation, Grading and Trenching phases to account for the water trucks.

Grading - Total acres disturbed based on default timing (775 acres)

Architectural Coating - Per SCAQMD Rule 1113 as Amended June 3, 2011, by January 1, 2014 architectural coatings wll be limited to 50 grams VOC/Liter

Vehicle Trips - Option B Trip Rates set to match TIA of 9.52 daily trips for SFR and 5.81 daily trips for MFR

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Woodstoves - Per SCAQMD Rule 445 requirements, only gas fireplaces are allowed and will only be included in the single-family homes.

Construction Off-road Equipment Mitigation - Mitigation Measure 1 - Require 50% of grading equipment to Meet Tier 3 or higher standards. Mitigation Measure 2 - Water exposed areas 3x a day. limit vehicle speed to 15 mph

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

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					
2014	16.21	132.99	70.55	0.15	18.33	5.81	21.96	9.94	5.81	13.57						
2015	5.74	37.45	36.73	0.08	3.07	2.11	5.19	0.13	2.11	2.25						
2016	71.05	34.06	35.68	0.08	3.07	2.36	4.95	0.13	2.36	2.37						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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					
2014	12.79	85.72	80.31	0.15	7.31	5.02	10.19	3.88	5.02	6.65						
2015	5.74	37.45	36.73	0.08	3.07	2.11	5.19	0.13	2.11	2.25						
2016	71.05	34.06	35.68	0.08	3.07	2.36	4.95	0.13	2.36	2.37						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	21.01	0.49	42.29	0.00		0.00	0.83		0.00	0.82						
Energy	0.56	4.80	2.04	0.03		0.00	0.39		0.00	0.39						
Mobile	17.39	19.10	194.20	0.34	42.81	1.50	44.31	1.40	1.50	2.90						
Total	**38.96**	**24.39**	**238.53**	**0.37**	**42.81**	**1.50**	**45.53**	**1.40**	**1.50**	**4.11**						

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	21.01	0.49	42.29	0.00		0.00	0.83		0.00	0.82						
Energy	0.56	4.80	2.04	0.03		0.00	0.39		0.00	0.39						
Mobile	17.39	19.10	194.20	0.34	42.81	1.50	44.31	1.40	1.50	2.90						
Total	**38.96**	**24.39**	**238.53**	**0.37**	**42.81**	**1.50**	**45.53**	**1.40**	**1.50**	**4.11**						

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.07	0.00	18.07	9.93	0.00	9.93						
Off-Road	9.37	74.88	43.05	0.07		3.61	3.61		3.61	3.61						
Total	**9.37**	**74.88**	**43.05**	**0.07**	**18.07**	**3.61**	**21.68**	**9.93**	**3.61**	**13.54**						

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.08	0.10	0.96	0.00	0.23	0.01	0.24	0.01	0.01	0.02						
Total	**0.12**	**0.55**	**1.21**	**0.00**	**0.26**	**0.02**	**0.28**	**0.01**	**0.02**	**0.04**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.05	0.00	7.05	3.87	0.00	3.87						
Off-Road	6.49	42.61	40.22	0.07		2.75	2.75		2.75	2.75						
Total	**6.49**	**42.61**	**40.22**	**0.07**	**7.05**	**2.75**	**9.80**	**3.87**	**2.75**	**6.62**						

3.2 Site Preparation - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.08	0.10	0.96	0.00	0.23	0.01	0.24	0.01	0.01	0.02						
Total	**0.12**	**0.55**	**1.21**	**0.00**	**0.26**	**0.02**	**0.28**	**0.01**	**0.02**	**0.04**						

3.3 Grading - 2014

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					12.34	0.00	12.34	3.31	0.00	3.31						
Off-Road	16.06	132.39	68.96	0.15		5.79	5.79		5.79	5.79						
Total	**16.06**	**132.39**	**68.96**	**0.15**	**12.34**	**5.79**	**18.13**	**3.31**	**5.79**	**9.10**						

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.11	0.14	1.33	0.00	0.33	0.01	0.34	0.01	0.01	0.02						
Total	**0.15**	**0.59**	**1.58**	**0.00**	**0.36**	**0.02**	**0.38**	**0.01**	**0.02**	**0.04**						

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					4.81	0.00	4.81	1.29	0.00	1.29						
Off-Road	12.64	85.13	78.73	0.15		4.99	4.99		4.99	4.99						
Total	**12.64**	**85.13**	**78.73**	**0.15**	**4.81**	**4.99**	**9.80**	**1.29**	**4.99**	**6.28**						

3.3 Grading - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.11	0.14	1.33	0.00	0.33	0.01	0.34	0.01	0.01	0.02						
Total	**0.15**	**0.59**	**1.58**	**0.00**	**0.36**	**0.02**	**0.38**	**0.01**	**0.02**	**0.04**						

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.82	20.08	16.23	0.03		1.26	1.26		1.26	1.26						
Total	**2.82**	**20.08**	**16.23**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**						

3.4 Trenching - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.04	0.06	0.53	0.00	0.13	0.00	0.14	0.00	0.00	0.01						
Total	**0.08**	**0.51**	**0.78**	**0.00**	**0.16**	**0.01**	**0.18**	**0.00**	**0.01**	**0.03**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.82	20.08	16.23	0.03		1.26	1.26		1.26	1.26						
Total	**2.82**	**20.08**	**16.23**	**0.03**		**1.26**	**1.26**		**1.26**	**1.26**						

3.4 Trenching - 2014

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.04	0.45	0.25	0.00	0.03	0.01	0.04	0.00	0.01	0.02						
Worker	0.04	0.06	0.53	0.00	0.13	0.00	0.14	0.00	0.00	0.01						
Total	**0.08**	**0.51**	**0.78**	**0.00**	**0.16**	**0.01**	**0.18**	**0.00**	**0.01**	**0.03**						

3.5 Building Construction - 2015

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80						
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**						

3.5 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.59	7.28	4.13	0.01	0.49	0.23	0.71	0.04	0.23	0.26						
Worker	0.81	1.01	9.62	0.02	2.58	0.09	2.68	0.10	0.09	0.19						
Total	**1.40**	**8.29**	**13.75**	**0.03**	**3.07**	**0.32**	**3.39**	**0.14**	**0.32**	**0.45**						

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	4.34	29.16	22.98	0.04		1.80	1.80		1.80	1.80						
Total	**4.34**	**29.16**	**22.98**	**0.04**		**1.80**	**1.80**		**1.80**	**1.80**						

3.5 Building Construction - 2015

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.59	7.28	4.13	0.01	0.49	0.23	0.71	0.04	0.23	0.26						
Worker	0.81	1.01	9.62	0.02	2.58	0.09	2.68	0.10	0.09	0.19						
Total	**1.40**	**8.29**	**13.75**	**0.03**	**3.07**	**0.32**	**3.39**	**0.14**	**0.32**	**0.45**						

3.5 Building Construction - 2016

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58						
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**						

3.5 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.55	6.62	3.89	0.01	0.49	0.20	0.69	0.04	0.20	0.24						
Worker	0.76	0.93	8.99	0.02	2.58	0.10	2.68	0.10	0.10	0.19						
Total	**1.31**	**7.55**	**12.88**	**0.03**	**3.07**	**0.30**	**3.37**	**0.14**	**0.30**	**0.43**						

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	3.99	26.52	22.80	0.04		1.58	1.58		1.58	1.58						
Total	**3.99**	**26.52**	**22.80**	**0.04**		**1.58**	**1.58**		**1.58**	**1.58**						

3.5 Building Construction - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.55	6.62	3.89	0.01	0.49	0.20	0.69	0.04	0.20	0.24						
Worker	0.76	0.93	8.99	0.02	2.58	0.10	2.68	0.10	0.10	0.19						
Total	**1.31**	**7.55**	**12.88**	**0.03**	**3.07**	**0.30**	**3.37**	**0.14**	**0.30**	**0.43**						

3.6 Paving - 2016

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	4.58	28.21	20.38	0.03		2.35	2.35		2.35	2.35						
Paving	0.89					0.00	0.00		0.00	0.00						
Total	**5.47**	**28.21**	**20.38**	**0.03**		**2.35**	**2.35**		**2.35**	**2.35**						

3.6 Paving - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.06	0.07	0.68	0.00	0.20	0.01	0.20	0.01	0.01	0.01						
Total	**0.06**	**0.07**	**0.68**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**						

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	4.58	28.21	20.38	0.03		2.35	2.35		2.35	2.35						
Paving	0.89					0.00	0.00		0.00	0.00						
Total	**5.47**	**28.21**	**20.38**	**0.03**		**2.35**	**2.35**		**2.35**	**2.35**						

3.6 Paving - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.06	0.07	0.68	0.00	0.20	0.01	0.20	0.01	0.01	0.01						
Total	**0.06**	**0.07**	**0.68**	**0.00**	**0.20**	**0.01**	**0.20**	**0.01**	**0.01**	**0.01**						

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	70.53					0.00	0.00		0.00	0.00						
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20						
Total	**70.90**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**						

3.7 Architectural Coating - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.15	0.19	1.82	0.00	0.52	0.02	0.54	0.02	0.02	0.04						
Total	**0.15**	**0.19**	**1.82**	**0.00**	**0.52**	**0.02**	**0.54**	**0.02**	**0.02**	**0.04**						

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	70.53					0.00	0.00		0.00	0.00						
Off-Road	0.37	2.37	1.88	0.00		0.20	0.20		0.20	0.20						
Total	**70.90**	**2.37**	**1.88**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**						

3.7 Architectural Coating - 2016

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
Worker	0.15	0.19	1.82	0.00	0.52	0.02	0.54	0.02	0.02	0.04						
Total	**0.15**	**0.19**	**1.82**	**0.00**	**0.52**	**0.02**	**0.54**	**0.02**	**0.02**	**0.04**						

4.0 Mobile Detail

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	17.39	19.10	194.20	0.34	42.81	1.50	44.31	1.40	1.50	2.90						
Unmitigated	17.39	19.10	194.20	0.34	42.81	1.50	44.31	1.40	1.50	2.90						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	296.31	296.31	296.31	841,556	841,556
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	4,264.96	4,264.96	4264.96	12,112,998	12,112,998
Total	4,561.27	4,561.27	4,561.27	12,954,554	12,954,554

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	10.80	7.30	7.50	40.20	19.20	40.60
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

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	0.56	4.80	2.04	0.03		0.00	0.39		0.00	0.39						
NaturalGas Unmitigated	0.56	4.80	2.04	0.03		0.00	0.39		0.00	0.39						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
Apartments Low Rise	2352.58	0.03	0.22	0.09	0.00		0.00	0.02		0.00	0.02						
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Single Family Housing	49740	0.54	4.58	1.95	0.03		0.00	0.37		0.00	0.37						
Total		**0.57**	**4.80**	**2.04**	**0.03**		**0.00**	**0.39**		**0.00**	**0.39**						

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
Apartments Low Rise	2.35258	0.03	0.22	0.09	0.00		0.00	0.02		0.00	0.02						
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00						
Single Family Housing	49.74	0.54	4.58	1.95	0.03		0.00	0.37		0.00	0.37						
Total		**0.57**	**4.80**	**2.04**	**0.03**		**0.00**	**0.39**		**0.00**	**0.39**						

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	21.01	0.49	42.29	0.00		0.00	0.83		0.00	0.82						
Unmitigated	21.01	0.49	42.29	0.00		0.00	0.83		0.00	0.82						
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.84					0.00	0.00		0.00	0.00						
Consumer Products	16.98					0.00	0.00		0.00	0.00						
Hearth	0.87	0.00	0.05	0.00		0.00	0.60		0.00	0.59						
Landscaping	1.33	0.49	42.25	0.00		0.00	0.23		0.00	0.23						
Total	**21.02**	**0.49**	**42.30**	**0.00**		**0.00**	**0.83**		**0.00**	**0.82**						

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.84					0.00	0.00		0.00	0.00						
Consumer Products	16.98					0.00	0.00		0.00	0.00						
Hearth	0.87	0.00	0.05	0.00		0.00	0.60		0.00	0.59						
Landscaping	1.33	0.49	42.25	0.00		0.00	0.23		0.00	0.23						
Total	**21.02**	**0.49**	**42.30**	**0.00**		**0.00**	**0.83**		**0.00**	**0.82**						

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Vegetation

APPENDIX D

SCAQMD Rule 403 Fugitive Dust Control Actions for Large Operations

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Unpaved roads/parking lots	19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
Vacant land	20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY		**CONTROL ACTIONS**
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL MEASURES
Earth-moving	(1A)	Cease all active operations; OR
	(2A)	Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B)	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR
	(1B)	Apply chemical stabilizers prior to wind event; OR
	(2B)	Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR
	(3B)	Take the actions specified in Table 2, Item (3c); OR
	(4B)	Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C)	Apply chemical stabilizers prior to wind event; OR
	(2C)	Apply water twice per hour during active operation; OR
	(3C)	Stop all vehicular traffic.
Open storage piles	(1D)	Apply water twice per hour; OR
	(2D)	Install temporary coverings.
Paved road track-out	(1E)	Cover all haul vehicles; OR
	(2E)	Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

APPENDIX E

AERMOD PM10 Construction Concentrations Printouts

```
**
****************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 8.2.0
** Lakes Environmental Software Inc.
** Date: 4/21/2013
** File: C:\Vista Env\2013\13009-Lake Elsinore\AERMOD\PM10Mit\PM10Mit.ADI
**
****************************************
**
**
****************************************
** AERMOD Control Pathway
****************************************
**
**
CO STARTING
   TITLEONE Lake Elsinore Terracina
   TITLETWO Mitigated Construction PM10 Grading Emissions
   MODELOPT DFAULT CONC
   AVERTIME 24
   URBANOPT 2100516 Riverside_County
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL PM10Mit.err
CO FINISHED
**
****************************************
** AERMOD Source Pathway
****************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION GRADING      AREAPOLY   464707.745  3728682.505      433.440
** DESCRSRC Gradding Middle
** Source Parameters **
   SRCPARAM GRADING      1.258E-06     1.207        13     0.000
   AREAVERT GRADING      464707.745 3728682.505 464704.511 3728660.489
   AREAVERT GRADING      464704.980 3728604.972 464702.079 3728528.696
   AREAVERT GRADING      464760.576 3728560.643 464843.400 3728600.134
   AREAVERT GRADING      465024.812 3728565.881 465161.762 3728453.095
   AREAVERT GRADING      465218.783 3728513.518 465424.464 3728314.559
   AREAVERT GRADING      465589.470 3728479.384 465068.737 3728660.318
   AREAVERT GRADING      464799.498 3728719.234
   URBANSRC ALL

** Variable Emissions Type: "By Hour-of-Day (HROFDY)"
** Variable Emission Scenario: "Scenario 2"
   EMISFACT GRADING      HROFDY 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT GRADING      HROFDY 0.0 1.0 1.0 1.0 1.0 1.0
   EMISFACT GRADING      HROFDY 1.0 1.0 1.0 1.0 0.0 0.0
   EMISFACT GRADING      HROFDY 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
   INCLUDED PM10Mit.rou
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
   SURFFILE ..\elsi6.sfc
   PROFFILE ..\elsi6.PFL
   SURFDATA 0 2005 Lake_Elsinore 469.33 3726.13
   UAIRDATA 3190 2005
   SITEDATA 99999 2005
   PROFBASE 406.0 METERS
```

```
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
   RECTABLE 24 1ST
** Auto-Generated Plotfiles
   PLOTFILE 24 ALL 1ST PM10MIT.AD\24H1GALL.PLT 31
   SUMMFILE PM10Mit.sum
OU FINISHED

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

```
 **MODELOPTs:  RegDFAULT CONC                                              ELEV


                                          ***     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     1 Source(s),
   for Total of    1 Urban Area(s):
   Urban Population =   2100516.0 ;  Urban Roughness Length =  1.000 m

 **Model Uses Regulatory DEFAULT Options:
         1. Stack-tip Downwash.
         2. Model Accounts for ELEVated Terrain Effects.
         3. Use Calms Processing Routine.
         4. Use Missing Data Processing Routine.
         5. No Exponential Decay for URBAN/Non-SO2.
         6. Urban Roughness Length of 1.0 Meter Assumed.

 **Model Assumes No FLAGPOLE Receptor Heights.

 **Model Calculates  1 Short Term Average(s) of:  24-HR

 **This Run Includes:      1 Source(s);       1 Source Group(s); and     265 Receptor(s)

 **The Model Assumes A Pollutant Type of:  PM_10

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

 **Output Options Selected:
          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) =   406.00 ;  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 =      3.5 MB of RAM.

 **Detailed Error/Message File:   PM10Mit.err
 **File for Summary of Results:   PM10Mit.sum
```

**MODELOPTs: RegDFAULT CONC ELEV

*** AREAPOLY SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	LOCATION OF AREA X (METERS)	LOCATION OF AREA Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	NUMBER OF VERTS.	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
GRADING	0	0.12580E-05	464707.7	3728682.5	433.4	1.21	13	0.00	YES	HROFDY

**MODELOPTs: RegDFAULT CONC ELEV

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	GRADING ,

**MODELOPTs: RegDFAULT CONC   ELEV

* SOURCE EMISSION RATE SCALARS WHICH VARY FOR EACH HOUR OF THE DAY *

SOURCE ID = GRADING   ; SOURCE TYPE = AREAPOLY :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
1	.00000E+00	2	.00000E+00	3	.00000E+00	4	.00000E+00	5	.00000E+00	6	.00000E+00
7	.00000E+00	8	.10000E+01	9	.10000E+01	10	.10000E+01	11	.10000E+01	12	.10000E+01
13	.10000E+01	14	.10000E+01	15	.10000E+01	16	.10000E+01	17	.00000E+00	18	.00000E+00
19	.00000E+00	20	.00000E+00	21	.00000E+00	22	.00000E+00	23	.00000E+00	24	.00000E+00

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

```
( 465312.0, 3728868.0,     413.9,    1408.0,       0.0);         ( 465904.0, 3729173.0,     392.4,    1408.0,       0.0);
( 465564.0, 3728440.0,     433.7,    1408.0,       0.0);         ( 465299.0, 3728416.0,     437.7,    1408.0,       0.0);
( 465180.0, 3728439.0,     427.9,    1408.0,       0.0);         ( 465056.0, 3728308.0,     419.9,    1408.0,       0.0);
( 464674.0, 3728150.0,     422.4,    1408.0,       0.0);         ( 464583.0, 3728262.0,     425.7,    1408.0,       0.0);
( 464684.0, 3728535.0,     432.4,    1408.0,       0.0);         ( 464693.0, 3728614.0,     427.9,    1408.0,       0.0);
( 464696.0, 3728670.0,     431.7,    1408.0,       0.0);         ( 464519.8, 3728368.2,     426.9,    1408.0,       0.0);
( 464419.8, 3728367.6,     431.5,    1408.0,       0.0);         ( 464321.6, 3728380.7,     434.8,    1408.0,       0.0);
( 464341.3, 3728472.6,     437.2,    1408.0,       0.0);         ( 464225.9, 3728412.2,     439.4,    1408.0,       0.0);
( 464128.4, 3728429.9,     449.9,    1408.0,       0.0);         ( 464148.6, 3728526.4,     466.7,    1408.0,       0.0);
( 464612.1, 3728292.5,     432.5,    1408.0,       0.0);         ( 464624.1, 3728192.0,     425.1,    1408.0,       0.0);
( 464621.0, 3728092.1,     420.2,    1408.0,       0.0);         ( 464618.0, 3727992.1,     419.0,    1408.0,       0.0);
( 464614.9, 3727892.2,     417.6,    1408.0,       0.0);         ( 464568.0, 3728513.6,     430.8,    1408.0,       0.0);
( 464497.2, 3728259.9,     427.1,    1408.0,       0.0);         ( 464440.3, 3728489.4,     434.9,    1408.0,       0.0);
( 464417.3, 3728206.3,     426.8,    1408.0,       0.0);         ( 464393.1, 3728610.6,     446.8,    1408.0,       0.0);
( 464267.0, 3728273.1,     433.8,    1408.0,       0.0);         ( 464334.5, 3728154.3,     427.5,    1408.0,       0.0);
( 464468.7, 3728073.5,     422.0,    1408.0,       0.0);         ( 464265.4, 3728586.5,     450.1,    1408.0,       0.0);
( 464179.6, 3728308.5,     438.1,    1408.0,       0.0);         ( 464250.4, 3728103.2,     427.9,    1408.0,       0.0);
( 464390.2, 3728019.0,     423.4,    1408.0,       0.0);         ( 464530.0, 3727934.8,     420.0,    1408.0,       0.0);
( 464178.0, 3728635.0,     475.5,    1408.0,       0.0);         ( 464493.9, 3728582.9,     437.0,    1408.0,       0.0);
( 464458.6, 3728704.3,     463.4,    1408.0,       0.0);         ( 464332.2, 3728700.7,     478.3,    1408.0,       0.0);
( 464251.4, 3728759.6,     483.5,    1408.0,       0.0);         ( 464602.4, 3728618.0,     433.3,    1408.0,       0.0);
( 464605.1, 3728795.8,     463.0,    1408.0,       0.0);         ( 464505.1, 3728797.3,     493.1,    1408.0,       0.0);
( 464405.1, 3728798.8,     505.4,    1408.0,       0.0);         ( 464707.1, 3728894.2,     465.3,    1408.0,       0.0);
( 464800.6, 3728892.3,     436.3,    1408.0,       0.0);         ( 464894.2, 3728890.4,     433.8,    1408.0,       0.0);
( 464987.7, 3728888.5,     444.0,    1408.0,       0.0);         ( 465081.3, 3728886.6,     437.7,    1408.0,       0.0);
( 465174.8, 3728884.6,     413.6,    1408.0,       0.0);         ( 465268.3, 3728882.7,     413.0,    1408.0,       0.0);
( 465361.9, 3728880.8,     414.0,    1408.0,       0.0);         ( 465455.4, 3728878.9,     407.7,    1408.0,       0.0);
( 464637.7, 3728966.2,     463.2,    1408.0,       0.0);         ( 464802.7, 3728992.3,     455.9,    1408.0,       0.0);
( 464896.2, 3728990.4,     442.4,    1408.0,       0.0);         ( 464989.8, 3728988.4,     449.2,    1408.0,       0.0);
( 465083.3, 3728986.5,     441.8,    1408.0,       0.0);         ( 465176.8, 3728984.6,     414.0,    1408.0,       0.0);
( 465270.4, 3728982.7,     412.0,    1408.0,       0.0);         ( 465363.9, 3728980.8,     410.4,    1408.0,       0.0);
( 465457.5, 3728978.9,     412.4,    1408.0,       0.0);         ( 464639.7, 3729066.1,     455.6,    1408.0,       0.0);
( 464466.2, 3728939.7,     516.5,    1408.0,       0.0);         ( 464804.7, 3729092.3,     482.4,    1408.0,       0.0);
```

```
     ( 464898.3, 3729090.3,     462.5,    1408.0,       0.0);         ( 464991.8, 3729088.4,     453.4,    1408.0,
0.0);
     ( 465085.3, 3729086.5,     436.4,    1408.0,       0.0);         ( 465178.9, 3729084.6,     414.0,    1408.0,
0.0);
     ( 465272.4, 3729082.7,     410.2,    1408.0,       0.0);         ( 465366.0, 3729080.8,     405.8,    1408.0,
0.0);
     ( 465459.5, 3729078.9,     404.8,    1408.0,       0.0);         ( 464641.8, 3729166.1,     464.7,    1408.0,
0.0);
     ( 464498.8, 3729110.1,     485.2,    1408.0,       0.0);         ( 464396.8, 3729011.6,     511.2,    1408.0,
0.0);
     ( 464335.7, 3728870.7,     525.4,    1408.0,       0.0);         ( 464806.8, 3729192.2,     501.0,    1408.0,
0.0);
     ( 464900.3, 3729190.3,     485.2,    1408.0,       0.0);         ( 464993.8, 3729188.4,     447.5,    1408.0,
0.0);
     ( 465087.4, 3729186.5,     424.9,    1408.0,       0.0);         ( 465180.9, 3729184.6,     414.0,    1408.0,
0.0);
     ( 465274.5, 3729182.7,     408.3,    1408.0,       0.0);         ( 465368.0, 3729180.8,     402.5,    1408.0,
0.0);
     ( 465461.5, 3729178.9,     402.1,    1408.0,       0.0);         ( 464643.8, 3729266.1,     497.7,    1408.0,
0.0);
     ( 464500.8, 3729210.1,     473.4,    1408.0,       0.0);         ( 464327.3, 3729083.6,     548.0,    1408.0,
0.0);
     ( 464266.2, 3728942.7,     550.1,    1408.0,       0.0);         ( 464808.8, 3729292.2,     497.6,    1408.0,
0.0);
```

**MODELOPTs: RegDFAULT CONC   ELEV

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

```
     ( 464902.4, 3729290.3,     485.6,    1408.0,       0.0);         ( 464995.9, 3729288.4,     462.1,    1408.0,
0.0);
     ( 465089.4, 3729286.5,     434.0,    1408.0,       0.0);         ( 465183.0, 3729284.6,     414.0,    1408.0,
0.0);
     ( 465276.5, 3729282.7,     410.0,    1408.0,       0.0);         ( 465370.0, 3729280.8,     405.0,    1408.0,
0.0);
     ( 465463.6, 3729278.8,     402.0,    1408.0,       0.0);         ( 465353.4, 3728781.2,     416.0,    1408.0,
0.0);
     ( 465253.4, 3728783.4,     414.1,    1408.0,       0.0);         ( 465153.4, 3728785.6,     409.5,    1408.0,
0.0);
     ( 465053.5, 3728787.8,     418.4,    1408.0,       0.0);         ( 464953.5, 3728790.0,     424.7,    1408.0,
0.0);
     ( 465554.7, 3729155.4,     404.0,    1408.0,       0.0);         ( 465647.7, 3729153.3,     402.6,    1408.0,
0.0);
     ( 465740.6, 3729151.3,     400.0,    1408.0,       0.0);         ( 465556.9, 3729255.3,     402.3,    1408.0,
0.0);
     ( 465649.8, 3729253.3,     403.0,    1408.0,       0.0);         ( 465742.8, 3729251.3,     402.0,    1408.0,
0.0);
     ( 465559.0, 3729355.3,     400.9,    1408.0,       0.0);         ( 465652.0, 3729353.3,     399.8,    1408.0,
0.0);
     ( 465745.0, 3729351.3,     398.1,    1408.0,       0.0);         ( 465396.9, 3729429.6,     402.2,    1408.0,
0.0);
     ( 465254.3, 3729374.1,     409.7,    1408.0,       0.0);         ( 465561.2, 3729455.3,     401.4,    1408.0,
0.0);
     ( 465654.2, 3729453.3,     400.4,    1408.0,       0.0);         ( 465747.2, 3729451.2,     392.3,    1408.0,
0.0);
     ( 465399.1, 3729529.6,     402.5,    1408.0,       0.0);         ( 465256.5, 3729474.1,     403.9,    1408.0,
0.0);
     ( 465563.4, 3729555.3,     407.9,    1408.0,       0.0);         ( 465656.4, 3729553.2,     403.8,    1408.0,
0.0);
     ( 465749.4, 3729551.2,     397.6,    1408.0,       0.0);         ( 465870.6, 3729188.8,     394.8,    1408.0,
0.0);
     ( 465941.0, 3729121.0,     391.0,    1408.0,       0.0);         ( 466011.3, 3729053.2,     401.0,    1408.0,
0.0);
     ( 466081.7, 3728985.4,     419.1,    1313.0,       0.0);         ( 465868.7, 3729288.8,     395.7,    1408.0,
0.0);
     ( 466010.4, 3729193.0,     390.0,    1408.0,       0.0);         ( 466080.7, 3729125.2,     395.0,    1407.0,
0.0);
     ( 466151.1, 3729057.4,     410.1,    1313.0,       0.0);         ( 465938.1, 3729360.8,     392.6,    1408.0,
0.0);
     ( 466079.8, 3729265.0,     390.5,    1408.0,       0.0);         ( 466150.1, 3729197.2,     389.9,    1313.0,
0.0);
     ( 466220.5, 3729129.3,     395.7,    1313.0,       0.0);         ( 466007.5, 3729432.8,     390.8,    1408.0,
0.0);
     ( 465864.7, 3729488.8,     390.0,    1408.0,       0.0);         ( 466149.2, 3729337.0,     389.0,    1407.0,
0.0);
     ( 466219.6, 3729269.2,     386.2,    1313.0,       0.0);         ( 466289.9, 3729201.3,     388.0,    1313.0,
0.0);
     ( 466059.1, 3729511.8,     388.5,    1408.0,       0.0);         ( 465969.8, 3729546.8,     389.0,    1408.0,
0.0);
     ( 465880.6, 3729581.8,     390.0,    1408.0,       0.0);         ( 466148.3, 3729476.8,     387.7,    1408.0,
0.0);
     ( 466218.6, 3729409.0,     386.0,    1313.0,       0.0);         ( 466289.0, 3729341.1,     384.0,    1313.0,
0.0);
     ( 466359.3, 3729273.3,     385.0,    1313.0,       0.0);         ( 466083.7, 3728843.4,     426.7,    1313.0,
0.0);
     ( 466018.3, 3728776.7,     441.3,    1313.0,       0.0);         ( 465953.0, 3728710.0,     430.2,    1313.0,
0.0);
     ( 465887.7, 3728643.3,     430.5,    1313.0,       0.0);         ( 465822.3, 3728576.6,     431.6,    1368.0,
0.0);
     ( 465757.0, 3728509.9,     432.4,    1368.0,       0.0);         ( 465691.6, 3728443.2,     446.6,    1368.0,
0.0);
     ( 465626.3, 3728376.5,     446.0,    1368.0,       0.0);         ( 465561.0, 3728309.8,     441.8,    1408.0,
0.0);
     ( 465495.6, 3728243.1,     438.6,    1408.0,       0.0);         ( 466183.7, 3728844.8,     458.7,     468.0,
0.0);
```

```
     ( 466089.8, 3728706.7,     460.2,     468.0,       0.0);         ( 466024.5, 3728640.0,     460.6,     479.0,
0.0);
     ( 465959.1, 3728573.3,     462.7,    1313.0,       0.0);         ( 465893.8, 3728506.6,     457.3,    1313.0,
0.0);
     ( 465828.4, 3728439.9,     442.5,    1313.0,       0.0);         ( 465763.1, 3728373.2,     450.1,    1313.0,
0.0);
     ( 465697.7, 3728306.5,     455.8,    1313.0,       0.0);         ( 465632.4, 3728239.8,     462.7,    1313.0,
0.0);
     ( 465567.1, 3728173.1,     454.4,    1368.0,       0.0);         ( 466255.1, 3728774.9,     449.9,     468.0,
0.0);
     ( 466281.6, 3728988.2,     413.5,    1313.0,       0.0);         ( 466161.2, 3728636.8,     450.7,     479.0,
0.0);
     ( 466095.9, 3728570.0,     445.0,    1313.0,       0.0);         ( 466030.5, 3728503.3,     473.1,     479.0,
0.0);
     ( 465965.2, 3728436.6,     457.9,    1313.0,       0.0);         ( 465899.9, 3728369.9,     445.2,    1313.0,
0.0);
     ( 465834.5, 3728303.2,     445.4,    1313.0,       0.0);         ( 465769.2, 3728236.5,     450.4,    1313.0,
0.0);
     ( 465703.8, 3728169.8,     452.2,    1368.0,       0.0);         ( 465638.5, 3728103.1,     447.9,    1368.0,
0.0);
     ( 466326.5, 3728704.9,     429.8,     479.0,       0.0);         ( 466383.7, 3728847.7,     407.6,    1313.0,
0.0);
     ( 466381.6, 3728989.6,     402.9,    1313.0,       0.0);         ( 466232.7, 3728566.8,     435.9,    1313.0,
0.0);
```

**MODELOPTs: RegDFAULT CONC   ELEV

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

```
    ( 466167.3, 3728500.1,     425.6,    1313.0,       0.0);         ( 466102.0, 3728433.4,     458.5,     479.0,
0.0);
    ( 466036.6, 3728366.7,     448.7,    1313.0,       0.0);         ( 465971.3, 3728300.0,     435.8,    1313.0,
0.0);
    ( 465906.0, 3728233.3,     435.8,    1368.0,       0.0);         ( 465840.6, 3728166.6,     438.9,    1368.0,
0.0);
    ( 465775.3, 3728099.9,     443.7,    1368.0,       0.0);         ( 465709.9, 3728033.2,     441.4,    1368.0,
0.0);
    ( 466398.0, 3728634.9,     419.8,    1313.0,       0.0);         ( 466455.1, 3728777.7,     414.9,     635.0,
0.0);
    ( 466481.6, 3728991.1,     394.6,    1313.0,       0.0);         ( 466420.5, 3729132.2,     390.0,    1313.0,
0.0);
    ( 466304.1, 3728496.8,     415.6,    1313.0,       0.0);         ( 466238.8, 3728430.1,     414.8,    1313.0,
0.0);
    ( 466173.4, 3728363.4,     431.8,    1313.0,       0.0);         ( 466108.1, 3728296.7,     432.2,    1313.0,
0.0);
    ( 466042.7, 3728230.0,     424.4,    1313.0,       0.0);         ( 465977.4, 3728163.3,     425.9,    1368.0,
0.0);
    ( 465912.0, 3728096.6,     427.1,    1368.0,       0.0);         ( 465846.7, 3728029.9,     438.1,    1368.0,
0.0);
    ( 465781.4, 3727963.2,     425.6,    1368.0,       0.0);         ( 465354.8, 3728241.1,     437.7,    1408.0,
0.0);
    ( 465286.1, 3728307.4,     439.0,    1408.0,       0.0);         ( 465217.4, 3728373.6,     438.7,    1408.0,
0.0);
    ( 465356.2, 3728141.1,     437.3,    1408.0,       0.0);         ( 465216.6, 3728235.4,     429.7,    1408.0,
0.0);
    ( 465148.0, 3728301.6,     427.7,    1408.0,       0.0);         ( 465286.8, 3728069.1,     412.3,    1408.0,
0.0);
    ( 465498.5, 3728043.1,     433.3,    1408.0,       0.0);         ( 465147.2, 3728163.4,     416.3,    1408.0,
0.0);
    ( 465078.5, 3728229.7,     417.4,    1408.0,       0.0);         ( 465217.3, 3727997.2,     407.0,    1408.0,
0.0);
    ( 465359.0, 3727941.1,     408.1,    1408.0,       0.0);         ( 465499.9, 3727943.1,     427.7,    1408.0,
0.0);
    ( 465077.8, 3728091.4,     410.4,    1408.0,       0.0);         ( 465009.1, 3728157.7,     411.4,    1408.0,
0.0);
    ( 465165.6, 3727918.2,     405.4,    1408.0,       0.0);         ( 465254.2, 3727883.2,     403.8,    1408.0,
0.0);
    ( 465342.7, 3727848.2,     402.0,    1408.0,       0.0);         ( 465518.8, 3727850.6,     410.0,    1408.0,
0.0);
    ( 465606.3, 3727888.2,     412.7,    1408.0,       0.0);         ( 465693.8, 3727925.7,     426.6,    1368.0,
0.0);
    ( 465077.1, 3727953.2,     407.4,    1408.0,       0.0);         ( 465008.4, 3728019.5,     408.8,    1408.0,
0.0);
    ( 464939.7, 3728085.7,     411.3,    1408.0,       0.0);         ( 464848.4, 3727999.2,     412.8,    1408.0,
0.0);
    ( 464880.9, 3727904.6,     410.3,    1408.0,       0.0);         ( 464736.0, 3727938.2,     415.1,    1408.0,
0.0);
    ( 464841.8, 3727812.5,     410.6,    1408.0,       0.0);         ( 465039.6, 3727853.4,     407.0,    1408.0,
0.0);
    ( 464697.0, 3727846.1,     415.4,    1408.0,       0.0);         ( 464802.8, 3727720.5,     410.9,    1408.0,
0.0);
    ( 464945.8, 3727715.4,     407.7,    1408.0,       0.0);         ( 465072.1, 3727758.8,     405.9,    1408.0,
0.0);
    ( 464658.0, 3727754.1,     414.7,    1408.0,       0.0);         ( 464511.2, 3727816.2,     418.6,    1408.0,
0.0);
    ( 464763.8, 3727628.4,     410.2,    1408.0,       0.0);         ( 464906.7, 3727623.3,     407.4,    1408.0,
0.0);
    ( 465104.5, 3727664.2,     404.8,    1408.0,       0.0);         ( 465214.3, 3727755.9,     403.2,    1408.0,
0.0);
    ( 464619.0, 3727662.0,     414.0,    1408.0,       0.0);         ( 464472.2, 3727724.2,     417.9,    1408.0,
0.0);
    ( 464334.0, 3727940.3,     423.1,    1408.0,       0.0);         ( 464426.4, 3727867.4,     420.4,    1408.0,
0.0);
    ( 464134.7, 3728144.6,     431.1,    1408.0,       0.0);         ( 464170.1, 3728032.3,     427.2,    1408.0,
0.0);
```

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     ( 464251.7, 3727883.5,     423.2,    1408.0,       0.0);         ( 464344.1, 3727810.6,     420.9,    1408.0,
0.0);
     ( 464617.0, 3728204.0,     425.8,    1408.0,       0.0);         ( 464616.1, 3728341.3,     433.1,    1408.0,
0.0);
     ( 464630.2, 3728391.9,     436.1,    1408.0,       0.0);         ( 464615.2, 3728392.4,     433.0,    1408.0,
0.0);
     ( 464655.5, 3728465.1,     434.7,    1408.0,       0.0);         ( 464701.0, 3728527.5,     434.4,    1408.0,
0.0);
     ( 464705.1, 3728794.2,     460.6,    1408.0,       0.0);         ( 465453.4, 3728778.9,     412.1,    1408.0,
0.0);
     ( 465459.5, 3729057.4,     405.6,    1408.0,       0.0);         ( 465738.5, 3729051.3,     400.7,    1408.0,
0.0);
     ( 465801.2, 3729116.9,     398.6,    1408.0,       0.0);         ( 466012.3, 3728913.4,     414.8,    1313.0,
0.0);
     ( 465424.2, 3728313.1,     431.9,    1408.0,       0.0);         ( 465218.1, 3728511.8,     424.6,    1408.0,
0.0);
     ( 464990.0, 3728275.0,     420.3,    1408.0,       0.0);         ( 464887.4, 3728091.3,     413.2,    1408.0,
0.0);
     ( 464667.3, 3728184.5,     424.6,    1408.0,       0.0);
```

```
                                             *** 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,
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**MODELOPTs: RegDFAULT CONC ELEV

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

Surface file: ..\elsi6.sfc Met Version: 12345
Profile file: ..\elsi6.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 0 Upper air station no.: 3190
Name: LAKE_ELSINORE Name: UNKNOWN
Year: 2005 Year: 2005

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
05	01	01	1	01	-2.0	0.049	-9.000	-9.000	-999.	25.	5.1	0.23	1.00	1.00	0.90	356.	9.1	278.1	5.5
05	01	01	1	02	-8.0	0.098	-9.000	-9.000	-999.	71.	10.1	0.23	1.00	1.00	1.80	13.	9.1	278.1	5.5
05	01	01	1	03	-2.0	0.049	-9.000	-9.000	-999.	25.	5.0	0.23	1.00	1.00	0.90	351.	9.1	277.5	5.5
05	01	01	1	04	-0.4	0.022	-9.000	-9.000	-999.	7.	2.2	0.23	1.00	1.00	0.40	59.	9.1	277.0	5.5
05	01	01	1	05	-0.4	0.022	-9.000	-9.000	-999.	7.	2.2	0.23	1.00	1.00	0.40	105.	9.1	277.5	5.5
05	01	01	1	06	-0.4	0.022	-9.000	-9.000	-999.	7.	2.2	0.23	1.00	1.00	0.40	7.	9.1	277.0	5.5
05	01	01	1	07	-1.7	0.049	-9.000	-9.000	-999.	25.	5.9	0.23	1.00	1.00	0.90	98.	9.1	276.4	5.5
05	01	01	1	08	-1.4	0.049	-9.000	-9.000	-999.	25.	7.4	0.23	1.00	0.54	0.90	60.	9.1	276.4	5.5
05	01	01	1	09	0.1	0.047	0.022	0.007	4.	24.	-90.3	0.23	1.00	0.33	0.40	246.	9.1	277.0	5.5
05	01	01	1	10	0.1	0.047	0.025	0.007	5.	24.	-90.3	0.23	1.00	0.25	0.40	108.	9.1	279.2	5.5
05	01	01	1	11	0.1	0.099	0.027	0.005	7.	72.	-840.2	0.23	1.00	0.23	0.90	275.	9.1	280.4	5.5
05	01	01	1	12	0.1	0.099	0.028	0.005	8.	72.	-840.2	0.23	1.00	0.22	0.90	235.	9.1	282.0	5.5
05	01	01	1	13	0.1	0.142	0.029	0.005	9.	123.	-2478.5	0.23	1.00	0.22	1.30	217.	9.1	283.1	5.5
05	01	01	1	14	0.1	0.099	0.030	0.005	9.	72.	-840.2	0.23	1.00	0.23	0.90	210.	9.1	283.8	5.5
05	01	01	1	15	0.1	0.047	0.031	0.006	10.	24.	-90.3	0.23	1.00	0.27	0.40	188.	9.1	283.8	5.5
05	01	01	1	16	0.1	0.047	0.032	0.007	11.	24.	-90.3	0.23	1.00	0.36	0.40	301.	9.1	283.8	5.5
05	01	01	1	17	-0.3	0.022	-9.000	-9.000	-999.	7.	3.2	0.23	1.00	0.63	0.40	277.	9.1	283.1	5.5
05	01	01	1	18	-1.7	0.049	-9.000	-9.000	-999.	25.	5.9	0.23	1.00	1.00	0.90	267.	9.1	282.5	5.5
05	01	01	1	19	-0.3	0.022	-9.000	-9.000	-999.	7.	2.6	0.23	1.00	1.00	0.40	342.	9.1	281.4	5.5
05	01	01	1	20	-1.7	0.049	-9.000	-9.000	-999.	25.	5.9	0.23	1.00	1.00	0.90	8.	9.1	279.9	5.5
05	01	01	1	21	-1.7	0.049	-9.000	-9.000	-999.	25.	5.9	0.23	1.00	1.00	0.90	355.	9.1	279.2	5.5
05	01	01	1	22	-0.3	0.022	-9.000	-9.000	-999.	7.	2.6	0.23	1.00	1.00	0.40	306.	9.1	278.8	5.5
05	01	01	1	23	-0.3	0.022	-9.000	-9.000	-999.	7.	2.6	0.23	1.00	1.00	0.40	326.	9.1	277.5	5.5
05	01	01	1	24	-0.3	0.022	-9.000	-9.000	-999.	7.	2.6	0.23	1.00	1.00	0.40	7.	9.1	277.5	5.5

First hour of profile data

YR	MO	DY	HR	HEIGHT	F	WDIR	WSPD	AMB_TMP	sigmaA	sigmaW	sigmaV
05	01	01	01	5.5	0	-999.	-99.00	278.2	99.0	-99.00	-99.00
05	01	01	01	9.1	1	356.	0.90	-999.0	99.0	-99.00	-99.00

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

**MODELOPTs: RegDFAULT CONC ELEV

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): GRADING ,

*** 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)
465312.00	3728868.00	0.89280	(06062024)	465904.00	3729173.00	0.32571	(09121124)
465564.00	3728440.00	5.28110	(05100324)	465299.00	3728416.00	3.36589	(07113024)
465180.00	3728439.00	2.73961	(05120524)	465056.00	3728308.00	0.64608m	(05020924)
464674.00	3728150.00	0.34318	(05012524)	464583.00	3728262.00	0.42890	(06120824)
464684.00	3728535.00	2.00942	(08122724)	464693.00	3728614.00	3.17914	(05010324)
464696.00	3728670.00	4.72947	(09021524)	464519.77	3728368.22	0.53380	(09011724)
464419.77	3728367.56	0.50428	(06121424)	464321.61	3728380.67	0.48185	(05020824)
464341.28	3728472.65	0.62997	(09112724)	464225.91	3728412.17	0.48737	(09112724)
464128.37	3728429.88	0.47729	(09112724)	464148.65	3728526.44	0.61146	(06120624)
464612.11	3728292.46	0.44771	(06120824)	464624.11	3728192.04	0.40857m	(05020924)
464621.05	3728092.09	0.33417m	(05020924)	464618.00	3727992.14	0.27951m	(05020924)
464614.94	3727892.18	0.25113	(09011724)	464568.04	3728513.58	1.02404	(05020824)
464497.22	3728259.89	0.42284	(05012324)	464440.28	3728489.43	0.74149	(09112724)
464417.27	3728206.26	0.34646	(05020824)	464393.15	3728610.61	0.84056	(06120624)
464267.02	3728273.09	0.36871	(06121424)	464334.53	3728154.32	0.31786	(05020824)
464468.74	3728073.46	0.29473	(06120824)	464265.39	3728586.46	0.72503	(06120624)
464179.64	3728308.54	0.38300	(05020824)	464250.39	3728103.22	0.29282	(05020824)
464390.19	3728018.99	0.28273	(06120824)	464529.99	3727934.76	0.25365m	(05020924)
464177.95	3728634.97	0.41088	(07121824)	464493.86	3728582.89	1.13056	(06120624)
464458.60	3728704.26	1.25776	(05010524)	464332.25	3728700.70	0.90661	(08021724)
464251.44	3728759.61	0.85322	(05010524)	464602.38	3728617.96	1.52846	(06120624)
464605.08	3728795.75	1.35799	(06010824)	464505.09	3728797.27	1.02089	(09021524)
464405.10	3728798.79	0.93182	(06012124)	464707.11	3728894.21	0.90971m	(06123024)
464800.65	3728892.30	1.07797	(09052524)	464894.19	3728890.39	1.14150	(09052524)
464987.72	3728888.48	1.04453	(09052524)	465081.26	3728886.56	0.98386	(06062024)
465174.79	3728884.65	0.91535	(06062024)	465268.33	3728882.74	0.87361	(06062024)
465361.87	3728880.83	0.84442	(06062024)	465455.40	3728878.92	0.77361	(06062024)
464637.67	3728966.17	0.79618	(07020524)	464802.69	3728992.28	0.68268	(09052524)
464896.23	3728990.37	0.77199	(09052524)	464989.76	3728988.45	0.68158	(09052524)

465083.30	3728986.54	0.67576	(06020224)	465176.84	3728984.63	0.64481	(05012624)
465270.37	3728982.72	0.64775	(06062024)	465363.91	3728980.81	0.64603	(06062024)
465457.45	3728978.90	0.62631	(06062024)	464639.72	3729066.15	0.59320	(05122824)
464466.20	3728939.67	0.80201m	(06123024)	464804.73	3729092.26	0.48650	(06123124)
464898.27	3729090.34	0.51567	(08122424)	464991.81	3729088.43	0.54241	(08120324)
465085.34	3729086.52	0.55866	(05012624)	465178.88	3729084.61	0.48799	(06062024)
465272.42	3729082.70	0.48642	(06062024)	465365.95	3729080.79	0.49188	(08120324)
465459.49	3729078.88	0.48371	(06062024)	464641.76	3729166.13	0.46173	(06123124)
464498.79	3729110.08	0.57092	(07020524)	464396.76	3729011.62	0.71725m	(06123024)
464335.66	3728870.74	0.67611	(06021824)	464806.78	3729192.24	0.34327	(08122424)
464900.31	3729190.32	0.38320	(08122424)	464993.85	3729188.41	0.47148	(06020224)

**MODELOPTs: RegDFAULT CONC ELEV

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): GRADING ,

*** 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)
465087.39	3729186.50	0.45997	(05012624)	465180.92	3729184.59	0.43490	(05121124)
465274.46	3729182.68	0.39572	(08120324)	465368.00	3729180.77	0.42000	(08120324)
465461.53	3729178.86	0.40055	(08120324)	464643.80	3729266.11	0.36563	(06123124)
464500.83	3729210.06	0.44898	(05122824)	464327.32	3729083.58	0.48761m	(06123024)
464266.22	3728942.70	0.52027	(06010824)	464808.82	3729292.21	0.32872	(05012624)
464902.36	3729290.30	0.36270	(06020224)	464995.89	3729288.39	0.41810	(05012624)
465089.43	3729286.48	0.37536	(06121124)	465182.97	3729284.57	0.38826	(05121124)
465276.50	3729282.66	0.33062	(08120324)	465370.04	3729280.75	0.36108	(08120324)
465463.57	3729278.84	0.36581	(08120324)	465353.38	3728781.16	1.14803	(06062024)
465253.41	3728783.38	1.22677	(06062024)	465153.43	3728785.60	1.33586	(09052524)
465053.46	3728787.81	1.64753	(09052524)	464953.48	3728790.03	1.86746	(07100424)
465554.69	3729155.37	0.40855	(08120324)	465647.67	3729153.34	0.45406	(08120324)
465740.64	3729151.32	0.41522	(08120324)	465556.87	3729255.35	0.35788	(08120324)
465649.85	3729253.32	0.38888	(08120324)	465742.82	3729251.29	0.39554	(08120324)
465559.05	3729355.32	0.32528	(08120324)	465652.02	3729353.30	0.33580	(08120324)
465745.00	3729351.27	0.35605	(08120324)	465396.94	3729429.60	0.30076m	(05012024)
465254.30	3729374.14	0.29182m	(05012024)	465561.23	3729455.30	0.29865	(08120324)
465654.20	3729453.27	0.30101	(08120324)	465747.18	3729451.25	0.31489	(08120324)
465399.12	3729529.57	0.27350m	(05012024)	465256.48	3729474.12	0.26346m	(05012024)
465563.41	3729555.27	0.27356	(08120324)	465656.38	3729553.25	0.27543	(08120324)
465749.36	3729551.22	0.28725	(08120324)	465870.65	3729188.85	0.32805	(09121124)
465940.99	3729121.02	0.32477	(09121124)	466011.33	3729053.20	0.33690	(06010724)
466081.67	3728985.38	0.31779m	(07020824)	465868.67	3729288.83	0.29479	(09121124)
466010.40	3729193.01	0.29616	(09121124)	466080.74	3729125.19	0.30432	(06010724)
466151.08	3729057.36	0.28160	(06020424)	465938.08	3729360.81	0.26885	(09121124)
466079.81	3729265.00	0.27273	(09121124)	466150.15	3729197.17	0.27843	(06010724)
466220.49	3729129.35	0.25234	(06020424)	466007.50	3729432.80	0.24610	(09121124)
465864.72	3729488.79	0.27580	(08120324)	466149.22	3729336.98	0.25047	(09121124)
466219.56	3729269.16	0.25808	(06010724)	466289.90	3729201.34	0.22803	(06020424)

466059.06	3729511.79	0.22570	(06010724)	465969.82	3729546.78	0.21895	(06010724)
465880.59	3729581.77	0.26457	(08120324)	466148.30	3729476.79	0.23240	(09121124)
466218.64	3729408.97	0.23575	(06010724)	466288.98	3729341.15	0.24196	(06010724)
466359.32	3729273.32	0.21043	(06122124)	466083.69	3728843.41	0.37265m	(07020824)
466018.35	3728776.71	0.41549m	(07020824)	465953.01	3728710.01	0.49186	(06020424)
465887.67	3728643.31	0.58135m	(07020824)	465822.33	3728576.61	0.73774	(08123024)
465756.99	3728509.91	1.12911	(06121324)	465691.65	3728443.21	1.75439	(06122024)
465626.31	3728376.51	2.47796m	(07020624)	465560.97	3728309.81	2.10537	(07030924)
465495.62	3728243.11	1.59133	(05120524)	466183.68	3728844.84	0.34508m	(07020824)
466089.79	3728706.73	0.43006m	(07020824)	466024.45	3728640.03	0.49277	(08123024)
465959.11	3728573.33	0.61465	(08123024)	465893.76	3728506.63	0.87533	(06121324)

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): GRADING ,

*** 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)
465828.42	3728439.93	1.28630	(06122024)	465763.08	3728373.23	1.53751	(05020524)
465697.74	3728306.53	1.84603m	(07020624)	465632.40	3728239.83	1.06996	(07030924)
465567.06	3728173.13	0.97565	(08123124)	466255.12	3728774.86	0.37200m	(07020824)
466281.65	3728988.23	0.29649m	(07020824)	466161.22	3728636.75	0.46774	(08123024)
466095.88	3728570.05	0.58523	(08123024)	466030.54	3728503.35	0.69950	(06121324)
465965.20	3728436.65	0.92619	(06122024)	465899.86	3728369.95	1.19964	(08010324)
465834.52	3728303.25	1.52588m	(07020624)	465769.18	3728236.55	1.28515m	(07020624)
465703.83	3728169.85	0.95808	(05021324)	465638.49	3728103.15	0.85666	(08123124)
466326.55	3728704.88	0.29870	(08123024)	466383.66	3728847.69	0.32002m	(07020824)
466381.64	3728989.65	0.28413m	(07020824)	466232.66	3728566.77	0.52705	(08123024)
466167.32	3728500.07	0.62324	(06121324)	466101.98	3728433.37	0.71707	(06122024)
466036.63	3728366.67	0.85521	(06122024)	465971.29	3728299.97	1.01688	(06122624)
465905.95	3728233.27	1.31088m	(07020624)	465840.61	3728166.57	0.98806	(05123124)
465775.27	3728099.87	0.85050	(07122824)	465709.93	3728033.17	0.75579	(08123124)
466397.99	3728634.90	0.40199	(08123024)	466455.10	3728777.71	0.26754m	(07020824)
466481.63	3728991.08	0.27333m	(07020824)	466420.47	3729132.20	0.23939	(06122124)
466304.09	3728496.79	0.53395	(06121324)	466238.75	3728430.09	0.57332	(06121324)
466173.41	3728363.39	0.75145	(06122024)	466108.07	3728296.69	0.87754	(08010324)
466042.73	3728229.99	0.98231m	(07020624)	465977.39	3728163.29	1.01896m	(07020624)
465912.05	3728096.59	0.73857	(06120524)	465846.70	3728029.89	0.72664	(07122824)
465781.36	3727963.19	0.65481	(08123124)	465354.77	3728241.11	1.12339m	(05020924)
465286.08	3728307.37	1.21006m	(08021124)	465217.39	3728373.62	1.43100m	(08021124)
465356.18	3728141.12	0.75118	(06020724)	465216.65	3728235.39	0.75675	(09011724)
465147.96	3728301.65	0.78253	(08020924)	465286.76	3728069.15	0.55000m	(05020924)
465498.46	3728043.13	0.81712m	(06011024)	465147.23	3728163.42	0.50016	(09011724)
465078.54	3728229.67	0.53554	(06020724)	465217.34	3727997.17	0.42181m	(05020924)
465359.02	3727941.14	0.42348	(06020724)	465499.88	3727943.14	0.66389m	(06011024)
465077.81	3728091.44	0.39387	(06020724)	465009.12	3728157.69	0.42578m	(05020924)
465165.63	3727918.19	0.35043m	(05020924)	465254.18	3727883.18	0.37186m	(05020924)

465342.73	3727848.16	0.35314	(06020724)	465518.80	3727850.65	0.53326m	(06011024)
465606.32	3727888.17	0.49017	(05122924)	465693.84	3727925.68	0.56183m	(09122024)
465077.08	3727953.21	0.34667	(05012324)	465008.39	3728019.46	0.33514m	(05020924)
464939.70	3728085.72	0.37588	(09011724)	464848.41	3727999.20	0.32374	(09011724)
464880.86	3727904.61	0.27676m	(05020924)	464736.02	3727938.22	0.28565	(09011724)
464841.84	3727812.53	0.24953m	(05020924)	465039.65	3727853.36	0.30475	(06120824)
464697.00	3727846.14	0.24835	(09011724)	464802.82	3727720.46	0.23821	(05112824)
464945.76	3727715.43	0.25575	(06120824)	465072.09	3727758.77	0.26854m	(05020924)
464657.98	3727754.07	0.20869	(06120824)	464511.24	3727816.25	0.23019	(09011724)
464763.81	3727628.39	0.22592	(05012324)	464906.74	3727623.35	0.22163	(06120824)
465104.54	3727664.18	0.28263m	(05020924)	465214.29	3727755.89	0.31282	(05012524)

**MODELOPTs: RegDFAULT CONC ELEV

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
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*** 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)
464618.97	3727661.99	0.19528	(05112824)	464472.22	3727724.18	0.21804	(09011724)
464334.00	3727940.35	0.24876	(06120824)	464426.43	3727867.43	0.23146	(06121424)
464134.70	3728144.57	0.28969	(06121424)	464170.09	3728032.28	0.26190	(05020824)
464251.70	3727883.54	0.22515	(05012324)	464344.13	3727810.63	0.21636	(06121424)
464616.99	3728204.02	0.41046m	(05020924)	464616.08	3728341.32	0.57535	(06120824)
464630.22	3728391.95	0.72845	(06120824)	464615.17	3728392.41	0.73626	(06120824)
464655.48	3728465.07	1.07004	(06120824)	464701.02	3728527.54	3.40360	(09120924)
464705.07	3728794.23	1.86982m	(06123024)	465453.36	3728778.94	1.06871	(06062024)
465459.54	3729057.42	0.51003	(06062024)	465738.46	3729051.34	0.40980	(08120324)
465801.24	3729116.86	0.36037	(09121124)	466012.26	3728913.39	0.35453m	(07020824)
465424.19	3728313.09	4.31242	(08020924)	465218.12	3728511.85	6.28992	(05121924)
464990.00	3728275.05	0.53747	(05020824)	464887.43	3728091.27	0.35165	(06121424)
464667.31	3728184.55	0.38244m	(05020924)				

**MODELOPTs: RegDFAULT CONC   ELEV

*** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

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

GROUP ID			AVERAGE CONC	DATE (YYMMDDHH)	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	NETWORK TYPE	OF GRID-ID
ALL	HIGH	1ST HIGH VALUE IS	6.28992	ON 05121924:	AT (465218.12, 3728511.85, 424.55, 1408.00, 0.00)	DC	

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

```
 **MODELOPTs:  RegDFAULT CONC                                              ELEV


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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            0 Warning Message(s)
 A Total of         1937 Informational Message(s)

 A Total of        43824 Hours Were Processed

 A Total of            0 Calm Hours Identified

 A Total of         1937 Missing Hours Identified (  4.42 Percent)


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


    ********   WARNING MESSAGES   ********
               ***  NONE  ***


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

APPENDIX F

CalEEMod Model Annual Emissions Printouts for Option A

Lake Elsinore Terracina Option A 2010

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	11.5	Acre
Single Family Housing	468	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Land Use - Option A - 468 SFR on 103.3 acres and 11.5 acres of other asphalt surfaces. Total area to be disturbed 114.8 acres. Permanent open space 36.2 acres. Total project site 151 acres.

Construction Phase - Project schedule provided by applicant

Off-road Equipment - Grading - 2 excavators, 1 grader, 1 rubber tired dozer, 4 scrappers, 2 tractor/lolader/backhoe

Off-road Equipment - Trenching - 2 excavators 8 hours/day and 2 of either tractor/loader/backhoe

Trips and VMT - 3 Vendor truck trips added to the Site Preparation, Grading and Trenching phases to account for the water trucks.

Grading - Total acres disturbed based on default timing (775 acres)

Architectural Coating - Per SCAQMD Rule 1113 as Amended June 3, 2011, by January 1, 2014 architectural coatings wll be limited to 50 grams VOC/Liter

Vehicle Trips - Option A Trip Rates set to match TIA of 9.52 daily trips for SFR

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Woodstoves - Per SCAQMD Rule 445 requirements, only gas fireplaces are allowed and will only be included in the single-family homes.

Construction Off-road Equipment Mitigation - Mitigation Measure 1 - Require 50% of grading equipment to Meet Tier 3 or higher standards. Mitigation Measure 2 - Water exposed areas 3x a day, limit vehicle speed to 15 mph.

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014											0.00	1,072.94	1,072.94	0.10	0.00	1,074.97
2015											0.00	823.85	823.85	0.06	0.00	825.09
2016											0.00	543.51	543.51	0.04	0.00	544.34
Total											**0.00**	**2,440.30**	**2,440.30**	**0.20**	**0.00**	**2,444.40**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014											0.00	1,072.94	1,072.94	0.10	0.00	1,074.97
2015											0.00	823.85	823.85	0.06	0.00	825.09
2016											0.00	543.51	543.51	0.04	0.00	544.34
Total											**0.00**	**2,440.30**	**2,440.30**	**0.20**	**0.00**	**2,444.40**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	348.79	348.79	0.02	0.01	351.14
Energy											0.00	1,992.17	1,992.17	0.06	0.04	2,004.47
Mobile											0.00	5,814.91	5,814.91	0.38	0.00	5,822.83
Waste											111.36	0.00	111.36	6.58	0.00	249.56
Water											0.00	177.95	177.95	0.94	0.03	205.76
Total											**111.36**	**8,333.82**	**8,445.18**	**7.98**	**0.08**	**8,633.76**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	348.79	348.79	0.02	0.01	351.14
Energy											0.00	1,992.17	1,992.17	0.06	0.04	2,004.47
Mobile											0.00	5,814.91	5,814.91	0.38	0.00	5,822.83
Waste											111.36	0.00	111.36	6.58	0.00	249.56
Water											0.00	177.95	177.95	0.94	0.03	205.76
Total											**111.36**	**8,333.82**	**8,445.18**	**7.98**	**0.08**	**8,633.76**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	79.79	79.79	0.01	0.00	79.96
Total											**0.00**	**79.79**	**79.79**	**0.01**	**0.00**	**79.96**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.81	0.81	0.00	0.00	0.81
Worker											0.00	1.71	1.71	0.00	0.00	1.71
Total											**0.00**	**2.52**	**2.52**	**0.00**	**0.00**	**2.52**

3.2 Site Preparation - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	79.79	79.79	0.01	0.00	79.96
Total											**0.00**	**79.79**	**79.79**	**0.01**	**0.00**	**79.96**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.81	0.81	0.00	0.00	0.81
Worker											0.00	1.71	1.71	0.00	0.00	1.71
Total											**0.00**	**2.52**	**2.52**	**0.00**	**0.00**	**2.52**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	942.64	942.64	0.08	0.00	944.41
Total											**0.00**	**942.64**	**942.64**	**0.08**	**0.00**	**944.41**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	4.80	4.80	0.00	0.00	4.80
Worker											0.00	14.04	14.04	0.00	0.00	14.06
Total											**0.00**	**18.84**	**18.84**	**0.00**	**0.00**	**18.86**

3.3 Grading - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	942.64	942.64	0.08	0.00	944.41
Total											**0.00**	**942.64**	**942.64**	**0.08**	**0.00**	**944.41**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	4.80	4.80	0.00	0.00	4.80
Worker											0.00	14.04	14.04	0.00	0.00	14.06
Total											**0.00**	**18.84**	**18.84**	**0.00**	**0.00**	**18.86**

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	27.31	27.31	0.00	0.00	27.36
Total											**0.00**	**27.31**	**27.31**	**0.00**	**0.00**	**27.36**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.85	0.85	0.00	0.00	0.85
Worker											0.00	0.99	0.99	0.00	0.00	0.99
Total											**0.00**	**1.84**	**1.84**	**0.00**	**0.00**	**1.84**

3.4 Trenching - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	27.31	27.31	0.00	0.00	27.36
Total											**0.00**	**27.31**	**27.31**	**0.00**	**0.00**	**27.36**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.85	0.85	0.00	0.00	0.85
Worker											0.00	0.99	0.99	0.00	0.00	0.99
Total											**0.00**	**1.84**	**1.84**	**0.00**	**0.00**	**1.84**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	478.23	478.23	0.05	0.00	479.20
Total											**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	160.72	160.72	0.00	0.00	160.78
Worker											0.00	184.90	184.90	0.01	0.00	185.11
Total											**0.00**	**345.62**	**345.62**	**0.01**	**0.00**	**345.89**

3.5 Building Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	478.23	478.23	0.05	0.00	479.20
Total											**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	160.72	160.72	0.00	0.00	160.78
Worker											0.00	184.90	184.90	0.01	0.00	185.11
Total											**0.00**	**345.62**	**345.62**	**0.01**	**0.00**	**345.89**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	276.68	276.68	0.02	0.00	277.19
Total											**0.00**	**276.68**	**276.68**	**0.02**	**0.00**	**277.19**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	93.43	93.43	0.00	0.00	93.47
Worker											0.00	105.82	105.82	0.01	0.00	105.93
Total											**0.00**	**199.25**	**199.25**	**0.01**	**0.00**	**199.40**

3.5 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	276.68	276.68	0.02	0.00	277.19
Total											**0.00**	**276.68**	**276.68**	**0.02**	**0.00**	**277.19**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	93.43	93.43	0.00	0.00	93.47
Worker											0.00	105.82	105.82	0.01	0.00	105.93
Total											**0.00**	**199.25**	**199.25**	**0.01**	**0.00**	**199.40**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	44.98	44.98	0.01	0.00	45.12
Paving											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**44.98**	**44.98**	**0.01**	**0.00**	**45.12**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	2.13	2.13	0.00	0.00	2.13
Total											**0.00**	**2.13**	**2.13**	**0.00**	**0.00**	**2.13**

3.6 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	44.98	44.98	0.01	0.00	45.12
Paving											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**44.98**	**44.98**	**0.01**	**0.00**	**45.12**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	2.13	2.13	0.00	0.00	2.13
Total											**0.00**	**2.13**	**2.13**	**0.00**	**0.00**	**2.13**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	9.69	9.69	0.00	0.00	9.71
Total											**0.00**	**9.69**	**9.69**	**0.00**	**0.00**	**9.71**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	10.78	10.78	0.00	0.00	10.79
Total											**0.00**	**10.78**	**10.78**	**0.00**	**0.00**	**10.79**

3.7 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	9.69	9.69	0.00	0.00	9.71
Total											**0.00**	**9.69**	**9.69**	**0.00**	**0.00**	**9.71**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	10.78	10.78	0.00	0.00	10.79
Total											**0.00**	**10.78**	**10.78**	**0.00**	**0.00**	**10.79**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	5,814.91	5,814.91	0.38	0.00	5,822.83
Unmitigated											0.00	5,814.91	5,814.91	0.38	0.00	5,822.83
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	4,455.36	4,455.36	4455.36	12,653,757	12,653,757
Total	4,455.36	4,455.36	4,455.36	12,653,757	12,653,757

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	980.09	980.09	0.04	0.02	986.24
Electricity Unmitigated											0.00	980.09	980.09	0.04	0.02	986.24
NaturalGas Mitigated											0.00	1,012.08	1,012.08	0.02	0.02	1,018.24
NaturalGas Unmitigated											0.00	1,012.08	1,012.08	0.02	0.02	1,018.24
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Other Asphalt Surfaces	0											0.00	0.00	0.00	0.00	0.00	0.00
Single Family Housing	1.89656e+007											0.00	1,012.08	1,012.08	0.02	0.02	1,018.24
Total												**0.00**	**1,012.08**	**1,012.08**	**0.02**	**0.02**	**1,018.24**

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	tons/yr										MT/yr					
Other Asphalt Surfaces	0											0.00	0.00	0.00	0.00	0.00	0.00
Single Family Housing	1.89656e+007											0.00	1,012.08	1,012.08	0.02	0.02	1,018.24
Total												**0.00**	**1,012.08**	**1,012.08**	**0.02**	**0.02**	**1,018.24**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	3.36952e+006					980.09	0.04	0.02	986.24
Total						**980.09**	**0.04**	**0.02**	**986.24**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	3.36952e+006					980.09	0.04	0.02	986.24
Total						**980.09**	**0.04**	**0.02**	**986.24**

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	tons/yr										MT/yr					
Mitigated											0.00	348.79	348.79	0.02	0.01	351.14
Unmitigated											0.00	348.79	348.79	0.02	0.01	351.14
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											0.00	337.15	337.15	0.01	0.01	339.20
Landscaping											0.00	11.64	11.64	0.01	0.00	11.94
Total											**0.00**	**348.79**	**348.79**	**0.02**	**0.01**	**351.14**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											0.00	337.15	337.15	0.01	0.01	339.20
Landscaping											0.00	11.64	11.64	0.01	0.00	11.94
Total											**0.00**	**348.79**	**348.79**	**0.02**	**0.01**	**351.14**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					177.95	0.94	0.03	205.76
Unmitigated					177.95	0.94	0.03	205.76
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Single Family Housing	30.4921 / 19.2233					177.95	0.94	0.03	205.76
Total						**177.95**	**0.94**	**0.03**	**205.76**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Single Family Housing	30.4921 / 19.2233					177.95	0.94	0.03	205.76
Total						**177.95**	**0.94**	**0.03**	**205.76**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					111.36	6.58	0.00	249.56
Unmitigated					111.36	6.58	0.00	249.56
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	548.58					111.36	6.58	0.00	249.56
Total						**111.36**	**6.58**	**0.00**	**249.56**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	548.58					111.36	6.58	0.00	249.56
Total						**111.36**	**6.58**	**0.00**	**249.56**

9.0 Vegetation

Lake Elsinore Terracina Option A 2020

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	11.5	Acre
Single Family Housing	468	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Land Use - Option A - 468 SFR on 103.3 acres and 11.5 acres of other asphalt surfaces. Total area to be disturbed 114.8 acres. Permanent open space 36.2 acres. Total project site 151 acres.

Construction Phase - Project schedule provided by applicant

Off-road Equipment - Grading - 2 excavators, 1 grader, 1 rubber tired dozer, 4 scrappers, 2 tractor/lolader/backhoe

Off-road Equipment - Trenching - 2 excavators 8 hours/day and 2 of either tractor/loader/backhoe

Trips and VMT - 3 Vendor truck trips added to the Site Preparation, Grading and Trenching phases to account for the water trucks.

Grading - Total acres disturbed based on default timing (775 acres)

Architectural Coating - Per SCAQMD Rule 1113 as Amended June 3, 2011, by January 1, 2014 architectural coatings wll be limited to 50 grams VOC/Liter

Vehicle Trips - Option A Trip Rates set to match TIA of 9.52 daily trips for SFR

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Woodstoves - Per SCAQMD Rule 445 requirements, only gas fireplaces are allowed and will only be included in the single-family homes.

Construction Off-road Equipment Mitigation - Mitigation Measure 1 - Require 50% of grading equipment to Meet Tier 3 or higher standards. Mitigation Measure 2 - Water exposed areas 3x a day, limit vehicle speed to 15 mph.

Sequestration - Measure E-1.1 - Plant 470 new tree species Miscellaneous

Mobile Land Use Mitigation - Measure T-1.2 - Provide sidewalks along new streets

Energy Mitigation - Measure E-1.3 - Exceed 2008 Title 24 by 15%

Water Mitigation - Measure E-4.1 - 75% Reduction in turf area and usw water efficient irrigation systems. Measure E-4.2 - Water Conservation Strategy 30% Reduction Indoor Water

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014											0.00	1,072.94	1,072.94	0.10	0.00	1,074.97
2015											0.00	823.85	823.85	0.06	0.00	825.09
2016											0.00	543.51	543.51	0.04	0.00	544.34
Total											**0.00**	**2,440.30**	**2,440.30**	**0.20**	**0.00**	**2,444.40**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014											0.00	1,072.94	1,072.94	0.10	0.00	1,074.97
2015											0.00	823.85	823.85	0.06	0.00	825.09
2016											0.00	543.51	543.51	0.04	0.00	544.34
Total											**0.00**	**2,440.30**	**2,440.30**	**0.20**	**0.00**	**2,444.40**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	348.79	348.79	0.02	0.01	351.08
Energy											0.00	1,992.17	1,992.17	0.06	0.04	2,004.47
Mobile											0.00	4,400.10	4,400.10	0.19	0.00	4,404.13
Waste											111.36	0.00	111.36	6.58	0.00	249.56
Water											0.00	177.95	177.95	0.94	0.03	205.76
Total											**111.36**	**6,919.01**	**7,030.37**	**7.79**	**0.08**	**7,215.00**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	348.79	348.79	0.02	0.01	351.08
Energy											0.00	1,837.19	1,837.19	0.06	0.03	1,848.54
Mobile											0.00	4,357.14	4,357.14	0.19	0.00	4,361.14
Waste											111.36	0.00	111.36	6.58	0.00	249.56
Water											0.00	143.20	143.20	0.66	0.02	162.79
Total											**111.36**	**6,686.32**	**6,797.68**	**7.51**	**0.06**	**6,973.11**

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
New Trees					332.76
Total					**332.76**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	79.79	79.79	0.01	0.00	79.96
Total											**0.00**	**79.79**	**79.79**	**0.01**	**0.00**	**79.96**

3.2 Site Preparation - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.81	0.81	0.00	0.00	0.81
Worker											0.00	1.71	1.71	0.00	0.00	1.71
Total											**0.00**	**2.52**	**2.52**	**0.00**	**0.00**	**2.52**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	79.79	79.79	0.01	0.00	79.96
Total											**0.00**	**79.79**	**79.79**	**0.01**	**0.00**	**79.96**

3.2 Site Preparation - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.81	0.81	0.00	0.00	0.81
Worker											0.00	1.71	1.71	0.00	0.00	1.71
Total											**0.00**	**2.52**	**2.52**	**0.00**	**0.00**	**2.52**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	942.64	942.64	0.08	0.00	944.41
Total											**0.00**	**942.64**	**942.64**	**0.08**	**0.00**	**944.41**

3.3 Grading - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	4.80	4.80	0.00	0.00	4.80
Worker											0.00	14.04	14.04	0.00	0.00	14.06
Total											**0.00**	**18.84**	**18.84**	**0.00**	**0.00**	**18.86**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	942.64	942.64	0.08	0.00	944.41
Total											**0.00**	**942.64**	**942.64**	**0.08**	**0.00**	**944.41**

3.3 Grading - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	4.80	4.80	0.00	0.00	4.80
Worker											0.00	14.04	14.04	0.00	0.00	14.06
Total											**0.00**	**18.84**	**18.84**	**0.00**	**0.00**	**18.86**

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	27.31	27.31	0.00	0.00	27.36
Total											**0.00**	**27.31**	**27.31**	**0.00**	**0.00**	**27.36**

3.4 Trenching - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.85	0.85	0.00	0.00	0.85
Worker											0.00	0.99	0.99	0.00	0.00	0.99
Total											**0.00**	**1.84**	**1.84**	**0.00**	**0.00**	**1.84**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	27.31	27.31	0.00	0.00	27.36
Total											**0.00**	**27.31**	**27.31**	**0.00**	**0.00**	**27.36**

3.4 Trenching - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.85	0.85	0.00	0.00	0.85
Worker											0.00	0.99	0.99	0.00	0.00	0.99
Total											**0.00**	**1.84**	**1.84**	**0.00**	**0.00**	**1.84**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	478.23	478.23	0.05	0.00	479.20
Total											**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

3.5 Building Construction - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	160.72	160.72	0.00	0.00	160.78
Worker											0.00	184.90	184.90	0.01	0.00	185.11
Total											**0.00**	**345.62**	**345.62**	**0.01**	**0.00**	**345.89**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	478.23	478.23	0.05	0.00	479.20
Total											**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

3.5 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	160.72	160.72	0.00	0.00	160.78
Worker											0.00	184.90	184.90	0.01	0.00	185.11
Total											**0.00**	**345.62**	**345.62**	**0.01**	**0.00**	**345.89**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	276.68	276.68	0.02	0.00	277.19
Total											**0.00**	**276.68**	**276.68**	**0.02**	**0.00**	**277.19**

3.5 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	93.43	93.43	0.00	0.00	93.47
Worker											0.00	105.82	105.82	0.01	0.00	105.93
Total											**0.00**	**199.25**	**199.25**	**0.01**	**0.00**	**199.40**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	276.68	276.68	0.02	0.00	277.19
Total											**0.00**	**276.68**	**276.68**	**0.02**	**0.00**	**277.19**

3.5 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	93.43	93.43	0.00	0.00	93.47
Worker											0.00	105.82	105.82	0.01	0.00	105.93
Total											**0.00**	**199.25**	**199.25**	**0.01**	**0.00**	**199.40**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	44.98	44.98	0.01	0.00	45.12
Paving											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**44.98**	**44.98**	**0.01**	**0.00**	**45.12**

3.6 Paving - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	2.13	2.13	0.00	0.00	2.13
Total											**0.00**	**2.13**	**2.13**	**0.00**	**0.00**	**2.13**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	44.98	44.98	0.01	0.00	45.12
Paving											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**44.98**	**44.98**	**0.01**	**0.00**	**45.12**

3.6 Paving - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	2.13	2.13	0.00	0.00	2.13
Total											**0.00**	**2.13**	**2.13**	**0.00**	**0.00**	**2.13**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	9.69	9.69	0.00	0.00	9.71
Total											**0.00**	**9.69**	**9.69**	**0.00**	**0.00**	**9.71**

3.7 Architectural Coating - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	10.78	10.78	0.00	0.00	10.79
Total											**0.00**	**10.78**	**10.78**	**0.00**	**0.00**	**10.79**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	9.69	9.69	0.00	0.00	9.71
Total											**0.00**	**9.69**	**9.69**	**0.00**	**0.00**	**9.71**

3.7 Architectural Coating - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	10.78	10.78	0.00	0.00	10.79
Total											**0.00**	**10.78**	**10.78**	**0.00**	**0.00**	**10.79**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	4,357.14	4,357.14	0.19	0.00	4,361.14
Unmitigated											0.00	4,400.10	4,400.10	0.19	0.00	4,404.13
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	4,455.36	4,455.36	4455.36	12,653,757	12,527,220
Total	4,455.36	4,455.36	4,455.36	12,653,757	12,527,220

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	954.67	954.67	0.04	0.02	960.65
Electricity Unmitigated											0.00	980.09	980.09	0.04	0.02	986.24
NaturalGas Mitigated											0.00	882.52	882.52	0.02	0.02	887.89
NaturalGas Unmitigated											0.00	1,012.08	1,012.08	0.02	0.02	1,018.24
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Other Asphalt Surfaces	0											0.00	0.00	0.00	0.00	0.00	0.00
Single Family Housing	1.89656e+007											0.00	1,012.08	1,012.08	0.02	0.02	1,018.24
Total												**0.00**	**1,012.08**	**1,012.08**	**0.02**	**0.02**	**1,018.24**

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	tons/yr										MT/yr					
Other Asphalt Surfaces	0											0.00	0.00	0.00	0.00	0.00	0.00
Single Family Housing	1.65378e+007											0.00	882.52	882.52	0.02	0.02	887.89
Total												**0.00**	**882.52**	**882.52**	**0.02**	**0.02**	**887.89**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	3.36952e+006					980.09	0.04	0.02	986.24
Total						**980.09**	**0.04**	**0.02**	**986.24**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	3.28211e+006					954.67	0.04	0.02	960.65
Total						**954.67**	**0.04**	**0.02**	**960.65**

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	tons/yr										MT/yr					
Mitigated											0.00	348.79	348.79	0.02	0.01	351.08
Unmitigated											0.00	348.79	348.79	0.02	0.01	351.08
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											0.00	337.15	337.15	0.01	0.01	339.20
Landscaping											0.00	11.64	11.64	0.01	0.00	11.88
Total											**0.00**	**348.79**	**348.79**	**0.02**	**0.01**	**351.08**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											0.00	337.15	337.15	0.01	0.01	339.20
Landscaping											0.00	11.64	11.64	0.01	0.00	11.88
Total											**0.00**	**348.79**	**348.79**	**0.02**	**0.01**	**351.08**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Turf Reduction

Use Water Efficient Irrigation System

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					143.20	0.66	0.02	162.79
Unmitigated					177.95	0.94	0.03	205.76
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Single Family Housing	30.4921 / 19.2233					177.95	0.94	0.03	205.76
Total						**177.95**	**0.94**	**0.03**	**205.76**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Single Family Housing	21.3445 / 19.2233					143.20	0.66	0.02	162.79
Total						**143.20**	**0.66**	**0.02**	**162.79**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					111.36	6.58	0.00	249.56
Unmitigated					111.36	6.58	0.00	249.56
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	548.58					111.36	6.58	0.00	249.56
Total						**111.36**	**6.58**	**0.00**	**249.56**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	548.58					111.36	6.58	0.00	249.56
Total						**111.36**	**6.58**	**0.00**	**249.56**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					332.76	0.00	0.00	332.76
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

9.1 Net New Trees

Species Class

	Number of Trees	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
		tons				MT			
Miscellaneous	470					332.76	0.00	0.00	332.76
Total						**332.76**	**0.00**	**0.00**	**332.76**

APPENDIX G

CalEEMod Model Annual Emissions Printouts for Option B

Lake Elsinore Terracina Option B - 2010

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	11.5	Acre
Apartments Mid Rise	51	Dwelling Unit
Single Family Housing	448	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Land Use - Option B - 51 MFR on 17.8 acres; 448 SFR on 97 acres and 11.5 acres of other asphalt surfaces. Total area to be disturbed 114.8 acres. Open space 36.2 acres. Total project site 151 acres.

Construction Phase - Project schedule provided by applicant

Grading - Total acres disturbed based on default timing (775 acres)

Architectural Coating - Rule 1113 - 50 grams VOC per liter

Vehicle Trips - Option B Trip Rates set to match TIA of 9.52 daily trips for SFR and 5.81 daily trips for MFR

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Woodstoves - Per SCAQMD Rule 445 requirements, only gas fireplaces are allowed and will only be included in the single-family homes and no fireplaces will be built in the multi-family homes

Area Coating - Mitigation Measure 1 for Option B - Use low VOC paint (25 grams VOC per liter)

Construction Off-road Equipment Mitigation - Mitigation Measure 3 - Water all exposed area a minimum of 3 times per day during site preparation and grading activities

Mobile Land Use Mitigation -

Area Mitigation - Mitigation Measure 1 for Option B - Use low VOC paint (25 grams VOC per liter)

Off-road Equipment - 2 excavators, 1 grader, 1 dozer, 4 scrappers, 2 tractors

Off-road Equipment - 2 excavators and 2 tractors

Trips and VMT - 3 vendor trucks added to Site Prep, Grading and Trenching

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014											0.00	1,072.94	1,072.94	0.10	0.00	1,074.97
2015											0.00	866.51	866.51	0.06	0.00	867.79
2016											0.00	569.91	569.91	0.04	0.00	570.76
Total											**0.00**	**2,509.36**	**2,509.36**	**0.20**	**0.00**	**2,513.52**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014											0.00	1,072.94	1,072.94	0.10	0.00	1,074.97
2015											0.00	866.51	866.51	0.06	0.00	867.79
2016											0.00	569.91	569.91	0.04	0.00	570.76
Total											**0.00**	**2,509.36**	**2,509.36**	**0.20**	**0.00**	**2,513.52**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	335.16	335.16	0.02	0.01	337.44
Energy											0.00	2,010.68	2,010.68	0.06	0.04	2,023.10
Mobile											0.00	5,953.14	5,953.14	0.39	0.00	5,961.25
Waste											111.38	0.00	111.38	6.58	0.00	249.60
Water											0.00	189.74	189.74	1.00	0.03	219.39
Total											**111.38**	**8,488.72**	**8,600.10**	**8.05**	**0.08**	**8,790.78**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	335.16	335.16	0.02	0.01	337.44
Energy											0.00	2,010.68	2,010.68	0.06	0.04	2,023.10
Mobile											0.00	5,953.14	5,953.14	0.39	0.00	5,961.25
Waste											111.38	0.00	111.38	6.58	0.00	249.60
Water											0.00	189.74	189.74	1.00	0.03	219.39
Total											**111.38**	**8,488.72**	**8,600.10**	**8.05**	**0.08**	**8,790.78**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	79.79	79.79	0.01	0.00	79.96
Total											**0.00**	**79.79**	**79.79**	**0.01**	**0.00**	**79.96**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.81	0.81	0.00	0.00	0.81
Worker											0.00	1.71	1.71	0.00	0.00	1.71
Total											**0.00**	**2.52**	**2.52**	**0.00**	**0.00**	**2.52**

3.2 Site Preparation - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	79.79	79.79	0.01	0.00	79.96
Total											**0.00**	**79.79**	**79.79**	**0.01**	**0.00**	**79.96**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.81	0.81	0.00	0.00	0.81
Worker											0.00	1.71	1.71	0.00	0.00	1.71
Total											**0.00**	**2.52**	**2.52**	**0.00**	**0.00**	**2.52**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	942.64	942.64	0.08	0.00	944.41
Total											**0.00**	**942.64**	**942.64**	**0.08**	**0.00**	**944.41**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	4.80	4.80	0.00	0.00	4.80
Worker											0.00	14.04	14.04	0.00	0.00	14.06
Total											**0.00**	**18.84**	**18.84**	**0.00**	**0.00**	**18.86**

3.3 Grading - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	942.64	942.64	0.08	0.00	944.41
Total											**0.00**	**942.64**	**942.64**	**0.08**	**0.00**	**944.41**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	4.80	4.80	0.00	0.00	4.80
Worker											0.00	14.04	14.04	0.00	0.00	14.06
Total											**0.00**	**18.84**	**18.84**	**0.00**	**0.00**	**18.86**

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	27.31	27.31	0.00	0.00	27.36
Total											**0.00**	**27.31**	**27.31**	**0.00**	**0.00**	**27.36**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.85	0.85	0.00	0.00	0.85
Worker											0.00	0.99	0.99	0.00	0.00	0.99
Total											**0.00**	**1.84**	**1.84**	**0.00**	**0.00**	**1.84**

3.4 Trenching - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	27.31	27.31	0.00	0.00	27.36
Total											**0.00**	**27.31**	**27.31**	**0.00**	**0.00**	**27.36**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.85	0.85	0.00	0.00	0.85
Worker											0.00	0.99	0.99	0.00	0.00	0.99
Total											**0.00**	**1.84**	**1.84**	**0.00**	**0.00**	**1.84**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	478.23	478.23	0.05	0.00	479.20
Total											**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	170.36	170.36	0.00	0.00	170.43
Worker											0.00	217.92	217.92	0.01	0.00	218.16
Total											**0.00**	**388.28**	**388.28**	**0.01**	**0.00**	**388.59**

3.5 Building Construction - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	478.23	478.23	0.05	0.00	479.20
Total											**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	170.36	170.36	0.00	0.00	170.43
Worker											0.00	217.92	217.92	0.01	0.00	218.16
Total											**0.00**	**388.28**	**388.28**	**0.01**	**0.00**	**388.59**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	276.68	276.68	0.02	0.00	277.19
Total											**0.00**	**276.68**	**276.68**	**0.02**	**0.00**	**277.19**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	99.04	99.04	0.00	0.00	99.08
Worker											0.00	124.71	124.71	0.01	0.00	124.84
Total											**0.00**	**223.75**	**223.75**	**0.01**	**0.00**	**223.92**

3.5 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	276.68	276.68	0.02	0.00	277.19
Total											**0.00**	**276.68**	**276.68**	**0.02**	**0.00**	**277.19**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	99.04	99.04	0.00	0.00	99.08
Worker											0.00	124.71	124.71	0.01	0.00	124.84
Total											**0.00**	**223.75**	**223.75**	**0.01**	**0.00**	**223.92**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	44.98	44.98	0.01	0.00	45.12
Paving											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**44.98**	**44.98**	**0.01**	**0.00**	**45.12**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	2.13	2.13	0.00	0.00	2.13
Total											**0.00**	**2.13**	**2.13**	**0.00**	**0.00**	**2.13**

3.6 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	44.98	44.98	0.01	0.00	45.12
Paving											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**44.98**	**44.98**	**0.01**	**0.00**	**45.12**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	2.13	2.13	0.00	0.00	2.13
Total											**0.00**	**2.13**	**2.13**	**0.00**	**0.00**	**2.13**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	9.69	9.69	0.00	0.00	9.71
Total											**0.00**	**9.69**	**9.69**	**0.00**	**0.00**	**9.71**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	12.68	12.68	0.00	0.00	12.69
Total											**0.00**	**12.68**	**12.68**	**0.00**	**0.00**	**12.69**

3.7 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	9.69	9.69	0.00	0.00	9.71
Total											**0.00**	**9.69**	**9.69**	**0.00**	**0.00**	**9.71**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	12.68	12.68	0.00	0.00	12.69
Total											**0.00**	**12.68**	**12.68**	**0.00**	**0.00**	**12.69**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	5,953.14	5,953.14	0.39	0.00	5,961.25
Unmitigated											0.00	5,953.14	5,953.14	0.39	0.00	5,961.25
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	296.31	296.31	296.31	841,556	841,556
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	4,264.96	4,264.96	4264.96	12,112,998	12,112,998
Total	4,561.27	4,561.27	4,561.27	12,954,554	12,954,554

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Mid Rise	10.80	7.30	7.50	40.20	19.20	40.60
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	1,000.35	1,000.35	0.05	0.02	1,006.62
Electricity Unmitigated											0.00	1,000.35	1,000.35	0.05	0.02	1,006.62
NaturalGas Mitigated											0.00	1,010.33	1,010.33	0.02	0.02	1,016.48
NaturalGas Unmitigated											0.00	1,010.33	1,010.33	0.02	0.02	1,016.48
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Apartments Mid Rise	777745											0.00	41.50	41.50	0.00	0.00	41.76
Other Asphalt Surfaces	0											0.00	0.00	0.00	0.00	0.00	0.00
Single Family Housing	1.81551e+007											0.00	968.83	968.83	0.02	0.02	974.72
Total												**0.00**	**1,010.33**	**1,010.33**	**0.02**	**0.02**	**1,016.48**

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	tons/yr										MT/yr					
Apartments Mid Rise	777745											0.00	41.50	41.50	0.00	0.00	41.76
Other Asphalt Surfaces	0											0.00	0.00	0.00	0.00	0.00	0.00
Single Family Housing	1.81551e+007											0.00	968.83	968.83	0.02	0.02	974.72
Total												**0.00**	**1,010.33**	**1,010.33**	**0.02**	**0.02**	**1,016.48**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Mid Rise	213641					62.14	0.00	0.00	62.53
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	3.22552e+006					938.21	0.04	0.02	944.09
Total						**1,000.35**	**0.04**	**0.02**	**1,006.62**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Mid Rise	213641					62.14	0.00	0.00	62.53
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	3.22552e+006					938.21	0.04	0.02	944.09
Total						**1,000.35**	**0.04**	**0.02**	**1,006.62**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	335.16	335.16	0.02	0.01	337.44
Unmitigated											0.00	335.16	335.16	0.02	0.01	337.44
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											0.00	322.74	322.74	0.01	0.01	324.71
Landscaping											0.00	12.41	12.41	0.02	0.00	12.73
Total											**0.00**	**335.15**	**335.15**	**0.03**	**0.01**	**337.44**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											0.00	322.74	322.74	0.01	0.01	324.71
Landscaping											0.00	12.41	12.41	0.02	0.00	12.73
Total											**0.00**	**335.15**	**335.15**	**0.03**	**0.01**	**337.44**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					189.74	1.00	0.03	219.39
Unmitigated					189.74	1.00	0.03	219.39
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Mid Rise	3.32286 / 2.09484					19.39	0.10	0.00	22.42
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Single Family Housing	29.189 / 18.4018					170.35	0.90	0.03	196.97
Total						**189.74**	**1.00**	**0.03**	**219.39**

7.2 Water by Land Use

<u>Mitigated</u>

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Mid Rise	3.32286 / 2.09484					19.39	0.10	0.00	22.42
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Single Family Housing	29.189 / 18.4018					170.35	0.90	0.03	196.97
Total						**189.74**	**1.00**	**0.03**	**219.39**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					111.38	6.58	0.00	249.60
Unmitigated					111.38	6.58	0.00	249.60
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Mid Rise	23.46					4.76	0.28	0.00	10.67
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	525.21					106.61	6.30	0.00	238.93
Total						**111.37**	**6.58**	**0.00**	**249.60**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Mid Rise	23.46					4.76	0.28	0.00	10.67
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	525.21					106.61	6.30	0.00	238.93
Total						**111.37**	**6.58**	**0.00**	**249.60**

9.0 Vegetation

Lake Elsinore Terracina Option B 2020

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
Other Asphalt Surfaces	11.5	Acre
Apartments Low Rise	51	Dwelling Unit
Single Family Housing	448	Dwelling Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Land Use - Option B - 51 MFR on 17.8 acres; 448 SFR on 97 acres and 11.5 acres of other asphalt surfaces. Total area to be disturbed 114.8 acres. Permanent open space 36.2 acres. Total project site 151 acres.

Construction Phase - Project schedule provided by applicant

Off-road Equipment - Grading - 2 excavators, 1 grader, 1 rubber tired dozer, 4 scrappers, 2 tractor/lolader/backhoe

Off-road Equipment - Trenching - 2 excavators 8 hours/day and 2 of either tractor/loader/backhoe

Trips and VMT - 3 Vendor truck trips added to the Site Preparation, Grading and Trenching phases to account for the water trucks.

Grading - Total acres disturbed based on default timing (775 acres)

Architectural Coating - Per SCAQMD Rule 1113 as Amended June 3, 2011, by January 1, 2014 architectural coatings wll be limited to 50 grams VOC/Liter

Vehicle Trips - Option B Trip Rates set to match TIA of 9.52 daily trips for SFR and 5.81 daily trips for MFR

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Vechicle Emission Factors - Vehicle Mix adjusted to consist of residential use vehicles and 15 delivery trucks per day

Woodstoves - Per SCAQMD Rule 445 requirements, only gas fireplaces are allowed and will only be included in the single-family homes.

Sequestration - Measure E-1.1 - Plant 470 new tree species Miscellaneous

Construction Off-road Equipment Mitigation - Mitigation Measure 1 - Require 50% of grading equipment to Meet Tier 3 or higher standards. Mitigation Measure 2 - Water exposed areas 3x a day. limit vehicle speed to 15 mph

Mobile Land Use Mitigation - Measure T-1.2 - Provide sidewalks along new streets

Energy Mitigation - Measure E-1.3 - Exceed 2008 Title 24 by 15%

Water Mitigation - Measure E-4.1 - 75% Reduction in turf area and use water efficient irrigation systems. Measure E-4.2 - Water Conservation Strategy 30% Reduction Indoor Water

Off-road Equipment -

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014											0.00	1,072.94	1,072.94	0.10	0.00	1,074.97
2015											0.00	866.51	866.51	0.06	0.00	867.79
2016											0.00	569.91	569.91	0.04	0.00	570.76
Total											**0.00**	**2,509.36**	**2,509.36**	**0.20**	**0.00**	**2,513.52**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2014											0.00	1,072.94	1,072.94	0.10	0.00	1,074.97
2015											0.00	866.51	866.51	0.06	0.00	867.79
2016											0.00	569.91	569.91	0.04	0.00	570.76
Total											**0.00**	**2,509.36**	**2,509.36**	**0.20**	**0.00**	**2,513.52**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	335.16	335.16	0.02	0.01	337.37
Energy											0.00	2,019.21	2,019.21	0.06	0.04	2,031.68
Mobile											0.00	4,504.69	4,504.69	0.20	0.00	4,508.82
Waste											111.38	0.00	111.38	6.58	0.00	249.60
Water											0.00	189.74	189.74	1.00	0.03	219.39
Total											**111.38**	**7,048.80**	**7,160.18**	**7.86**	**0.08**	**7,346.86**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area											0.00	335.16	335.16	0.02	0.01	337.37
Energy											0.00	1,862.43	1,862.43	0.06	0.03	1,873.95
Mobile											0.00	4,460.72	4,460.72	0.19	0.00	4,464.81
Waste											111.38	0.00	111.38	6.58	0.00	249.60
Water											0.00	152.69	152.69	0.70	0.02	173.57
Total											**111.38**	**6,811.00**	**6,922.38**	**7.55**	**0.06**	**7,099.30**

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
New Trees					332.76
Total					**332.76**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	79.79	79.79	0.01	0.00	79.96
Total											**0.00**	**79.79**	**79.79**	**0.01**	**0.00**	**79.96**

3.2 Site Preparation - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.81	0.81	0.00	0.00	0.81
Worker											0.00	1.71	1.71	0.00	0.00	1.71
Total											**0.00**	**2.52**	**2.52**	**0.00**	**0.00**	**2.52**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	79.79	79.79	0.01	0.00	79.96
Total											**0.00**	**79.79**	**79.79**	**0.01**	**0.00**	**79.96**

3.2 Site Preparation - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.81	0.81	0.00	0.00	0.81
Worker											0.00	1.71	1.71	0.00	0.00	1.71
Total											**0.00**	**2.52**	**2.52**	**0.00**	**0.00**	**2.52**

3.3 Grading - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	942.64	942.64	0.08	0.00	944.41
Total											**0.00**	**942.64**	**942.64**	**0.08**	**0.00**	**944.41**

3.3 Grading - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	4.80	4.80	0.00	0.00	4.80
Worker											0.00	14.04	14.04	0.00	0.00	14.06
Total											**0.00**	**18.84**	**18.84**	**0.00**	**0.00**	**18.86**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	942.64	942.64	0.08	0.00	944.41
Total											**0.00**	**942.64**	**942.64**	**0.08**	**0.00**	**944.41**

3.3 Grading - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	4.80	4.80	0.00	0.00	4.80
Worker											0.00	14.04	14.04	0.00	0.00	14.06
Total											**0.00**	**18.84**	**18.84**	**0.00**	**0.00**	**18.86**

3.4 Trenching - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	27.31	27.31	0.00	0.00	27.36
Total											**0.00**	**27.31**	**27.31**	**0.00**	**0.00**	**27.36**

3.4 Trenching - 2014

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.85	0.85	0.00	0.00	0.85
Worker											0.00	0.99	0.99	0.00	0.00	0.99
Total											**0.00**	**1.84**	**1.84**	**0.00**	**0.00**	**1.84**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	27.31	27.31	0.00	0.00	27.36
Total											**0.00**	**27.31**	**27.31**	**0.00**	**0.00**	**27.36**

3.4 Trenching - 2014

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.85	0.85	0.00	0.00	0.85
Worker											0.00	0.99	0.99	0.00	0.00	0.99
Total											**0.00**	**1.84**	**1.84**	**0.00**	**0.00**	**1.84**

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	478.23	478.23	0.05	0.00	479.20
Total											**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

3.5 Building Construction - 2015

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	170.36	170.36	0.00	0.00	170.43
Worker											0.00	217.92	217.92	0.01	0.00	218.16
Total											**0.00**	**388.28**	**388.28**	**0.01**	**0.00**	**388.59**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	478.23	478.23	0.05	0.00	479.20
Total											**0.00**	**478.23**	**478.23**	**0.05**	**0.00**	**479.20**

3.5 Building Construction - 2015

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	170.36	170.36	0.00	0.00	170.43
Worker											0.00	217.92	217.92	0.01	0.00	218.16
Total											**0.00**	**388.28**	**388.28**	**0.01**	**0.00**	**388.59**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	276.68	276.68	0.02	0.00	277.19
Total											**0.00**	**276.68**	**276.68**	**0.02**	**0.00**	**277.19**

3.5 Building Construction - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	99.04	99.04	0.00	0.00	99.08
Worker											0.00	124.71	124.71	0.01	0.00	124.84
Total											**0.00**	**223.75**	**223.75**	**0.01**	**0.00**	**223.92**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	276.68	276.68	0.02	0.00	277.19
Total											**0.00**	**276.68**	**276.68**	**0.02**	**0.00**	**277.19**

3.5 Building Construction - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	99.04	99.04	0.00	0.00	99.08
Worker											0.00	124.71	124.71	0.01	0.00	124.84
Total											**0.00**	**223.75**	**223.75**	**0.01**	**0.00**	**223.92**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	44.98	44.98	0.01	0.00	45.12
Paving											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**44.98**	**44.98**	**0.01**	**0.00**	**45.12**

3.6 Paving - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	2.13	2.13	0.00	0.00	2.13
Total											**0.00**	**2.13**	**2.13**	**0.00**	**0.00**	**2.13**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road											0.00	44.98	44.98	0.01	0.00	45.12
Paving											0.00	0.00	0.00	0.00	0.00	0.00
Total											**0.00**	**44.98**	**44.98**	**0.01**	**0.00**	**45.12**

3.6 Paving - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	2.13	2.13	0.00	0.00	2.13
Total											**0.00**	**2.13**	**2.13**	**0.00**	**0.00**	**2.13**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	9.69	9.69	0.00	0.00	9.71
Total											**0.00**	**9.69**	**9.69**	**0.00**	**0.00**	**9.71**

3.7 Architectural Coating - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	12.68	12.68	0.00	0.00	12.69
Total											**0.00**	**12.68**	**12.68**	**0.00**	**0.00**	**12.69**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.00	0.00	0.00	0.00	0.00	0.00
Off-Road											0.00	9.69	9.69	0.00	0.00	9.71
Total											**0.00**	**9.69**	**9.69**	**0.00**	**0.00**	**9.71**

3.7 Architectural Coating - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling											0.00	0.00	0.00	0.00	0.00	0.00
Vendor											0.00	0.00	0.00	0.00	0.00	0.00
Worker											0.00	12.68	12.68	0.00	0.00	12.69
Total											**0.00**	**12.68**	**12.68**	**0.00**	**0.00**	**12.69**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated											0.00	4,460.72	4,460.72	0.19	0.00	4,464.81
Unmitigated											0.00	4,504.69	4,504.69	0.20	0.00	4,508.82
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	296.31	296.31	296.31	841,556	833,140
Other Asphalt Surfaces	0.00	0.00	0.00		
Single Family Housing	4,264.96	4,264.96	4264.96	12,112,998	11,991,868
Total	4,561.27	4,561.27	4,561.27	12,954,554	12,825,009

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
Apartments Low Rise	10.80	7.30	7.50	40.20	19.20	40.60
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Single Family Housing	10.80	7.30	7.50	40.20	19.20	40.60

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.00	977.56	977.56	0.04	0.02	983.68
Electricity Unmitigated											0.00	1,004.56	1,004.56	0.05	0.02	1,010.85
NaturalGas Mitigated											0.00	884.88	884.88	0.02	0.02	890.26
NaturalGas Unmitigated											0.00	1,014.65	1,014.65	0.02	0.02	1,020.82
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
Apartments Low Rise	858691											0.00	45.82	45.82	0.00	0.00	46.10
Other Asphalt Surfaces	0											0.00	0.00	0.00	0.00	0.00	0.00
Single Family Housing	1.81551e+007											0.00	968.83	968.83	0.02	0.02	974.72
Total												**0.00**	**1,014.65**	**1,014.65**	**0.02**	**0.02**	**1,020.82**

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	tons/yr										MT/yr					
Apartments Low Rise	750971											0.00	40.07	40.07	0.00	0.00	40.32
Other Asphalt Surfaces	0											0.00	0.00	0.00	0.00	0.00	0.00
Single Family Housing	1.5831e+007											0.00	844.80	844.80	0.02	0.02	849.94
Total												**0.00**	**884.87**	**884.87**	**0.02**	**0.02**	**890.26**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	228107					66.35	0.00	0.00	66.77
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	3.22552e+006					938.21	0.04	0.02	944.09
Total						**1,004.56**	**0.04**	**0.02**	**1,010.86**

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
Apartments Low Rise	218948					63.69	0.00	0.00	64.08
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	3.14185e+006					913.87	0.04	0.02	919.60
Total						**977.56**	**0.04**	**0.02**	**983.68**

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	tons/yr										MT/yr					
Mitigated											0.00	335.16	335.16	0.02	0.01	337.37
Unmitigated											0.00	335.16	335.16	0.02	0.01	337.37
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											0.00	322.74	322.74	0.01	0.01	324.71
Landscaping											0.00	12.41	12.41	0.01	0.00	12.67
Total											**0.00**	**335.15**	**335.15**	**0.02**	**0.01**	**337.38**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products											0.00	0.00	0.00	0.00	0.00	0.00
Hearth											0.00	322.74	322.74	0.01	0.01	324.71
Landscaping											0.00	12.41	12.41	0.01	0.00	12.67
Total											**0.00**	**335.15**	**335.15**	**0.02**	**0.01**	**337.38**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Turf Reduction

Use Water Efficient Irrigation System

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					152.69	0.70	0.02	173.57
Unmitigated					189.74	1.00	0.03	219.39
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	3.32286 / 2.09484					19.39	0.10	0.00	22.42
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Single Family Housing	29.189 / 18.4018					170.35	0.90	0.03	196.97
Total						**189.74**	**1.00**	**0.03**	**219.39**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
Apartments Low Rise	2.326 / 2.09484					15.61	0.07	0.00	17.74
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Single Family Housing	20.4323 / 18.4018					137.08	0.63	0.02	155.83
Total						**152.69**	**0.70**	**0.02**	**173.57**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					111.38	6.58	0.00	249.60
Unmitigated					111.38	6.58	0.00	249.60
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	23.46					4.76	0.28	0.00	10.67
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	525.21					106.61	6.30	0.00	238.93
Total						**111.37**	**6.58**	**0.00**	**249.60**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
Apartments Low Rise	23.46					4.76	0.28	0.00	10.67
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Single Family Housing	525.21					106.61	6.30	0.00	238.93
Total						**111.37**	**6.58**	**0.00**	**249.60**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					332.76	0.00	0.00	332.76
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

9.1 Net New Trees

Species Class

	Number of Trees	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
		tons				MT			
Miscellaneous	470					332.76	0.00	0.00	332.76
Total						**332.76**	**0.00**	**0.00**	**332.76**

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1111 Town & Country Road, Suite 34
Orange, California 92868
(714) 973-8383

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