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LETTER OF TRANSMITTAL

TO: LANSING COMPANIES
12671 High Bluff Drive, Suite 150
San Diego, CA 92130
ATTN: James Kozak

DATE: August 29, 2014
JOB NO.: 0995-2014-08/09
SUBJECT: Agua Mansa High-Cube Warehouse Air, GHG, and Health Risk Assessment Impact Studies, County of San Bernardino

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REMARKS:
Attached is the Agua Mansa High-Cube Warehouse Air Quality, Greenhouse Gas, and Health Risk Assessment Impact Studies, County of San Bernardino. If you have any questions please call me at (949) 474-0809.

BY: Mike Dickerson
Mike Dickerson, INCE
Air/Noise Specialist

COPIES TO:

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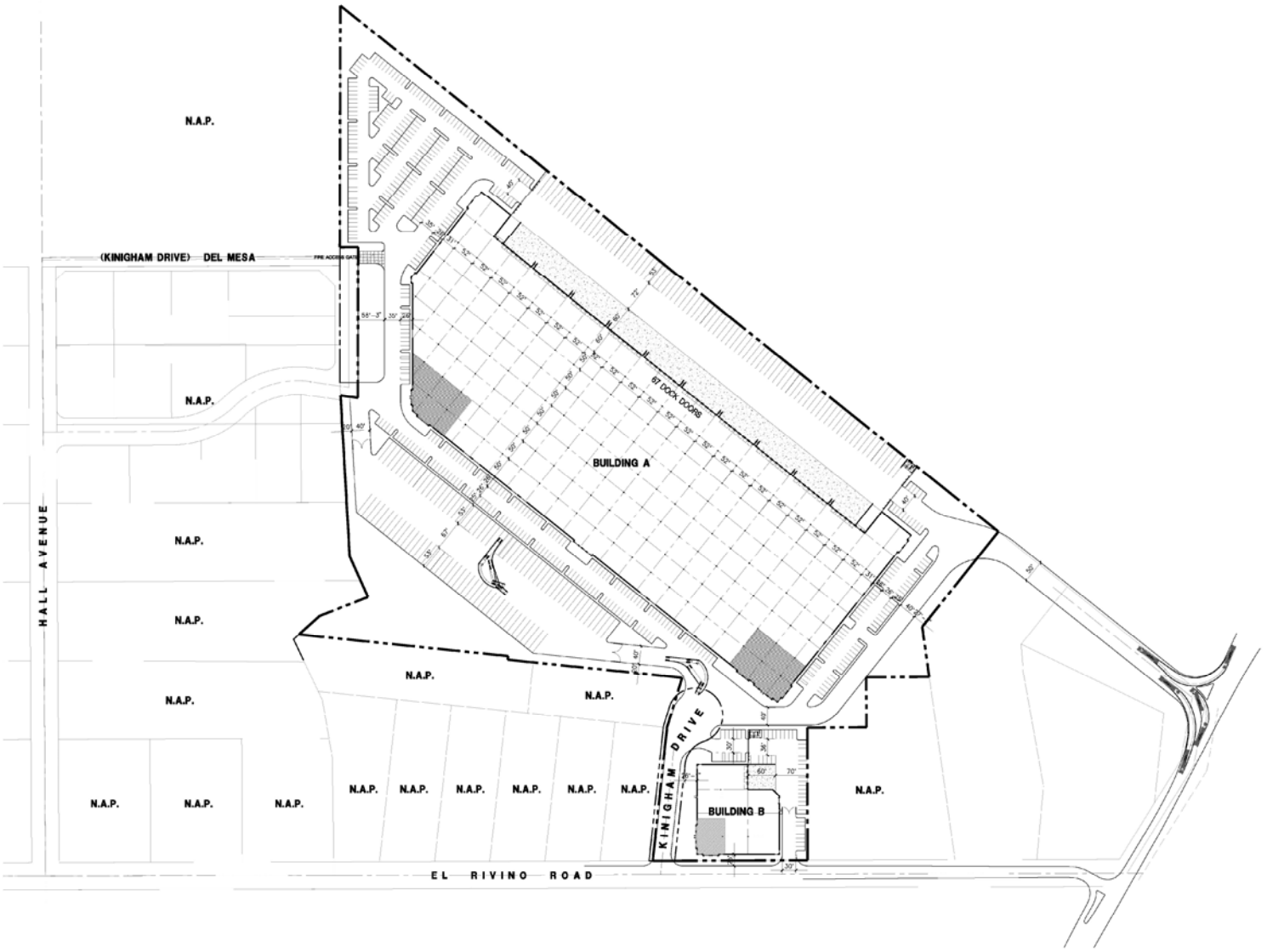
AGUA MANSA HIGH-CUBE WAREHOUSE
AIR QUALITY AND GHG IMPACT STUDY
County of San Bernardino, California



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August 29, 2014

Mr. James Kozak
LANSING COMPANIES
12671 High Bluff Drive, Suite 150
San Diego, CA 92130

Subject: Agua Mansa High-Cube Warehouse Air Quality, Greenhouse Gas, and Health Risk Assessment Impact Study, County of San Bernardino

Dear Mr. Lansing:

RK ENGINEERING GROUP, INC. (RK) has completed an air quality (AQ), greenhouse gas (GHG) and health risk assessment for the Agua Mansa High-Cube Warehouse project. The proposed project is located north of El Rivino Road and west of Agua Mansa, as indicated on Exhibit A. The County of San Bernardino has requested that an AQ, GHG, and HRA impact study be performed to evaluate the emissions generated from the Project.

The project will seek an amendment to the Agua Mansa Specific Plan and would require a zone change from single family residential to industrial. The project consists of approximately 516,490 square feet of high cube warehouse uses. The project would be processed through the County of San Bernardino.

This report provides a summary of the findings, analysis procedures, and evaluation for the proposed Project with respect to air quality emissions, greenhouse gases, and health risk assessment from the Project site pursuant to the County of San Bernardino requirements. The purpose of this analysis is to review the Project design from an Air Quality / GHG /HRA standpoint, review criteria pollutant emissions, and determine the overall impact.

Based upon the analysis of the Air/GHG/HRA emissions, all study areas are anticipated to be below the criteria pollutant standards. Furthermore, it is anticipated that the Project will incorporate design features which will further reduce the potential Air/GHG/HRA impacts

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RK Engineering Group, Inc. is pleased to provide this analysis for the proposed Agua Mansa High-Cube Warehouse project. RK appreciates this opportunity to work with the LANSING COMPANIES and looks forward to working with you on future projects. If you have any questions regarding this analysis, or would like further review, please do not hesitate to call us at (949) 474-0809.

Sincerely,
RK ENGINEERING GROUP, INC.

Robert Kahn, P.E.
Principal

Mike Dickerson
Noise/Air Specialist

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JN:0995-2014-08/09

AGUA MANSA HIGH-CUBE WAREHOUSE AIR QUALITY, GREENHOUSE GAS, AND HEALTH RISK ASSESSMENT IMPACT STUDY
County of San Bernardino, California

Prepared for:

LANSING COMPANIES
12671 High Bluff Drive, Suite 150
San Diego, CA 92130

Prepared by:

RK ENGINEERING GROUP, INC.
4000 Westerly Place, Suite 280
Newport Beach, CA 92660

Robert Kahn, P.E.
Mike Dickerson

August 29, 2014

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1.0 Executive Summary

1.1 Purpose and Methods of Analysis

This air quality (AQ), greenhouse gas (GHG), and health risk assessment (HRA) analyses were prepared to evaluate whether the estimated criteria pollutants and GHG emissions generated from the Project would cause a significant impact to air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The assessment is consistent with the methodology and emission factors endorsed by South Coast Air Quality Management District (SCAQMD), California Air Resource Board (CARB), and the United States Environmental Protection Agency (US EPA).

1.2 Project Summary

1.2.1 Site Location

The project site is located north of El Rivino Road and west of Agua Mansa Road in an unincorporated area of the County of San Bernardino, California. The project site is bounded by El Rivino Road to the south, Agua Mansa Road to the east, existing industrial land use to the north (high-cube warehouse) and existing residential to the west as illustrated in Exhibit A. The project vicinity is characterized by a mix of developed properties. Developed properties in the vicinity include residential properties to the south and west, and industrial properties to the north. The project site is relatively flat, located approximately 940 feet above sea level and is vacant.

1.2.2 Project Description

The Agua Mansa High-Cube Warehouse project proposes to amend the zoning for the site area from Residential to Industrial. The site is within the Agua Mansa Specific Plan, which was adopted by the County in July, 1986.

The project consists of two (2) warehouse buildings, building A and building B, on approximately 30.45 acres (28.66 acres for building A and 1.79 acres for building B). Building #1 has approximately 484,670 square feet of high-cube warehouse space. Building #2 has approximately 31,818 square feet of high-cube warehouse space. The project provides a total of 552 standard parking spaces, 15 handicap parking spaces and 179 trailer parking spaces. The proposed project site plan used for this analysis, provided by HPA Architecture., is illustrated in Exhibit B. Table 1 summarizes the land use description of the site.

1.2.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill and those with cardio-

respiratory diseases. For CEQA purposes, the SCAQMD, in its Localized Significance Threshold Methodology (SCAQMD 2008a, page 3-2), considers a sensitive receptor to be a location where a sensitive individual could remain for 24-hours or longer, such as residencies, hospitals, and schools (etc).

The closest existing sensitive receptors are residential units located approximately 25 meters to the west and south of the project site.

1.3 Summary of Analysis Results

The following is a summary of the analysis results, according to impact.

Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan. **Less than significant.**

Impact AIR-2: The project would not violate an air quality standard or contribute substantially to an existing or projected air quality violation during construction and operation of the project. **The project will have a less than significant impact.**

Impact AIR-3: The project would not result in a cumulatively considerable net increase of a criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors). **Less than significant.**

Impact AIR-4: The project would not expose sensitive receptors to substantial pollutant concentrations. **Less than significant.**

Impact AIR-5: The project would not create objectionable odors affecting a substantial number of people. **Less than significant.**

The following is a summary of the analysis results, according to impact.

Impact GHG-1: The project would generate direct and indirect greenhouse gas emissions; however, these emissions would not result in a significant impact on the environment. **Less than significant with mitigation.**

Impact GHG-2: The 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. **Less than significant with mitigation.**

The following summarizes the results of the health risk assessment:

- The Proposed Project-generated operational emissions would not exceed the SCAQMD health risk significance thresholds at surrounding sensitive receptors.

1.4 Mitigations Measures (MM) Applied to Project

Air Quality Impact Construction Measures

MM AQ-1 The project shall require that the site preparation and grading contractors limit the daily disturbed area to 5 acres or less.

MM AQ-2 The project shall require that during site preparation, and grading operations all contractors shall comply with all applicable measures listed in SCAQMD Rule 403 to control fugitive dust including the application of water to all exposed surfaces a minimum of three times per day.

Air Quality Impact Operational Measures

None required.

Greenhouse Gas Operational Measures

MM GHG-1 The project applicant shall require that all building structures meet Green Building Code Standards (CalGreen) and that all project buildings shall be designed to exceed 2008 Title 24 requirements by thirty percent (30%) or meet current (2013) Title 24 standards[1].

MM GHG-2 The project applicant shall encourage that any future tenants institute a ride sharing program and employee vanpool/shuttle that is open to all employees.

MM GHG-3 The project applicant shall encourage all future tenants to institute recycling programs that reduces waste to landfills by a minimum of 50 percent and includes designated recycling bins at each proposed structure and requires all green waste to be processed at a recycling or composting facility.

MM GHG-4 The project applicant shall require that at least 147 new trees are planted on site.

MM GHG-5 The project shall incorporate a water conservation strategy of 20% or higher.

[1] Current 2013 Title 24 Standards for commercial uses are approximately 30% more efficient than 2008 Title 24 Standards.

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2.0 Regulatory Framework and Background

2.1 Air Quality Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level. The California Air Resources Board (ARB) regulates at the state level. The South Coast Air Quality Management District (SCAQMD) regulates at the air basin level.

2.1.1 National and State

Both the federal government and the State of California have established health-based ambient air quality standards (AAQS) for seven air pollutants. As shown in Table 2, these pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), coarse particulate matter with a diameter of 10 microns or less (PM_{10}), fine particulate matter with a diameter of 2.5 microns in diameter ($PM_{2.5}$), and lead. In addition the State has set standards for sulfates, hydrogen sulfides, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to setting out primary and secondary AAQS, the State has established a set of episode criteria for O_3, CO, NO_2, SO_2, and PM_{10}. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Health effects are progressively more severe as pollutant levels increases from Stage One to Stage Three. An alert level is that concentration of pollutants at which initial stage control actions are to begin. An alert will be declared when any one of the pollutant concentrations ca be expected to remain at these levels for 12 or more hours or to increase or, in the case of oxidants, the situation is likely to recur within the next 24 hours unless control actions are taken.

Pollutant alert levels:

- O_3: 392 micrograms per cubic meter ($\mu g/m^3$) (0.20 parts per million [ppm]), 1-hour average
- CO: 17 milligrams per cubic meter (mg/m^3) (15 ppm), 8-hour average
- NO_2: 1,130 $\mu g/m^3$ (0.6 ppm) 1-hour average; 282 $\mu g/m^3$ (0.15 ppm) 24-hour average

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal

attainment plans for regional air districts—air district prepares their federal attainment plan, which sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

Several pollutants listed in Table 2 are not addressed in this analysis. Analysis of lead is not included in this report because the project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the project vicinity. The proposed project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

2.1.2 South Coast Air Quality Management District

The agency for air pollution control for the South Coast Air Basin (basin) is the South Coast Air Quality Management District (SCAQMD). SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the basin. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the basin. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

Every three years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20 year horizon.

On December 7, 2012, SCAQMD adopted the 2012 AQMP. The 2012 AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. In addition, the 2012 AQMP includes the new and changing federal requirements, the implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

South Coast Air Quality Management District Rules

The AQMP for the basin establishes a program of rules and regulations administered by SCAQMD to obtain attainment of the state and federal standards. The rules and regulations that apply to this project include, but are not limited to, the following:

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of project must comply with Rule 1113.

2.1.3 County of San Bernardino

The agency for air pollution control for the South Coast Air Basin (basin) is the South Coast Air Quality Management District. Local jurisdictions, such as the County of San Bernardino, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the County is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The County 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 County 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 County does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the County 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.

Goal CO 4 from the County of San Bernardino 2007 General Plan, March 13, 2007, contains the following air quality-related policies that are applicable to the proposed project:

CO 4.2: *Coordinate air quality improvements technologies with the SCAQMD and the Mojave Air Quality Management District (MAQMD) to improve air quality through reductions in pollutants from the region.*

CO 4.4: *Because congestion resulting from growth is expected to result in a significant increase in the air quality degradation, the County may manage growth by insuring the timely provision of infrastructure to serve new development.*

CO 4.5: *Reduce emissions through reduced energy consumption.*

CO 4.6: *Provide incentives such as preferential parking for alternative-fuel vehicles (e.g., CNG or hydrogen).*

2.2 Greenhouse Gas Regulatory Setting

2.2.1 International

Many countries around the globe have made an effort to reduce GHGs since climate change is a global issue.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations. The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Kyoto Protocol. The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5% from 1990 levels during the first commitment period of 2008 – 2012 (UNFCCC 1997). On December 8, 2012, the Doha Amendment to the Kyoto Protocol was adopted. The amendment includes: New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from 2013 – 2020; a revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period; and Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period.

2.2.2 National

Greenhouse Gas Endangerment. On December 2, 2009, the EPA announced that GHGs threaten the public heath and welfare of the American people. The EPA also states that GHG emissions from on-road vehicles contribute to that threat. The decision was based on *Massachusetts v. EPA* (Supreme Court Case 05-1120) which argued that GHGs are air pollutants covered by the Clean Air Act and that the EPA has authority to regulate those emissions.

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). The second phase of the national program involved proposing new fuel economy and greenhouse gas standards for model years 2017 – 2025 on September 1, 2011.

On October 25, 2010, the EPA and the U.S. Department of Transportation proposed the first national standards to reduce greenhouse gas emissions and improve fuel efficiency of heavy-duty trucks and buses. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by 2018 model year.

Mandatory Reporting of Greenhouse Gases. On January 1, 2010, the EPA started requiring large emitters of heat-trapping emissions to begin collecting GHG data under a

new reporting system. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

New Source Review. On May 13, 2010 the EPA issued a final rule that establishes common sense approach to addressing greenhouse gas emissions from stationary sources under the Clean Air Act (CAA) permitting programs. In the first phase of the Rule (Jan 2011 – Jun 2011), only sources currently subject to the New Source Review Prevention of Significant Deterioration (PSD) permitting program (i.e., those that newly constructed or modified in a way that significantly increase emissions of a pollutant other than GHGs) are subject to permitting requirements for their GHG emissions under PSD. For these projects, only GHG increases of 75,000 tons per year CO_2e or more need to determine the Best Available Control Technology (BACT) for their GHG emissions. Similarly for the operating permit program, only sources currently subject to the program are subject to Title V requirements for GHG. In the second phase of the rule (July 2011 – June 2013) new construction projects that exceed a threshold of 100,000 tons per year and modifications of existing facilities that increase emissions by at least 75,000 tons per year will be subject to permitting requirements. Additionally, operating facilities that emit at least 100,000 tons per year will be subject to Title V permitting requirements (USEPA 2010a). EPA estimates that facilities responsible for nearly 70 percent of the national greenhouse gas emissions from stationary sources will be subject to permitting requirements under this rule. This rule took effect January 2, 2011.

2.2.3 California

Title 24. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted 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 efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after January 1, 2011 must follow the 2008 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Green Building Standards. On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas

not served by construction and demolition recycling infrastructure. State building code provides the minimum standard which buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Standards Code (code section in parentheses) requires:

- **Short-term bicycle parking.** If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1).
- **Long-term bicycle parking.** For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.2).
- **Designated parking.** Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles (5.106.5.2).
- **Recycling by Occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling.
- **Construction waste.** A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and-75 percent for new homes and 80-percent for commercial projects. All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled.
- **Wastewater reduction.** Each building shall reduce the generation of wastewater by one of the following methods:
    - The installation of water-conserving fixtures or
    - Utilizing nonpotable water systems (5.303.4).
    - Water use savings. 20-percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35 and 40-percent reductions.
    - Water meters. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day.
    - Irrigation efficiency. Moisture-sensing irrigation systems for larger landscaped areas.
    - Materials pollution control. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particle board.
    - Building commissioning. Mandatory inspections of energy systems (i.e. heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies.

Pavley Regulations. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. The regulation was stalled by automaker lawsuits and by the EPA's denial of an implementation waiver. On January 21, 2009, the ARB requested that the EPA reconsider its previous waiver denial. On January 26, 2009, President Obama directed that the EPA assess whether the denial of the waiver was appropriate. On June 30, 2009, the EPA granted the waiver request.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near term (2009-2012) standards will result in about a 22-percent reduction compared with the 2002 fleet, and the mid-term (2013-2016) standards will result in about a 30-percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

Executive Order S-3-05. California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for greenhouse gas emissions:

- By 2010, California shall reduce greenhouse gas emissions to 2000 levels;
- By 2020, California shall reduce greenhouse gas emissions to 1990 levels.
- By 2050, California shall reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be an aggressive, but achievable, mid-term target. The Climate Action Team's Report to the Governor in 2006 contains recommendations and strategies to help ensure the 2020 targets in Executive Order S-3-05 are met.

Low Carbon Fuel Standard - Executive Order S-01-07. The Governor signed Executive Order S¬01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to ARB for

consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

SB 1368. In 2006, the State Legislature adopted Senate Bill (SB) 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for greenhouse gas emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law will effectively prevent California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. Thus, SB 1368 will lead to dramatically lower greenhouse gas emissions associated with California's energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out-of-state producers that cannot satisfy the performance standard for greenhouse gas emissions required by SB 1368. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007.

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)." Section 21097 was also added to the Public Resources Code. It provided CEQA protection until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to adequately analyze the effects of greenhouse gases would not violate CEQA.

On April 13, 2009, the Office of Planning and Research submitted to the Secretary for Natural Resources its recommended amendments to the CEQA Guidelines for addressing greenhouse gas emissions. On July 3, 2009, the Natural Resources Agency commenced the Administrative Procedure Act rulemaking process for certifying and adopting these amendments pursuant to Public Resources Code section 21083.05. Following a 55-day public comment period and two public hearings, the Natural Resources Agency proposed revisions to the text of the proposed Guidelines amendments. The Natural Resources Agency transmitted the adopted amendments and the entire rulemaking file to the Office of Administrative Law on December 31, 2009. On February 16, 2010, the Office of Administrative Law approved the Amendments, and filed them with the Secretary of State

for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010.

The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of greenhouse gas emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

A new section, CEQA Guidelines Section 15064.4, was added to assist agencies in determining the significance of greenhouse gas emissions. The new section allows agencies the discretion to determine whether a quantitative or qualitative analysis is best for a particular project. However, little guidance is offered on the crucial next step in this assessment process—how to determine whether the project's estimated greenhouse gas emissions are significant or cumulatively considerable.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. Greenhouse gas mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze greenhouse gas emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable, however it does not answer the question of when emissions are cumulatively considerable.

Section 15183.5 permits programmatic greenhouse gas analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to proposed Section 15183.5(b). In addition, the amendments revised Appendix F of the CEQA Guidelines, which focuses on Energy Conservation. The sample environmental checklist in Appendix G was amended to include greenhouse gas questions.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydro fluorocarbons, perfluorocarbons, and sulfur hexafluoride. ARB is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB Board approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent (MMTCO2e) on December 6, 2007 (California Air Resources Board 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO2e. Emissions in 2020 in a "business as usual" scenario are estimated to be 596 MMTCO2e.

Under AB 32, the ARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable by January 1, 2010. The ARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of these early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. The ARB estimates that the 44 recommendations are expected to result in reductions of at least 42 MMTCO2e by 2020, representing approximately 25 percent of the 2020 target.

The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 (California Air Resources Board 2008). The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, Including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help

ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions.[4]

SB 375. Passing the Senate on August 30, 2008, SB 375 was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of greenhouse gas emissions, which emits over 40 percent of the total greenhouse gas emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing greenhouse gas emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies. Concerning CEQA, SB 375, section 21159.28 states that CEQA findings determinations for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network if the project:

1. Is in an area with an approved sustainable community's strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the mitigation measures required by an applicable prior environmental document.

Executive Order S-13-08. Executive Order S-13-08 indicates that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the " . . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078 requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a

Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21¬09) to adopt a regulation by July 31, 2010, requiring the state's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

2.2.4 South Coast Air Quality Management District

The project is within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). SCAQMD Regulation XXVII currently includes three rules:

- The purpose of Rule 2700 is to define terms and post global warming potentials.
- The purpose of Rule 2701, SoCal Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified greenhouse gas emission reductions in the SCAQMD.
- Rule 2702, Greenhouse Gas Reduction Program, was adopted on February 6, 2009. The purpose of this rule is to create a Greenhouse Gas Reduction Program for greenhouse gas emission reductions in the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

SCAQMD Threshold Development

The SCAQMD has established recommended significance thresholds for greenhouse gases for local lead agency consideration ("SCAQMD draft local agency threshold"). SCAQMD has published a five-tiered draft GHG threshold which includes a 10,000 metric ton of CO_2e per year for stationary/industrial sources and 3,000 metric tons of CO_2e per year significance threshold for residential/commercial projects (South Coast Air Quality Management District 2010c). Tier 3 is anticipated to be the primary tier by which the SCAQMD will determine significance for projects. The Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90-precent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to CEQA analysis. The 90-percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the SCAQMD's annual Emissions Reporting Program.

The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.

- Tier 2 consists of determining whether or not the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose but must be consistent. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:
  - All land use types: 3,000 MTCO2e per year
  - Based on land use types: residential is 3,500 MTCO2e per year; commercial is 1,400 MTCO2e per year; and mixed use is 3,000 MTCO2e per year
- Tier 4 has the following options:
  - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3: Year 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO2e/SP/year for projects and 6.6 MTCO2e/SP/year for plans;
  - Option 3, 2035 target: 3.0 MTCO2e/SP/year for projects and 4.1 MTCO2e/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

3.0 Setting

3.1 Existing Physical Setting

The project is located in the County of San Bernardino and is within the South Coast Air Basin (basin). To the west of the basin is the Pacific Ocean. To the north and east of the basin are the San Gabriel, San Bernardino, and San Jacinto mountains, while the southern limit of the basin is the San Diego County line. The basin consists of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The air quality in the basin is impacted by dominant airflows, topography, atmospheric inversions, location, season, and time of day.

3.1.1 Local Climate and Meteorology

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the Los Angeles area is transported inland until it reaches the mountains where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The local dominant wind blows predominantly from the south-southwest with relatively low velocities. The annual average annual wind speed is about 10 mph. Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion limit the vertical dispersion of air pollutants throughout the Basin.

The annual average temperature varies little throughout much of the basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas where the project site is located.

The climatological station closest to the project site is a National Weather Service Cooperative weather station located in San Bernardino. Climatological data from the National Weather Service at this station spanning the period 1893-2004 indicate an annual average temperature of 64.1 Fahrenheit, with December the coldest month (mean minimum daily temperatures of 38.5° Fahrenheit) and July, the warmest months of the year (mean daily maximum temperatures of 96.2° Fahrenheit).

The majority of the annual rainfall in the basin occurs between November and February. Summer rainfall is minimal and is generally limited to scattered thunderstorms in the coastal regions and slightly heavier showers in the eastern portion of the basin along the coastal side of the mountains. The climatological data from the San Bernardino National Weather Service Coop station spanning the period 1893-2004 indicate an annual average precipitation of 16.1 inches. Seventy-nine (79) percent of the annual rainfall occurs during the November to February rain season. Highest monthly average rainfall occurs during December and January. Year to year patterns in rainfall are unpredictable due to fluctuations in the weather. General meteorological data for the San Bernardino County area, as measured at the San Bernardino weather station, are presented in Table 3.

Temperature inversions are another important feature that limits the vertical depth through which pollution can be mixed. During the summer, coastal areas are characterized by a sharp discontinuity between the cool marine air at the surface and the warm, sinking air aloft within the high-pressure cell over the ocean to the west. This marine/subsidence inversion allows for good local mixing, but acts like a giant lid over the Basin. The air remains stagnant, as the average wind speed in downtown Los Angeles becomes less than five mph. A second type of inversion forms on clear winter nights when cold air off the mountains to the south sinks to the valley floor while the air aloft over the valley remains warm. This forms radiation inversions. These inversions, in conjunction with calm winds, trap pollutants such as those from automobile exhaust near their source. They lead to air pollution "hotspots" in heavily developed coastal areas of the Basin, but onshore breezes often push the pollutants along canyons into the inland valleys. Summers are often periods of hazy visibility and occasionally unhealthful air, while winter air quality impacts tend to be highly localized and can consist of elevated levels of nitrogen dioxide and fine particulate matter.

3.1.2 Local Air Quality

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. For evaluation purposes, the South Coast Air Quality Management District (SCAQMD) has divided the basin into 36 Source Receptor Areas (SRA) within the Basin operating monitoring stations in most of the areas. These SRAs are designated to provide a general representation of the local meteorological, terrain, and air quality conditions within the particular geographical area. The project is within SRA 32,

Northwest San Bernardino Valley. This station monitors CO, O_3, and NO_2. The next closest monitoring station is the Southwest San Bernardino Valley Station, Station 33, which monitors PM_{10}, $PM_{2.5}$, SO_2. The pollutant levels from SRA 32 and 33 were used to comprise a "background" for the project location.

Table 4 summarizes 2010 through 2012 published monitoring data, which is the most recent 3-year period available. The data shows that during the past few years, the project area has exceeded the ozone, PM_{10}, and $PM_{2.5}$ standards.

3.1.3 Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard. Table 5 lists the attainment status for the criteria pollutants in the Basin.

3.2 Climate Change Setting

Climate change is a change in the average weather of the earth that is measured by alterations in temperature, wind patterns, storms, and precipitation. These changes are assessed using historical records of temperature changes occurring in the past, such as during previous ice ages. The historical data is utilized to extrapolate a level of statistical significance specifically focusing on temperature records from the last 150 years.

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The IPPC concluded that global average temperatures and sea levels are expected to rise under all analytical scenarios (Intergovernmental Panel on Climate Change 2007a). The report also concluded that"[w]arming of the climate system is unequivocal," and that "[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

Many question the validity of the IPCC's report by claiming the inadequacy of the peer review process. Audits have concluded that 48 percent of the chapters in the Fourth

Assessment Report received a grade of "F" meaning that 59 percent or fewer of the sources were peer reviewed (NoConsensus.org 2010).

Consequences of Climate Change in California

In California, climate change may result in consequences such as the following (from California Climate Change Center 2006 and Moser et al. 2010).

- A rise in sea levels resulting in displacement of costal businesses and residencies. During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 55 inches by the end of the century.
- A reduction in the quality and supply of water from the Sierra snowpack. If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- Increased risk of large wildfires. If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- Reductions in the quality and quantity of certain agricultural products. The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- Exacerbation of air quality problems. If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- An increase temperature and extreme weather events. Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- A decrease in the health and productivity of California's forests. Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

3.3 Greenhouse Gases

Gases that trap heat in the atmosphere are commonly referred to as "greenhouse gases" because they function like a greenhouse by letting light in while preventing heat from escaping. Naturally occurring GHGs include water vapor, carbon dioxide (CO_2) methane (CH_4) and nitrogen dioxide/oxides (N_2O and NO_x). The natural accumulation of GHGs in the atmosphere has a warming effect on the Earth's temperature. Without these natural GHGs, the Earth's temperature would be cooler.

In addition to the naturally occurring gases, man-made chemicals also act as GHGs and include the following common compounds: chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), ozone (O_3), and aerosols. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Climate change is driven by forcings and feedbacks. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in watts per square meter. A feedback is a climate process that can strengthen or weaken a forcing. For example, when ice or snow melts, it reveals darker land underneath which absorbs more radiation and causes more warming. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a greenhouse gas compared with the reference gas, carbon dioxide.

Individual greenhouse gas compounds have varying global warming potential and atmospheric lifetimes. Carbon dioxide (CO_2), the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a greenhouse gas is a measure of how much a given mass of a greenhouse gas is estimated to contribute to global warming. To describe how much global warming a given type and amount of greenhouse gas may cause, the carbon dioxide equivalent (CO_2 e) is used. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing greenhouse gas emissions since it normalizes various greenhouse gas emissions to a consistent reference gas, carbon dioxide. For example, methane's warming potential of 21 indicates that methane has 21 times greater warming affect than carbon dioxide on a molecule per molecule basis. A carbon dioxide equivalent is the mass emissions of an individual greenhouse gas multiplied by its global warming potential. Greenhouse gases defined by AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. They are described in Table 6.

Emissions Inventories

Emissions in California were approximately 450 million tons of carbon dioxide equivalents (MMTCO2e) in 2009 (California Air Resources Board).

3.4 Greenhouse Gas Inventory

This analysis is restricted to greenhouse gases identified by AB 32 and the CEQA Guidelines (section 15364.5), which include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. The project would generate a variety of greenhouse gases during construction and operation, including several defined by AB 32 and the CEQA Guidelines such as carbon dioxide, methane, and nitrous oxide.

The project may also emit greenhouse gases that are not defined by AB 32 and the CEQA Guidelines. For example, the project may generate aerosols. During construction, the diesel fueled vehicles and equipment emit diesel particulate matter, which has black carbon, which is a component of aerosol. During operation, any diesel fueled trucks or vehicles could emit aerosols. Aerosols are short-lived particles, as they remain in the atmosphere for about one week. Studies have indicated that black carbon has a high global warming potential; however, the Intergovernmental Panel on Climate Change states that it has a low level of scientific certainty (Intergovernmental Panel on Climate Change 2007a).

Water vapor could be emitted from evaporated water used for landscaping, but this is not a significant impact, because water vapor concentrations in the upper atmosphere are primarily due to climate feedbacks rather than emissions from project-related activities. The project would emit nitrogen oxides and volatile organic compounds, which are ozone precursors. Ozone is a greenhouse gas; however, unlike the other greenhouse gases, ozone in the troposphere is relatively short-lived and can be reduced in the troposphere on a daily basis. Stratospheric ozone can be reduced through reactions with other pollutants.

Certain greenhouse gases defined by AB 32 would not be emitted by the project. Perfluorocarbons and sulfur hexafluoride are typically used in industrial applications, none of which would be used by the project. Therefore, it is not anticipated that the project would emit perfluorocarbons or sulfur hexafluoride.

An upstream emission source (also known as life cycle emissions) refers to emissions that were generated during the manufacture of products to be used for construction of the project. Upstream emission sources for the project include but are not limited emissions from the manufacture of cement, emissions from the manufacture of steel, and/or emissions from the transportation of building materials to the seller. The upstream emissions were not estimated because they are not within the control of the project and to do so would be speculative at this time. Additionally, the California Air Pollution Control

Officers Association White Paper on CEQA and Climate Change supports this conclusion by stating, "The full life-cycle of GHG [greenhouse gas] emissions from construction activities is not accounted for . . . and the information needed to characterize [life-cycle emissions] would be speculative at the CEQA analysis level" (California Air Pollution Control Officers Association 2008). Therefore, pursuant to CEQA Guidelines Sections 15144 and 15145, upstream / life cycle emissions are speculative and no further discussion is necessary.

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4.0 Modeling Parameters and Assumptions

4.1 Construction

Emissions were estimated using the California Emissions Estimator Model Version 2013.2.2 (CalEEMod), which was released October 2, 2013. The analysis reflects the construction of 516,490 square feet of warehouse space and parking lot provided for a total of 746 vehicles. Construction was anticipated to begin no sooner than January 2015. It was assumed that construction would last approximately 2 years. The duration of construction is shown in Table 7.

The construction equipment list used for the unmitigated scenario is shown in Table 8.

Other parameters which are used to estimate construction emissions such as the worker and vendor trips and trip lengths utilize the CalEEMod defaults. The trips assumptions are provided in Table 9.

Grading The quantity of fugitive dust estimated by CalEEMod is based on the number of equipment used during grading. Tractors, graders and dozers would impact 5 acres per 8-hour day if all were used simultaneously. Therefore, considering the equipment assumed during grading, there would be a worst-case 5 acres disturbed per day on the site. To avoid a significant impact during construction, the project is confined to a maximum disturbance area of 5 acres. It is assumed for purposes of this analysis that there would be no import or export of soil.

SCAQMD Rule 403 requires fugitive dust generating activities follow best available control measures to reduce emissions of fugitive dust. These measures are accounted for in CalEEMod as "mitigation" because the model categorizes the measures as "mitigation," even though they are technically not mitigation.

4.2 Operations

Operational or long-term emissions occur over the life of the Project. Both mobile and area sources generate operational emissions. Area source emissions arise from consumer product usage, heaters that consume natural gas, gasoline-powered landscape equipment, gasoline service station, and architectural coatings (painting). Mobile source emissions from motor vehicles are the largest single long-term source of air pollutants from the operation of the Project and consist of emissions from vehicles visiting the project site. Small amounts of emissions would also occur from area sources such as the consumption of natural gas for heating, hearths, from landscaping emissions, and consumer product usage.

The operational emissions were estimated using the California Emissions Estimator Model Version 2013.2.2 (CalEEMod), which was released October 2, 2013.

4.2.1 Motor Vehicle Emissions

Estimates of motor vehicle emissions require information on four parameters: trip generation, mix of vehicles accessing the Project (i.e., car versus type of truck), length of each trip made by each type of vehicle, and emission factor (quantity of emission for each mile traveled or time spent idling by each vehicle). Each of these parameters is discussed below.

Non-Residential Trips

Due to the proposed project's location and proposed warehouse land use, the average commercial-work (C-W) based trip length was increased to 40 miles and adjusted to 20 percent of the trips, while the other trip lengths were based on the default values and ratios. Vehicle trip assumptions are shown in Table 10.

Vehicle trips associated with the project have been analyzed by inputting the project generated vehicular trips from the Agua Mansa High-Cube Warehouse Traffic Impact Study, prepared by RK Engineering Group. The traffic study states the trip generation rate is 1.68 trips per thousand square feet of high cube warehouse space. Table 11 details the trip generation rates incorporated into CalEEMod.

The traffic impact study found that the project would create a total of 868 vehicle trips per day; 691 automobile round trips, 30 2-axle truck round trips, 40 3-axle truck round trips, and 107 4+ axle truck round trips per day. The vehicle mix in the CalEEMod model was adjusted based on the vehicle mix provided in the Traffic Impact Study and the resultant mix is shown in Table 12.

Emission Factors

The emission factors (from EMFAC2011) required to estimate the mobile source emissions are embedded in the CalEEMod emissions model.

4.2.2 Other Emissions

Natural Gas. Natural gas emissions refer to the emissions that occur when natural gas is combusted on the project site for heating water, space heating, stoves, or other uses. Criteria air pollutant and greenhouse gas emissions were estimated using CalEEMod defaults.

Indirect Electricity. Indirect electricity refers to the greenhouse gas emissions generated by offsite power plants to supply the electricity required for the project. The CalEEMod defaults for energy intensity were used.

Water Transport. There would be greenhouse gas emissions generated from the electricity required to supply and treat the water to be used on the project site. The water consumption for the Project is shown in Table 13.

Waste. There would be greenhouse gas emissions from the decomposing waste generated by the project. The CalEEMod default estimates the Project scenario would generate 458.5 tons per year.

4.3 Localized Construction Analysis Modeling Parameters

The SCAQMD published its *Final Localized Significance Threshold Methodology* (June 2003, revised July 2008) and *Final – Methodology to Calculate Particulate Matter (PM) 10 and PM 2.5 Significance Thresholds* (October 2006), recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors.

To avoid the need for every air quality analysis to perform air dispersion modeling, the SCAQMD performed air dispersion modeling for a range of construction sites less than or equal to 1, 2, and 5 acre in size and created look-up tables that correlate pollutant emissions rates with project size to screen out projects that are unlikely to generate enough emissions to result in a locally significant concentration of any criteria pollutant. These look-up tables can also be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required.

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. Nearby development in the project vicinity includes existing single-family residential units within 25 meters of the site.

These look-up tables were utilized to determine localized significance. The construction emissions were compared to the SCAQMD's threshold tables with a disturbance area of 5 acres. The tables for a 5-acre footprint was used as Table 8 shows the maximum disturbance would occur during grading, and would be no more than 5 acres per day. The project will be confined to a 5 acre disturbance area footprint/per day (see mitigation measures MM AQ-1 and AQ-2). A review of the CalEEMod model outputs indicated that the highest emissions generated from onsite construction activities are associated with grading activities of the project site. Therefore, grading emissions during this construction activity were evaluated in the localized assessment.

4.4 Localized Operational Analysis Modeling Parameters

For operational emissions, the screening tables for a disturbance area of 5 acres and a distance of 25 meters were utilized to determine significance. The tables were compared to the project's operational emissions.

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5.0 Thresholds of Significance

5.1 Air Quality Thresholds of Significance

5.1.1 CEQA Guidelines for Air Quality

The CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines. A significant impact would occur if the project would:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

d) Expose sensitive receptors to substantial pollutant concentrations; or

e) Create objectionable odors affecting a substantial number of people.

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, SCAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. There are daily emission thresholds for construction and operation of a proposed project in the Basin.

5.1.2 Regional Significance Thresholds for Construction Emissions

The following CEQA significance thresholds for construction emissions are established for the Basin:

- 75 pounds per day (lbs/day) of ROC
- 100 lbs/day of NO_x
- 550 lbs/day of CO
- 150 lbs/day of PM_{10}
- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of SO_2

Projects in the Basin with construction-related emissions that exceed any of the emission thresholds are considered to be significant under SCAQMD guidelines.

5.1.3 Regional Significance Thresholds for Operational Emissions

The daily operational emissions significance thresholds for the Basin are as follows:

- 55 pounds per day (lbs/day) of ROC
- 55 lbs/day of NO_x
- 550 lbs/day of CO
- 150 lbs/day of PM_{10}
- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of SO_2

Local Microscale Concentration Standards The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

5.1.4 Thresholds for Localized Significance

LSTs represent the maximum emissions from a project site that is not expected to result in an exceedance of the national or state AAQS shown in Table 4. LSTs are based on the ambient concentrations of that pollutant within the project source receptor area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA for the LST is the Northwest San Bernardino Station area.

In the case of CO and NO_2, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard,

then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM_{10} and $PM_{2.5}$, both of which are non-attainment pollutants. For these two, the significance criteria are the pollutant concentration thresholds presented in SCAQMD Rules 403 and 1301. The Rule 403 threshold of 10.4 micrograms per cubic meter applies to construction emissions (and may apply to operational emissions at aggregate handling facilities).

Construction LSTs are assessed with the SCAQMD screening thresholds. Construction thresholds for a 5-acre site in the Northwest San Bernardino County SRA (SRA 32) at 25 meters were utilized:

- 270 lbs/day of NO_X
- 2,193 lbs/day of CO
- 14 lbs/day of PM_{10}
- 8 lbs/day of $PM_{2.5}$

Operational LSTs are assessed with the SCAQMD screening thresholds. Operational thresholds for a 5-acre site in the Northwest San Bernardino County SRA at 25 meters were utilized:

- 270 lbs/day of NO_X
- 2,193 lbs/day of CO
- 4 lbs/day of PM_{10}
- 2 lbs/day of $PM_{2.5}$

5.1.5 Thresholds for Toxic Air Contaminants

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

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or

- Toxic air containments 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).

5.2 Greenhouse Gas Thresholds of Significance

5.2.1 CEQA Guidelines for Greenhouse Gas

CEQA Guidelines define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in the environment." To determine if a project would have a significant impact on greenhouse gases, the type, level, and impact of emissions generated by the project must be evaluated.

The following greenhouse gas significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the project would:

(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

(b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

5.2.2 SCAQMD Interim Significance Thresholds

In addition to CEQA guidelines, the SCAQMD established working group to develop an interim significance threshold for GHG emissions under CEQA as discussed in Section 3.4.1. This analysis compares the Project's GHG emissions to the SCAQMD's Tier 3 approach.

5.2.3 County of San Bernardino Thresholds

The County of San Bernardino GHG Emissions Reduction Plan (GHG Plan) requires the reduction of 159,423 metric tons of CO_2 equivalent emissions ($MTCO_2e$) per year from new development by 2020 as compared to the unmitigated conditions. The Greenhouse Gas Emissions Development Review Processes (GHG Review Processes), prepared for County of San Bernardino, August 2011, provides project level direction on how the County plans to achieve the reduction in GHG Emissions. The GHG Review Processes determined that projects that do not exceed 3,000 $MTCO_2e$ per year will be consistent with the GHG Plan and determined to have a less than significant individual and cumulative impact for GHG emissions. For projects that exceed 3,000 $MTCO_2e$ per year of GHG emissions the applicant may choose to either; utilize the Screening Tables, which consist of a list of mitigation measures, rated for their effectiveness and provide mitigation to reach 100 points; or provide a detailed GHG analysis that quantifies project design features or mitigation measures in order to reduce GHG emissions by 31 percent or more over year 2020 unmitigated GHG emissions levels.

6.0 Air Quality Impact Analysis

6.1 Construction Air Quality Emissions Impact

6.1.1 Regional Construction Emissions

CalEEMod was used to estimate onsite and offsite construction emissions as shown in Table 14. Emissions incorporate Rule 1113 (use of low VOC paint) and Rule 403 during construction. **The construction related air emissions will not exceed the SCAQMD's regional emission thresholds.** The project shall require that site preparation and grading contractors limit the daily disturbed area to 5 acres or less. Therefore, the project will have a less than significant impact.

6.1.2 Localized Construction Emissions

Table 15 illustrates the construction related LSTs for the project area. **The emissions will be below the SCAQMD thresholds of significance for localized construction emissions.** Therefore, the Project will not result in significant localized construction emissions.

6.1.3 Fugitive Dust

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, and cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction.

Construction emissions can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. The proposed Project will be required to comply with SCAQMD Rules 402 and 403 to control fugitive dust. Table 14 illustrates total construction emissions, i.e., fugitive-dust emissions and construction equipment exhausts that have incorporated a number of feasible control measures that can be reasonably implemented to significantly reduce PM_{10} emissions from construction. **Table 14 illustrates that all construction phases, the daily total construction emissions with standard control measures would be below the daily thresholds established by the SCAQMD.** Therefore, the Project will not result in significant Fugitive Dust emissions.

6.1.4 Odors

Heavy-duty equipment in the project area during construction will emit odors; however, the construction activity would cease to occur after individual construction is completed. Potential sources that may emit odors during operations of proposed project would include odors emissions from diesel truck emissions and trash storage areas. **Due to the distance**

of the nearest receptors from the proposed project site and through compliance to SCAQMD's Rule 402 no significant impact related to odors would occur during operation.

6.1.5 Naturally Occurring Asbestos

The proposed project is located in San Bernardino County which is not among the counties that are found to have serpentine and ultramafic rock in their soils. **There, the potential risk for naturally occurring asbestos (NOA) during project construction is small and less than significant.**

6.1.6 Construction-Related Toxic Air Contaminant Impact

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.

6.2 Operational Air Quality Emissions Impact

6.2.1 Regional Operational Emissions

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The stationary source emissions would come from additional natural gas consumption for on-site buildings and electricity for the lighting in the buildings and at the parking area. Based on trip generation factors included in the traffic study, long-term operational emissions associated with the proposed Project, calculated with the CalEEMod model, are shown in Table 16. Area sources include architectural coatings, consumer products, and landscaping. Energy sources include natural gas consumption for heating.

Table 16 shows that the increase of all criteria pollutants as a result of the proposed Project is below the SCAQMD daily emission thresholds. Therefore, the Project will not result in significant Regional Operational emissions.

6.2.2 Localized Operational Emissions

Table 17 shows the calculated emissions for the proposed operational activities compared with appropriate LSTs. The LST analysis only includes on-site sources; however, the CalEEMod software outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 17 include all on-site project-related stationary sources and 10% of the project-related new mobile sources. This percentage is an estimate of the amount of project-related new vehicle traffic that will occur on-site.

Table 17 indicates that the operational emission rates would not exceed the LST thresholds for the nearest sensitive receptors at 25 meters. Therefore, the Project will not result in significant Localized Operational emissions.

6.3 CO Hot Spot Emissions

The SCAQMD recommends that a local CO hot spot analysis be conducted if the intersection meets one of the following criteria: 1) the intersection is at level of service (LOS) D or worse and where the project increases the volume to capacity ratio by 2 percent, or 2) the project decrease at an intersection from C to D.

Mirco-scale air quality emissions have traditionally been analyzed in environmental documents where the air basin was a non-attainment area for CO. However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no "hot spots" anywhere in the air basin, even at intersections with much higher volumes, much worse congestion, and much higher background CO levels than anywhere in Riverside County. **If the worst-case intersections in the air basin have no "hot spot" potential, any local impacts will be below thresholds.**

6.4 Air Quality Mitigation Measures

Air Quality Reduction Measures

The Project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable suppression techniques are as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas in active for 10 days or more).
- Water active sites at least three times daily.

- Cover all trucks hauling dirt, san, soil, or other loose materials, or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) section 23114.
- Pave construction access roads at least 100 feet onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.

Air Quality Impact Construction Mitigation Measures

The following mitigation measures are required to maintain the construction emissions below the SCAQMD daily emissions thresholds:

MM AQ-1 The project shall require that the site preparation and grading contractors limit the daily disturbed area to 5 acres or less.

MM AQ-2 The project shall require that during site preparation, and grading operations all contractors shall comply with all applicable measures listed in SCAQMD Rule 403 to control fugitive dust including the application of water to all exposed surfaces a minimum of three times per day.

Air Quality Impact Operational Measures

None required.

6.5 Air Quality Management Plan Consistency

An AQMP describes air pollution control strategies to be taken by a city, county, or region classified as a nonattainment area. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. CEQA requires that certain proposed projects be analyzed for consistency with the AQMP. For a project to be consistent with the AQMP adopted by the SCAQMD, the pollutants emitted from the project should not exceed the SCAQMD daily threshold or cause a significant impact on air quality, or the project must already have been included in the AQMP projection. However, if feasible mitigation measures are implemented and shown to reduce the impact level from significant to less than significant, a project may be deemed consistent with the AQMP. The AQMP uses the assumptions and forecast projections of local planning agencies to determine control strategies for regional compliance status. Since the AQMP is based on the local General Plan, projects that are deemed consistent with the General Plan are found to be consistent with the AQMP.

The project is located within the single family residence boundary of the Agua Mansa Industrial Corridor/Specific Plan. The project will seek an amendment to the Agua Mansa Specific Plan and would require a zone change from single family residential to industrial. High-cube warehouses are an allowed uses within the Specific Plan. Therefore, the emissions associated with the proposed project are already accounted for in the AQMP, do

not exceed SCAQMD regional thresholds for construction or operation, and no significant inconsistency with the AQMP would occur. No mitigation is required.

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7.0 Greenhouse Gas Impact Analysis

7.1 Construction Greenhouse Gas Emissions Impact

CalEEMod was used to estimate onsite and offsite emissions. For assumptions used in estimating these emissions, please refer to Section 4.1. Greenhouse gas emissions from Project construction equipment and worker vehicle emissions are shown in Table 18. The emissions are from all phases of construction. The total construction emissions amortized over a period of 30 years are estimated at 89.68 metric tons of CO_2e per year. CalEEMod output calculations are provided in Appendix A.

7.2 Operational Greenhouse Gas Emissions Impact

Operational or long-term emissions occur over the life of the project. For assumptions used in estimating the emissions and details regarding the emissions, please refer to Section 4.2. The unmitigated operational emissions for the Project are 3,663.56 metric tons of CO_2e per year as shown in Table 19.

Emissions reductions also include measure LUT-2 from the 2010, Final CAPCOA Quantification Report. LUT-2 addresses the reduction in the project's vehicle miles travelled (VMT) due to its location in an urban/suburban environment. According to page 159 of the CAPCOA Report, this measure reduces not only reduces greenhouse gas emissions, but also criteria pollutant emissions by 10 to 65 percent, depending on project location (urban 65 percent, compact infill 30 percent, and suburban center 10 percent) and is "appropriate for residential, retail, office, industrial and mixed-use projects." This reduction measure is not included as mitigation option in CalEEMod; therefore, a percentage reduction of 10 percent (to be conservative) of mobile source emissions was calculated separately and is shown in Table 18.

As shown in Table 19, the project's mitigated emissions (incorporating mitigation measures MM GHG-1 through 5) would be reduced to 2,761.81 $MTCO_2e$ per year, which would not exceed the San Bernardino County Climate Action Plan (CAP) screening threshold of 3,000 metric tons per year of CO_2e. Therefore, with implementation of the above mitigation measures, the proposed project would result in a less than significant individual and cumulative impact for GHG emissions.

7.2.1 Operational Mitigation Measure Reductions

MM GHG-1 The project applicant shall require that all building structures meet Green Building Code Standards (CalGreen) and that all project buildings shall be

designed to exceed 2008 Title 24 requirements by thirty percent (30%) or meet current (2013) Title 24 standards[2].

MM GHG-2 The project applicant shall encourage that any future tenants institute a ride sharing program and employee vanpool/shuttle that is open to all employees.

MM GHG-3 The project applicant shall encourage all future tenants to institute recycling programs that reduces waste to landfills by a minimum of 50 percent and includes designated recycling bins at each proposed structure and requires all green waste to be processed at a recycling or composting facility.

MM GHG-4 The project applicant shall require that at least 147 new trees are planted on site.

MM GHG-5 The project shall incorporate a water conservation strategy of 20% or higher.

7.3 Conflict with an Applicable Plan, Policy or Regulation for the Purpose of Reducing the Emissions of Greenhouse Gases

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.

On December 6, 2011, the County adopted a Greenhouse Gas Emissions Reduction Plan (GHG Plan). In addition, the Greenhouse Gas Emissions Development Review Processes (GHG Review Processes), prepared for the County of San Bernardino, August 2011, provides direction for conformity of new development projects to the GHG Plan. The GHG Review Processes determined that projects that do not exceed 3,000 MTCO2e per year will be consistent with the GHG Plan and determined to have a less than significant individual and cumulative impact for GHG emissions. With the incorporation of mitigation measures GHG-1 through GHG-5, the proposed project's emissions do not exceed 3,000 MTCO2e per year, and the project is considered to be consistent with the GHG Plan. 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.

[2] Current 2013 Title 24 Standards for commercial uses are approximately 30% more efficient than 2008 Title 24 Standards.

8.0 Diesel Emissions Health Risk Assessment

The on-going operation of the proposed project would generate toxic air contaminant emissions from diesel truck emissions created by the on-going operations 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.

A health risk assessment requires the completion and interaction of four general steps:

1. Quantify project-generated TAC emissions.
2. Identify nearby ground level receptor locations that may be affected by the emissions (including any sensitive receptor locations such as residences, schools, hospitals, etc).
3. Perform air dispersion modeling analyses to estimate ambient pollutant concentrations at each receptor location using project TAC emissions and representative meteorological data to define the transport and dispersion of those emissions in the atmosphere.
4. Characterize and compare the calculated health risks with the applicable health risk significance thresholds.

8.1 Emissions Inventory Development

Important issues that affect the dispersion modeling include the following: 1) Model Selection, 2) Source Treatment, 3) Meteorological Data, and 4) Receptor Grid. Each of these issues is addressed below.

8.1.1 Emission Source Estimates – DPM from Motor Vehicles

DPM emissions from the various sources were calculated using information derived from the project description, and mobile source emission factors from the CARB EMFAC2011 emissions factor model. Truck mix information was obtained from the project specific traffic impact study (RK Engineering Group, 2014).

Four pieces of information are required to generate the mobile source emissions from the proposed project:

- Number of vehicle trips for each component of the proposed project;
- Type of vehicles that access the proposed project (passenger car vs. heavy-duty truck and gasoline vs. diesel);
- The allocation of the vehicle trips to each building that comprises that proposed project; and
- Estimate of the vehicle emission factors for calculating exhausting and idling emissions.

Estimate of Vehicle Trips and Vehicle Types

The traffic impact study (RK Engineering Group, 2014) showed that the project is expected to generate approximately 868 vehicle trips per day.

For the Proposed Project, passenger vehicles comprise 79.6 percent of the vehicle fleet and trucks 20.4 percent. Of that 20.4 percent, 12.33 percent are heavy-heavy duty (4-axle) trucks, 4.64 percent are medium-heavy duty (3-axle), and 3.46 percent are light-heavy duty (2-axle) trucks. The vehicle fleet mix is defined as the mix of motor vehicle classes active during the operation of the project. Emission factors are assigned to the expected vehicle mix as a function of vehicle class, speed, and fuel use (gasoline and diesel-powered vehicles).

Estimate of Emission Factors

The DPM emission factors for the various vehicle types were derived from the CARB EMFAC2011 mobile source emission model. The 70-year average factors were derived for San Bernardino County for year 2017, the buildout year the proposed project. Emissions factors were estimated to establish the emissions generated while the vehicles travel off-site, along travel links from the entrance to the loading docks, and while idling at the loading dock during loading or unloading materials. All vehicles were assumed to travel on-site at a speed of 10 miles per hour. Off-site, the speeds along the roads were anticipated to average 35 miles per hour. Delivery vehicles were assumed to idle for a maximum of 15 minutes per vehicle per day (5 minutes per location: at the facility entrance, at the loading bay, and at the facility exit, in keeping with the CARB Air Toxic Control Measure (ATCM), which regulates truck idling time (CARB 2005). Table 20 provides the emission factors used in this assessment. It should be noted that the DPM emissions on both the gram per mile and gram per idle hour bases decline beyond 2013 for all vehicle classes and in particular the heavy-heavy-duty truck class (the 4+ axle "big rig" trucks). This is due to the CARB emissions' requirements on heavy-duty trucks that call for either the replacement of older trucks with cleaner trucks or the installation of diesel particulate matter filters on the truck fleet.

Emission Source Characterization

Each of the emission source types described above also requires geometrical and emission release specifications for use in the air dispersion model. Table 21 provides a summary of the assumptions used to configure the various emission sources. The following definitions are used to characterize the emission source geometrical configurations referred to in Table 21.

Point source: A single, identifiable, local source of emissions; it is approximated in the AERMOD air dispersion model as a mathematical point in the modeling region with a location and emission characteristics such as height of release, temperature, etc., for example, a truck idle location.

Line source: A series of volume sources along a path, for example, vehicular traffic along a roadway.

Exhibit C provides the location of the project buildings, emission source locations, and the locations of the adjacent sensitive receptors (located to the south and west).

8.2 Receptor Network

The assessment requires that a network of receptors be specified where the impacts can be computed at the various locations surrounding the project. Receptors were located at existing residences surrounding the proposed project (as detailed above). In addition, the identified sensitive receptors locations were supplemented by the specification of a modeling grid that extended around the proposed project to identify other potential locations of impact. The locations of the receptors are shown as orange triangles on Exhibit C.

8.3 Dispersion Modeling

The next step in the assessment process utilizes the emissions inventory along with a mathematical air dispersion model and representative meteorological data to calculate impacts at the various receptor locations. The dispersion model used in this assessment is described below.

8.3.1 Model Selection

The assessment of air quality and health risk impacts from pollutant emissions from this project applied the USEPA AERMOD Model, which is the air dispersion model accepted by the SCAQMD for performing air quality impact analyses. AERMOD predicts pollutant concentrations from point, area, volume, line, and flare sources with variable emissions in terrain from flat to complex with the inclusion of building downwash effects from buildings on pollutant dispersion. It captures the essential atmospheric physical processes and provides reasonable estimates over a wide range of meteorological conditions and modeling scenarios.

8.3.2 General Model Assumptions

The basic options used in the dispersion modeling are summarized in Table 22. As indicated in Table 22, the analysis takes into account the effects of building downwash on the dispersion of emissions from the various sources located on the project's property. Building downwash occurs when the aerodynamic turbulence, induced by nearby buildings, causes pollutants emitted from an elevated source to be mixed rapidly toward the ground (downwash), resulting in potentially higher ground- level concentrations than if the buildings were not present. The AERMOD dispersion model contains algorithms to account for building downwash effects. The required information includes the location of the emission source; the location of adjacent buildings; and the building geometry in terms of length, width, and height. For purposes of this analysis, the emission source and

building locations were taken from the project site plan. The building geometries were derived from the project plan, assuming a building height of 35 feet for the building. Important issues that affect the dispersion

8.3.3 Meteorological Data

Meteorological data from the Air District's Riverside monitoring site was selected for this modeling application. .Data for the years 2008 to 2012 from SCAQMD's Riverside air monitoring station (as that station is the closest to the site) was used in the assessment. Exhibit D shows a wind rose for the project area (Riverside).

8.4 Estimation of Health Risks

Health risks from diesel particulate matter twofold: First, diesel particulate matter is a carcinogen according to the State of California. Second, long-term chronic exposure to diesel particulate matter can cause health effects to the respiratory system.

Cancer Risk

According to the in *Health Risk Assessment for Proposed Land Use Projects*, prepared by CAPCOA, July 2009, the cancer risk should be calculated using the following formula:

[Dose-inh (mg/(Kg-day)] * [Oral Slope Factor (kg-day)/mg]*[1x106] = Potential Cancer Risk

Where:

Oral Slope Factor = 1.1
Dose-inh = (C¬air * DBR * A * EF * ED * 10-6) / AT

Where:

Cair [Concentration in air ($\mu g/m^3$)] = (Calculated by AERMOD Model)
DBR [Daily breathing rate (L/kg body weight – day)] = 302 for residential, 149 for off-site worker
A [Inhalation absorption factor] = 1
EF [Exposure frequency (days/year)] = 350 ED [Exposure duration (years)] = 70
10^6 [Micrograms to milligrams conversion]
AT [Average time period over which exposure is averaged in days] = 25,550

According to the OEHHA formula the residential receptors equates to Cair * 318.91 = Potential Cancer Risk. The Year 2017 model run results are shown below on Exhibit D and Appendix B. Table 23 provides a summary of the calculated diesel emission concentrations at the nearest sensitive receptors. Table 23 shows that the point of maximum impact (PMI) of off-site DPM emissions would occur at the project access along Agua Mansa Road, with concentrations of 0.0454 $\mu g/m^3$ The project diesel emissions at the PMI would result in a

cancer risk increase of 1.4 per million people, however there are no sensitive receptors located in the proximity of the PMI. Sensitive Receptor 1, which is located east of Building 2 project boundary line, would experience the highest level of project-related diesel emissions that would result in a cancer risk increase of 0.8 per million people. **All off-site diesel emissions concentrations were found to be below the 10.0 in a million cancer risk threshold that has been discussed above in Section 5.1.5. Therefore, no significant long-term health impacts would occur from the operation of diesel trucks on the project site**.

Non-Cancer Risks

The relationship for non-cancer health effects is given by the equation:

HIDPM = CDPM/RELDPM

Where:

HIDPM = Hazard Index; an expression of the potential for non-cancer health effects.

CDPM = Annual average diesel particulate matter concentration in $\mu g/m^3$.

RELDPM = Reference Exposure Level (REL) for diesel particulate matter; the diesel particulate matter concentration at which no adverse health effects are anticipated.

The RELDPM is 5 $\mu g/m^3$. The Office of Environmental Health Hazard Assessment as protective for the respiratory system has established this concentration. The resulting Hazard Index is

HIDPM = 0.01305/5 = 0.009

The criterion for significance is a Hazard Index increase of 1.0 or greater. **Therefore, the on-going operations of the proposed project would result in a less than significant impact due to the non-cancer risk from diesel emissions created by the proposed project.**

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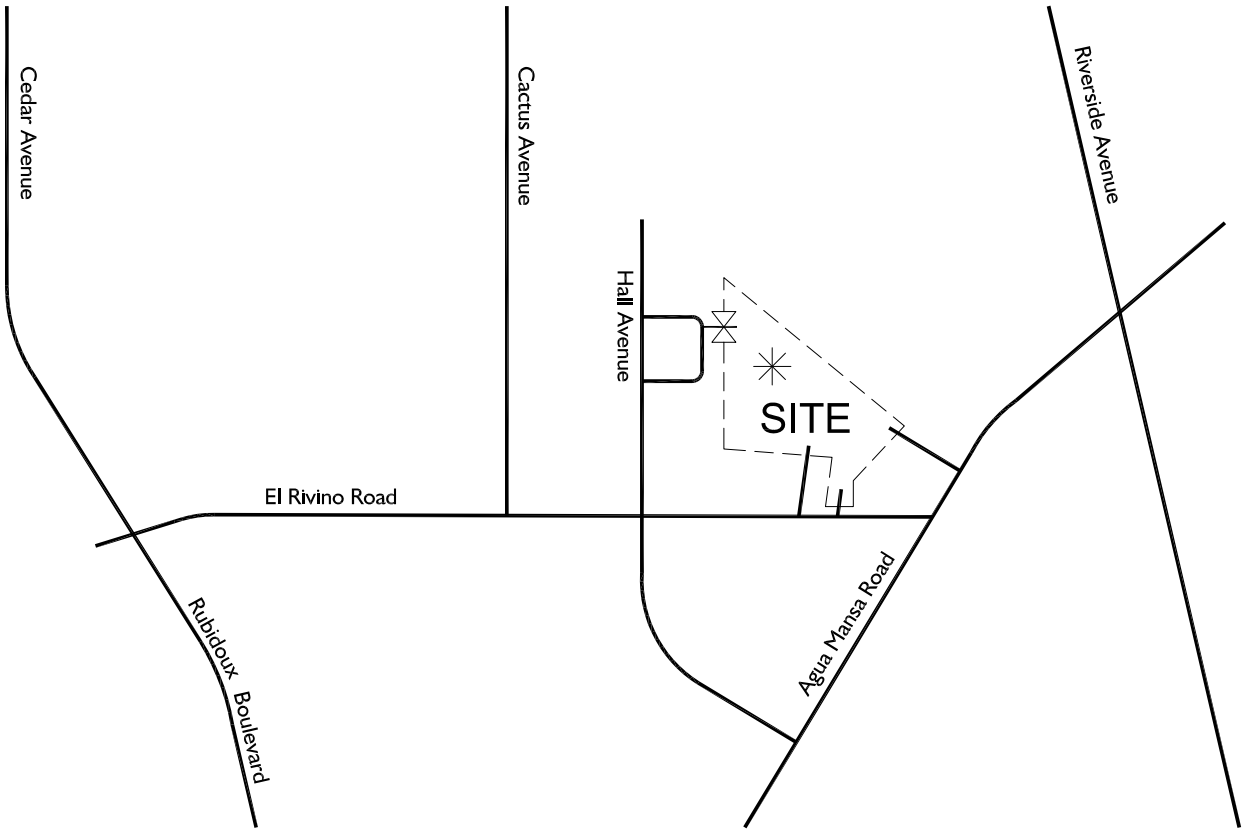
Exhibits

Exhibit A
Location Map



Legend:

⋈ = Emergency Access Only

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Exhibit B
Site Plan

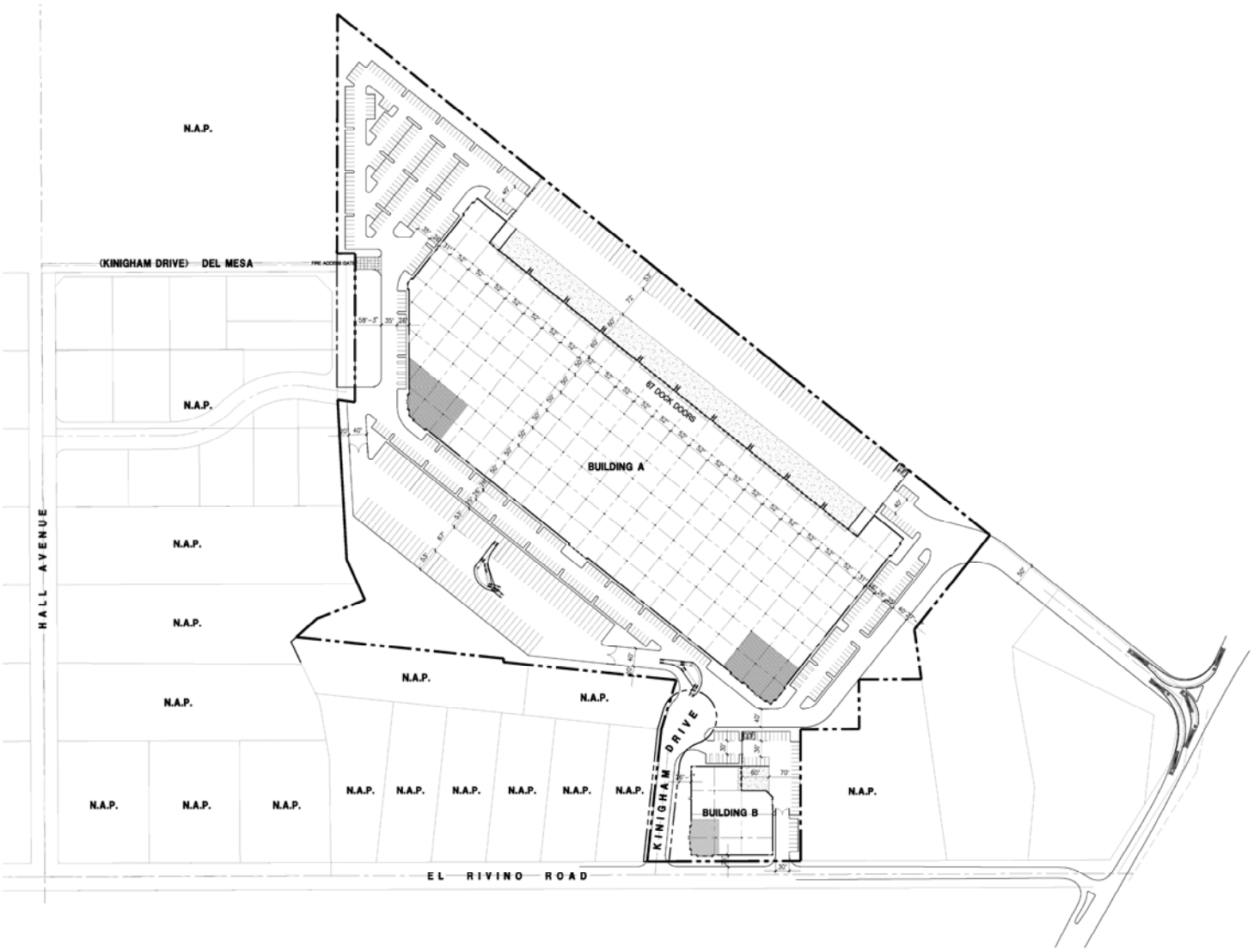

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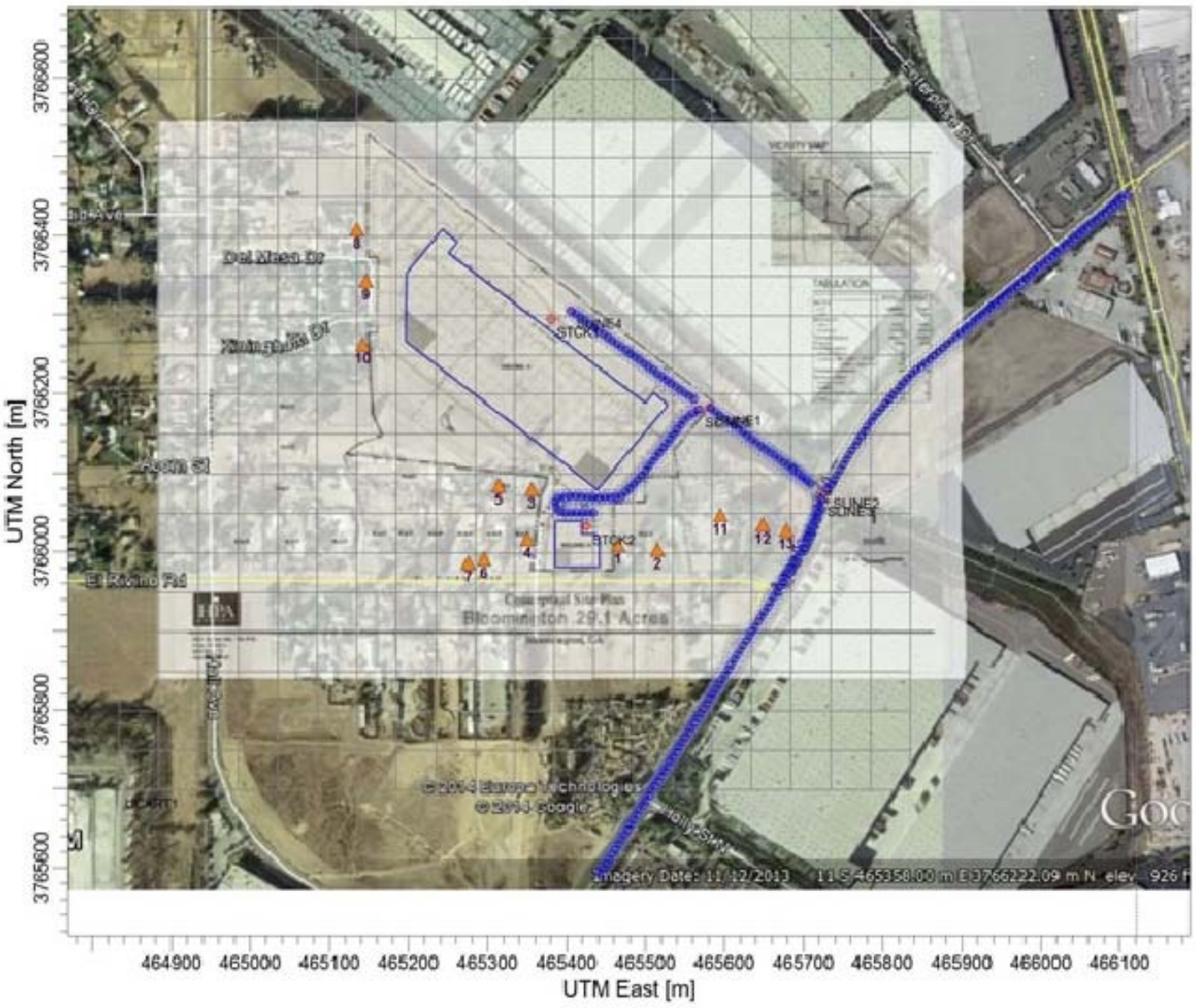
Exhibit C

Location of Operational Emissions Sources and Receptors



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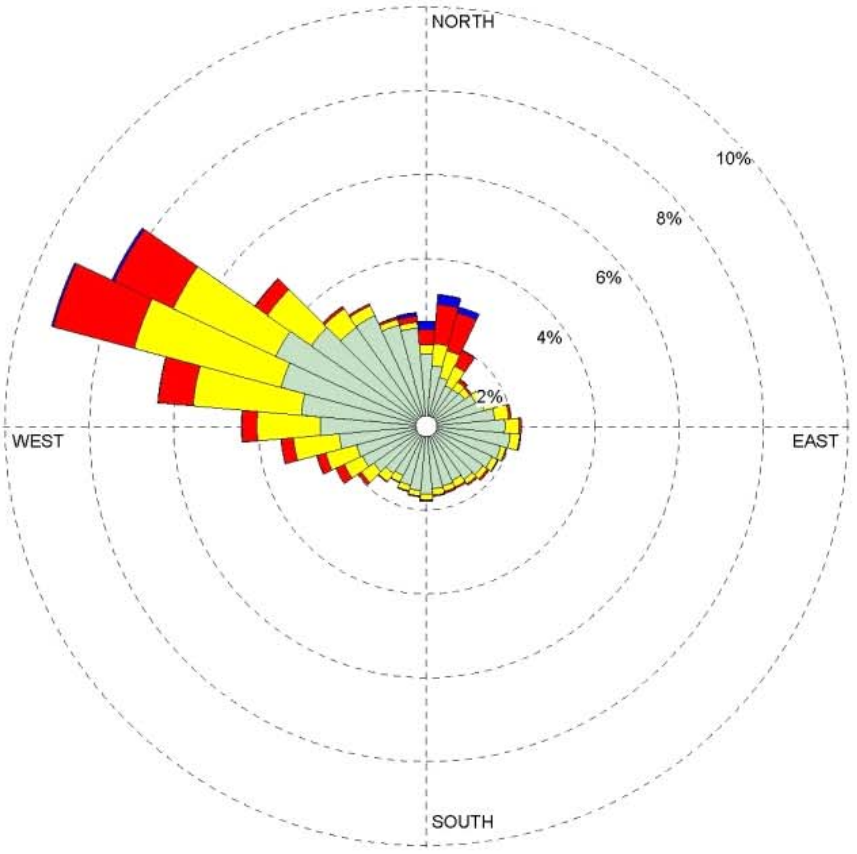
Wind Rose for the SCAQMD Riverside Monitoring Station

WIND ROSE PLOT:
Station #OS_ID:

DISPLAY:
Wind Speed
Direction (blowing from)



WIND SPEED
(Knots)

- >= 21.58
- 17.11 - 21.58
- 11.08 - 17.11
- 7.00 - 11.08
- 4.08 - 7.00
- 0.97 - 4.08

Calms: 0.02%

COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	Start Date: 1/1/2008 - 00:00 **End Date: 12/31/2012 - 23:00**	MODELER:	
	CALM WINDS: **0.02%**	TOTAL COUNT: **43514 hrs.**	
	AVG. WIND SPEED: **3.35 Knots**	DATE: **8/12/2014**	PROJECT NO.:

WRPLOT View - Lakes Environmental Software

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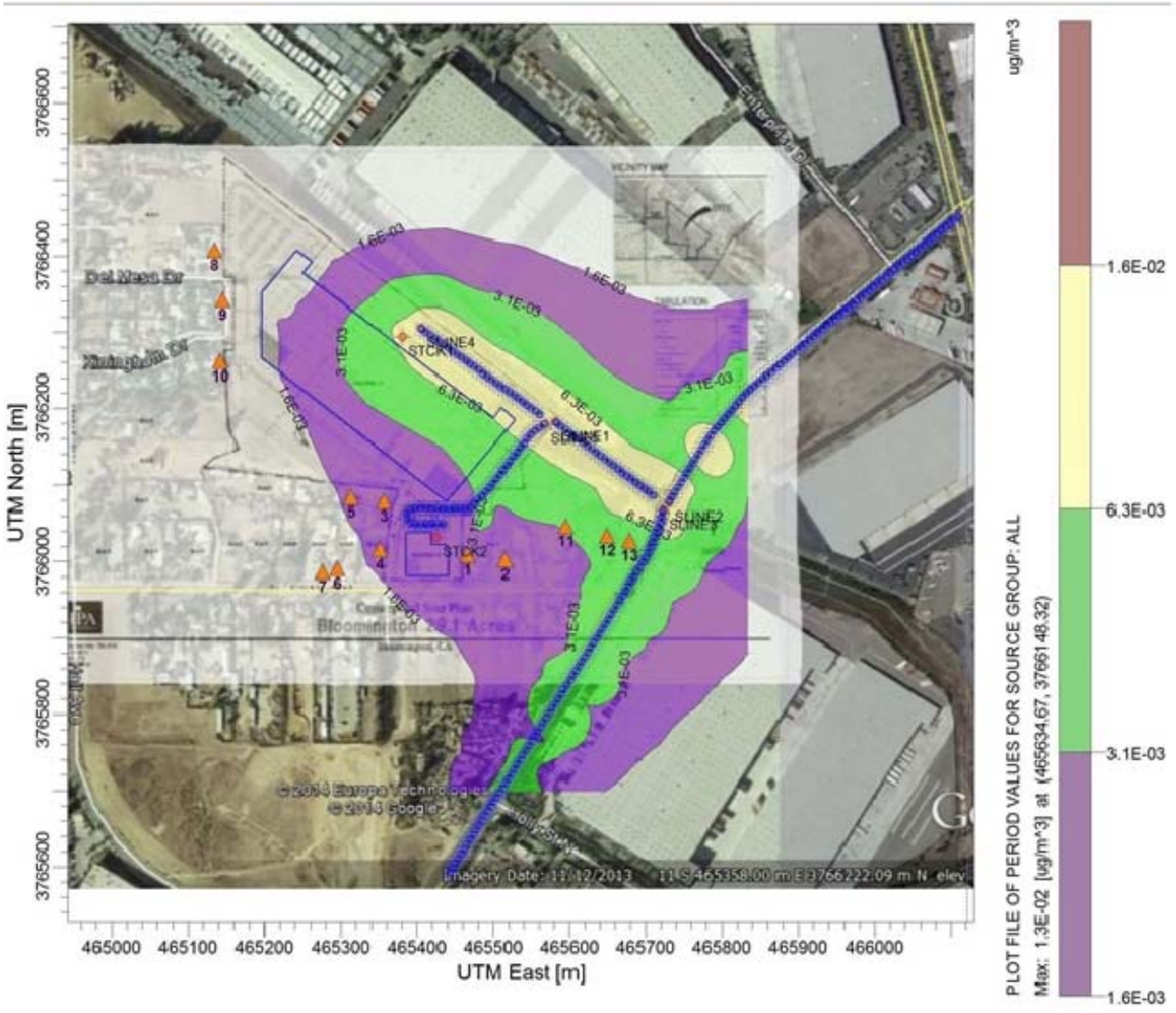
DPM Emissions Contours and Associated Risk



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Tables

TABLE 1
Land Use Summary

Land Use	Unit Amount	Size Metric
High-Cube Warehouse	516.49	1,000 Square Feet
Parking Lot	746.0	Space

TABLE 2
Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[1]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1 Hour	0.09 ppm	--	(a) Decrease of pulmonary function 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) 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.	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), NOX, and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NOX) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm	0.075 ppm[4]			
Carbon Monoxide (CO)	1 Hour	20 ppm	35 ppm	(a) Aggravation of angina pectoris (chest pain) and there 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.	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.
	8 Hour	9 ppm	9 ppm			
Nitrogen Dioxide (NO_2)[2]	1 Hour	0.18 ppm	0.100 ppm	(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.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides - NOX (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4,and N_2O_5). NOX is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NOX can react with compounds to form nitric acid and related particles.	NOX is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	Annual	0.030 ppm	0.053 ppm			
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm	0.075 ppm	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SOX) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour	--	0.5 ppm			
	24 Hour	0.04 ppm	--			
Particulate Matter (PM_{10})	24 Hour	50 $\mu g/m^3$	150 $\mu g/m^3$	(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 the elderly. Daily fluctuations in PM2.5 levels have been related to hospital admissions for acute respiratory conditions, school absences, and increased medication use in children and adults with asthma.	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter.	Stationary sources include fuel combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation-related sources are from vehicle exhaust and road dust.
	Mean	20 $\mu g/m^3$	--			
Particulate Matter (PM2.5)	24 Hour	--	35 $\mu g/m^3$			
	Annual	12 $\mu g/m^3$	15 $\mu g/m^3$			
Visibility reducing particles	8 Hour	Extinction coefficient of 0.23 per kilometer; visibility of ten miles or more (0.07 - 30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent.				
Sulfates	24 Hour	25 $\mu g/m^3$	--	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardiopulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO4 2−. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead[3]	30-day	1.5 $\mu g/m^3$	--	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.
	Quarter	--	1.5 $\mu g/m^3$			
	Rolling 3-month average	--	0.15 $\mu g/m^3$			
Vinyl chloride[3]	24 Hour	0.01 ppm	--	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. pidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills, sewage plants, and hazardous waste sites.
Hydrogen sulfide	24 Hour	0.03 ppm	--	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Hydrogen sulfide (H2S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).
Volatile organic compounds (VOC)		There are no State or federal standards for VOCs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants.	Reactive organic gases (ROGs), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM10 and lower visibility.
Benzene		There are no ambient air quality standards for benzene.		Short-term (acute) exposure of high doses from inhalation of benzene may cause dizziness, drowsiness, headaches, eye irritation, skin irritation, and respiratory tract irritation, and at higher levels, loss of consciousness can occur. Long-term (chronic) occupational exposure of high doses has caused blood disorders, leukemia, and lymphatic cancer.	Benzene is a VOC. It is a clear or colorless light-yellow, volatile, highly flammable liquid with a gasoline-like odor. The EPA has classified benzene as a "Group A" carcinogen.	Benzene is emitted into the air from fuel evaporation, motor vehicle exhaust, tobacco smoke, and from burning oil and coal. Benzene is used as a solvent for paints, inks, oils, waxes, plastic, and rubber. It is used in the extraction of oils from seeds and nuts and in the manufacture of detergents, explosives, and pharmaceuticals.
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	DPM is a source of PM2.5—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.

Notes:
ppm = parts per million (concentration) µg/m3 = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter
[1.] Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour SO2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
[2.] Effective April 12, 2010; the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb, or 188µg/m3
[3.] The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
[4.] To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.
Source of effects: South Coast Air Quality Management District 2007b; California Environmental Protection Agency 2002; California Air Resources Board 2009; U.S. Environmental Protection Agency 2010; U.S. Environmental Protection Agency 2000; National Toxicology Program 2005a.
Source of standards: California Air Resources Board 2010a.
Source of properties and sources: U.S. Environmental Protection Agency 1999; U.S. Environmental Protection Agency 2003; U.S. Environmental Protection Agency 2011b; U.S. Environmental Protection Agency 2009a; National Toxicology Program 2005b.

TABLE 3
Meteorological Summary[1]

Month	Temperature (˚F)		Average Precipitation (inches)
	Average High	Average Low	
January	66.2	38.5	3.22
February	68.1	40.9	3.25
March	70.4	43.0	2.86
April	75.6	46.3	1.29
May	80.4	50.6	0.47
June	88.6	54.3	0.09
July	96.2	59.1	0.04
August	96.2	59.4	0.15
September	92.1	55.9	0.33
October	83.2	49.7	0.71
November	74.6	42.4	1.32
December	67.7	38.6	2.38
Annual Average	**79.9**	**48.2**	**16.1**

[1] Averages derived from measurements recorded between 1893 and 2004. Source: Western Regional Climate Center 2014, San Bernardino COOP.

TABLE 4
Air Quality Monitoring Summary

Air Pollutant Location	Averaging Time	Item	2010	2011	2012
Carbon Monoxide from NW San Bernardino Valley Station	1 Hour	Max 1-Hour (ppm)	2.0	1.3	0.0
		Days > State Standard (20 ppm)	0	0	0
		Days >National Standard (35 ppm)	0	0	0
	8 Hour	Max 8 Hour (ppm)	1.8	- -	1.1
		Days > State Standard (9 ppm)	0	0.0	0
		Days >National Standard (9 ppm)	0	0	0
Ozone from NW San Bernardino Valley Station	1 Hour	Max 1-Hour (ppm)	0.131	0.145	0.136
		Days > State Standard (0.09 ppm)	31	36	42
	8 Hour	Max 8 Hour (ppm)	0.097	0.122	0.111
		Days > State Standard (0.07 ppm)	59	45	66
		Days >National Standard (0.075 ppm)	39	36	45
Coarse Particles (PM10) from SW San Bernardino Valley Station	24 Hour	Max 24-Hour ($\mu g/m^3$)	87.0	70.0	57.0
		Days > State Standard (50 $\mu g/m^3$)	3	3	4
		Days >National Standard (150 $\mu g/m^3$)	0	0	0
	Annual	Annual Average ($\mu g/m^3$)	31.8	30.8	30.8
		Exceeded >State Standard (20 $\mu g/m^3$)	YES	YES	YES
Fine Particulates (PM2.5) from SW San Bernardino Valley Station	24 Hour	Max 24-Hour ($\mu g/m^3$)	46.1	52.9	35.2
		Days >National Standard (35 $\mu g/m^3$)	1	2	0
	Annual	Annual Average ($\mu g/m^3$)	13	13.2	12.4
		Exceeded >State Standard (12 $\mu g/m^3$)	YES	YES	YES
		Exceeded >National Standard (15 $\mu g/m^3$)	NO	NO	NO
Nitrogen Dioxide from NW San Bernardino Valley Station	1 Hour	Max 1-Hour (ppm)	0.079	0.069	0.068
		Days > State Standard (0.18 ppm)	0	0.0	0
	Annual	Annual Average (ppm)	0.02	0.02	0.02
		Exceeded >State Standard (0.030 ppm)	NO	NO	NO
		Exceeded >National Standard (0.053 ppm)	NO	NO	NO
Sulfur Dioxide from SW San Bernardino Valley Station	1 Hour	Max 1 Hour (ppm)	0.006	0.012	0.004
		Days > State Standard (0.04 ppm)	NO	NO	0
		Days >National Standard (0.14 ppm)	NO	NO	0
	Annual	Annual Average (ppm)	0.002	- -	- -
		Exceeded >National Standard (0.030 ppm)	0	0	NO

Source: EPA and ARB websites www.epa.gov/air/data.index.html and www.arb.ca.gov/adam/welcome.html
$\mu g/m^3$ = micrograms per cubic meter
ARB = California Air Resource Board
EPA= Environmental Protection Agency
ppm = part per million

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TABLE 5
South Coast Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment
Carbon monoxide	Attainment	Attainment
Nitrogen dioxide (annual)	Nonattainment	Attainment
Nitrogen dioxide (1-hour)	Attainment	Unclassified[1]
Sulfur dioxide	Attainment	Attainment
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment

[1] EPA set a new one-hour standard for nitrogen dioxide at a level of 100 parts per billion on January 25, 2010, which became effective April 12, 2010. The EPA expects to identify or designate areas not meeting the new standard, based on the existing community-wide monitoring network, by January 2012.

Source: State status from California Air Resources Board 2010b; national status from U.S. Environmental Protection Agency 2011a.

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TABLE 6
Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (N_20),also known as laughing gas is a colorless gas. It has a lifetime of 114 years. Its global warming potential is 310.	Microbial processes in soil and water, fuel combustion, and industrial processes. In addition to agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N_20.
Methane	Methane (CH_4) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 21.	A natural source of CH_4 is from the decay of organic matter. Methane is extracted from geological deposits (natural gas fields). Other sources are from the decay of organic material in landfills, fermentation of manure, and cattle farming.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). They are gases formed synthetically by replacing all hydrogen atoms in methane or methane with chlorine and/or fluorine atoms. Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone, therefore their production was stopped as required by the Montreal Protocol.
Hydrofluorocarbons	Hydrofluorocarbons (HFCs) are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above the Earth's surface. They have a lifetime 10,000 to 50,000 years. They have a global warming potential range of 6,200 to 9,500.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Sources: Intergovernmental Panel on Climate Change 2007a and Intergovernmental Panel on Climate Change 2007b

TABLE 7
Construction Duration[1]

Phase	Duration (days)	
	CalEEMod Default	Project
Site Preparation	10.0	30.0
Grading	35.0	75.0
Building	370.0	547.0
Paving of roads	20.0	55.0
Coating	20.0	68.0
Total	**--**	**775.0**

[1] Assumes that project completion is Year 2017

TABLE 8
Construction Equipment Assumptions[1]

Phase	Equipment	Number	Hours per day	Horsepower	Load Factor	Daily Disturbance Footprint (Arces)[2]
Site Preparation	Rubber Tired Dozers	3	8	255	0.4	3.5
	Tractors/Loaders/Backhoes	4	8	97	0.37	
Grading of main site	Excavators	2	8	162	0.38	5
	Graders	1	8	174	0.41	
	Rubber Tired Dozers	1	8	255	0.4	
	Scrapers	2	8	361	0.48	
	Tractors/Loaders/Backhoes	2	8	97	0.37	
Building construction	Cranes	1	7	226	0.29	- -
	Forklifts	3	8	89	0.2	
	Generator Sets	1	8	84	0.74	
	Tractors/Loaders/Backhoes	3	7	97	0.37	
	Welders	1	8	46	0.45	
Paving of parking lots and roads, road striping	Pavers	2	8	125	0.42	- -
	Paving Equipment	2	8	130	0.36	
	Rollers	2	8	80	0.38	
Architectural Coating	Air Compressors	1	6	78	0.48	- -

[1] Source: CalEEMod defaults

[2] Source: Calculation details for CalEEMod Appendix B

TABLE 9
Construction Trips Assumptions[1]

Phase	Trips per day		Total # of Trips Haul	Trip Length (miles)		
	Worker	Vendor		Worker	Vendor	Haul
Site Preparation	18.0	0.0	0	14.7	6.9	20.0
Grading	20.0	0.0	0	14.7	6.9	20.0
Building	342.0	134.0	0	14.7	6.9	20.0
Paving	15.0	0.0	0	14.7	6.9	20.0
Coating	68.0	0.0	0	14.7	6.9	20.0

[1] Worker fleet is light duty mix; vendor fleet is a heavy duty truck mix; hauling vehicle mix is heavy-heavy duty

TABLE 10
Operational Vehicle Trip Assumptions[1]

Land Use	Trip Length (miles) Non-Residential			Percent of Trips (%) Non-Residential		
	C-C	C-W	C-NW	C-C	C-W	C-NW
High-Cube Warehouse	8.4	40.0	6.9	0.0	20.0	80.0
Parking Lot	8.4	16.6	6.9	0.0	0.0	0.0

[1] C-W increased to 40 miles per SCAQMD recommendations. Trip mix changed to 20% C-W and 80% C-NW to match TIS.

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TABLE 11
Trip Generation Rates[1]

Land Use	Quantity	Units[2]	Trip Generation Rate (trips/unit/day)		
			Weekday	Saturday	Sunday
High Cube Warehouse	516.49	TSF	1.68	1.68	1.68
Parking Lot	746.000	Space	0.00	0.00	0.00

[1] Trip Generationper TIS (RK Engineering Group).

[2] TSF = thousand square feet

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TABLE 12

CalEEMod Revised Vehicle Mix Parameters for Warehouse Uses

CalEEMod Vehicle Type	Vehicle Mix from Traffic Analysis	CalEEMod Default Mix[1]		CalEEMod Revised[2]	
		Ratio	No. of Vehicles	Ratio	No. of Vehicles
Light Auto	Automobile	0.477	414	0.433	376
Light Truck < 3750 lbs	Automobile	0.066	57	0.060	52
Light Truck < 3751 - 5750 lbs	Automobile	0.172	149	0.156	135
Light Truck < 5751 - 8500 lbs	Automobile	0.157	136	0.142	123
Lite-Heavy Truck 8501 - 10,000 lbs	2-Axle Truck	0.055	48	0.035	30
Lite-Heavy Truck 10,001 - 14,000 lbs	2-Axle Truck	0.009	8	0.005	4
Med-Heavy Truck 14,001 - 33,000 lbs	3-Axle Truck	0.016	14	0.046	40
Heavy-Heavy Truck 33,001 - 60,000 lbs	4+-Axle Truck	0.037	32	0.123	107
Other Bus	--	0.001	1	0.000	0
Urban Bus	--	0.001	1	0.000	0
Motorcycle	Automobile	0.005	4	0.000	0
School Bus	--	0.001	1	0.000	0
Motor Home	--	0.003	3	0.000	0
Total		1.0	868	1.0	868

1. CalEEMod Version 2013.2.2 default values of Opening year 2017.
2. Revised per the vehicle mix provided in the Traffic Impact Study of 79.6% Autos, 3.5% 2-Axle Trucks, 4.6% 3- Axle Trucks,, and 12.3% 4+ Axle Trucks.

TABLE 13
Project Water Consumption[1]

Use	Annual Water Consumption (gallons)		
	Indoor	Outdoor	Total
High-Cube Warehouse	119,438,312	0	119,438,312
Parking Lot	0	0	0

[1] Source: Estimated from CalEEMod

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TABLE 14
Regional Significance - Construction Emissions[1]

Activity	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Site Preparation	5.35	56.99	44.01	0.04	10.76	6.81
Grading	6.87	79.16	52.37	0.06	6.54	4.87
Building Construction	6.60	45.29	59.44	0.10	7.04	3.49
Architectural Coating	36.4	2.50	6.08	0.01	0.94	0.38
Paving	2.28	20.37	15.66	0.02	1.31	1.09
Maximum[1]	38.69	79.16	59.44	0.10	10.76	6.81
SCAQMD Threshold	75	100	550	150	150	55
Exceeds Threshold (?)	**No**	**No**	**No**	**No**	**No**	**No**

[1] Construction activities are not expected to overlap except during paving and painting; therefore, the maximum emissions represent the largest of each activity alone except for painting and paving which are combined.

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TABLE 15
Construction Localized Significance

LST Pollutants[1]	CO (lbs/day)	NOx (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
On-site Emissions	50.84	79.05	6.32	4.81
SCAQMD Construction Threshold[2]	2,193	270	16	9
Exceeds Threshold (?)	**No**	**No**	**No**	**No**

[1] Reference LST thresholds are from 2006-2008 SCAQMD Mass rate Localized Significant Thresholds for construction and operation Tables C-1 through C-6 for a disturbance area of 5 acres and at a receptor distance of 25 meters.

[2] Reference: Source Receptor Area 32 Thresholds for 5 acres at 25 meters.

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TABLE 16
Regional Significance - Operational Emissions[1]

Unmitigated (lbs/day)						
Activity	**VOC**	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Area Sources	18.82	0.00	0.13	0.00	0.00	0.00
Energy Sources	0.03	0.30	0.25	0.00	0.02	0.02
Mobile Sources	6.88	26.56	77.60	0.16	9.01	2.68
Total: Area Sources + Energy + Mobile	25.73	26.85	77.98	0.16	9.03	2.70
SCAQMD Threshold	55	55	550	150	150	55
Exceeds Threshold (?)	**No**	**No**	**No**	**No**	**No**	**No**

1. Emissions levels do not exceed the significance thresholds, therefore any additional air quality reduction measures will further reduce emissions. Section 5.0 of the report indicates additional emission reduction measures.

TABLE 17
Localized Significance - Operational Emissions

Project Scenario				
LST Pollutants[1]	CO (lbs/day)	NOx (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
On-site Emissions[2]	8.14	2.95	0.9	0.29
SCAQMD Operation Threshold[3]	2,193	270	4	2
Exceeds Threshold (?)	**No**	**No**	**No**	**No**

[1] Reference LST thresholds are from 2006-2008 SCAQMD Mass rate Localized Significant Thresholds for construction and operation Table C-1 for a disturbance area of 5 acres and at a receptor distance of 25 meters.

[2] Per LST methodology, mobile source emissions do not need to be included except for land use emissions and on-site vehicle emissions. It is estimated that approximately 10% of mobile emissions will occur on the project site.

[3] Reference: Source Receptor Area 32 Thresholds

TABLE 18
Construction Greenhouse Gas Emissions

Activity	Emissions ($MTC0_2e$)[1]		
	Onsite	Offsite	Total
Site Preparation	56.30	2.75	59.05
Grading	222.04	7.63	229.67
Building Construction	665.44	1640.86	2306.30
Paving	57.27	3.88	61.15
Coating	8.70	25.60	34.30
Total	1009.76	1680.72	2690.48
Averaged over 30 years[2]	33.66	56.02	89.68

[1] $MTCO_2e$=metric tons of carbon dioxide equivalents (includes carbon dioxide, methane, nitrous oxide, and/or hydroflurocarbons).

[2] The emissions are averaged over 30 years because the average is added to the operational emissions, pursuant to SCAQMD recommendations.

* CalEEMod output (Appendix A)

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TABLE 19
Unmitigated Project Greenhouse Gas Emissions During Operation

Emission Source	Emissions ($MTCO_2e$) with Regulation[1]
Area Source	0.03
Energy Source	582.89
Mobile Source	2175.19
Waste	220.86
Water	594.90
Subtotal (Operation)	3573.87
Subtotal Construction (averaged over 30 years)	89.68
Total Annual Emissions	**3,663.56**

Mitigated Project Greenhouse Gas Emissions During Operation

Emission Source	Emissions ($MTCO_2e$) with Regulation[1]
Area Source	0.03
Energy Source	545.31
Mobile Source[2]	1656.85
Waste	110.43
Water	463.51
Subtotal (Operation)	2776.13
Subtotal Construction (averaged over 30 years)	89.68
Sequestration from 147 new trees in parking area[3]	104.00
Total Annual Emissions	**2,761.81**
CAP Screening Threshold	3,000
Exceeds Screening Threshold (?)	No
SCAQMD Industrial Use Threshold	10,000
Exceeds Screening Threshold (?)	No

[1] $MTCO_2e$ = metric tons of carbon dioxide equivalents

[2] Includes the reduction of 10% mobile source emission from CAPCOA measure LUT-2 (based on output of 1,840.94 $MTCO_2e$).

[3] Reduction from sequestration from the planting of 147 new trees in the parking lot (1 tree for every 3.5 spaces).

TABLE 20
2017 DPM Emissions Factors for the Proposed Project (70-year average)[1]

Vehicle Class	Idling (g/hr)	On-site Travel (g/mi)	Off-Site Travel (g/mi)
Light Heavy Duty Truck 2	0.1066	0.0532	0.0209
Medium Heavy Duty Truck	0.097	0.0456	0.0324
Heavy Heavy Duty Truck	0.111	0.0791	0.0607

[1.] Per EMFAC2011

TABLE 21
Summary of Emissions Configuration

Emission Source Type	Geometric Configuration	Relevant Assumptions
Off-site Diesel Truck Traffic	Line Sources	- Stack realease height: 12 feet
		- Vehicle Speed: 35 mph
		- Length of the line source (distance from the project entrance on Agua Mansa Road to the loading docks of the project warehouse buildings)
		- Vehicle types: heavy-heavy-duty, medium-heavy-duty, and light-heavy duty diesel delievery trucks
		- Emission factor: CARB EMFAC2011
On-site Diesel Truck Traffic	Line Sources	- Stack realease height: 12 feet
		- Vehicle Speed: 10 mph
		- Length of the line source (distance from facility entrance to the loading docks)
		- Vehicle types: heavy-heavy-duty, medium-heavy-duty, and light-heavy duty diesel delievery trucks
		- Emission factor: CARB EMFAC2011
On-site Diesel Truck Idling	Line Sources	- Stack realease height: 12 feet
		- Stack realease characteristics
		> Stack diameter:0.1 meter (0.3 feet)
		> Stack velocity:51.9 mps (170 feet/sec)
		> Stack temperature:366 °K (200° F)
		- Idle time: 15 minutes per truck per day
		- Vehicle types: heavy-heavy-duty, medium-heavy-duty, and light-heavy duty diesel delievery trucks
		- Emission factor: CARB EMFAC2011

TABLE 22
General Model Assumptions

Feature	Assumption
Terrain Processsing	Complex terrain; elevations were obtained for the project site region using the EPA AERMAP terrain pre-processor
Emission source configuration	Seet Table 21
Regulatory dispersion options	Default Assumptions Used
Land Use	Urban; Bloomington (population: 23,851)
Building downwash	Included in calculations for the high cuge warehouse buildings; each building was assumed to be 35 feet in height
Receptor height	0 meters, as recommended by SCAQMD methodology
Meterological data	SCAQMD Riverside Meterological Data for 2008-2012

TABLE 23
Diesel Particulate Emission Levels and Cancer Risk at Nearby Sensitive Receptors[1]

Sensitive Receptor No.	Land Use	Annual Concentration	Cancer Risk Per Million People[2]	Significant Impact (?)
1	Residential	0.003	0.9	No
2	Residential	0.003	0.8	No
3	Residential	0.002	0.6	No
4	Residential	0.002	0.6	No
5	Residential	0.002	0.5	No
6	Residential	0.001	0.4	No
7	Residential	0.001	0.4	No
8	Residential	0.001	0.3	No
9	Residential	0.003	1.0	No
10	Residential	0.001	0.4	No
11	Residential	0.003	1.0	No
12	Residential	0.004	1.2	No
13	Residential	0.005	1.4	No
PMI[3]	Roadway	0.013	1.4	No

1. Source: Calculated from ISC-AEROMOD View

2. PMI, residential = 318.91 x Cair;

3. PMI = Point of Maximum Impact, based on commercial risk factors.

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Appendices

Appendix A

Emission Calculations Output
(CalEEMod)

Agua Mansa High Cube Warehouse - 2017

San Bernardino-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	516.49	1000sqft	23.74	516,490.00	0
Parking Lot	746.00	Space	6.71	298,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - - Per project site plan

Land Use - - Per project site plan, project on 30.45 acres (28.66 acres for building A and 1.79 acres for building B)

Construction Phase - - Per project opening year

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Demolition -

Grading - project located on 30.45 acres

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip generation is 1.68 per TSF per TIA. C-W increased to 40 miles per SCAQMD recommendations. Trip mix changed to 20% C-W and 80% C-NW to match TIA

Vechicle Emission Factors - Fleet mix changed per TIA

Vechicle Emission Factors - Fleet mix changed per TIA

Vechicle Emission Factors - Fleet mix changed per TIA

Area Coating - SCAQMD Rule 1113.

Energy Use -

Solid Waste -

Sequestration - 1 tree every every 3.5 parking spaces in parking lot = 514/3.5 = 147

Construction Off-road Equipment Mitigation - - Per SCAQMD Rule 403 Fugtive Dust

Mobile Land Use Mitigation - ~3.7 miles to downtown Riverside. Omnitrans route 29, 11th St at Cedar 1.15 miles from the site.

Mobile Commute Mitigation - Passenger cars constitute 80% of project-traffic; therefore, all of the passenger vehicles are eligible for vanpool and ride share programs.

Area Mitigation - - Project shall use low VOC paint per SCAQMD Rule 1113

Energy Mitigation - - 2013 Title 24 standards are 30% more efficient than 2008 Title 24 standards.

Water Mitigation - - Project must incorporate water conservation strategy to reduce water by 20%

Waste Mitigation - AB 939 requires a 50% diversion in waste (75% by 2020)

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstructionPhase	NumDays	35.00	68.00
tblConstructionPhase	NumDays	500.00	547.00
tblConstructionPhase	NumDays	45.00	75.00
tblConstructionPhase	NumDays	35.00	55.00
tblConstructionPhase	NumDays	20.00	30.00
tblGrading	AcresOfGrading	187.50	30.45
tblGrading	AcresOfGrading	0.00	30.45
tblLandUse	LotAcreage	11.86	23.74
tblProjectCharacteristics	OperationalYear	2014	2017
tblSequestration	NumberOfNewTrees	0.00	147.00
tblVehicleEF	HHD	0.04	0.12
tblVehicleEF	HHD	0.04	0.12
tblVehicleEF	HHD	0.04	0.12
tblVehicleEF	LDA	0.47	0.43
tblVehicleEF	LDA	0.47	0.43
tblVehicleEF	LDA	0.47	0.43
tblVehicleEF	LDT1	0.07	0.06
tblVehicleEF	LDT1	0.07	0.06
tblVehicleEF	LDT1	0.07	0.06
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LHD1	0.06	0.03

tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD2	9.0390e-003	5.0000e-003
tblVehicleEF	LHD2	9.0390e-003	5.0000e-003
tblVehicleEF	LHD2	9.0390e-003	5.0000e-003
tblVehicleEF	MCY	4.9210e-003	4.0000e-003
tblVehicleEF	MCY	4.9210e-003	0.04
tblVehicleEF	MCY	4.9210e-003	4.0000e-003
tblVehicleEF	MDV	0.16	0.14
tblVehicleEF	MDV	0.16	0.14
tblVehicleEF	MDV	0.16	0.14
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleTrips	CNW_TTP	41.00	80.00
tblVehicleTrips	CW_TL	16.60	40.00

tblVehicleTrips	CW_TTP	59.00	20.00
tblVehicleTrips	ST_TR	2.59	1.68
tblVehicleTrips	SU_TR	2.59	1.68
tblVehicleTrips	WD_TR	2.59	1.68

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					
2015	6.8714	79.1634	59.4397	0.1041	19.3439	3.8039	22.4337	10.1003	3.4996	12.9429	0.0000	9,787.5506	9,787.5506	1.9491	0.0000	9,828.4820
2016	6.0131	41.9972	55.3609	0.1040	4.6646	2.1895	6.8541	1.2542	2.0527	3.3068	0.0000	9,584.8393	9,584.8393	0.8815	0.0000	9,603.3506
2017	36.4073	38.6504	51.9051	0.1040	4.6647	1.9813	6.6460	1.2542	1.8571	3.1113	0.0000	9,350.6432	9,350.6432	0.8519	0.0000	9,368.5337
Total	**49.2917**	**159.8110**	**166.7057**	**0.3121**	**28.6732**	**7.9747**	**35.9338**	**12.6086**	**7.4093**	**19.3610**	**0.0000**	**28,723.0332**	**28,723.0332**	**3.6825**	**0.0000**	**28,800.3663**

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					
2015	6.8714	79.1634	59.4397	0.1041	7.6668	3.8039	10.7567	3.9717	3.4996	6.8143	0.0000	9,787.5506	9,787.5506	1.9491	0.0000	9,828.4820
2016	6.0131	41.9972	55.3609	0.1040	4.6646	2.1895	6.8541	1.2542	2.0527	3.3068	0.0000	9,584.8393	9,584.8393	0.8815	0.0000	9,603.3506
2017	36.4073	38.6504	51.9051	0.1040	4.6647	1.9813	6.6460	1.2542	1.8571	3.1113	0.0000	9,350.6432	9,350.6432	0.8519	0.0000	9,368.5337
Total	**49.2917**	**159.8110**	**166.7057**	**0.3121**	**16.9962**	**7.9747**	**24.2568**	**6.4800**	**7.4093**	**13.2324**	**0.0000**	**28,723.0332**	**28,723.0332**	**3.6825**	**0.0000**	**28,800.3663**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	40.72	0.00	32.50	48.61	0.00	31.65	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Area	18.8165	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925
Energy	0.0327	0.2969	0.2494	1.7800e-003		0.0226	0.0226		0.0226	0.0226		356.2574	356.2574	6.8300e-003	6.5300e-003	358.4255
Mobile	6.8772	26.4482	77.5950	0.1566	8.6058	0.3998	9.0056	2.3129	0.3678	2.6807		13,861.9589	13,861.9589	0.3708		13,869.7465
Total	**25.7263**	**26.7463**	**77.9757**	**0.1584**	**8.6058**	**0.4228**	**9.0287**	**2.3129**	**0.3908**	**2.7038**		**14,218.4926**	**14,218.4926**	**0.3784**	**6.5300e-003**	**14,228.4645**

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	16.8147	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925
Energy	0.0230	0.2091	0.1756	1.2500e-003		0.0159	0.0159		0.0159	0.0159		250.8785	250.8785	4.8100e-003	4.6000e-003	252.4053
Mobile	6.2633	22.7729	68.1342	0.1325	7.2506	0.3383	7.5889	1.9487	0.3112	2.2599		11,731.3762	11,731.3762	0.3165		11,738.0233
Total	**23.1010**	**22.9832**	**68.4412**	**0.1338**	**7.2506**	**0.3547**	**7.6053**	**1.9487**	**0.3276**	**2.2763**		**11,982.5310**	**11,982.5310**	**0.3221**	**4.6000e-003**	**11,990.7211**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**10.20**	**14.07**	**12.23**	**15.52**	**15.75**	**16.12**	**15.77**	**15.75**	**16.19**	**15.81**	**0.00**	**15.73**	**15.73**	**14.88**	**29.56**	**15.73**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2015	2/11/2015	5	30	
2	Grading	Grading	2/12/2015	5/27/2015	5	75	
3	Building Construction	Building Construction	5/28/2015	6/30/2017	5	547	
4	Paving	Paving	7/1/2017	9/15/2017	5	55	
5	Architectural Coating	Architectural Coating	9/16/2017	12/20/2017	5	68	

Acres of Grading (Site Preparation Phase): 30.45

Acres of Grading (Grading Phase): 30.45

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 788,163; Non-Residential Outdoor: 262,721 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	342.00	134.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	68.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 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					
Fugitive Dust					19.1427	0.0000	19.1427	10.0469	0.0000	10.0469			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**19.1427**	**3.0883**	**22.2310**	**10.0469**	**2.8412**	**12.8881**		**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5225**

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0866	0.1051	1.3789	2.5300e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		218.0256	218.0256	0.0114		218.2656
Total	**0.0866**	**0.1051**	**1.3789**	**2.5300e-003**	**0.2012**	**1.5700e-003**	**0.2028**	**0.0534**	**1.4400e-003**	**0.0548**		**218.0256**	**218.0256**	**0.0114**		**218.2656**

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					7.4656	0.0000	7.4656	3.9183	0.0000	3.9183			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**7.4656**	**3.0883**	**10.5539**	**3.9183**	**2.8412**	**6.7595**	**0.0000**	**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5224**

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0866	0.1051	1.3789	2.5300e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		218.0256	218.0256	0.0114		218.2656
Total	**0.0866**	**0.1051**	**1.3789**	**2.5300e-003**	**0.2012**	**1.5700e-003**	**0.2028**	**0.0534**	**1.4400e-003**	**0.0548**		**218.0256**	**218.0256**	**0.0114**		**218.2656**

3.3 Grading - 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					
Fugitive Dust					6.4527	0.0000	6.4527	3.3567	0.0000	3.3567			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**6.4527**	**3.8022**	**10.2548**	**3.3567**	**3.4980**	**6.8547**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0962	0.1168	1.5321	2.8100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		242.2506	242.2506	0.0127		242.5173
Total	**0.0962**	**0.1168**	**1.5321**	**2.8100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**242.2506**	**242.2506**	**0.0127**		**242.5173**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5165	0.0000	2.5165	1.3091	0.0000	1.3091			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**2.5165**	**3.8022**	**6.3187**	**1.3091**	**3.4980**	**4.8071**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0962	0.1168	1.5321	2.8100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		242.2506	242.2506	0.0127		242.5173
Total	**0.0962**	**0.1168**	**1.5321**	**2.8100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**242.2506**	**242.2506**	**0.0127**		**242.5173**

3.4 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	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2945	13.2593	14.4955	0.0292	0.8418	0.2328	1.0746	0.2404	0.2140	0.4544		2,955.4879	2,955.4879	0.0233		2,955.9773
Worker	1.6456	1.9965	26.1996	0.0481	3.8228	0.0299	3.8526	1.0138	0.0274	1.0412		4,142.4856	4,142.4856	0.2171		4,147.0455
Total	**2.9401**	**15.2557**	**40.6952**	**0.0773**	**4.6646**	**0.2626**	**4.9272**	**1.2542**	**0.2414**	**1.4955**		**7,097.9735**	**7,097.9735**	**0.2405**		**7,103.0228**

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	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2945	13.2593	14.4955	0.0292	0.8418	0.2328	1.0746	0.2404	0.2140	0.4544		2,955.4879	2,955.4879	0.0233		2,955.9773
Worker	1.6456	1.9965	26.1996	0.0481	3.8228	0.0299	3.8526	1.0138	0.0274	1.0412		4,142.4856	4,142.4856	0.2171		4,147.0455
Total	**2.9401**	**15.2557**	**40.6952**	**0.0773**	**4.6646**	**0.2626**	**4.9272**	**1.2542**	**0.2414**	**1.4955**		**7,097.9735**	**7,097.9735**	**0.2405**		**7,103.0228**

3.4 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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1357	11.7029	13.2958	0.0291	0.8419	0.1937	1.0356	0.2404	0.1781	0.4185		2,921.7531	2,921.7531	0.0210		2,922.1949
Worker	1.4712	1.7879	23.5584	0.0481	3.8228	0.0284	3.8511	1.0138	0.0261	1.0399		3,993.7998	3,993.7998	0.1984		3,997.9667
Total	**2.6069**	**13.4908**	**36.8542**	**0.0772**	**4.6646**	**0.2221**	**4.8867**	**1.2542**	**0.2042**	**1.4584**		**6,915.5529**	**6,915.5529**	**0.2195**		**6,920.1616**

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1357	11.7029	13.2958	0.0291	0.8419	0.1937	1.0356	0.2404	0.1781	0.4185		2,921.7531	2,921.7531	0.0210		2,922.1949
Worker	1.4712	1.7879	23.5584	0.0481	3.8228	0.0284	3.8511	1.0138	0.0261	1.0399		3,993.7998	3,993.7998	0.1984		3,997.9667
Total	**2.6069**	**13.4908**	**36.8542**	**0.0772**	**4.6646**	**0.2221**	**4.8867**	**1.2542**	**0.2042**	**1.4584**		**6,915.5529**	**6,915.5529**	**0.2195**		**6,920.1616**

3.4 Building Construction - 2017

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0490	10.6417	12.6146	0.0291	0.8419	0.1728	1.0147	0.2404	0.1589	0.3993		2,873.6781	2,873.6781	0.0203		2,874.1050
Worker	1.3072	1.6030	21.1613	0.0481	3.8228	0.0273	3.8501	1.0138	0.0252	1.0390		3,837.1598	3,837.1598	0.1819		3,840.9797
Total	**2.3562**	**12.2447**	**33.7759**	**0.0772**	**4.6647**	**0.2001**	**4.8648**	**1.2542**	**0.1841**	**1.4383**		**6,710.8379**	**6,710.8379**	**0.2022**		**6,715.0847**

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.0490	10.6417	12.6146	0.0291	0.8419	0.1728	1.0147	0.2404	0.1589	0.3993		2,873.6781	2,873.6781	0.0203		2,874.1050
Worker	1.3072	1.6030	21.1613	0.0481	3.8228	0.0273	3.8501	1.0138	0.0252	1.0390		3,837.1598	3,837.1598	0.1819		3,840.9797
Total	**2.3562**	**12.2447**	**33.7759**	**0.0772**	**4.6647**	**0.2001**	**4.8648**	**1.2542**	**0.1841**	**1.4383**		**6,710.8379**	**6,710.8379**	**0.2022**		**6,715.0847**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.3196					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2270**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.5 Paving - 2017

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					
Worker	0.0573	0.0703	0.9281	2.1100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		168.2965	168.2965	7.9800e-003		168.4640
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0573**	**0.0703**	**0.9281**	**2.1100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**168.2965**	**168.2965**	**7.9800e-003**		**168.4640**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.3196					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2270**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.5 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0573	0.0703	0.9281	2.1100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		168.2965	168.2965	7.9800e-003		168.4640
Total	**0.0573**	**0.0703**	**0.9281**	**2.1100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**168.2965**	**168.2965**	**7.9800e-003**		**168.4640**

3.6 Architectural Coating - 2017

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	35.8151					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**36.1474**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2599	0.3187	4.2075	9.5600e-003	0.7601	5.4300e-003	0.7655	0.2016	5.0100e-003	0.2066		762.9441	762.9441	0.0362		763.7036
Total	**0.2599**	**0.3187**	**4.2075**	**9.5600e-003**	**0.7601**	**5.4300e-003**	**0.7655**	**0.2016**	**5.0100e-003**	**0.2066**		**762.9441**	**762.9441**	**0.0362**		**763.7036**

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	35.8151					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**36.1474**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2599	0.3187	4.2075	9.5600e-003	0.7601	5.4300e-003	0.7655	0.2016	5.0100e-003	0.2066		762.9441	762.9441	0.0362		763.7036
Total	**0.2599**	**0.3187**	**4.2075**	**9.5600e-003**	**0.7601**	**5.4300e-003**	**0.7655**	**0.2016**	**5.0100e-003**	**0.2066**		**762.9441**	**762.9441**	**0.0362**		**763.7036**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	6.2633	22.7729	68.1342	0.1325	7.2506	0.3383	7.5889	1.9487	0.3112	2.2599		11,731.3762	11,731.3762	0.3165		11,738.0233
Unmitigated	6.8772	26.4482	77.5950	0.1566	8.6058	0.3998	9.0056	2.3129	0.3678	2.6807		13,861.9589	13,861.9589	0.3708		13,869.7465

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	867.70	867.70	867.70	3,982,919	3,355,704
Total	867.70	867.70	867.70	3,982,919	3,355,704

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	8.40	6.90	20.00	0.00	80.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.433000	0.060000	0.156000	0.142000	0.030000	0.005000	0.046000	0.123000	0.000000	0.000000	0.040000	0.000000	0.000000

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

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	lb/day										lb/day					
NaturalGas Mitigated	0.0230	0.2091	0.1756	1.2500e-003		0.0159	0.0159		0.0159	0.0159		250.8785	250.8785	4.8100e-003	4.6000e-003	252.4053
NaturalGas Unmitigated	0.0327	0.2969	0.2494	1.7800e-003		0.0226	0.0226		0.0226	0.0226		356.2574	356.2574	6.8300e-003	6.5300e-003	358.4255

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	3028.19	0.0327	0.2969	0.2494	1.7800e-003		0.0226	0.0226		0.0226	0.0226		356.2574	356.2574	6.8300e-003	6.5300e-003	358.4255
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0327**	**0.2969**	**0.2494**	**1.7800e-003**		**0.0226**	**0.0226**		**0.0226**	**0.0226**		**356.2574**	**356.2574**	**6.8300e-003**	**6.5300e-003**	**358.4255**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	2.13247	0.0230	0.2091	0.1756	1.2500e-003		0.0159	0.0159		0.0159	0.0159		250.8785	250.8785	4.8100e-003	4.6000e-003	252.4053
Total		**0.0230**	**0.2091**	**0.1756**	**1.2500e-003**		**0.0159**	**0.0159**		**0.0159**	**0.0159**		**250.8785**	**250.8785**	**4.8100e-003**	**4.6000e-003**	**252.4053**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	16.8147	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925
Unmitigated	18.8165	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925

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	2.6690					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.1348					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0127	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925
Total	**18.8165**	**1.2400e-003**	**0.1313**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**		**0.2763**	**0.2763**	**7.7000e-004**		**0.2925**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.1348					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0127	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925
Total	**16.8147**	**1.2400e-003**	**0.1313**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**		**0.2763**	**0.2763**	**7.7000e-004**		**0.2925**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Agua Mansa High Cube Warehouse - 2017

San Bernardino-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	516.49	1000sqft	23.74	516,490.00	0
Parking Lot	746.00	Space	6.71	298,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - - Per project site plan

Land Use - - Per project site plan, project on 30.45 acres (28.66 acres for building A and 1.79 acres for building B)

Construction Phase - - Per project opening year

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Demolition -

Grading - project located on 30.45 acres

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip generation is 1.68 per TSF per TIA. C-W increased to 40 miles per SCAQMD recommendations. Trip mix changed to 20% C-W and 80% C-NW to match TIA

Vechicle Emission Factors - Fleet mix changed per TIA

Vechicle Emission Factors - Fleet mix changed per TIA

Vechicle Emission Factors - Fleet mix changed per TIA

Area Coating - SCAQMD Rule 1113.

Energy Use -

Solid Waste -

Sequestration - 1 tree every every 3.5 parking spaces in parking lot = 514/3.5 = 147

Construction Off-road Equipment Mitigation - - Per SCAQMD Rule 403 Fugtive Dust

Mobile Land Use Mitigation - ~3.7 miles to downtown Riverside. Omnitrans route 29, 11th St at Cedar 1.15 miles from the site.

Mobile Commute Mitigation - Passenger cars constitute 80% of project-traffic; therefore, all of the passenger vehicles are eligible for vanpool and ride share programs.

Area Mitigation - - Project shall use low VOC paint per SCAQMD Rule 1113

Energy Mitigation - - 2013 Title 24 standards are 30% more efficient than 2008 Title 24 standards.

Water Mitigation - - Project must incorporate water conservation strategy to reduce water by 20%

Waste Mitigation - AB 939 requires a 50% diversion in waste (75% by 2020)

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstructionPhase	NumDays	35.00	68.00
tblConstructionPhase	NumDays	500.00	547.00
tblConstructionPhase	NumDays	45.00	75.00
tblConstructionPhase	NumDays	35.00	55.00
tblConstructionPhase	NumDays	20.00	30.00
tblGrading	AcresOfGrading	187.50	30.45
tblGrading	AcresOfGrading	0.00	30.45
tblLandUse	LotAcreage	11.86	23.74
tblProjectCharacteristics	OperationalYear	2014	2017
tblSequestration	NumberOfNewTrees	0.00	147.00
tblVehicleEF	HHD	0.04	0.12
tblVehicleEF	HHD	0.04	0.12
tblVehicleEF	HHD	0.04	0.12
tblVehicleEF	LDA	0.47	0.43
tblVehicleEF	LDA	0.47	0.43
tblVehicleEF	LDA	0.47	0.43
tblVehicleEF	LDT1	0.07	0.06
tblVehicleEF	LDT1	0.07	0.06
tblVehicleEF	LDT1	0.07	0.06
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LHD1	0.06	0.03

tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD2	9.0390e-003	5.0000e-003
tblVehicleEF	LHD2	9.0390e-003	5.0000e-003
tblVehicleEF	LHD2	9.0390e-003	5.0000e-003
tblVehicleEF	MCY	4.9210e-003	4.0000e-003
tblVehicleEF	MCY	4.9210e-003	0.04
tblVehicleEF	MCY	4.9210e-003	4.0000e-003
tblVehicleEF	MDV	0.16	0.14
tblVehicleEF	MDV	0.16	0.14
tblVehicleEF	MDV	0.16	0.14
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleTrips	CNW_TTP	41.00	80.00
tblVehicleTrips	CW_TL	16.60	40.00

tblVehicleTrips	CW_TTP	59.00	20.00
tblVehicleTrips	ST_TR	2.59	1.68
tblVehicleTrips	SU_TR	2.59	1.68
tblVehicleTrips	WD_TR	2.59	1.68

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					
2015	6.8658	79.1715	57.6428	0.0995	19.3439	3.8039	22.4337	10.1003	3.4996	12.9429	0.0000	9,394.3679	9,394.3679	1.9491	0.0000	9,435.2993
2016	5.9963	42.4354	53.9227	0.0995	4.6646	2.1914	6.8560	1.2542	2.0545	3.3086	0.0000	9,204.5212	9,204.5212	0.8821	0.0000	9,223.0455
2017	36.3907	39.0385	50.7566	0.0994	4.6647	1.9830	6.6477	1.2542	1.8586	3.1128	0.0000	8,984.0979	8,984.0979	0.8526	0.0000	9,002.0017
Total	**49.2527**	**160.6454**	**162.3220**	**0.2984**	**28.6732**	**7.9783**	**35.9374**	**12.6086**	**7.4127**	**19.3644**	**0.0000**	**27,582.9870**	**27,582.9870**	**3.6838**	**0.0000**	**27,660.3464**

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					
2015	6.8658	79.1715	57.6428	0.0995	7.6668	3.8039	10.7567	3.9717	3.4996	6.8143	0.0000	9,394.3679	9,394.3679	1.9491	0.0000	9,435.2993
2016	5.9963	42.4354	53.9227	0.0995	4.6646	2.1914	6.8560	1.2542	2.0545	3.3086	0.0000	9,204.5212	9,204.5212	0.8821	0.0000	9,223.0455
2017	36.3907	39.0385	50.7566	0.0994	4.6647	1.9830	6.6477	1.2542	1.8586	3.1128	0.0000	8,984.0979	8,984.0979	0.8526	0.0000	9,002.0017
Total	**49.2527**	**160.6454**	**162.3220**	**0.2984**	**16.9962**	**7.9783**	**24.2604**	**6.4800**	**7.4127**	**13.2357**	**0.0000**	**27,582.9869**	**27,582.9869**	**3.6838**	**0.0000**	**27,660.3464**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	40.72	0.00	32.49	48.61	0.00	31.65	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Area	18.8165	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925
Energy	0.0327	0.2969	0.2494	1.7800e-003		0.0226	0.0226		0.0226	0.0226		356.2574	356.2574	6.8300e-003	6.5300e-003	358.4255
Mobile	4.2593	26.5556	55.4737	0.1466	8.5670	0.4009	8.9679	2.2975	0.3689	2.6664		13,065.7599	13,065.7599	0.3717		13,073.5655
Total	**23.1084**	**26.8537**	**55.8544**	**0.1484**	**8.5670**	**0.4240**	**8.9909**	**2.2975**	**0.3919**	**2.6894**		**13,422.2936**	**13,422.2936**	**0.3793**	**6.5300e-003**	**13,432.2835**

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	16.8147	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925
Energy	0.0230	0.2091	0.1756	1.2500e-003		0.0159	0.0159		0.0159	0.0159		250.8785	250.8785	4.8100e-003	4.6000e-003	252.4053
Mobile	3.9794	22.8507	49.9737	0.1241	7.2179	0.3395	7.5574	1.9357	0.3123	2.2480		11,056.0056	11,056.0056	0.3174		11,062.6707
Total	**20.8171**	**23.0610**	**50.2806**	**0.1254**	**7.2179**	**0.3558**	**7.5737**	**1.9357**	**0.3287**	**2.2644**		**11,307.1604**	**11,307.1604**	**0.3230**	**4.6000e-003**	**11,315.3685**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**9.92**	**14.12**	**9.98**	**15.54**	**15.75**	**16.07**	**15.76**	**15.75**	**16.13**	**15.80**	**0.00**	**15.76**	**15.76**	**14.85**	**29.56**	**15.76**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2015	2/11/2015	5	30	
2	Grading	Grading	2/12/2015	5/27/2015	5	75	
3	Building Construction	Building Construction	5/28/2015	6/30/2017	5	547	
4	Paving	Paving	7/1/2017	9/15/2017	5	55	
5	Architectural Coating	Architectural Coating	9/16/2017	12/20/2017	5	68	

Acres of Grading (Site Preparation Phase): 30.45

Acres of Grading (Grading Phase): 30.45

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 788,163; Non-Residential Outdoor: 262,721 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	342.00	134.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	68.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 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					
Fugitive Dust					19.1427	0.0000	19.1427	10.0469	0.0000	10.0469			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**19.1427**	**3.0883**	**22.2310**	**10.0469**	**2.8412**	**12.8881**		**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5225**

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0816	0.1124	1.1825	2.3000e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		198.6297	198.6297	0.0114		198.8697
Total	**0.0816**	**0.1124**	**1.1825**	**2.3000e-003**	**0.2012**	**1.5700e-003**	**0.2028**	**0.0534**	**1.4400e-003**	**0.0548**		**198.6297**	**198.6297**	**0.0114**		**198.8697**

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					7.4656	0.0000	7.4656	3.9183	0.0000	3.9183			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	**5.2609**	**56.8897**	**42.6318**	**0.0391**	**7.4656**	**3.0883**	**10.5539**	**3.9183**	**2.8412**	**6.7595**	**0.0000**	**4,111.7444**	**4,111.7444**	**1.2275**		**4,137.5224**

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0816	0.1124	1.1825	2.3000e-003	0.2012	1.5700e-003	0.2028	0.0534	1.4400e-003	0.0548		198.6297	198.6297	0.0114		198.8697
Total	**0.0816**	**0.1124**	**1.1825**	**2.3000e-003**	**0.2012**	**1.5700e-003**	**0.2028**	**0.0534**	**1.4400e-003**	**0.0548**		**198.6297**	**198.6297**	**0.0114**		**198.8697**

3.3 Grading - 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					
Fugitive Dust					6.4527	0.0000	6.4527	3.3567	0.0000	3.3567			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**6.4527**	**3.8022**	**10.2548**	**3.3567**	**3.4980**	**6.8547**		**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0907	0.1248	1.3139	2.5600e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		220.6996	220.6996	0.0127		220.9663
Total	**0.0907**	**0.1248**	**1.3139**	**2.5600e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**220.6996**	**220.6996**	**0.0127**		**220.9663**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5165	0.0000	2.5165	1.3091	0.0000	1.3091			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080
Total	**6.7751**	**79.0467**	**50.8400**	**0.0618**	**2.5165**	**3.8022**	**6.3187**	**1.3091**	**3.4980**	**4.8071**	**0.0000**	**6,486.2433**	**6,486.2433**	**1.9364**		**6,526.9080**

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0907	0.1248	1.3139	2.5600e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6000e-003	0.0609		220.6996	220.6996	0.0127		220.9663
Total	**0.0907**	**0.1248**	**1.3139**	**2.5600e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6000e-003**	**0.0609**		**220.6996**	**220.6996**	**0.0127**		**220.9663**

3.4 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	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**		**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3776	13.6287	16.4299	0.0290	0.8418	0.2355	1.0774	0.2404	0.2166	0.4569		2,930.8273	2,930.8273	0.0240		2,931.3304
Worker	1.5501	2.1348	22.4683	0.0438	3.8228	0.0299	3.8526	1.0138	0.0274	1.0412		3,773.9635	3,773.9635	0.2171		3,778.5234
Total	**2.9277**	**15.7635**	**38.8982**	**0.0727**	**4.6646**	**0.2654**	**4.9300**	**1.2542**	**0.2439**	**1.4981**		**6,704.7908**	**6,704.7908**	**0.2411**		**6,709.8537**

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	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	**3.6591**	**30.0299**	**18.7446**	**0.0268**		**2.1167**	**2.1167**		**1.9904**	**1.9904**	**0.0000**	**2,689.5771**	**2,689.5771**	**0.6748**		**2,703.7483**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.3776	13.6287	16.4299	0.0290	0.8418	0.2355	1.0774	0.2404	0.2166	0.4569		2,930.8273	2,930.8273	0.0240		2,931.3304
Worker	1.5501	2.1348	22.4683	0.0438	3.8228	0.0299	3.8526	1.0138	0.0274	1.0412		3,773.9635	3,773.9635	0.2171		3,778.5234
Total	**2.9277**	**15.7635**	**38.8982**	**0.0727**	**4.6646**	**0.2654**	**4.9300**	**1.2542**	**0.2439**	**1.4981**		**6,704.7908**	**6,704.7908**	**0.2411**		**6,709.8537**

3.4 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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**		**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2082	12.0187	15.2679	0.0289	0.8419	0.1957	1.0375	0.2404	0.1799	0.4203		2,897.2511	2,897.2511	0.0217		2,897.7060
Worker	1.3819	1.9103	20.1481	0.0437	3.8228	0.0284	3.8511	1.0138	0.0261	1.0399		3,637.9837	3,637.9837	0.1984		3,642.1505
Total	**2.5901**	**13.9291**	**35.4161**	**0.0726**	**4.6646**	**0.2240**	**4.8886**	**1.2542**	**0.2060**	**1.4602**		**6,535.2348**	**6,535.2348**	**0.2201**		**6,539.8565**

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	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	**3.4062**	**28.5063**	**18.5066**	**0.0268**		**1.9674**	**1.9674**		**1.8485**	**1.8485**	**0.0000**	**2,669.2864**	**2,669.2864**	**0.6620**		**2,683.1890**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.2082	12.0187	15.2679	0.0289	0.8419	0.1957	1.0375	0.2404	0.1799	0.4203		2,897.2511	2,897.2511	0.0217		2,897.7060
Worker	1.3819	1.9103	20.1481	0.0437	3.8228	0.0284	3.8511	1.0138	0.0261	1.0399		3,637.9837	3,637.9837	0.1984		3,642.1505
Total	**2.5901**	**13.9291**	**35.4161**	**0.0726**	**4.6646**	**0.2240**	**4.8886**	**1.2542**	**0.2060**	**1.4602**		**6,535.2348**	**6,535.2348**	**0.2201**		**6,539.8565**

3.4 Building Construction - 2017

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**		**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1152	10.9216	14.5846	0.0289	0.8419	0.1745	1.0164	0.2404	0.1604	0.4008		2,849.5140	2,849.5140	0.0210		2,849.9542
Worker	1.2236	1.7112	18.0429	0.0437	3.8228	0.0273	3.8501	1.0138	0.0252	1.0390		3,494.7786	3,494.7786	0.1819		3,498.5985
Total	**2.3388**	**12.6329**	**32.6274**	**0.0726**	**4.6647**	**0.2018**	**4.8665**	**1.2542**	**0.1856**	**1.4398**		**6,344.2926**	**6,344.2926**	**0.2029**		**6,348.5526**

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	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
Total	**3.1024**	**26.4057**	**18.1291**	**0.0268**		**1.7812**	**1.7812**		**1.6730**	**1.6730**	**0.0000**	**2,639.8053**	**2,639.8053**	**0.6497**		**2,653.4490**

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	1.1152	10.9216	14.5846	0.0289	0.8419	0.1745	1.0164	0.2404	0.1604	0.4008		2,849.5140	2,849.5140	0.0210		2,849.9542
Worker	1.2236	1.7112	18.0429	0.0437	3.8228	0.0273	3.8501	1.0138	0.0252	1.0390		3,494.7786	3,494.7786	0.1819		3,498.5985
Total	**2.3388**	**12.6329**	**32.6274**	**0.0726**	**4.6647**	**0.2018**	**4.8665**	**1.2542**	**0.1856**	**1.4398**		**6,344.2926**	**6,344.2926**	**0.2029**		**6,348.5526**

3.5 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.3196					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2270**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**		**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.5 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0537	0.0751	0.7914	1.9200e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		153.2798	153.2798	7.9800e-003		153.4473
Total	**0.0537**	**0.0751**	**0.7914**	**1.9200e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**153.2798**	**153.2798**	**7.9800e-003**		**153.4473**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.3196					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.2270**	**20.2964**	**14.7270**	**0.0223**		**1.1384**	**1.1384**		**1.0473**	**1.0473**	**0.0000**	**2,281.0588**	**2,281.0588**	**0.6989**		**2,295.7360**

3.5 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0537	0.0751	0.7914	1.9200e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		153.2798	153.2798	7.9800e-003		153.4473
Total	**0.0537**	**0.0751**	**0.7914**	**1.9200e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**153.2798**	**153.2798**	**7.9800e-003**		**153.4473**

3.6 Architectural Coating - 2017

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	35.8151					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	**36.1474**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**		**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2433	0.3402	3.5875	8.6900e-003	0.7601	5.4300e-003	0.7655	0.2016	5.0100e-003	0.2066		694.8683	694.8683	0.0362		695.6278
Total	**0.2433**	**0.3402**	**3.5875**	**8.6900e-003**	**0.7601**	**5.4300e-003**	**0.7655**	**0.2016**	**5.0100e-003**	**0.2066**		**694.8683**	**694.8683**	**0.0362**		**695.6278**

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	35.8151					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	**36.1474**	**2.1850**	**1.8681**	**2.9700e-003**		**0.1733**	**0.1733**		**0.1733**	**0.1733**	**0.0000**	**281.4481**	**281.4481**	**0.0297**		**282.0721**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2433	0.3402	3.5875	8.6900e-003	0.7601	5.4300e-003	0.7655	0.2016	5.0100e-003	0.2066		694.8683	694.8683	0.0362		695.6278
Total	**0.2433**	**0.3402**	**3.5875**	**8.6900e-003**	**0.7601**	**5.4300e-003**	**0.7655**	**0.2016**	**5.0100e-003**	**0.2066**		**694.8683**	**694.8683**	**0.0362**		**695.6278**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	3.9794	22.8507	49.9737	0.1241	7.2179	0.3395	7.5574	1.9357	0.3123	2.2480		11,056.0056	11,056.0056	0.3174		11,062.6707
Unmitigated	4.2593	26.5556	55.4737	0.1466	8.5670	0.4009	8.9679	2.2975	0.3689	2.6664		13,065.7599	13,065.7599	0.3717		13,073.5655

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	867.70	867.70	867.70	3,982,919	3,355,704
Total	867.70	867.70	867.70	3,982,919	3,355,704

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	8.40	6.90	20.00	0.00	80.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.433000	0.060000	0.156000	0.142000	0.030000	0.005000	0.046000	0.123000	0.000000	0.000000	0.004000	0.000000	0.000000

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

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	lb/day										lb/day					
NaturalGas Mitigated	0.0230	0.2091	0.1756	1.2500e-003		0.0159	0.0159		0.0159	0.0159		250.8785	250.8785	4.8100e-003	4.6000e-003	252.4053
NaturalGas Unmitigated	0.0327	0.2969	0.2494	1.7800e-003		0.0226	0.0226		0.0226	0.0226		356.2574	356.2574	6.8300e-003	6.5300e-003	358.4255

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	3028.19	0.0327	0.2969	0.2494	1.7800e-003		0.0226	0.0226		0.0226	0.0226		356.2574	356.2574	6.8300e-003	6.5300e-003	358.4255
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0327**	**0.2969**	**0.2494**	**1.7800e-003**		**0.0226**	**0.0226**		**0.0226**	**0.0226**		**356.2574**	**356.2574**	**6.8300e-003**	**6.5300e-003**	**358.4255**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	2.13247	0.0230	0.2091	0.1756	1.2500e-003		0.0159	0.0159		0.0159	0.0159		250.8785	250.8785	4.8100e-003	4.6000e-003	252.4053
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0230**	**0.2091**	**0.1756**	**1.2500e-003**		**0.0159**	**0.0159**		**0.0159**	**0.0159**		**250.8785**	**250.8785**	**4.8100e-003**	**4.6000e-003**	**252.4053**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	16.8147	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925
Unmitigated	18.8165	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925

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	2.6690					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.1348					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0127	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925
Total	**18.8165**	**1.2400e-003**	**0.1313**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**		**0.2763**	**0.2763**	**7.7000e-004**		**0.2925**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6672					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	16.1348					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0127	1.2400e-003	0.1313	1.0000e-005		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004		0.2763	0.2763	7.7000e-004		0.2925
Total	**16.8147**	**1.2400e-003**	**0.1313**	**1.0000e-005**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**		**0.2763**	**0.2763**	**7.7000e-004**		**0.2925**

7.0 Water Detail

Agua Mansa High Cube Warehouse - 2017

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	516.49	1000sqft	23.74	516,490.00	0
Parking Lot	746.00	Space	6.71	298,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - - Per project site plan

Land Use - - Per project site plan, project on 30.45 acres (28.66 acres for building A and 1.79 acres for building B)

Construction Phase - - Per project opening year

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Off-road Equipment - - Per project estimates

Demolition -

Grading - project located on 30.45 acres

Architectural Coating - SCAQMD Rule 1113

Vehicle Trips - Trip generation is 1.68 per TSF per TIA. C-W increased to 40 miles per SCAQMD recommendations. Trip mix changed to 20% C-W and 80% C-NW to match TIA

Vechicle Emission Factors - Fleet mix changed per TIA

Vechicle Emission Factors - Fleet mix changed per TIA

Vechicle Emission Factors - Fleet mix changed per TIA

Area Coating - SCAQMD Rule 1113.

Energy Use -

Solid Waste -

Sequestration - 1 tree every every 3.5 parking spaces in parking lot = 514/3.5 = 147

Construction Off-road Equipment Mitigation - - Per SCAQMD Rule 403 Fugtive Dust

Mobile Land Use Mitigation - ~3.7 miles to downtown Riverside. Omnitrans route 29, 11th St at Cedar 1.15 miles from the site.

Mobile Commute Mitigation - Passenger cars constitute 80% of project-traffic; therefore, all of the passenger vehicles are eligible for vanpool and ride share programs.

Area Mitigation - - Project shall use low VOC paint per SCAQMD Rule 1113

Energy Mitigation - - 2013 Title 24 standards are 30% more efficient than 2008 Title 24 standards.

Water Mitigation - - Project must incorporate water conservation strategy to reduce water by 20%

Waste Mitigation - AB 939 requires a 50% diversion in waste (75% by 2020)

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaMitigation	UseLowVOCPaintNonresidentialInteriorValue	250	50
tblConstructionPhase	NumDays	35.00	68.00
tblConstructionPhase	NumDays	500.00	547.00
tblConstructionPhase	NumDays	45.00	75.00
tblConstructionPhase	NumDays	35.00	55.00
tblConstructionPhase	NumDays	20.00	30.00
tblGrading	AcresOfGrading	187.50	30.45
tblGrading	AcresOfGrading	0.00	30.45
tblLandUse	LotAcreage	11.86	23.74
tblProjectCharacteristics	OperationalYear	2014	2017
tblSequestration	NumberOfNewTrees	0.00	147.00
tblVehicleEF	HHD	0.04	0.12
tblVehicleEF	HHD	0.04	0.12
tblVehicleEF	HHD	0.04	0.12
tblVehicleEF	LDA	0.47	0.43
tblVehicleEF	LDA	0.47	0.43
tblVehicleEF	LDA	0.47	0.43
tblVehicleEF	LDT1	0.07	0.06
tblVehicleEF	LDT1	0.07	0.06
tblVehicleEF	LDT1	0.07	0.06
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LDT2	0.17	0.16
tblVehicleEF	LHD1	0.06	0.03

tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD1	0.06	0.03
tblVehicleEF	LHD2	9.0390e-003	5.0000e-003
tblVehicleEF	LHD2	9.0390e-003	5.0000e-003
tblVehicleEF	LHD2	9.0390e-003	5.0000e-003
tblVehicleEF	MCY	4.9210e-003	4.0000e-003
tblVehicleEF	MCY	4.9210e-003	0.04
tblVehicleEF	MCY	4.9210e-003	4.0000e-003
tblVehicleEF	MDV	0.16	0.14
tblVehicleEF	MDV	0.16	0.14
tblVehicleEF	MDV	0.16	0.14
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MH	2.9320e-003	0.00
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	MHD	0.02	0.05
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	OBUS	1.1220e-003	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	SBUS	7.1200e-004	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleEF	UBUS	1.3340e-003	0.00
tblVehicleTrips	CNW_TTP	41.00	80.00
tblVehicleTrips	CW_TL	16.60	40.00

tblVehicleTrips	CW_TTP	59.00	20.00
tblVehicleTrips	ST_TR	2.59	1.68
tblVehicleTrips	SU_TR	2.59	1.68
tblVehicleTrips	WD_TR	2.59	1.68

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					
2015	0.8449	7.4229	7.2092	0.0109	0.8974	0.3747	1.2721	0.3757	0.3480	0.7238	0.0000	956.8581	956.8581	0.1480	0.0000	959.9651
2016	0.7730	5.5778	7.1847	0.0131	0.5975	0.2858	0.8833	0.1609	0.2680	0.4289	0.0000	1,098.0363	1,098.0363	0.1044	0.0000	1,100.2285
2017	1.6488	3.2022	3.9830	7.5800e-003	0.3275	0.1663	0.4937	0.0881	0.1557	0.2437	0.0000	625.0157	625.0157	0.0699	0.0000	626.4840
Total	**3.2667**	**16.2029**	**18.3768**	**0.0315**	**1.8224**	**0.8268**	**2.6491**	**0.6247**	**0.7717**	**1.3964**	**0.0000**	**2,679.9101**	**2,679.9101**	**0.3223**	**0.0000**	**2,686.6775**

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					
2015	0.8449	7.4229	7.2092	0.0109	0.5747	0.3747	0.9493	0.2070	0.3480	0.5551	0.0000	956.8576	956.8576	0.1480	0.0000	959.9645
2016	0.7730	5.5778	7.1847	0.0131	0.5975	0.2858	0.8833	0.1609	0.2680	0.4289	0.0000	1,098.0360	1,098.0360	0.1044	0.0000	1,100.2281
2017	1.6488	3.2022	3.9829	7.5800e-003	0.3275	0.1663	0.4937	0.0881	0.1557	0.2437	0.0000	625.0154	625.0154	0.0699	0.0000	626.4837
Total	**3.2667**	**16.2029**	**18.3768**	**0.0315**	**1.4996**	**0.8268**	**2.3264**	**0.4560**	**0.7717**	**1.2277**	**0.0000**	**2,679.9089**	**2,679.9089**	**0.3223**	**0.0000**	**2,686.6763**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**17.71**	**0.00**	**12.18**	**27.01**	**0.00**	**12.08**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.4333	1.6000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0313	0.0313	9.0000e-005	0.0000	0.0332
Energy	5.9600e-003	0.0542	0.0455	3.3000e-004		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003	0.0000	580.4906	580.4906	0.0251	6.0400e-003	582.8905
Mobile	0.7572	4.9219	10.3949	0.0269	1.5303	0.0727	1.6031	0.4111	0.0669	0.4780	0.0000	2,173.9024	2,173.9024	0.0612	0.0000	2,175.1879
Waste						0.0000	0.0000		0.0000	0.0000	98.5521	0.0000	98.5521	5.8243	0.0000	220.8616
Water						0.0000	0.0000		0.0000	0.0000	37.8923	445.0485	482.9408	3.9124	0.0961	594.9002
Total	**4.1964**	**4.9763**	**10.4568**	**0.0273**	**1.5303**	**0.0769**	**1.6072**	**0.4111**	**0.0711**	**0.4822**	**136.4444**	**3,199.4729**	**3,335.9173**	**9.8230**	**0.1022**	**3,573.8734**

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	3.0680	1.6000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0313	0.0313	9.0000e-005	0.0000	0.0332
Energy	4.2000e-003	0.0382	0.0321	2.3000e-004		2.9000e-003	2.9000e-003		2.9000e-003	2.9000e-003	0.0000	543.0906	543.0906	0.0239	5.5300e-003	545.3063
Mobile	0.7057	4.2359	9.3621	0.0228	1.2893	0.0616	1.3509	0.3463	0.0566	0.4030	0.0000	1,839.8378	1,839.8378	0.0523	0.0000	1,840.9353
Waste						0.0000	0.0000		0.0000	0.0000	49.2761	0.0000	49.2761	2.9121	0.0000	110.4308
Water						0.0000	0.0000		0.0000	0.0000	30.3138	343.6813	373.9951	3.1293	0.0768	463.5143
Total	**3.7778**	**4.2742**	**9.4106**	**0.0230**	**1.2893**	**0.0645**	**1.3539**	**0.3463**	**0.0596**	**0.4059**	**79.5899**	**2,726.6411**	**2,806.2310**	**6.1177**	**0.0823**	**2,960.2198**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**9.97**	**14.11**	**10.01**	**15.56**	**15.75**	**16.11**	**15.77**	**15.75**	**16.18**	**15.81**	**41.67**	**14.78**	**15.88**	**37.72**	**19.43**	**17.17**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	104.0760
Total	**104.0760**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2015	2/11/2015	5	30	
2	Grading	Grading	2/12/2015	5/27/2015	5	75	
3	Building Construction	Building Construction	5/28/2015	6/30/2017	5	547	
4	Paving	Paving	7/1/2017	9/15/2017	5	55	
5	Architectural Coating	Architectural Coating	9/16/2017	12/20/2017	5	68	

Acres of Grading (Site Preparation Phase): 30.45

Acres of Grading (Grading Phase): 30.45

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 788,163; Non-Residential Outdoor: 262,721 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	342.00	134.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	68.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 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					
Fugitive Dust					0.2871	0.0000	0.2871	0.1507	0.0000	0.1507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0789	0.8533	0.6395	5.9000e-004		0.0463	0.0463		0.0426	0.0426	0.0000	55.9517	55.9517	0.0167	0.0000	56.3025
Total	**0.0789**	**0.8533**	**0.6395**	**5.9000e-004**	**0.2871**	**0.0463**	**0.3335**	**0.1507**	**0.0426**	**0.1933**	**0.0000**	**55.9517**	**55.9517**	**0.0167**	**0.0000**	**56.3025**

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	1.7500e-003	0.0184	4.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.7446	2.7446	1.6000e-004	0.0000	2.7479
Total	**1.1700e-003**	**1.7500e-003**	**0.0184**	**4.0000e-005**	**2.9600e-003**	**2.0000e-005**	**2.9800e-003**	**7.9000e-004**	**2.0000e-005**	**8.1000e-004**	**0.0000**	**2.7446**	**2.7446**	**1.6000e-004**	**0.0000**	**2.7479**

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					0.1120	0.0000	0.1120	0.0588	0.0000	0.0588	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0789	0.8533	0.6395	5.9000e-004		0.0463	0.0463		0.0426	0.0426	0.0000	55.9516	55.9516	0.0167	0.0000	56.3024
Total	**0.0789**	**0.8533**	**0.6395**	**5.9000e-004**	**0.1120**	**0.0463**	**0.1583**	**0.0588**	**0.0426**	**0.1014**	**0.0000**	**55.9516**	**55.9516**	**0.0167**	**0.0000**	**56.3024**

3.2 Site Preparation - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1700e-003	1.7500e-003	0.0184	4.0000e-005	2.9600e-003	2.0000e-005	2.9800e-003	7.9000e-004	2.0000e-005	8.1000e-004	0.0000	2.7446	2.7446	1.6000e-004	0.0000	2.7479
Total	**1.1700e-003**	**1.7500e-003**	**0.0184**	**4.0000e-005**	**2.9600e-003**	**2.0000e-005**	**2.9800e-003**	**7.9000e-004**	**2.0000e-005**	**8.1000e-004**	**0.0000**	**2.7446**	**2.7446**	**1.6000e-004**	**0.0000**	**2.7479**

3.3 Grading - 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					
Fugitive Dust					0.2420	0.0000	0.2420	0.1259	0.0000	0.1259	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2541	2.9643	1.9065	2.3200e-003		0.1426	0.1426		0.1312	0.1312	0.0000	220.6583	220.6583	0.0659	0.0000	222.0417
Total	**0.2541**	**2.9643**	**1.9065**	**2.3200e-003**	**0.2420**	**0.1426**	**0.3846**	**0.1259**	**0.1312**	**0.2571**	**0.0000**	**220.6583**	**220.6583**	**0.0659**	**0.0000**	**222.0417**

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2400e-003	4.8700e-003	0.0511	1.0000e-004	8.2200e-003	7.0000e-005	8.2900e-003	2.1800e-003	6.0000e-005	2.2400e-003	0.0000	7.6239	7.6239	4.3000e-004	0.0000	7.6329
Total	**3.2400e-003**	**4.8700e-003**	**0.0511**	**1.0000e-004**	**8.2200e-003**	**7.0000e-005**	**8.2900e-003**	**2.1800e-003**	**6.0000e-005**	**2.2400e-003**	**0.0000**	**7.6239**	**7.6239**	**4.3000e-004**	**0.0000**	**7.6329**

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					0.0944	0.0000	0.0944	0.0491	0.0000	0.0491	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2541	2.9643	1.9065	2.3200e-003		0.1426	0.1426		0.1312	0.1312	0.0000	220.6580	220.6580	0.0659	0.0000	222.0414
Total	**0.2541**	**2.9643**	**1.9065**	**2.3200e-003**	**0.0944**	**0.1426**	**0.2370**	**0.0491**	**0.1312**	**0.1803**	**0.0000**	**220.6580**	**220.6580**	**0.0659**	**0.0000**	**222.0414**

3.3 Grading - 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.2400e-003	4.8700e-003	0.0511	1.0000e-004	8.2200e-003	7.0000e-005	8.2900e-003	2.1800e-003	6.0000e-005	2.2400e-003	0.0000	7.6239	7.6239	4.3000e-004	0.0000	7.6329
Total	**3.2400e-003**	**4.8700e-003**	**0.0511**	**1.0000e-004**	**8.2200e-003**	**7.0000e-005**	**8.2900e-003**	**2.1800e-003**	**6.0000e-005**	**2.2400e-003**	**0.0000**	**7.6239**	**7.6239**	**4.3000e-004**	**0.0000**	**7.6329**

3.4 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	0.2854	2.3423	1.4621	2.0900e-003		0.1651	0.1651		0.1553	0.1553	0.0000	190.3156	190.3156	0.0478	0.0000	191.3183
Total	**0.2854**	**2.3423**	**1.4621**	**2.0900e-003**		**0.1651**	**0.1651**		**0.1553**	**0.1553**	**0.0000**	**190.3156**	**190.3156**	**0.0478**	**0.0000**	**191.3183**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1068	1.0833	1.3130	2.2700e-003	0.0646	0.0183	0.0829	0.0185	0.0168	0.0353	0.0000	208.3986	208.3986	1.6700e-003	0.0000	208.4337
Worker	0.1153	0.1731	1.8186	3.4700e-003	0.2925	2.3300e-003	0.2948	0.0777	2.1300e-003	0.0798	0.0000	271.1655	271.1655	0.0154	0.0000	271.4881
Total	**0.2221**	**1.2563**	**3.1316**	**5.7400e-003**	**0.3571**	**0.0206**	**0.3777**	**0.0962**	**0.0189**	**0.1151**	**0.0000**	**479.5641**	**479.5641**	**0.0170**	**0.0000**	**479.9218**

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	0.2854	2.3423	1.4621	2.0900e-003		0.1651	0.1651		0.1553	0.1553	0.0000	190.3154	190.3154	0.0478	0.0000	191.3181
Total	**0.2854**	**2.3423**	**1.4621**	**2.0900e-003**		**0.1651**	**0.1651**		**0.1553**	**0.1553**	**0.0000**	**190.3154**	**190.3154**	**0.0478**	**0.0000**	**191.3181**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1068	1.0833	1.3130	2.2700e-003	0.0646	0.0183	0.0829	0.0185	0.0168	0.0353	0.0000	208.3986	208.3986	1.6700e-003	0.0000	208.4337
Worker	0.1153	0.1731	1.8186	3.4700e-003	0.2925	2.3300e-003	0.2948	0.0777	2.1300e-003	0.0798	0.0000	271.1655	271.1655	0.0154	0.0000	271.4881
Total	**0.2221**	**1.2563**	**3.1316**	**5.7400e-003**	**0.3571**	**0.0206**	**0.3777**	**0.0962**	**0.0189**	**0.1151**	**0.0000**	**479.5641**	**479.5641**	**0.0170**	**0.0000**	**479.9218**

3.4 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	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0104**	**316.0104**	**0.0784**	**0.0000**	**317.6563**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1567	1.5985	2.0415	3.7900e-003	0.1081	0.0254	0.1335	0.0309	0.0234	0.0543	0.0000	344.6811	344.6811	2.5200e-003	0.0000	344.7340
Worker	0.1718	0.2592	2.7281	5.8000e-003	0.4894	3.7000e-003	0.4931	0.1300	3.4000e-003	0.1334	0.0000	437.3448	437.3448	0.0235	0.0000	437.8381
Total	**0.3285**	**1.8577**	**4.7695**	**9.5900e-003**	**0.5975**	**0.0291**	**0.6266**	**0.1609**	**0.0268**	**0.1877**	**0.0000**	**782.0259**	**782.0259**	**0.0260**	**0.0000**	**782.5722**

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	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560
Total	**0.4445**	**3.7201**	**2.4151**	**3.5000e-003**		**0.2567**	**0.2567**		**0.2412**	**0.2412**	**0.0000**	**316.0101**	**316.0101**	**0.0784**	**0.0000**	**317.6560**

3.4 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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1567	1.5985	2.0415	3.7900e-003	0.1081	0.0254	0.1335	0.0309	0.0234	0.0543	0.0000	344.6811	344.6811	2.5200e-003	0.0000	344.7340
Worker	0.1718	0.2592	2.7281	5.8000e-003	0.4894	3.7000e-003	0.4931	0.1300	3.4000e-003	0.1334	0.0000	437.3448	437.3448	0.0235	0.0000	437.8381
Total	**0.3285**	**1.8577**	**4.7695**	**9.5900e-003**	**0.5975**	**0.0291**	**0.6266**	**0.1609**	**0.0268**	**0.1877**	**0.0000**	**782.0259**	**782.0259**	**0.0260**	**0.0000**	**782.5722**

3.4 Building Construction - 2017

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	0.2017	1.7164	1.1784	1.7400e-003		0.1158	0.1158		0.1087	0.1087	0.0000	155.6614	155.6614	0.0383	0.0000	156.4660
Total	**0.2017**	**1.7164**	**1.1784**	**1.7400e-003**		**0.1158**	**0.1158**		**0.1087**	**0.1087**	**0.0000**	**155.6614**	**155.6614**	**0.0383**	**0.0000**	**156.4660**

3.4 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0720	0.7236	0.9704	1.8900e-003	0.0539	0.0113	0.0651	0.0154	0.0104	0.0258	0.0000	168.8538	168.8538	1.2100e-003	0.0000	168.8793
Worker	0.0756	0.1157	1.2165	2.8900e-003	0.2437	1.7800e-003	0.2455	0.0647	1.6400e-003	0.0664	0.0000	209.2651	209.2651	0.0107	0.0000	209.4904
Total	**0.1477**	**0.8393**	**2.1870**	**4.7800e-003**	**0.2976**	**0.0131**	**0.3107**	**0.0802**	**0.0120**	**0.0922**	**0.0000**	**378.1189**	**378.1189**	**0.0119**	**0.0000**	**378.3696**

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	0.2017	1.7164	1.1784	1.7400e-003		0.1158	0.1158		0.1087	0.1087	0.0000	155.6612	155.6612	0.0383	0.0000	156.4658
Total	**0.2017**	**1.7164**	**1.1784**	**1.7400e-003**		**0.1158**	**0.1158**		**0.1087**	**0.1087**	**0.0000**	**155.6612**	**155.6612**	**0.0383**	**0.0000**	**156.4658**

3.4 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0720	0.7236	0.9704	1.8900e-003	0.0539	0.0113	0.0651	0.0154	0.0104	0.0258	0.0000	168.8538	168.8538	1.2100e-003	0.0000	168.8793
Worker	0.0756	0.1157	1.2165	2.8900e-003	0.2437	1.7800e-003	0.2455	0.0647	1.6400e-003	0.0664	0.0000	209.2651	209.2651	0.0107	0.0000	209.4904
Total	**0.1477**	**0.8393**	**2.1870**	**4.7800e-003**	**0.2976**	**0.0131**	**0.3107**	**0.0802**	**0.0120**	**0.0922**	**0.0000**	**378.1189**	**378.1189**	**0.0119**	**0.0000**	**378.3696**

3.5 Paving - 2017

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	0.0525	0.5582	0.4050	6.1000e-004		0.0313	0.0313		0.0288	0.0288	0.0000	56.9069	56.9069	0.0174	0.0000	57.2731
Paving	8.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0612**	**0.5582**	**0.4050**	**6.1000e-004**		**0.0313**	**0.0313**		**0.0288**	**0.0288**	**0.0000**	**56.9069**	**56.9069**	**0.0174**	**0.0000**	**57.2731**

3.5 Paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-003	2.1500e-003	0.0226	5.0000e-005	4.5200e-003	3.0000e-005	4.5600e-003	1.2000e-003	3.0000e-005	1.2300e-003	0.0000	3.8831	3.8831	2.0000e-004	0.0000	3.8873
Total	**1.4000e-003**	**2.1500e-003**	**0.0226**	**5.0000e-005**	**4.5200e-003**	**3.0000e-005**	**4.5600e-003**	**1.2000e-003**	**3.0000e-005**	**1.2300e-003**	**0.0000**	**3.8831**	**3.8831**	**2.0000e-004**	**0.0000**	**3.8873**

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	0.0525	0.5582	0.4050	6.1000e-004		0.0313	0.0313		0.0288	0.0288	0.0000	56.9068	56.9068	0.0174	0.0000	57.2730
Paving	8.7900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0612**	**0.5582**	**0.4050**	**6.1000e-004**		**0.0313**	**0.0313**		**0.0288**	**0.0288**	**0.0000**	**56.9068**	**56.9068**	**0.0174**	**0.0000**	**57.2730**

3.5 Paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4000e-003	2.1500e-003	0.0226	5.0000e-005	4.5200e-003	3.0000e-005	4.5600e-003	1.2000e-003	3.0000e-005	1.2300e-003	0.0000	3.8831	3.8831	2.0000e-004	0.0000	3.8873
Total	**1.4000e-003**	**2.1500e-003**	**0.0226**	**5.0000e-005**	**4.5200e-003**	**3.0000e-005**	**4.5600e-003**	**1.2000e-003**	**3.0000e-005**	**1.2300e-003**	**0.0000**	**3.8831**	**3.8831**	**2.0000e-004**	**0.0000**	**3.8873**

3.6 Architectural Coating - 2017

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	1.2177					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.0743	0.0635	1.0000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	8.6811	8.6811	9.2000e-004	0.0000	8.7003
Total	**1.2290**	**0.0743**	**0.0635**	**1.0000e-004**		**5.8900e-003**	**5.8900e-003**		**5.8900e-003**	**5.8900e-003**	**0.0000**	**8.6811**	**8.6811**	**9.2000e-004**	**0.0000**	**8.7003**

3.6 Architectural Coating - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8600e-003	0.0120	0.1265	3.0000e-004	0.0254	1.8000e-004	0.0255	6.7300e-003	1.7000e-004	6.9000e-003	0.0000	21.7643	21.7643	1.1200e-003	0.0000	21.7878
Total	**7.8600e-003**	**0.0120**	**0.1265**	**3.0000e-004**	**0.0254**	**1.8000e-004**	**0.0255**	**6.7300e-003**	**1.7000e-004**	**6.9000e-003**	**0.0000**	**21.7643**	**21.7643**	**1.1200e-003**	**0.0000**	**21.7878**

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	1.2177					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0113	0.0743	0.0635	1.0000e-004		5.8900e-003	5.8900e-003		5.8900e-003	5.8900e-003	0.0000	8.6811	8.6811	9.2000e-004	0.0000	8.7003
Total	**1.2290**	**0.0743**	**0.0635**	**1.0000e-004**		**5.8900e-003**	**5.8900e-003**		**5.8900e-003**	**5.8900e-003**	**0.0000**	**8.6811**	**8.6811**	**9.2000e-004**	**0.0000**	**8.7003**

3.6 Architectural Coating - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.8600e-003	0.0120	0.1265	3.0000e-004	0.0254	1.8000e-004	0.0255	6.7300e-003	1.7000e-004	6.9000e-003	0.0000	21.7643	21.7643	1.1200e-003	0.0000	21.7878
Total	**7.8600e-003**	**0.0120**	**0.1265**	**3.0000e-004**	**0.0254**	**1.8000e-004**	**0.0255**	**6.7300e-003**	**1.7000e-004**	**6.9000e-003**	**0.0000**	**21.7643**	**21.7643**	**1.1200e-003**	**0.0000**	**21.7878**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

Employee Vanpool/Shuttle

Provide Riade Sharing Program

	ROG	NOx	CO	SO2	Fugitive 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	0.7057	4.2359	9.3621	0.0228	1.2893	0.0616	1.3509	0.3463	0.0566	0.4030	0.0000	1,839.8378	1,839.8378	0.0523	0.0000	1,840.9353
Unmitigated	0.7572	4.9219	10.3949	0.0269	1.5303	0.0727	1.6031	0.4111	0.0669	0.4780	0.0000	2,173.9024	2,173.9024	0.0612	0.0000	2,175.1879

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	867.70	867.70	867.70	3,982,919	3,355,704
Total	867.70	867.70	867.70	3,982,919	3,355,704

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	8.40	6.90	20.00	0.00	80.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.433000	0.060000	0.156000	0.142000	0.030000	0.005000	0.046000	0.123000	0.000000	0.000000	0.004000	0.000000	0.000000

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

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						0.0000	0.0000		0.0000	0.0000	0.0000	501.5549	501.5549	0.0231	4.7700e-003	503.5177
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	521.5082	521.5082	0.0240	4.9600e-003	523.5491
NaturalGas Mitigated	4.2000e-003	0.0382	0.0321	2.3000e-004		2.9000e-003	2.9000e-003		2.9000e-003	2.9000e-003	0.0000	41.5357	41.5357	8.0000e-004	7.6000e-004	41.7885
NaturalGas Unmitigated	5.9600e-003	0.0542	0.0455	3.3000e-004		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003	0.0000	58.9824	58.9824	1.1300e-003	1.0800e-003	59.3414

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	1.10529e+006	5.9600e-003	0.0542	0.0455	3.3000e-004		4.1200e-003	4.1200e-003		4.1200e-003	4.1200e-003	0.0000	58.9824	58.9824	1.1300e-003	1.0800e-003	59.3414
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**5.9600e-003**	**0.0542**	**0.0455**	**3.3000e-004**		**4.1200e-003**	**4.1200e-003**		**4.1200e-003**	**4.1200e-003**	**0.0000**	**58.9824**	**58.9824**	**1.1300e-003**	**1.0800e-003**	**59.3414**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	778350	4.2000e-003	0.0382	0.0321	2.3000e-004		2.9000e-003	2.9000e-003		2.9000e-003	2.9000e-003	0.0000	41.5357	41.5357	8.0000e-004	7.6000e-004	41.7885
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**4.2000e-003**	**0.0382**	**0.0321**	**2.3000e-004**		**2.9000e-003**	**2.9000e-003**		**2.9000e-003**	**2.9000e-003**	**0.0000**	**41.5357**	**41.5357**	**8.0000e-004**	**7.6000e-004**	**41.7885**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	262592	75.1451	3.4500e-003	7.1000e-004	75.4392
Unrefrigerated Warehouse-No Rail	1.5598e+006	446.3631	0.0205	4.2500e-003	448.1099
Total		**521.5082**	**0.0240**	**4.9600e-003**	**523.5491**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	262592	75.1451	3.4500e-003	7.1000e-004	75.4392
Unrefrigerated Warehouse-No Rail	1.49007e+006	426.4097	0.0196	4.0600e-003	428.0785
Total		**501.5549**	**0.0231**	**4.7700e-003**	**503.5177**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.0680	1.6000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0313	0.0313	9.0000e-005	0.0000	0.0332
Unmitigated	3.4333	1.6000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0313	0.0313	9.0000e-005	0.0000	0.0332

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	0.4871					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9446					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5800e-003	1.6000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0313	0.0313	9.0000e-005	0.0000	0.0332
Total	**3.4333**	**1.6000e-004**	**0.0164**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0313**	**0.0313**	**9.0000e-005**	**0.0000**	**0.0332**

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	0.1218					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.9446					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5800e-003	1.6000e-004	0.0164	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0313	0.0313	9.0000e-005	0.0000	0.0332
Total	**3.0680**	**1.6000e-004**	**0.0164**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0313**	**0.0313**	**9.0000e-005**	**0.0000**	**0.0332**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	373.9951	3.1293	0.0768	463.5143
Unmitigated	482.9408	3.9124	0.0961	594.9002

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	119.438 / 0	482.9408	3.9124	0.0961	594.9002
Total		**482.9408**	**3.9124**	**0.0961**	**594.9002**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	95.5507 / 0	373.9951	3.1293	0.0768	463.5143
Total		**373.9951**	**3.1293**	**0.0768**	**463.5143**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	49.2761	2.9121	0.0000	110.4308
Unmitigated	98.5521	5.8243	0.0000	220.8616

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	485.5	98.5521	5.8243	0.0000	220.8616
Total		**98.5521**	**5.8243**	**0.0000**	**220.8616**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	242.75	49.2761	2.9121	0.0000	110.4308
Total		**49.2761**	**2.9121**	**0.0000**	**110.4308**

9.0 Operational Offroad

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

10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	104.0760	0.0000	0.0000	104.0760

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	147	104.0760	0.0000	0.0000	104.0760
Total		**104.0760**	**0.0000**	**0.0000**	**104.0760**

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Vegetation

Appendix B

Diesel Health Risk Assessment

Emission Assumptions **DPM** Emissions
Warehouse

Facility Operations

Buildout year: 2017

Emission Factors

1) Onsite Vehicle Emissions

a) Truck

(1) EMFAC2011

(a) Annual Meteorology

Temperature: 64 degF

Relative Humidity: 50%

(b) Calculations for San Bernardino County

(c) Truck Mix

4+ axle heavy-heavy duty diesel trucks (HHDT)

4 axle diesel trucks (MHDT)

2 axle diesel trucks (LHDT2)

(d) Onsite Truck Travel Speed: 10 mph

(e) Off-site Truck Travel Speed: 35 mph

(f) Idle speed: 0 mph

(g) Truck Idle time: 15 minutes per truck per day

2) Other Parameters

(a) Width of Plume: 12 feet

(b) Truck Operational Schedule 24 hours/day

Warehouse — Emission: DPM

Processes Modeled — Build-out: 2017

Onsite delivery traffic
Truck idling
Offsite delivery traffic

Facilities in Operation

Location	Truck type	Daily trucks
Site	HHDT	107
Site	MHDT	40
Site	LHDT	30
Total		**177**

Delivery Schedule:

Site 24 **hrs/day, 52weeks/year**

Emission Factors

Vehicle Class	Onsite Exhaust (g/mi)	Offsite Exhaust (g/mi)	Idle (g/hr)
HHDT	0.0791	0.0607	0.111
MHDT	0.0456	0.0324	0.097
LHDT	0.0532	0.0209	0.1066

Onsite Roadway Links Modeled

Link	Truck Type	Emission Factor (g/mi)	Trips per day (in and out)	Length (m)	Length (mi)	Daily Emissions Over the Link (g/day)	Emissions Over the Link (g/sec)	Max Hourly Emissions Over Link (lb/hr)	Daily Emissions (lbs/day)	Annual Avg Emissions Over Link (tons/yr)	Total Daily Emissions for all Vehicles (g/sec)
Blg A	HHDT	0.0791	107	194.5	0.12	1.02E+00	1.18E-05	8.11E+00	2.25E-03	4.11E-04	
Blg A	MHDT	0.0456	40	194.5	0.12	2.20E-01	2.55E-06	1.75E+00	4.85E-04	8.86E-05	1.66E-05
Blg A	LHDT	0.0532	30	194.5	0.12	1.93E-01	2.23E-06	1.53E+00	4.25E-04	7.75E-05	**1.55E-05**
Blg B	HHDT	0.0791	107	295.3	0.18	1.55E+00	1.80E-05	1.23E+01	3.42E-03	6.24E-04	
Blg B	MHDT	0.0456	40	295.3	0.18	3.35E-01	3.87E-06	2.65E+00	7.37E-04	1.35E-04	2.52E-05
Blg B	LHDT	0.0532	30	295.3	0.18	2.93E-01	3.39E-06	2.32E+00	6.45E-04	1.18E-04	**1.55E-06**

Truck Idling

Idle time 15 minutes

Building/Location	Truck Type	Emission Factor (g/idle-hour)	Idling Time (min)	Daily Trucks	Total Emissions (g/day)	Max Hourly Emissions (g/sec)	Max Hourly Emissions (lb/hr)	Total Daily Emissions (lbs/day)	Total Emissions (tons/yr)		
Blg A	HHDT	0.111	15	107	2.97	3.44E-05	2.73E-04	6.54E-03	1.19E-03		
Blg A	MHDT	0.097	15	40	0.97	1.12E-05	8.90E-05	2.14E-03	3.90E-04		5.48E-05
Blg A	LHDT	0.1066	15	30	0.80	9.25E-06	7.34E-05	1.76E-03	3.21E-04	93.8% of trucks	**5.14E-05**
Blg B	HHDT	0.111	15	107	2.97	3.44E-05	2.73E-04	6.54E-03	1.19E-03		
Blg B	MHDT	0.097	15	40	0.97	1.12E-05	8.90E-05	2.14E-03	3.90E-04		5.48E-05
Blg B	LHDT	0.1066	15	30	0.80	9.25E-06	7.34E-05	1.76E-03	3.21E-04	6.2% of trucks	**3.40E-06**

Offsite Roadway Links Modeled

Link	Truck Type	Emission Factor (g/mi)	Trips per day	Length (m)	Length (mi)	Daily Emissions Over the Link (g/day)	Emissions Over the Link (g/sec)	Max Hourly Emissions Over Link (lb/hr)	Daily Emissions (lbs/day)	Annual Avg Emissions Over Link (tons/yr)	
NW on Agua Mansa Road	HHDT	0.0607	107	538.8	0.33	2.17E+00	2.52E-05	1.72E+01	4.79E-03	8.74E-04	
NW on Agua Mansa Road	MHDT	0.0324	40	538.8	0.33	4.34E-01	5.02E-06	3.44E+00	9.55E-04	1.74E-04	3.26E-05
NW on Agua Mansa Road	LHDT	0.0209	30	538.8	0.33	2.10E-01	2.43E-06	1.66E+00	4.62E-04	8.44E-05	**1.79E-05**
											55% of truck traffic
SE on Agua Mansa Road	HHDT	0.0607	107	554.7	0.34	2.24E+00	2.59E-05	1.77E+01	4.93E-03	9.00E-04	
SE on Agua Mansa Road	MHDT	0.0324	40	554.7	0.34	4.47E-01	5.17E-06	3.54E+00	9.84E-04	1.80E-04	3.36E-05
SE on Agua Mansa Road	LHDT	0.0209	30	554.7	0.34	2.16E-01	2.50E-06	1.71E+00	4.76E-04	8.69E-05	**1.51E-05**
											45% of truck traffic
Access road to Agua Mansa	HHDT	0.0607	107	161.5	0.10	6.52E-01	7.54E-06	5.17E+00	1.44E-03	2.62E-04	
Access road to Agua Mansa	MHDT	0.0324	40	161.5	0.10	1.30E-01	1.50E-06	1.03E+00	2.86E-04	5.23E-05	9.77E-06
Access road to Agua Mansa	LHDT	0.0209	30	161.5	0.10	6.29E-02	7.28E-07	4.99E-01	1.39E-04	2.53E-05	**9.77E-06**
											100% of truck traffic

MICR Calculations

Receptor	DPM* Conc (µg/m3)	DBR** (Daily Breathing rate)	EVF*** (Exposure Value Factor)		CP**** (Cancer Potency Factor)	MICR (Maximum Individual Cancer Risk)	Cancer risk per million
1	0.00268	302	0.96	1.00E-06	1.1	8.55E-07	0.9
2	0.00250	302	0.96	1.00E-06	1.1	7.97E-07	0.8
3	0.00190	302	0.96	1.00E-06	1.1	6.06E-07	0.6
4	0.00194	302	0.96	1.00E-06	1.1	6.19E-07	0.6
5	0.00164	302	0.96	1.00E-06	1.1	5.23E-07	0.5
6	0.00131	302	0.96	1.00E-06	1.1	4.18E-07	0.4
7	0.00121	302	0.96	1.00E-06	1.1	3.86E-07	0.4
8	0.00085	302	0.96	1.00E-06	1.1	2.71E-07	0.3
9	0.00313	302	0.96	1.00E-06	1.1	9.98E-07	1.0
10	0.00127	302	0.96	1.00E-06	1.1	4.05E-07	0.4
11	0.00320	302	0.96	1.00E-06	1.1	1.02E-06	1.0
12	0.00372	302	0.96	1.00E-06	1.1	1.19E-06	1.2
13	0.00454	302	0.96	1.00E-06	1.1	1.45E-06	1.4
Max	0.01305	149	0.38	1.00E-06	1.1	8.13E-07	0.8

* DPM concentration calculated by AERMOD

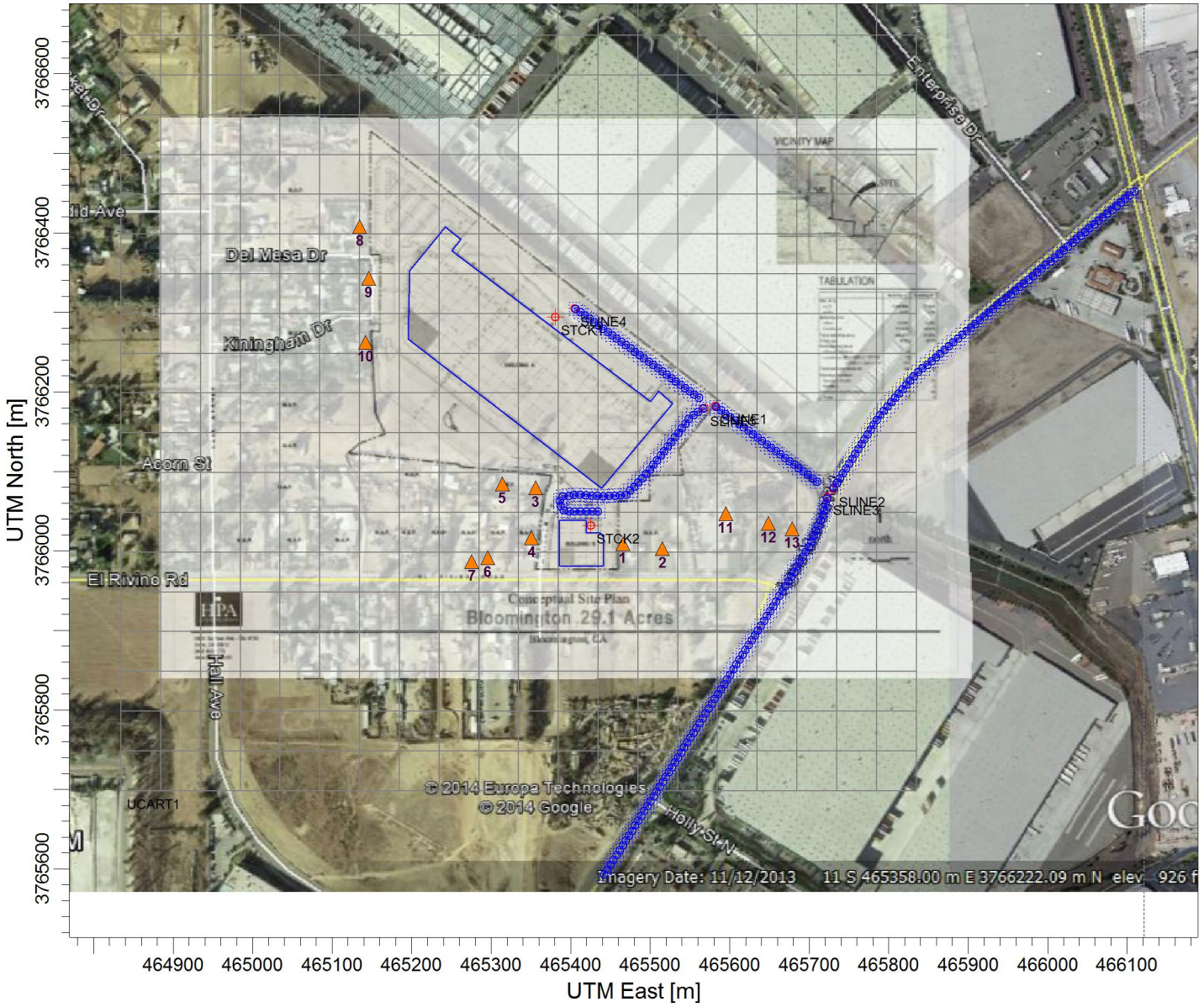
** DBR fromTable 9A of 2012 "AQMD Risk Assessment Procedures for Rules 1401 and 212"

*** EVF from Table 9B of 2012 "AQMD Risk Assessment Procedures for Rules 1401 and 212"

**** CP for DPM value from 2013 "Consolidated Table of OEHHA/ARB Approved Risk Assessment Health Values"

PROJECT TITLE:

Agua Mansa
Source and receptor locations



COMMENTS:

Point source receptors, red crosshairs; line sources, blue lines; discrete receptors, orange triangles

SOURCES:

7

RECEPTORS:

454

DATE:

8/12/2014

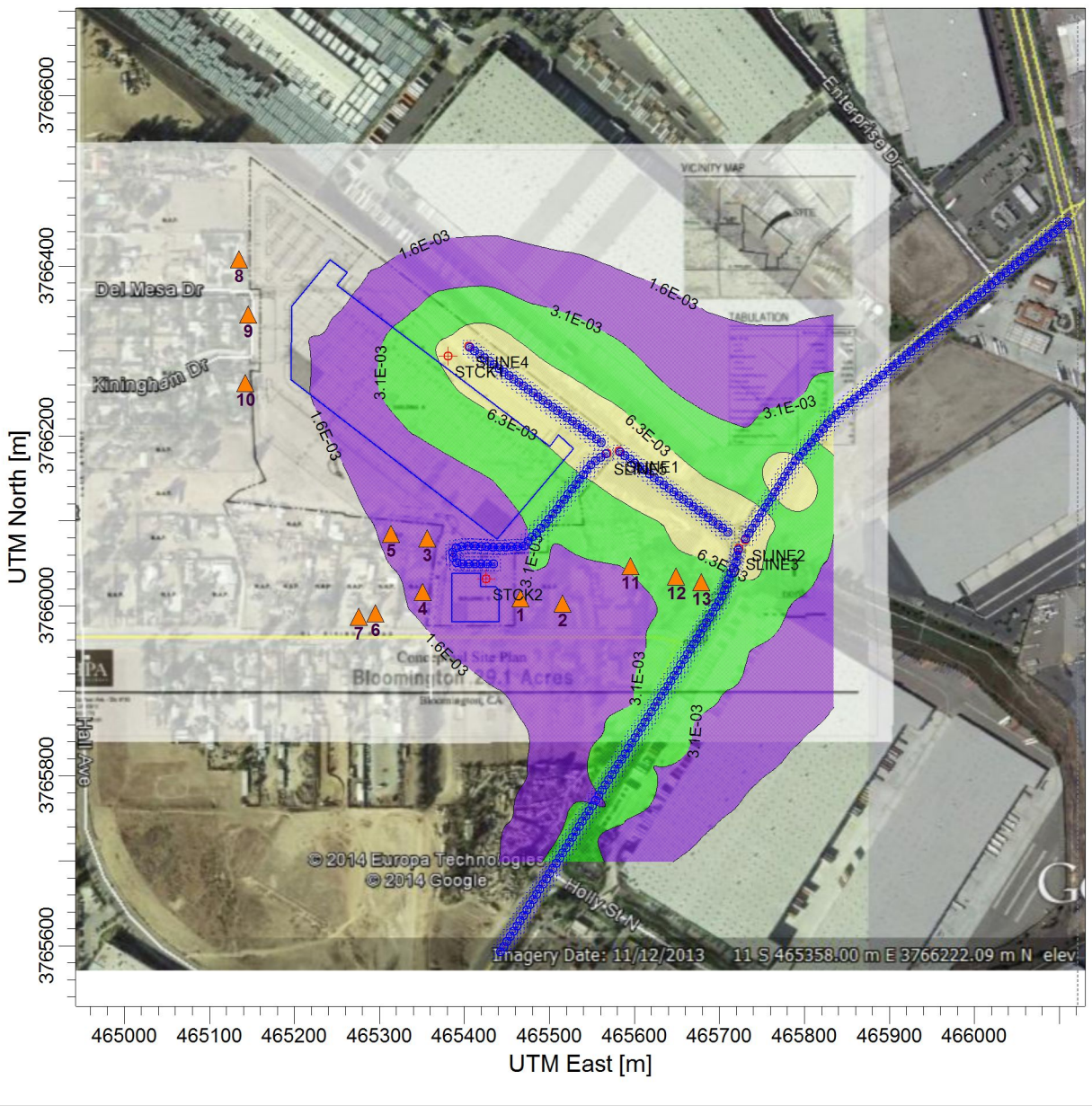
SCALE: 1:8,000

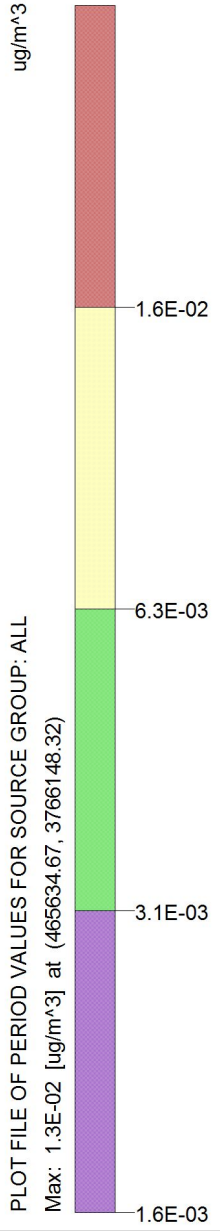
0 0.2 km

PROJECT NO.:

PROJECT TITLE:

Agua Mansa
DPM Concentration Contours





COMMENTS:

Cancer Risk:
Red = 5 in one million
Yellow 2 in one million
Green = 1 in one million
Purple = 0.5 in one million

SOURCES:

7

RECEPTORS:

454

OUTPUT TYPE:

Concentration

MAX:

1.3E-02 ug/m^3

DATE:

8/12/2014

SCALE: 1:8,000

0 0.2 km

PROJECT NO.:

```
** Lakes Environmental AERMOD MPI
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 8.7.0
** Lakes Environmental Software Inc.
** Date: 8/12/2014
** File: C:\Lakes\AERMOD View\Agua Mansa MD\Agua Mansa MD.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE Agua Mansa DPM
   TITLETWO 15 min idling
   MODELOPT CONC  FASTALL
   AVERTIME PERIOD
   URBANOPT 23851 population_of_Bloomington
   POLLUTID DPM
   RUNORNOT RUN
   ERRORFIL "Agua Mansa MD.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION STCK1        POINT      465380.650  3766293.870      280.050
** DESCRSRC Idling Building A
   LOCATION STCK2        POINT      465425.341  3766031.701      284.280
** DESCRSRC Idling Building B
** ------------------------------------------------------------------
** Line Source Represented by Separated Volume Sources
** LINE VOLUME Source ID = SLINE1
** DESCRSRC Access road to Agua Mansa
** PREFIX
** Length of Side = 3.66
** Configuration = Separated
** Emission Rate = 9.77E-06
** Elevated
** Vertical Dimension = 3.66
```

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** SZINIT = 0.85
** Nodes = 2
** 465581.698, 3766182.125, 280.01, 0.00, 3.34
** 465711.384, 3766085.802, 279.64, 0.00, 3.34
** ----------------------------------------------------------------
   LOCATION L0000001     VOLUME   465583.166 3766181.035 279.98
   LOCATION L0000002     VOLUME   465588.927 3766176.755 279.90
   LOCATION L0000003     VOLUME   465594.689 3766172.476 279.93
   LOCATION L0000004     VOLUME   465600.450 3766168.197 280.07
   LOCATION L0000005     VOLUME   465606.211 3766163.918 280.32
   LOCATION L0000006     VOLUME   465611.973 3766159.639 280.66
   LOCATION L0000007     VOLUME   465617.734 3766155.360 281.00
   LOCATION L0000008     VOLUME   465623.495 3766151.080 281.00
   LOCATION L0000009     VOLUME   465629.257 3766146.801 281.00
   LOCATION L0000010     VOLUME   465635.018 3766142.522 281.00
   LOCATION L0000011     VOLUME   465640.779 3766138.243 280.95
   LOCATION L0000012     VOLUME   465646.541 3766133.964 280.83
   LOCATION L0000013     VOLUME   465652.302 3766129.684 280.87
   LOCATION L0000014     VOLUME   465658.064 3766125.405 281.04
   LOCATION L0000015     VOLUME   465663.825 3766121.126 281.18
   LOCATION L0000016     VOLUME   465669.586 3766116.847 281.32
   LOCATION L0000017     VOLUME   465675.348 3766112.568 281.17
   LOCATION L0000018     VOLUME   465681.109 3766108.289 281.07
   LOCATION L0000019     VOLUME   465686.870 3766104.009 281.03
   LOCATION L0000020     VOLUME   465692.632 3766099.730 281.04
   LOCATION L0000021     VOLUME   465698.393 3766095.451 281.04
   LOCATION L0000022     VOLUME   465704.154 3766091.172 280.13
   LOCATION L0000023     VOLUME   465709.916 3766086.893 279.14
** End of LINE VOLUME Source ID = SLINE1
** ----------------------------------------------------------------
** Line Source Represented by Separated Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC NW on Agua Mansa Rd
** PREFIX
** Length of Side = 3.66
** Configuration = Separated
** Emission Rate = 0.0000179
** Elevated
** Vertical Dimension = 3.66
** SZINIT = 0.85
** Nodes = 5
** 465729.957, 3766077.806, 277.23, 0.00, 3.36
** 465786.971, 3766168.182, 270.12, 0.00, 3.36
** 465833.415, 3766221.636, 269.00, 0.00, 3.36
** 465913.158, 3766289.111, 269.18, 0.00, 3.36
** 466110.411, 3766453.322, 271.00, 0.00, 3.36
** ----------------------------------------------------------------
   LOCATION L0000024     VOLUME   465730.933 3766079.353 276.02
   LOCATION L0000025     VOLUME   465734.791 3766085.469 275.32
   LOCATION L0000026     VOLUME   465738.650 3766091.585 274.67
   LOCATION L0000027     VOLUME   465742.508 3766097.702 274.11
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LOCATION L0000028     VOLUME   465746.366 3766103.818 273.77
LOCATION L0000029     VOLUME   465750.225 3766109.934 273.48
LOCATION L0000030     VOLUME   465754.083 3766116.050 273.24
LOCATION L0000031     VOLUME   465757.942 3766122.166 273.06
LOCATION L0000032     VOLUME   465761.800 3766128.282 272.79
LOCATION L0000033     VOLUME   465765.658 3766134.398 272.33
LOCATION L0000034     VOLUME   465769.517 3766140.515 271.87
LOCATION L0000035     VOLUME   465773.375 3766146.631 271.41
LOCATION L0000036     VOLUME   465777.234 3766152.747 270.95
LOCATION L0000037     VOLUME   465781.092 3766158.863 270.54
LOCATION L0000038     VOLUME   465784.950 3766164.979 270.26
LOCATION L0000039     VOLUME   465789.230 3766170.782 270.01
LOCATION L0000040     VOLUME   465793.973 3766176.241 269.80
LOCATION L0000041     VOLUME   465798.716 3766181.700 269.64
LOCATION L0000042     VOLUME   465803.459 3766187.159 269.52
LOCATION L0000043     VOLUME   465808.202 3766192.618 269.30
LOCATION L0000044     VOLUME   465812.945 3766198.076 269.13
LOCATION L0000045     VOLUME   465817.688 3766203.535 269.03
LOCATION L0000046     VOLUME   465822.431 3766208.994 269.00
LOCATION L0000047     VOLUME   465827.174 3766214.453 269.00
LOCATION L0000048     VOLUME   465831.916 3766219.912 268.93
LOCATION L0000049     VOLUME   465837.191 3766224.832 268.89
LOCATION L0000050     VOLUME   465842.712 3766229.503 268.90
LOCATION L0000051     VOLUME   465848.232 3766234.174 268.97
LOCATION L0000052     VOLUME   465853.753 3766238.845 269.14
LOCATION L0000053     VOLUME   465859.273 3766243.516 269.32
LOCATION L0000054     VOLUME   465864.793 3766248.187 269.45
LOCATION L0000055     VOLUME   465870.314 3766252.859 269.48
LOCATION L0000056     VOLUME   465875.834 3766257.530 269.51
LOCATION L0000057     VOLUME   465881.355 3766262.201 269.48
LOCATION L0000058     VOLUME   465886.875 3766266.872 269.32
LOCATION L0000059     VOLUME   465892.395 3766271.543 269.17
LOCATION L0000060     VOLUME   465897.916 3766276.214 269.01
LOCATION L0000061     VOLUME   465903.436 3766280.885 268.85
LOCATION L0000062     VOLUME   465908.957 3766285.556 268.70
LOCATION L0000063     VOLUME   465914.486 3766290.217 268.71
LOCATION L0000064     VOLUME   465920.044 3766294.844 268.74
LOCATION L0000065     VOLUME   465925.601 3766299.470 268.77
LOCATION L0000066     VOLUME   465931.159 3766304.097 268.80
LOCATION L0000067     VOLUME   465936.717 3766308.724 268.84
LOCATION L0000068     VOLUME   465942.274 3766313.350 268.86
LOCATION L0000069     VOLUME   465947.832 3766317.977 268.90
LOCATION L0000070     VOLUME   465953.390 3766322.604 268.93
LOCATION L0000071     VOLUME   465958.948 3766327.231 268.96
LOCATION L0000072     VOLUME   465964.505 3766331.857 268.99
LOCATION L0000073     VOLUME   465970.063 3766336.484 269.02
LOCATION L0000074     VOLUME   465975.621 3766341.111 269.05
LOCATION L0000075     VOLUME   465981.178 3766345.737 269.08
LOCATION L0000076     VOLUME   465986.736 3766350.364 269.11
LOCATION L0000077     VOLUME   465992.294 3766354.991 269.14
LOCATION L0000078     VOLUME   465997.851 3766359.618 269.17
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   LOCATION L0000079     VOLUME   466003.409 3766364.244 269.20
   LOCATION L0000080     VOLUME   466008.967 3766368.871 269.24
   LOCATION L0000081     VOLUME   466014.524 3766373.498 269.27
   LOCATION L0000082     VOLUME   466020.082 3766378.125 269.30
   LOCATION L0000083     VOLUME   466025.640 3766382.751 269.33
   LOCATION L0000084     VOLUME   466031.198 3766387.378 269.38
   LOCATION L0000085     VOLUME   466036.755 3766392.005 269.56
   LOCATION L0000086     VOLUME   466042.313 3766396.631 269.85
   LOCATION L0000087     VOLUME   466047.871 3766401.258 270.13
   LOCATION L0000088     VOLUME   466053.428 3766405.885 270.34
   LOCATION L0000089     VOLUME   466058.986 3766410.512 270.51
   LOCATION L0000090     VOLUME   466064.544 3766415.138 270.42
   LOCATION L0000091     VOLUME   466070.101 3766419.765 270.42
   LOCATION L0000092     VOLUME   466075.659 3766424.392 270.53
   LOCATION L0000093     VOLUME   466081.217 3766429.018 270.75
   LOCATION L0000094     VOLUME   466086.774 3766433.645 270.93
   LOCATION L0000095     VOLUME   466092.332 3766438.272 271.00
   LOCATION L0000096     VOLUME   466097.890 3766442.899 271.00
   LOCATION L0000097     VOLUME   466103.448 3766447.525 271.00
   LOCATION L0000098     VOLUME   466109.005 3766452.152 271.00
** End of LINE VOLUME Source ID = SLINE2
** ----------------------------------------------------------------------
** Line Source Represented by Separated Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC
** PREFIX
** Length of Side = 3.66
** Configuration = Separated
** Emission Rate = 0.0000151
** Elevated
** Vertical Dimension = 12.00
** SZINIT = 2.79
** Nodes = 5
** 465722.623, 3766067.852, 277.41, 0.00, 3.37
** 465718.735, 3766049.188, 280.50, 0.00, 3.37
** 465701.626, 3766008.750, 281.01, 0.00, 3.37
** 465661.188, 3765941.093, 283.30, 0.00, 3.37
** 465441.428, 3765591.478, 285.63, 0.00, 3.37
** ----------------------------------------------------------------------
   LOCATION L0000099     VOLUME   465722.250 3766066.062 278.01
   LOCATION L0000100     VOLUME   465720.771 3766058.963 278.70
   LOCATION L0000101     VOLUME   465719.292 3766051.864 279.33
   LOCATION L0000102     VOLUME   465716.975 3766045.028 279.92
   LOCATION L0000103     VOLUME   465714.149 3766038.350 280.42
   LOCATION L0000104     VOLUME   465711.324 3766031.672 280.67
   LOCATION L0000105     VOLUME   465708.499 3766024.994 280.82
   LOCATION L0000106     VOLUME   465705.674 3766018.316 280.92
   LOCATION L0000107     VOLUME   465702.848 3766011.638 280.98
   LOCATION L0000108     VOLUME   465699.515 3766005.217 281.04
   LOCATION L0000109     VOLUME   465695.795 3765998.993 281.38
   LOCATION L0000110     VOLUME   465692.075 3765992.769 281.71
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LOCATION L0000111     VOLUME   465688.355 3765986.545 282.04
LOCATION L0000112     VOLUME   465684.634 3765980.321 282.37
LOCATION L0000113     VOLUME   465680.914 3765974.097 282.65
LOCATION L0000114     VOLUME   465677.194 3765967.873 282.82
LOCATION L0000115     VOLUME   465673.474 3765961.649 282.93
LOCATION L0000116     VOLUME   465669.754 3765955.425 283.00
LOCATION L0000117     VOLUME   465666.034 3765949.201 283.11
LOCATION L0000118     VOLUME   465662.314 3765942.977 283.36
LOCATION L0000119     VOLUME   465658.497 3765936.812 283.69
LOCATION L0000120     VOLUME   465654.638 3765930.673 284.02
LOCATION L0000121     VOLUME   465650.779 3765924.534 284.36
LOCATION L0000122     VOLUME   465646.920 3765918.395 284.69
LOCATION L0000123     VOLUME   465643.061 3765912.256 284.90
LOCATION L0000124     VOLUME   465639.203 3765906.117 285.00
LOCATION L0000125     VOLUME   465635.344 3765899.978 285.00
LOCATION L0000126     VOLUME   465631.485 3765893.839 285.00
LOCATION L0000127     VOLUME   465627.626 3765887.700 285.00
LOCATION L0000128     VOLUME   465623.767 3765881.561 285.17
LOCATION L0000129     VOLUME   465619.908 3765875.422 285.37
LOCATION L0000130     VOLUME   465616.050 3765869.283 285.58
LOCATION L0000131     VOLUME   465612.191 3765863.144 285.78
LOCATION L0000132     VOLUME   465608.332 3765857.005 285.98
LOCATION L0000133     VOLUME   465604.473 3765850.866 286.00
LOCATION L0000134     VOLUME   465600.614 3765844.727 286.00
LOCATION L0000135     VOLUME   465596.755 3765838.588 286.00
LOCATION L0000136     VOLUME   465592.896 3765832.449 286.00
LOCATION L0000137     VOLUME   465589.038 3765826.310 286.00
LOCATION L0000138     VOLUME   465585.179 3765820.171 285.91
LOCATION L0000139     VOLUME   465581.320 3765814.031 285.66
LOCATION L0000140     VOLUME   465577.461 3765807.892 285.35
LOCATION L0000141     VOLUME   465573.602 3765801.753 285.14
LOCATION L0000142     VOLUME   465569.743 3765795.614 285.04
LOCATION L0000143     VOLUME   465565.885 3765789.475 285.26
LOCATION L0000144     VOLUME   465562.026 3765783.336 285.37
LOCATION L0000145     VOLUME   465558.167 3765777.197 285.37
LOCATION L0000146     VOLUME   465554.308 3765771.058 285.27
LOCATION L0000147     VOLUME   465550.449 3765764.919 285.12
LOCATION L0000148     VOLUME   465546.590 3765758.780 285.23
LOCATION L0000149     VOLUME   465542.731 3765752.641 285.36
LOCATION L0000150     VOLUME   465538.873 3765746.502 285.43
LOCATION L0000151     VOLUME   465535.014 3765740.363 285.45
LOCATION L0000152     VOLUME   465531.155 3765734.224 285.39
LOCATION L0000153     VOLUME   465527.296 3765728.085 285.26
LOCATION L0000154     VOLUME   465523.437 3765721.946 285.13
LOCATION L0000155     VOLUME   465519.578 3765715.807 285.00
LOCATION L0000156     VOLUME   465515.720 3765709.668 285.01
LOCATION L0000157     VOLUME   465511.861 3765703.529 285.00
LOCATION L0000158     VOLUME   465508.002 3765697.390 285.00
LOCATION L0000159     VOLUME   465504.143 3765691.251 285.00
LOCATION L0000160     VOLUME   465500.284 3765685.112 285.00
LOCATION L0000161     VOLUME   465496.425 3765678.973 285.00
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   LOCATION L0000162     VOLUME   465492.566 3765672.834 285.00
   LOCATION L0000163     VOLUME   465488.708 3765666.695 285.03
   LOCATION L0000164     VOLUME   465484.849 3765660.556 285.16
   LOCATION L0000165     VOLUME   465480.990 3765654.417 285.28
   LOCATION L0000166     VOLUME   465477.131 3765648.278 285.41
   LOCATION L0000167     VOLUME   465473.272 3765642.139 285.54
   LOCATION L0000168     VOLUME   465469.413 3765636.000 285.67
   LOCATION L0000169     VOLUME   465465.554 3765629.861 285.80
   LOCATION L0000170     VOLUME   465461.696 3765623.722 285.93
   LOCATION L0000171     VOLUME   465457.837 3765617.583 286.00
   LOCATION L0000172     VOLUME   465453.978 3765611.444 285.86
   LOCATION L0000173     VOLUME   465450.119 3765605.305 285.74
   LOCATION L0000174     VOLUME   465446.260 3765599.166 285.68
   LOCATION L0000175     VOLUME   465442.401 3765593.027 285.66
** End of LINE VOLUME Source ID = SLINE3
** ----------------------------------------------------------------------
** Line Source Represented by Separated Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Onsite travel blg A
** PREFIX
** Length of Side = 3.66
** Configuration = Separated
** Emission Rate = 0.0000155
** Elevated
** Building Height = 10.67
** SZINIT = 4.96
** Nodes = 2
** 465404.976, 3766305.326, 279.06, 0.00, 3.29
** 465562.636, 3766191.355, 280.70, 0.00, 3.29
** ----------------------------------------------------------------------
   LOCATION L0000176     VOLUME   465406.458 3766304.255 279.08
   LOCATION L0000177     VOLUME   465412.188 3766300.113 279.21
   LOCATION L0000178     VOLUME   465417.917 3766295.971 279.35
   LOCATION L0000179     VOLUME   465423.646 3766291.829 279.49
   LOCATION L0000180     VOLUME   465429.376 3766287.688 279.63
   LOCATION L0000181     VOLUME   465435.105 3766283.546 279.58
   LOCATION L0000182     VOLUME   465440.835 3766279.404 279.53
   LOCATION L0000183     VOLUME   465446.564 3766275.262 279.43
   LOCATION L0000184     VOLUME   465452.294 3766271.120 279.24
   LOCATION L0000185     VOLUME   465458.023 3766266.979 279.05
   LOCATION L0000186     VOLUME   465463.753 3766262.837 278.92
   LOCATION L0000187     VOLUME   465469.482 3766258.695 278.87
   LOCATION L0000188     VOLUME   465475.212 3766254.553 278.86
   LOCATION L0000189     VOLUME   465480.941 3766250.411 278.91
   LOCATION L0000190     VOLUME   465486.671 3766246.270 279.01
   LOCATION L0000191     VOLUME   465492.400 3766242.128 278.97
   LOCATION L0000192     VOLUME   465498.129 3766237.986 278.79
   LOCATION L0000193     VOLUME   465503.859 3766233.844 278.67
   LOCATION L0000194     VOLUME   465509.588 3766229.703 278.60
   LOCATION L0000195     VOLUME   465515.318 3766225.561 278.58
   LOCATION L0000196     VOLUME   465521.047 3766221.419 278.52
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   LOCATION L0000197     VOLUME   465526.777 3766217.277 278.22
   LOCATION L0000198     VOLUME   465532.506 3766213.135 278.08
   LOCATION L0000199     VOLUME   465538.236 3766208.994 278.10
   LOCATION L0000200     VOLUME   465543.965 3766204.852 278.29
   LOCATION L0000201     VOLUME   465549.695 3766200.710 278.63
   LOCATION L0000202     VOLUME   465555.424 3766196.568 279.13
   LOCATION L0000203     VOLUME   465561.154 3766192.427 279.63
** End of LINE VOLUME Source ID = SLINE4
** ----------------------------------------------------------------------
** Line Source Represented by Separated Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC On-site to bldg B
** PREFIX
** Length of Side = 3.66
** Configuration = Separated
** Emission Rate = 1.55E-06
** Elevated
** Building Height = 10.67
** SZINIT = 4.96
** Nodes = 10
** 465567.925, 3766179.734, 280.48, 0.00, 3.39
** 465550.047, 3766167.816, 281.13, 0.00, 3.39
** 465496.413, 3766098.539, 283.04, 0.00, 3.39
** 465469.597, 3766070.233, 284.00, 0.00, 3.39
** 465439.055, 3766068.743, 284.00, 0.00, 3.39
** 465406.279, 3766070.978, 284.07, 0.00, 3.39
** 465387.657, 3766067.998, 284.49, 0.00, 3.39
** 465385.422, 3766059.059, 284.71, 0.00, 3.39
** 465392.126, 3766049.375, 284.92, 0.00, 3.39
** 465436.076, 3766049.375, 284.15, 0.00, 3.39
** ----------------------------------------------------------------------
   LOCATION L0000204     VOLUME   465566.403 3766178.720 280.58
   LOCATION L0000205     VOLUME   465560.336 3766174.675 280.78
   LOCATION L0000206     VOLUME   465554.269 3766170.631 280.93
   LOCATION L0000207     VOLUME   465548.690 3766166.063 281.02
   LOCATION L0000208     VOLUME   465544.226 3766160.297 281.15
   LOCATION L0000209     VOLUME   465539.762 3766154.532 281.37
   LOCATION L0000210     VOLUME   465535.298 3766148.766 281.61
   LOCATION L0000211     VOLUME   465530.835 3766143.000 281.79
   LOCATION L0000212     VOLUME   465526.371 3766137.235 281.92
   LOCATION L0000213     VOLUME   465521.907 3766131.469 281.99
   LOCATION L0000214     VOLUME   465517.444 3766125.703 282.10
   LOCATION L0000215     VOLUME   465512.980 3766119.938 282.39
   LOCATION L0000216     VOLUME   465508.516 3766114.172 282.63
   LOCATION L0000217     VOLUME   465504.052 3766108.406 282.81
   LOCATION L0000218     VOLUME   465499.589 3766102.641 282.93
   LOCATION L0000219     VOLUME   465494.966 3766097.011 283.00
   LOCATION L0000220     VOLUME   465489.951 3766091.718 283.16
   LOCATION L0000221     VOLUME   465484.936 3766086.425 283.34
   LOCATION L0000222     VOLUME   465479.922 3766081.131 283.51
   LOCATION L0000223     VOLUME   465474.907 3766075.838 283.69
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   LOCATION L0000224     VOLUME   465469.892 3766070.545 283.87
   LOCATION L0000225     VOLUME   465462.743 3766069.898 283.89
   LOCATION L0000226     VOLUME   465455.460 3766069.543 283.91
   LOCATION L0000227     VOLUME   465448.177 3766069.188 283.95
   LOCATION L0000228     VOLUME   465440.894 3766068.833 283.97
   LOCATION L0000229     VOLUME   465433.617 3766069.114 283.99
   LOCATION L0000230     VOLUME   465426.343 3766069.610 284.01
   LOCATION L0000231     VOLUME   465419.068 3766070.106 284.04
   LOCATION L0000232     VOLUME   465411.793 3766070.602 284.08
   LOCATION L0000233     VOLUME   465404.536 3766070.699 284.12
   LOCATION L0000234     VOLUME   465397.336 3766069.547 284.17
   LOCATION L0000235     VOLUME   465390.136 3766068.395 284.37
   LOCATION L0000236     VOLUME   465386.497 3766063.361 284.49
   LOCATION L0000237     VOLUME   465387.048 3766056.709 284.61
   LOCATION L0000238     VOLUME   465391.199 3766050.714 284.66
   LOCATION L0000239     VOLUME   465397.789 3766049.375 284.60
   LOCATION L0000240     VOLUME   465405.080 3766049.375 284.47
   LOCATION L0000241     VOLUME   465412.372 3766049.375 284.33
   LOCATION L0000242     VOLUME   465419.664 3766049.375 284.19
   LOCATION L0000243     VOLUME   465426.955 3766049.375 284.05
   LOCATION L0000244     VOLUME   465434.247 3766049.375 284.00
** End of LINE VOLUME Source ID = SLINE5
** Source Parameters **
   SRCPARAM STCK1        0.0000514     3.658   366.483  51.81600     0.100
   SRCPARAM STCK2          3.4E-06     3.658   366.483  51.81600     0.100
** LINE VOLUME Source ID = SLINE1
   SRCPARAM L0000001     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000002     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000003     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000004     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000005     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000006     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000007     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000008     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000009     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000010     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000011     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000012     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000013     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000014     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000015     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000016     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000017     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000018     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000019     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000020     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000021     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000022     0.0000004248      0.00      3.34      0.85
   SRCPARAM L0000023     0.0000004248      0.00      3.34      0.85
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE2
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SRCPARAM L0000024     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000025     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000026     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000027     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000028     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000029     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000030     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000031     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000032     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000033     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000034     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000035     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000036     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000037     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000038     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000039     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000040     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000041     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000042     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000043     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000044     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000045     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000046     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000047     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000048     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000049     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000050     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000051     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000052     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000053     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000054     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000055     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000056     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000057     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000058     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000059     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000060     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000061     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000062     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000063     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000064     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000065     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000066     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000067     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000068     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000069     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000070     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000071     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000072     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000073     0.0000002387      0.00      3.36      0.85
SRCPARAM L0000074     0.0000002387      0.00      3.36      0.85
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   SRCPARAM L0000075     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000076     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000077     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000078     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000079     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000080     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000081     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000082     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000083     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000084     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000085     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000086     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000087     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000088     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000089     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000090     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000091     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000092     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000093     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000094     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000095     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000096     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000097     0.0000002387      0.00      3.36      0.85
   SRCPARAM L0000098     0.0000002387      0.00      3.36      0.85
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE3
   SRCPARAM L0000099     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000100     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000101     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000102     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000103     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000104     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000105     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000106     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000107     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000108     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000109     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000110     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000111     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000112     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000113     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000114     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000115     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000116     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000117     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000118     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000119     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000120     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000121     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000122     0.0000001961      0.00      3.37      2.79
   SRCPARAM L0000123     0.0000001961      0.00      3.37      2.79
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SRCPARAM L0000124     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000125     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000126     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000127     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000128     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000129     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000130     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000131     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000132     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000133     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000134     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000135     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000136     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000137     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000138     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000139     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000140     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000141     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000142     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000143     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000144     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000145     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000146     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000147     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000148     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000149     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000150     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000151     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000152     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000153     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000154     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000155     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000156     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000157     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000158     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000159     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000160     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000161     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000162     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000163     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000164     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000165     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000166     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000167     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000168     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000169     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000170     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000171     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000172     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000173     0.0000001961      0.00      3.37      2.79
SRCPARAM L0000174     0.0000001961      0.00      3.37      2.79
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   SRCPARAM L0000175     0.0000001961      0.00      3.37      2.79
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE4
   SRCPARAM L0000176     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000177     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000178     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000179     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000180     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000181     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000182     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000183     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000184     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000185     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000186     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000187     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000188     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000189     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000190     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000191     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000192     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000193     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000194     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000195     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000196     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000197     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000198     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000199     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000200     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000201     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000202     0.0000005536      0.00      3.29      4.96
   SRCPARAM L0000203     0.0000005536      0.00      3.29      4.96
** ------------------------------------------------------------------
** LINE VOLUME Source ID = SLINE5
   SRCPARAM L0000204     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000205     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000206     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000207     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000208     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000209     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000210     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000211     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000212     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000213     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000214     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000215     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000216     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000217     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000218     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000219     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000220     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000221     0.0000000378      0.00      3.39      4.96
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   SRCPARAM L0000222     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000223     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000224     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000225     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000226     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000227     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000228     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000229     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000230     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000231     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000232     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000233     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000234     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000235     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000236     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000237     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000238     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000239     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000240     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000241     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000242     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000243     0.0000000378      0.00      3.39      4.96
   SRCPARAM L0000244     0.0000000378      0.00      3.39      4.96
** ------------------------------------------------------------------

** Building Downwash **
   BUILDHGT STCK1           10.67    10.67    10.67    10.67    10.67    10.67
   BUILDHGT STCK1           10.67    10.67    10.67    10.67    10.67    10.67
   BUILDHGT STCK1           10.67    10.67    10.67    10.67    10.67    10.67
   BUILDHGT STCK1           10.67    10.67    10.67    10.67    10.67    10.67
   BUILDHGT STCK1           10.67    10.67    10.67    10.67    10.67    10.67
   BUILDHGT STCK1           10.67    10.67    10.67    10.67    10.67    10.67

   BUILDHGT STCK2           10.67    10.67    10.67    10.67    10.67    10.67
   BUILDHGT STCK2           10.67    10.67    10.67    10.67    10.67    10.67
   BUILDHGT STCK2           10.67    10.67    10.67    10.67    10.67    10.67
   BUILDHGT STCK2           10.67    10.67    10.67    10.67    10.67    10.67
   BUILDHGT STCK2           10.67    10.67    10.67    10.67    10.67    10.67
   BUILDHGT STCK2           10.67    10.67    10.67    10.67    10.67    10.67

   BUILDWID STCK1          354.94   368.19   370.25   361.77   377.67   382.44
   BUILDWID STCK1          375.60   357.34   328.22   289.13   241.26   186.05
   BUILDWID STCK1          152.04   202.51   247.35   284.69   313.37   332.53
   BUILDWID STCK1          354.94   368.19   370.25   361.77   377.67   382.44
   BUILDWID STCK1          375.60   357.34   328.22   289.13   241.26   186.05
   BUILDWID STCK1          152.04   202.51   247.35   284.69   313.37   332.53

   BUILDWID STCK2           63.95    71.08    76.04    78.70    78.96    76.83
   BUILDWID STCK2           72.36    65.69    57.57    61.97    65.01    66.08
   BUILDWID STCK2           65.14    65.63    66.02    64.41    60.84    55.42
   BUILDWID STCK2           63.95    71.08    76.04    78.70    78.96    76.83
```

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   BUILDWID STCK2           72.36    65.69    57.57    61.97    65.01    66.08
   BUILDWID STCK2           65.14    65.63    66.02    64.41    60.84    55.42

   BUILDLEN STCK1          289.13   241.26   186.05   152.04   202.51   247.35
   BUILDLEN STCK1          284.69   313.37   332.53   354.94   368.19   370.25
   BUILDLEN STCK1          361.77   377.67   382.44   375.60   357.34   328.22
   BUILDLEN STCK1          289.13   241.26   186.05   152.04   202.51   247.35
   BUILDLEN STCK1          284.69   313.37   332.53   354.94   368.19   370.25
   BUILDLEN STCK1          361.77   377.67   382.44   375.60   357.34   328.22

   BUILDLEN STCK2           61.97    65.01    66.08    65.14    65.63    66.02
   BUILDLEN STCK2           64.41    60.84    55.42    63.95    71.08    76.04
   BUILDLEN STCK2           78.70    78.96    76.83    72.36    65.69    57.57
   BUILDLEN STCK2           61.97    65.01    66.08    65.14    65.63    66.02
   BUILDLEN STCK2           64.41    60.84    55.42    63.95    71.08    76.04
   BUILDLEN STCK2           78.70    78.96    76.83    72.36    65.69    57.57

   XBADJ    STCK1         -201.79  -182.35  -157.37  -139.74  -159.16  -173.74
   XBADJ    STCK1         -183.04  -186.78  -184.85  -190.65  -192.28  -188.07
   XBADJ    STCK1         -178.86  -175.73  -167.25  -153.69  -135.46  -113.12
   XBADJ    STCK1          -87.34   -58.90   -28.68   -12.30   -43.35   -73.61
   XBADJ    STCK1         -101.64  -126.59  -147.68  -164.29  -175.90  -182.17
   XBADJ    STCK1         -182.91  -201.94  -215.19  -221.90  -221.87  -215.10

   XBADJ    STCK2          -56.43   -60.83   -63.38   -64.00   -62.68   -59.45
   XBADJ    STCK2          -54.42   -47.74   -39.60   -40.07   -39.33   -37.38
   XBADJ    STCK2          -34.31   -30.19   -25.15   -19.35   -12.96    -6.72
   XBADJ    STCK2           -5.53    -4.18    -2.70    -1.14    -2.95    -6.57
   XBADJ    STCK2           -9.99   -13.10   -15.82   -23.88   -31.75   -38.66
   XBADJ    STCK2          -44.39   -48.78   -51.68   -53.01   -52.73   -50.85

   YBADJ    STCK1           13.18     8.19     2.95    -2.02   -13.11   -23.97
   YBADJ    STCK1          -34.11   -43.20   -50.99   -57.23   -61.72   -64.35
   YBADJ    STCK1          -63.72   -57.90   -50.06   -40.70   -30.10   -18.58
   YBADJ    STCK1          -13.18    -8.19    -2.95     2.02    13.11    23.97
   YBADJ    STCK1           34.11    43.20    50.99    57.23    61.72    64.35
   YBADJ    STCK1           63.72    57.90    50.06    40.70    30.10    18.58

   YBADJ    STCK2            8.10     3.79    -0.64    -5.04    -9.29   -13.26
   YBADJ    STCK2          -16.83   -19.88   -22.07   -25.45   -28.32   -30.34
   YBADJ    STCK2          -31.43   -29.87   -26.44   -22.22   -17.32   -11.89
   YBADJ    STCK2           -8.10    -3.79     0.64     5.04     9.29    13.26
   YBADJ    STCK2           16.83    19.88    22.07    25.45    28.32    30.34
   YBADJ    STCK2           31.43    29.87    26.44    22.22    17.32    11.89

   URBANSRC ALL
   SRCGROUP ALL
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
```

```
**************************************
**
**
RE STARTING
   INCLUDED "Agua Mansa MD.rou"
RE FINISHED
**
**************************************
** AERMOD Meteorology Pathway
**************************************
**
**
ME STARTING
   SURFFILE "C:\Users\Kate Wilson\Desktop\Met data\rivr8.sfc"
   PROFFILE "C:\Users\Kate Wilson\Desktop\Met data\rivr8.PFL"
   SURFDATA 0 2008
   UAIRDATA 3190 2008
   SITEDATA 99999 2008
   PROFBASE 250.0 METERS
ME FINISHED
**
**************************************
** AERMOD Output Pathway
**************************************
**
**
OU STARTING
** Auto-Generated Plotfiles
   PLOTFILE PERIOD ALL "Agua Mansa MD.AD\PE00GALL.PLT" 31
   SUMMFILE "Agua Mansa MD.sum"
OU FINISHED


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

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

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


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


    ********   WARNING MESSAGES   ********
 SO W320     380  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS
 SO W320     381  PPARM:Input Parameter May Be Out-of-Range for Parameter            VS

 *********************************
```

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


*** AERMOD - VERSION  12345 ***   *** Agua Mansa DPM                                                    ***        08/12/14
                                  *** 15 min idling                                                     ***        12:01:07
                                                                                                                   PAGE   1
**MODELOPTs:  NonDFAULT CONC                                          ELEV                                    FASTALL


                                        ***     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   246 Source(s),
  for Total of    1 Urban Area(s):
  Urban Population =     23851.0 ;  Urban Roughness Length =  1.000 m

**Model Allows User-Specified 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.
        6. Urban Roughness Length of 1.0 Meter Used.

**Other Options Specified:
        FASTALL  - Use effective sigma-y to optimize meander for
                   POINT and VOLUME sources, and hybrid approach
                   to optimize AREA sources (formerly TOXICS option)

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates PERIOD Averages Only

**This Run Includes:    246 Source(s);       1 Source Group(s); and     454 Receptor(s)

**The Model Assumes A Pollutant Type of:  DPM

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

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         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) = 250.00 ; 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 = 4.0 MB of RAM.

**Detailed Error/Message File: Agua Mansa MD.err
**File for Summary of Results: Agua Mansa MD.sum

*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BLDG EXISTS	URBAN SOURCE	CAP/ HOR	EMIS RATE SCALAR VARY BY
STCK1	0	0.51400E-04	465380.6	3766293.9	280.1	3.66	366.48	51.82	0.10	YES	YES	NO	
STCK2	0	0.34000E-05	465425.3	3766031.7	284.3	3.66	366.48	51.82	0.10	YES	YES	NO	

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.42480E-06	465583.2	3766181.0	280.0	0.00	3.34	0.85	YES	
L0000002	0	0.42480E-06	465588.9	3766176.8	279.9	0.00	3.34	0.85	YES	
L0000003	0	0.42480E-06	465594.7	3766172.5	279.9	0.00	3.34	0.85	YES	
L0000004	0	0.42480E-06	465600.5	3766168.2	280.1	0.00	3.34	0.85	YES	
L0000005	0	0.42480E-06	465606.2	3766163.9	280.3	0.00	3.34	0.85	YES	

L0000006	0	0.42480E-06	465612.0	3766159.6	280.7	0.00	3.34	0.85	YES	
L0000007	0	0.42480E-06	465617.7	3766155.4	281.0	0.00	3.34	0.85	YES	
L0000008	0	0.42480E-06	465623.5	3766151.1	281.0	0.00	3.34	0.85	YES	
L0000009	0	0.42480E-06	465629.3	3766146.8	281.0	0.00	3.34	0.85	YES	
L0000010	0	0.42480E-06	465635.0	3766142.5	281.0	0.00	3.34	0.85	YES	
L0000011	0	0.42480E-06	465640.8	3766138.2	280.9	0.00	3.34	0.85	YES	
L0000012	0	0.42480E-06	465646.5	3766134.0	280.8	0.00	3.34	0.85	YES	
L0000013	0	0.42480E-06	465652.3	3766129.7	280.9	0.00	3.34	0.85	YES	
L0000014	0	0.42480E-06	465658.1	3766125.4	281.0	0.00	3.34	0.85	YES	
L0000015	0	0.42480E-06	465663.8	3766121.1	281.2	0.00	3.34	0.85	YES	
L0000016	0	0.42480E-06	465669.6	3766116.8	281.3	0.00	3.34	0.85	YES	
L0000017	0	0.42480E-06	465675.3	3766112.6	281.2	0.00	3.34	0.85	YES	
L0000018	0	0.42480E-06	465681.1	3766108.3	281.1	0.00	3.34	0.85	YES	
L0000019	0	0.42480E-06	465686.9	3766104.0	281.0	0.00	3.34	0.85	YES	
L0000020	0	0.42480E-06	465692.6	3766099.7	281.0	0.00	3.34	0.85	YES	
L0000021	0	0.42480E-06	465698.4	3766095.5	281.0	0.00	3.34	0.85	YES	
L0000022	0	0.42480E-06	465704.2	3766091.2	280.1	0.00	3.34	0.85	YES	
L0000023	0	0.42480E-06	465709.9	3766086.9	279.1	0.00	3.34	0.85	YES	
L0000024	0	0.23870E-06	465730.9	3766079.4	276.0	0.00	3.36	0.85	YES	
L0000025	0	0.23870E-06	465734.8	3766085.5	275.3	0.00	3.36	0.85	YES	
L0000026	0	0.23870E-06	465738.6	3766091.6	274.7	0.00	3.36	0.85	YES	
L0000027	0	0.23870E-06	465742.5	3766097.7	274.1	0.00	3.36	0.85	YES	
L0000028	0	0.23870E-06	465746.4	3766103.8	273.8	0.00	3.36	0.85	YES	
L0000029	0	0.23870E-06	465750.2	3766109.9	273.5	0.00	3.36	0.85	YES	
L0000030	0	0.23870E-06	465754.1	3766116.0	273.2	0.00	3.36	0.85	YES	
L0000031	0	0.23870E-06	465757.9	3766122.2	273.1	0.00	3.36	0.85	YES	
L0000032	0	0.23870E-06	465761.8	3766128.3	272.8	0.00	3.36	0.85	YES	
L0000033	0	0.23870E-06	465765.7	3766134.4	272.3	0.00	3.36	0.85	YES	
L0000034	0	0.23870E-06	465769.5	3766140.5	271.9	0.00	3.36	0.85	YES	
L0000035	0	0.23870E-06	465773.4	3766146.6	271.4	0.00	3.36	0.85	YES	
L0000036	0	0.23870E-06	465777.2	3766152.7	270.9	0.00	3.36	0.85	YES	
L0000037	0	0.23870E-06	465781.1	3766158.9	270.5	0.00	3.36	0.85	YES	
L0000038	0	0.23870E-06	465785.0	3766165.0	270.3	0.00	3.36	0.85	YES	
L0000039	0	0.23870E-06	465789.2	3766170.8	270.0	0.00	3.36	0.85	YES	
L0000040	0	0.23870E-06	465794.0	3766176.2	269.8	0.00	3.36	0.85	YES	

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000041	0	0.23870E-06	465798.7	3766181.7	269.6	0.00	3.36	0.85	YES	

L0000042	0	0.23870E-06	465803.5	3766187.2	269.5	0.00	3.36	0.85	YES
L0000043	0	0.23870E-06	465808.2	3766192.6	269.3	0.00	3.36	0.85	YES
L0000044	0	0.23870E-06	465812.9	3766198.1	269.1	0.00	3.36	0.85	YES
L0000045	0	0.23870E-06	465817.7	3766203.5	269.0	0.00	3.36	0.85	YES
L0000046	0	0.23870E-06	465822.4	3766209.0	269.0	0.00	3.36	0.85	YES
L0000047	0	0.23870E-06	465827.2	3766214.5	269.0	0.00	3.36	0.85	YES
L0000048	0	0.23870E-06	465831.9	3766219.9	268.9	0.00	3.36	0.85	YES
L0000049	0	0.23870E-06	465837.2	3766224.8	268.9	0.00	3.36	0.85	YES
L0000050	0	0.23870E-06	465842.7	3766229.5	268.9	0.00	3.36	0.85	YES
L0000051	0	0.23870E-06	465848.2	3766234.2	269.0	0.00	3.36	0.85	YES
L0000052	0	0.23870E-06	465853.8	3766238.8	269.1	0.00	3.36	0.85	YES
L0000053	0	0.23870E-06	465859.3	3766243.5	269.3	0.00	3.36	0.85	YES
L0000054	0	0.23870E-06	465864.8	3766248.2	269.4	0.00	3.36	0.85	YES
L0000055	0	0.23870E-06	465870.3	3766252.9	269.5	0.00	3.36	0.85	YES
L0000056	0	0.23870E-06	465875.8	3766257.5	269.5	0.00	3.36	0.85	YES
L0000057	0	0.23870E-06	465881.4	3766262.2	269.5	0.00	3.36	0.85	YES
L0000058	0	0.23870E-06	465886.9	3766266.9	269.3	0.00	3.36	0.85	YES
L0000059	0	0.23870E-06	465892.4	3766271.5	269.2	0.00	3.36	0.85	YES
L0000060	0	0.23870E-06	465897.9	3766276.2	269.0	0.00	3.36	0.85	YES
L0000061	0	0.23870E-06	465903.4	3766280.9	268.9	0.00	3.36	0.85	YES
L0000062	0	0.23870E-06	465909.0	3766285.6	268.7	0.00	3.36	0.85	YES
L0000063	0	0.23870E-06	465914.5	3766290.2	268.7	0.00	3.36	0.85	YES
L0000064	0	0.23870E-06	465920.0	3766294.8	268.7	0.00	3.36	0.85	YES
L0000065	0	0.23870E-06	465925.6	3766299.5	268.8	0.00	3.36	0.85	YES
L0000066	0	0.23870E-06	465931.2	3766304.1	268.8	0.00	3.36	0.85	YES
L0000067	0	0.23870E-06	465936.7	3766308.7	268.8	0.00	3.36	0.85	YES
L0000068	0	0.23870E-06	465942.3	3766313.3	268.9	0.00	3.36	0.85	YES
L0000069	0	0.23870E-06	465947.8	3766318.0	268.9	0.00	3.36	0.85	YES
L0000070	0	0.23870E-06	465953.4	3766322.6	268.9	0.00	3.36	0.85	YES
L0000071	0	0.23870E-06	465958.9	3766327.2	269.0	0.00	3.36	0.85	YES
L0000072	0	0.23870E-06	465964.5	3766331.9	269.0	0.00	3.36	0.85	YES
L0000073	0	0.23870E-06	465970.1	3766336.5	269.0	0.00	3.36	0.85	YES
L0000074	0	0.23870E-06	465975.6	3766341.1	269.1	0.00	3.36	0.85	YES
L0000075	0	0.23870E-06	465981.2	3766345.7	269.1	0.00	3.36	0.85	YES
L0000076	0	0.23870E-06	465986.7	3766350.4	269.1	0.00	3.36	0.85	YES
L0000077	0	0.23870E-06	465992.3	3766355.0	269.1	0.00	3.36	0.85	YES
L0000078	0	0.23870E-06	465997.9	3766359.6	269.2	0.00	3.36	0.85	YES
L0000079	0	0.23870E-06	466003.4	3766364.2	269.2	0.00	3.36	0.85	YES
L0000080	0	0.23870E-06	466009.0	3766368.9	269.2	0.00	3.36	0.85	YES

*** VOLUME SOURCE DATA ***

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

ID	CATS.		(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	(METERS)	BY
L0000081	0	0.23870E-06	466014.5	3766373.5	269.3	0.00	3.36	0.85	YES
L0000082	0	0.23870E-06	466020.1	3766378.1	269.3	0.00	3.36	0.85	YES
L0000083	0	0.23870E-06	466025.6	3766382.8	269.3	0.00	3.36	0.85	YES
L0000084	0	0.23870E-06	466031.2	3766387.4	269.4	0.00	3.36	0.85	YES
L0000085	0	0.23870E-06	466036.8	3766392.0	269.6	0.00	3.36	0.85	YES
L0000086	0	0.23870E-06	466042.3	3766396.6	269.9	0.00	3.36	0.85	YES
L0000087	0	0.23870E-06	466047.9	3766401.3	270.1	0.00	3.36	0.85	YES
L0000088	0	0.23870E-06	466053.4	3766405.9	270.3	0.00	3.36	0.85	YES
L0000089	0	0.23870E-06	466059.0	3766410.5	270.5	0.00	3.36	0.85	YES
L0000090	0	0.23870E-06	466064.5	3766415.1	270.4	0.00	3.36	0.85	YES
L0000091	0	0.23870E-06	466070.1	3766419.8	270.4	0.00	3.36	0.85	YES
L0000092	0	0.23870E-06	466075.7	3766424.4	270.5	0.00	3.36	0.85	YES
L0000093	0	0.23870E-06	466081.2	3766429.0	270.8	0.00	3.36	0.85	YES
L0000094	0	0.23870E-06	466086.8	3766433.6	270.9	0.00	3.36	0.85	YES
L0000095	0	0.23870E-06	466092.3	3766438.3	271.0	0.00	3.36	0.85	YES
L0000096	0	0.23870E-06	466097.9	3766442.9	271.0	0.00	3.36	0.85	YES
L0000097	0	0.23870E-06	466103.4	3766447.5	271.0	0.00	3.36	0.85	YES
L0000098	0	0.23870E-06	466109.0	3766452.2	271.0	0.00	3.36	0.85	YES
L0000099	0	0.19610E-06	465722.2	3766066.1	278.0	0.00	3.37	2.79	YES
L0000100	0	0.19610E-06	465720.8	3766059.0	278.7	0.00	3.37	2.79	YES
L0000101	0	0.19610E-06	465719.3	3766051.9	279.3	0.00	3.37	2.79	YES
L0000102	0	0.19610E-06	465717.0	3766045.0	279.9	0.00	3.37	2.79	YES
L0000103	0	0.19610E-06	465714.1	3766038.3	280.4	0.00	3.37	2.79	YES
L0000104	0	0.19610E-06	465711.3	3766031.7	280.7	0.00	3.37	2.79	YES
L0000105	0	0.19610E-06	465708.5	3766025.0	280.8	0.00	3.37	2.79	YES
L0000106	0	0.19610E-06	465705.7	3766018.3	280.9	0.00	3.37	2.79	YES
L0000107	0	0.19610E-06	465702.8	3766011.6	281.0	0.00	3.37	2.79	YES
L0000108	0	0.19610E-06	465699.5	3766005.2	281.0	0.00	3.37	2.79	YES
L0000109	0	0.19610E-06	465695.8	3765999.0	281.4	0.00	3.37	2.79	YES
L0000110	0	0.19610E-06	465692.1	3765992.8	281.7	0.00	3.37	2.79	YES
L0000111	0	0.19610E-06	465688.4	3765986.5	282.0	0.00	3.37	2.79	YES
L0000112	0	0.19610E-06	465684.6	3765980.3	282.4	0.00	3.37	2.79	YES
L0000113	0	0.19610E-06	465680.9	3765974.1	282.7	0.00	3.37	2.79	YES
L0000114	0	0.19610E-06	465677.2	3765967.9	282.8	0.00	3.37	2.79	YES
L0000115	0	0.19610E-06	465673.5	3765961.6	282.9	0.00	3.37	2.79	YES
L0000116	0	0.19610E-06	465669.8	3765955.4	283.0	0.00	3.37	2.79	YES
L0000117	0	0.19610E-06	465666.0	3765949.2	283.1	0.00	3.37	2.79	YES
L0000118	0	0.19610E-06	465662.3	3765943.0	283.4	0.00	3.37	2.79	YES
L0000119	0	0.19610E-06	465658.5	3765936.8	283.7	0.00	3.37	2.79	YES
L0000120	0	0.19610E-06	465654.6	3765930.7	284.0	0.00	3.37	2.79	YES

**MODELOPTs: NonDFAULT CONC ELEV FASTALL

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000121	0	0.19610E-06	465650.8	3765924.5	284.4	0.00	3.37	2.79	YES	
L0000122	0	0.19610E-06	465646.9	3765918.4	284.7	0.00	3.37	2.79	YES	
L0000123	0	0.19610E-06	465643.1	3765912.3	284.9	0.00	3.37	2.79	YES	
L0000124	0	0.19610E-06	465639.2	3765906.1	285.0	0.00	3.37	2.79	YES	
L0000125	0	0.19610E-06	465635.3	3765900.0	285.0	0.00	3.37	2.79	YES	
L0000126	0	0.19610E-06	465631.5	3765893.8	285.0	0.00	3.37	2.79	YES	
L0000127	0	0.19610E-06	465627.6	3765887.7	285.0	0.00	3.37	2.79	YES	
L0000128	0	0.19610E-06	465623.8	3765881.6	285.2	0.00	3.37	2.79	YES	
L0000129	0	0.19610E-06	465619.9	3765875.4	285.4	0.00	3.37	2.79	YES	
L0000130	0	0.19610E-06	465616.0	3765869.3	285.6	0.00	3.37	2.79	YES	
L0000131	0	0.19610E-06	465612.2	3765863.1	285.8	0.00	3.37	2.79	YES	
L0000132	0	0.19610E-06	465608.3	3765857.0	286.0	0.00	3.37	2.79	YES	
L0000133	0	0.19610E-06	465604.5	3765850.9	286.0	0.00	3.37	2.79	YES	
L0000134	0	0.19610E-06	465600.6	3765844.7	286.0	0.00	3.37	2.79	YES	
L0000135	0	0.19610E-06	465596.8	3765838.6	286.0	0.00	3.37	2.79	YES	
L0000136	0	0.19610E-06	465592.9	3765832.4	286.0	0.00	3.37	2.79	YES	
L0000137	0	0.19610E-06	465589.0	3765826.3	286.0	0.00	3.37	2.79	YES	
L0000138	0	0.19610E-06	465585.2	3765820.2	285.9	0.00	3.37	2.79	YES	
L0000139	0	0.19610E-06	465581.3	3765814.0	285.7	0.00	3.37	2.79	YES	
L0000140	0	0.19610E-06	465577.5	3765807.9	285.4	0.00	3.37	2.79	YES	
L0000141	0	0.19610E-06	465573.6	3765801.8	285.1	0.00	3.37	2.79	YES	
L0000142	0	0.19610E-06	465569.7	3765795.6	285.0	0.00	3.37	2.79	YES	
L0000143	0	0.19610E-06	465565.9	3765789.5	285.3	0.00	3.37	2.79	YES	
L0000144	0	0.19610E-06	465562.0	3765783.3	285.4	0.00	3.37	2.79	YES	
L0000145	0	0.19610E-06	465558.2	3765777.2	285.4	0.00	3.37	2.79	YES	
L0000146	0	0.19610E-06	465554.3	3765771.1	285.3	0.00	3.37	2.79	YES	
L0000147	0	0.19610E-06	465550.4	3765764.9	285.1	0.00	3.37	2.79	YES	
L0000148	0	0.19610E-06	465546.6	3765758.8	285.2	0.00	3.37	2.79	YES	
L0000149	0	0.19610E-06	465542.7	3765752.6	285.4	0.00	3.37	2.79	YES	
L0000150	0	0.19610E-06	465538.9	3765746.5	285.4	0.00	3.37	2.79	YES	
L0000151	0	0.19610E-06	465535.0	3765740.4	285.4	0.00	3.37	2.79	YES	
L0000152	0	0.19610E-06	465531.2	3765734.2	285.4	0.00	3.37	2.79	YES	
L0000153	0	0.19610E-06	465527.3	3765728.1	285.3	0.00	3.37	2.79	YES	
L0000154	0	0.19610E-06	465523.4	3765721.9	285.1	0.00	3.37	2.79	YES	
L0000155	0	0.19610E-06	465519.6	3765715.8	285.0	0.00	3.37	2.79	YES	
L0000156	0	0.19610E-06	465515.7	3765709.7	285.0	0.00	3.37	2.79	YES	
L0000157	0	0.19610E-06	465511.9	3765703.5	285.0	0.00	3.37	2.79	YES	
L0000158	0	0.19610E-06	465508.0	3765697.4	285.0	0.00	3.37	2.79	YES	
L0000159	0	0.19610E-06	465504.1	3765691.3	285.0	0.00	3.37	2.79	YES	
L0000160	0	0.19610E-06	465500.3	3765685.1	285.0	0.00	3.37	2.79	YES	

**MODELOPTs: NonDFAULT CONC ELEV FASTALL

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000161	0	0.19610E-06	465496.4	3765679.0	285.0	0.00	3.37	2.79	YES	
L0000162	0	0.19610E-06	465492.6	3765672.8	285.0	0.00	3.37	2.79	YES	
L0000163	0	0.19610E-06	465488.7	3765666.7	285.0	0.00	3.37	2.79	YES	
L0000164	0	0.19610E-06	465484.8	3765660.6	285.2	0.00	3.37	2.79	YES	
L0000165	0	0.19610E-06	465481.0	3765654.4	285.3	0.00	3.37	2.79	YES	
L0000166	0	0.19610E-06	465477.1	3765648.3	285.4	0.00	3.37	2.79	YES	
L0000167	0	0.19610E-06	465473.3	3765642.1	285.5	0.00	3.37	2.79	YES	
L0000168	0	0.19610E-06	465469.4	3765636.0	285.7	0.00	3.37	2.79	YES	
L0000169	0	0.19610E-06	465465.6	3765629.9	285.8	0.00	3.37	2.79	YES	
L0000170	0	0.19610E-06	465461.7	3765623.7	285.9	0.00	3.37	2.79	YES	
L0000171	0	0.19610E-06	465457.8	3765617.6	286.0	0.00	3.37	2.79	YES	
L0000172	0	0.19610E-06	465454.0	3765611.4	285.9	0.00	3.37	2.79	YES	
L0000173	0	0.19610E-06	465450.1	3765605.3	285.7	0.00	3.37	2.79	YES	
L0000174	0	0.19610E-06	465446.3	3765599.2	285.7	0.00	3.37	2.79	YES	
L0000175	0	0.19610E-06	465442.4	3765593.0	285.7	0.00	3.37	2.79	YES	
L0000176	0	0.55360E-06	465406.5	3766304.3	279.1	0.00	3.29	4.96	YES	
L0000177	0	0.55360E-06	465412.2	3766300.1	279.2	0.00	3.29	4.96	YES	
L0000178	0	0.55360E-06	465417.9	3766296.0	279.4	0.00	3.29	4.96	YES	
L0000179	0	0.55360E-06	465423.6	3766291.8	279.5	0.00	3.29	4.96	YES	
L0000180	0	0.55360E-06	465429.4	3766287.7	279.6	0.00	3.29	4.96	YES	
L0000181	0	0.55360E-06	465435.1	3766283.5	279.6	0.00	3.29	4.96	YES	
L0000182	0	0.55360E-06	465440.8	3766279.4	279.5	0.00	3.29	4.96	YES	
L0000183	0	0.55360E-06	465446.6	3766275.3	279.4	0.00	3.29	4.96	YES	
L0000184	0	0.55360E-06	465452.3	3766271.1	279.2	0.00	3.29	4.96	YES	
L0000185	0	0.55360E-06	465458.0	3766267.0	279.1	0.00	3.29	4.96	YES	
L0000186	0	0.55360E-06	465463.8	3766262.8	278.9	0.00	3.29	4.96	YES	
L0000187	0	0.55360E-06	465469.5	3766258.7	278.9	0.00	3.29	4.96	YES	
L0000188	0	0.55360E-06	465475.2	3766254.6	278.9	0.00	3.29	4.96	YES	
L0000189	0	0.55360E-06	465480.9	3766250.4	278.9	0.00	3.29	4.96	YES	
L0000190	0	0.55360E-06	465486.7	3766246.3	279.0	0.00	3.29	4.96	YES	
L0000191	0	0.55360E-06	465492.4	3766242.1	279.0	0.00	3.29	4.96	YES	
L0000192	0	0.55360E-06	465498.1	3766238.0	278.8	0.00	3.29	4.96	YES	
L0000193	0	0.55360E-06	465503.9	3766233.8	278.7	0.00	3.29	4.96	YES	
L0000194	0	0.55360E-06	465509.6	3766229.7	278.6	0.00	3.29	4.96	YES	
L0000195	0	0.55360E-06	465515.3	3766225.6	278.6	0.00	3.29	4.96	YES	
L0000196	0	0.55360E-06	465521.0	3766221.4	278.5	0.00	3.29	4.96	YES	
L0000197	0	0.55360E-06	465526.8	3766217.3	278.2	0.00	3.29	4.96	YES	
L0000198	0	0.55360E-06	465532.5	3766213.1	278.1	0.00	3.29	4.96	YES	
L0000199	0	0.55360E-06	465538.2	3766209.0	278.1	0.00	3.29	4.96	YES	
L0000200	0	0.55360E-06	465544.0	3766204.9	278.3	0.00	3.29	4.96	YES	

**MODELOPTs: NonDFAULT CONC   ELEV   FASTALL

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000201	0	0.55360E-06	465549.7	3766200.7	278.6	0.00	3.29	4.96	YES	
L0000202	0	0.55360E-06	465555.4	3766196.6	279.1	0.00	3.29	4.96	YES	
L0000203	0	0.55360E-06	465561.2	3766192.4	279.6	0.00	3.29	4.96	YES	
L0000204	0	0.37800E-07	465566.4	3766178.7	280.6	0.00	3.39	4.96	YES	
L0000205	0	0.37800E-07	465560.3	3766174.7	280.8	0.00	3.39	4.96	YES	
L0000206	0	0.37800E-07	465554.3	3766170.6	280.9	0.00	3.39	4.96	YES	
L0000207	0	0.37800E-07	465548.7	3766166.1	281.0	0.00	3.39	4.96	YES	
L0000208	0	0.37800E-07	465544.2	3766160.3	281.2	0.00	3.39	4.96	YES	
L0000209	0	0.37800E-07	465539.8	3766154.5	281.4	0.00	3.39	4.96	YES	
L0000210	0	0.37800E-07	465535.3	3766148.8	281.6	0.00	3.39	4.96	YES	
L0000211	0	0.37800E-07	465530.8	3766143.0	281.8	0.00	3.39	4.96	YES	
L0000212	0	0.37800E-07	465526.4	3766137.2	281.9	0.00	3.39	4.96	YES	
L0000213	0	0.37800E-07	465521.9	3766131.5	282.0	0.00	3.39	4.96	YES	
L0000214	0	0.37800E-07	465517.4	3766125.7	282.1	0.00	3.39	4.96	YES	
L0000215	0	0.37800E-07	465513.0	3766119.9	282.4	0.00	3.39	4.96	YES	
L0000216	0	0.37800E-07	465508.5	3766114.2	282.6	0.00	3.39	4.96	YES	
L0000217	0	0.37800E-07	465504.1	3766108.4	282.8	0.00	3.39	4.96	YES	
L0000218	0	0.37800E-07	465499.6	3766102.6	282.9	0.00	3.39	4.96	YES	
L0000219	0	0.37800E-07	465495.0	3766097.0	283.0	0.00	3.39	4.96	YES	
L0000220	0	0.37800E-07	465490.0	3766091.7	283.2	0.00	3.39	4.96	YES	
L0000221	0	0.37800E-07	465484.9	3766086.4	283.3	0.00	3.39	4.96	YES	
L0000222	0	0.37800E-07	465479.9	3766081.1	283.5	0.00	3.39	4.96	YES	
L0000223	0	0.37800E-07	465474.9	3766075.8	283.7	0.00	3.39	4.96	YES	
L0000224	0	0.37800E-07	465469.9	3766070.5	283.9	0.00	3.39	4.96	YES	
L0000225	0	0.37800E-07	465462.7	3766069.9	283.9	0.00	3.39	4.96	YES	
L0000226	0	0.37800E-07	465455.5	3766069.5	283.9	0.00	3.39	4.96	YES	
L0000227	0	0.37800E-07	465448.2	3766069.2	283.9	0.00	3.39	4.96	YES	
L0000228	0	0.37800E-07	465440.9	3766068.8	284.0	0.00	3.39	4.96	YES	
L0000229	0	0.37800E-07	465433.6	3766069.1	284.0	0.00	3.39	4.96	YES	
L0000230	0	0.37800E-07	465426.3	3766069.6	284.0	0.00	3.39	4.96	YES	
L0000231	0	0.37800E-07	465419.1	3766070.1	284.0	0.00	3.39	4.96	YES	
L0000232	0	0.37800E-07	465411.8	3766070.6	284.1	0.00	3.39	4.96	YES	
L0000233	0	0.37800E-07	465404.5	3766070.7	284.1	0.00	3.39	4.96	YES	
L0000234	0	0.37800E-07	465397.3	3766069.5	284.2	0.00	3.39	4.96	YES	
L0000235	0	0.37800E-07	465390.1	3766068.4	284.4	0.00	3.39	4.96	YES	
L0000236	0	0.37800E-07	465386.5	3766063.4	284.5	0.00	3.39	4.96	YES	

L0000237	0	0.37800E-07	465387.0	3766056.7	284.6	0.00	3.39	4.96	YES
L0000238	0	0.37800E-07	465391.2	3766050.7	284.7	0.00	3.39	4.96	YES
L0000239	0	0.37800E-07	465397.8	3766049.4	284.6	0.00	3.39	4.96	YES
L0000240	0	0.37800E-07	465405.1	3766049.4	284.5	0.00	3.39	4.96	YES

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000241	0	0.37800E-07	465412.4	3766049.4	284.3	0.00	3.39	4.96	YES	
L0000242	0	0.37800E-07	465419.7	3766049.4	284.2	0.00	3.39	4.96	YES	
L0000243	0	0.37800E-07	465427.0	3766049.4	284.1	0.00	3.39	4.96	YES	
L0000244	0	0.37800E-07	465434.2	3766049.4	284.0	0.00	3.39	4.96	YES	

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID	SOURCE IDs
ALL	STCK1 , STCK2 , L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 ,
	L0000007 , L0000008 , L0000009 , L0000010 , L0000011 , L0000012 , L0000013 , L0000014 ,
	L0000015 , L0000016 , L0000017 , L0000018 , L0000019 , L0000020 , L0000021 , L0000022 ,
	L0000023 , L0000024 , L0000025 , L0000026 , L0000027 , L0000028 , L0000029 , L0000030 ,
	L0000031 , L0000032 , L0000033 , L0000034 , L0000035 , L0000036 , L0000037 , L0000038 ,
	L0000039 , L0000040 , L0000041 , L0000042 , L0000043 , L0000044 , L0000045 , L0000046 ,
	L0000047 , L0000048 , L0000049 , L0000050 , L0000051 , L0000052 , L0000053 , L0000054 ,

L0000055 , L0000056 , L0000057 , L0000058 , L0000059 , L0000060 , L0000061 , L0000062 ,

L0000063 , L0000064 , L0000065 , L0000066 , L0000067 , L0000068 , L0000069 , L0000070 ,

L0000071 , L0000072 , L0000073 , L0000074 , L0000075 , L0000076 , L0000077 , L0000078 ,

L0000079 , L0000080 , L0000081 , L0000082 , L0000083 , L0000084 , L0000085 , L0000086 ,

L0000087 , L0000088 , L0000089 , L0000090 , L0000091 , L0000092 , L0000093 , L0000094 ,

L0000095 , L0000096 , L0000097 , L0000098 , L0000099 , L0000100 , L0000101 , L0000102 ,

L0000103 , L0000104 , L0000105 , L0000106 , L0000107 , L0000108 , L0000109 , L0000110 ,

L0000111 , L0000112 , L0000113 , L0000114 , L0000115 , L0000116 , L0000117 , L0000118 ,

L0000119 , L0000120 , L0000121 , L0000122 , L0000123 , L0000124 , L0000125 , L0000126 ,

L0000127 , L0000128 , L0000129 , L0000130 , L0000131 , L0000132 , L0000133 , L0000134 ,

L0000135 , L0000136 , L0000137 , L0000138 , L0000139 , L0000140 , L0000141 , L0000142 ,

L0000143 , L0000144 , L0000145 , L0000146 , L0000147 , L0000148 , L0000149 , L0000150 ,

L0000151 , L0000152 , L0000153 , L0000154 , L0000155 , L0000156 , L0000157 , L0000158 ,

*** SOURCE IDs DEFINING SOURCE GROUPS ***

GROUP ID SOURCE IDs

L0000159 , L0000160 , L0000161 , L0000162 , L0000163 , L0000164 , L0000165 , L0000166 ,

L0000167 , L0000168 , L0000169 , L0000170 , L0000171 , L0000172 , L0000173 , L0000174 ,

L0000175 , L0000176 , L0000177 , L0000178 , L0000179 , L0000180 , L0000181 , L0000182 ,

L0000183 , L0000184 , L0000185 , L0000186 , L0000187 , L0000188 , L0000189 , L0000190 ,

L0000191 , L0000192 , L0000193 , L0000194 , L0000195 , L0000196 , L0000197 , L0000198 ,

L0000199 , L0000200 , L0000201 , L0000202 , L0000203 , L0000204 , L0000205 , L0000206 ,

L0000207 , L0000208 , L0000209 , L0000210 , L0000211 , L0000212 , L0000213 , L0000214 ,

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: STCK1

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	10.7,	354.9,	289.1,	-201.8,	13.2,	2	10.7,	368.2,	241.3,	-182.4,	8.2,
3	10.7,	370.2,	186.1,	-157.4,	2.9,	4	10.7,	361.8,	152.0,	-139.7,	-2.0,
5	10.7,	377.7,	202.5,	-159.2,	-13.1,	6	10.7,	382.4,	247.4,	-173.7,	-24.0,
7	10.7,	375.6,	284.7,	-183.0,	-34.1,	8	10.7,	357.3,	313.4,	-186.8,	-43.2,
9	10.7,	328.2,	332.5,	-184.9,	-51.0,	10	10.7,	289.1,	354.9,	-190.7,	-57.2,
11	10.7,	241.3,	368.2,	-192.3,	-61.7,	12	10.7,	186.1,	370.2,	-188.1,	-64.3,
13	10.7,	152.0,	361.8,	-178.9,	-63.7,	14	10.7,	202.5,	377.7,	-175.7,	-57.9,
15	10.7,	247.4,	382.4,	-167.2,	-50.1,	16	10.7,	284.7,	375.6,	-153.7,	-40.7,
17	10.7,	313.4,	357.3,	-135.5,	-30.1,	18	10.7,	332.5,	328.2,	-113.1,	-18.6,
19	10.7,	354.9,	289.1,	-87.3,	-13.2,	20	10.7,	368.2,	241.3,	-58.9,	-8.2,
21	10.7,	370.2,	186.1,	-28.7,	-2.9,	22	10.7,	361.8,	152.0,	-12.3,	2.0,
23	10.7,	377.7,	202.5,	-43.3,	13.1,	24	10.7,	382.4,	247.4,	-73.6,	24.0,
25	10.7,	375.6,	284.7,	-101.6,	34.1,	26	10.7,	357.3,	313.4,	-126.6,	43.2,
27	10.7,	328.2,	332.5,	-147.7,	51.0,	28	10.7,	289.1,	354.9,	-164.3,	57.2,
29	10.7,	241.3,	368.2,	-175.9,	61.7,	30	10.7,	186.1,	370.2,	-182.2,	64.3,
31	10.7,	152.0,	361.8,	-182.9,	63.7,	32	10.7,	202.5,	377.7,	-201.9,	57.9,
33	10.7,	247.4,	382.4,	-215.2,	50.1,	34	10.7,	284.7,	375.6,	-221.9,	40.7,
35	10.7,	313.4,	357.3,	-221.9,	30.1,	36	10.7,	332.5,	328.2,	-215.1,	18.6,

SOURCE ID: STCK2

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	10.7,	63.9,	62.0,	-56.4,	8.1,	2	10.7,	71.1,	65.0,	-60.8,	3.8,
3	10.7,	76.0,	66.1,	-63.4,	-0.6,	4	10.7,	78.7,	65.1,	-64.0,	-5.0,
5	10.7,	79.0,	65.6,	-62.7,	-9.3,	6	10.7,	76.8,	66.0,	-59.4,	-13.3,
7	10.7,	72.4,	64.4,	-54.4,	-16.8,	8	10.7,	65.7,	60.8,	-47.7,	-19.9,
9	10.7,	57.6,	55.4,	-39.6,	-22.1,	10	10.7,	62.0,	63.9,	-40.1,	-25.4,
11	10.7,	65.0,	71.1,	-39.3,	-28.3,	12	10.7,	66.1,	76.0,	-37.4,	-30.3,
13	10.7,	65.1,	78.7,	-34.3,	-31.4,	14	10.7,	65.6,	79.0,	-30.2,	-29.9,
15	10.7,	66.0,	76.8,	-25.2,	-26.4,	16	10.7,	64.4,	72.4,	-19.4,	-22.2,
17	10.7,	60.8,	65.7,	-13.0,	-17.3,	18	10.7,	55.4,	57.6,	-6.7,	-11.9,

19	10.7,	63.9,	62.0,	-5.5,	-8.1,	20	10.7,	71.1,	65.0,	-4.2,	-3.8,
21	10.7,	76.0,	66.1,	-2.7,	0.6,	22	10.7,	78.7,	65.1,	-1.1,	5.0,
23	10.7,	79.0,	65.6,	-2.9,	9.3,	24	10.7,	76.8,	66.0,	-6.6,	13.3,
25	10.7,	72.4,	64.4,	-10.0,	16.8,	26	10.7,	65.7,	60.8,	-13.1,	19.9,
27	10.7,	57.6,	55.4,	-15.8,	22.1,	28	10.7,	62.0,	63.9,	-23.9,	25.4,
29	10.7,	65.0,	71.1,	-31.8,	28.3,	30	10.7,	66.1,	76.0,	-38.7,	30.3,
31	10.7,	65.1,	78.7,	-44.4,	31.4,	32	10.7,	65.6,	79.0,	-48.8,	29.9,
33	10.7,	66.0,	76.8,	-51.7,	26.4,	34	10.7,	64.4,	72.4,	-53.0,	22.2,
35	10.7,	60.8,	65.7,	-52.7,	17.3,	36	10.7,	55.4,	57.6,	-50.8,	11.9,

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

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

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

464834.7, 464884.7, 464934.7, 464984.7, 465034.7, 465084.7, 465134.7, 465184.7, 465234.7, 465284.7,
465334.7, 465384.7, 465434.7, 465484.7, 465534.7, 465584.7, 465634.7, 465684.7, 465734.7, 465784.7,
465834.7,

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

3765698.3, 3765748.3, 3765798.3, 3765848.3, 3765898.3, 3765948.3, 3765998.3, 3766048.3, 3766098.3, 3766148.3,
3766198.3, 3766248.3, 3766298.3, 3766348.3, 3766398.3, 3766448.3, 3766498.3, 3766548.3, 3766598.3, 3766648.3,
3766698.3,

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

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 464834.67	464884.67	464934.67	464984.67	465034.67	465084.67	465134.67	465184.67	465234.67
3766698.32	288.00	288.00	287.00	286.80	284.30	281.50	279.80	278.20	276.50
3766648.32	287.40	287.10	287.00	286.20	284.20	281.50	279.80	278.20	276.50

3766598.32	287.00	286.70	285.90	284.70	283.00	281.50	280.90	279.40	277.80
3766548.32	286.10	286.00	284.60	283.80	282.20	282.00	281.00	280.90	279.40
3766498.32	285.90	285.10	284.30	283.00	282.70	282.00	281.90	281.10	280.50
3766448.32	285.00	285.00	284.40	283.80	283.00	282.60	282.00	282.00	281.10
3766398.32	285.00	285.00	284.50	283.10	283.00	283.00	282.80	282.00	282.00
3766348.32	285.80	285.00	284.30	284.00	284.00	283.30	283.50	283.50	283.00
3766298.32	285.90	285.00	284.60	284.30	284.30	284.50	284.40	284.40	283.80
3766248.32	286.00	285.20	285.00	285.00	285.00	285.40	285.80	285.00	285.00
3766198.32	286.00	285.70	285.80	286.00	285.70	285.80	286.60	286.10	286.00
3766148.32	286.00	286.20	287.00	286.20	286.00	286.40	287.00	287.00	287.00
3766098.32	286.90	287.00	287.00	287.00	286.20	285.50	286.20	287.00	287.00
3766048.32	287.60	287.90	287.20	287.00	286.20	285.00	285.40	286.20	286.40
3765998.32	287.60	287.00	287.00	286.80	286.00	284.90	284.00	284.30	285.10
3765948.32	287.00	287.00	287.00	286.80	285.20	284.50	283.80	282.20	283.10
3765898.32	286.10	286.90	287.00	286.80	285.50	284.50	282.90	282.10	282.50
3765848.32	285.70	285.70	286.70	286.00	285.20	284.20	282.60	282.00	282.50
3765798.32	285.00	285.00	285.50	285.80	285.00	283.50	282.00	282.00	282.50
3765748.32	284.90	284.10	284.50	284.90	284.10	282.70	281.90	281.90	283.00
3765698.32	285.00	284.20	284.00	283.80	283.00	282.40	281.60	281.60	283.00

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

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 465284.67	465334.67	465384.67	465434.67	465484.67	465534.67	465584.67	465634.67	465684.67
3766698.32	275.00	274.10	274.00	273.00	272.20	271.50	271.10	273.40	277.30
3766648.32	275.00	273.70	273.00	272.30	271.50	270.70	269.40	268.90	273.40
3766598.32	275.30	274.00	273.60	272.80	272.00	270.90	269.00	268.10	267.30
3766548.32	276.90	275.10	274.50	273.00	272.20	271.40	269.80	268.20	268.00
3766498.32	279.60	277.80	275.50	274.60	273.80	272.10	270.50	269.70	268.30
3766448.32	281.00	279.40	276.80	275.90	274.40	273.10	271.70	270.00	268.40
3766398.32	281.90	280.20	278.40	276.80	275.20	274.40	271.80	270.20	268.00
3766348.32	282.00	280.80	279.10	277.50	276.20	275.10	273.50	273.90	268.30
3766298.32	283.30	281.40	279.80	279.10	277.40	276.10	274.80	272.90	269.10
3766248.32	284.90	283.10	281.40	279.80	279.00	275.50	273.90	272.20	270.40
3766198.32	286.60	285.40	283.40	281.40	280.60	279.60	277.80	274.60	272.70
3766148.32	287.00	287.00	285.50	283.10	282.30	281.60	281.20	281.00	277.10
3766098.32	287.00	287.00	285.50	283.80	283.00	282.90	282.00	281.90	281.40
3766048.32	286.40	286.40	284.80	284.00	284.00	283.60	282.60	282.10	281.50
3765998.32	285.00	285.70	285.10	285.00	285.00	284.10	283.90	282.40	281.80
3765948.32	283.10	284.10	285.50	285.90	285.20	285.00	284.00	284.00	283.00
3765898.32	283.00	284.80	286.30	286.50	286.00	285.30	285.00	285.00	284.60

3765848.32	283.30	286.20	288.30	288.10	286.20	285.50	286.00	286.20	285.80
3765798.32	284.90	288.60	290.40	289.40	286.20	285.50	285.50	288.70	287.00
3765748.32	286.00	290.80	292.90	289.50	286.20	285.30	288.40	292.90	288.10
3765698.32	286.00	290.50	292.40	289.20	285.30	285.50	289.20	291.70	289.20

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

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 465734.67	465784.67	465834.67
3766698.32	274.00	274.00	274.00
3766648.32	273.80	273.80	274.20
3766598.32	266.90	269.00	271.50
3766548.32	266.80	266.10	267.00
3766498.32	266.90	266.10	266.50
3766448.32	267.60	267.00	267.10
3766398.32	266.80	266.80	267.50
3766348.32	267.00	267.50	267.80
3766298.32	268.20	268.00	268.00
3766248.32	269.00	268.20	268.50
3766198.32	271.40	269.80	269.00
3766148.32	273.10	270.60	268.10
3766098.32	274.60	272.10	269.40
3766048.32	278.50	274.70	272.70
3765998.32	281.40	281.40	279.20
3765948.32	283.00	283.00	285.80
3765898.32	284.50	284.50	286.50
3765848.32	284.80	284.50	286.40
3765798.32	285.60	284.90	286.00
3765748.32	285.80	285.00	285.70
3765698.32	286.10	284.80	284.70

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

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	464834.67	464884.67	464934.67	464984.67	465034.67	465084.67	465134.67	465184.67	465234.67
3766698.32	288.00	288.00	287.00	286.80	284.30	281.50	279.80	278.20	276.50
3766648.32	287.40	287.10	287.00	286.20	284.20	281.50	279.80	278.20	276.50
3766598.32	287.00	286.70	285.90	284.70	283.00	281.50	280.90	279.40	277.80
3766548.32	286.10	286.00	284.60	283.80	282.20	282.00	281.00	280.90	279.40
3766498.32	285.90	285.10	284.30	283.00	282.70	282.00	281.90	281.10	280.50
3766448.32	285.00	285.00	284.40	283.80	283.00	282.60	282.00	282.00	281.10
3766398.32	285.00	285.00	284.50	283.10	283.00	283.00	282.80	282.00	282.00
3766348.32	285.80	285.00	284.30	284.00	284.00	283.30	283.50	283.50	283.00
3766298.32	285.90	285.00	284.60	284.30	284.30	284.50	284.40	284.40	283.80
3766248.32	286.00	285.20	285.00	285.00	285.00	285.40	285.80	285.00	285.00
3766198.32	286.00	285.70	285.80	286.00	285.70	285.80	286.60	286.10	286.00
3766148.32	286.00	286.20	287.00	286.20	286.00	286.40	287.00	287.00	287.00
3766098.32	286.90	287.00	287.00	287.00	286.20	285.50	286.20	287.00	287.00
3766048.32	287.60	287.90	287.20	287.00	286.20	285.00	285.40	286.20	286.40
3765998.32	287.60	287.00	287.00	286.80	286.00	284.90	284.00	284.30	285.10
3765948.32	287.00	287.00	287.00	286.80	285.20	284.50	283.80	282.20	283.10
3765898.32	286.10	286.90	287.00	286.80	285.50	284.50	282.90	282.10	282.50
3765848.32	285.70	285.70	286.70	286.00	285.20	284.20	282.60	282.00	282.50
3765798.32	440.00	285.00	285.50	285.80	285.00	283.50	282.00	282.00	282.50
3765748.32	440.00	363.00	363.00	284.90	284.10	282.70	281.90	281.90	283.00
3765698.32	440.00	440.00	363.00	363.00	363.00	282.40	281.60	281.60	283.00

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

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	465284.67	465334.67	465384.67	465434.67	465484.67	465534.67	465584.67	465634.67	465684.67
3766698.32	275.00	274.10	274.00	273.00	272.20	271.50	281.00	281.00	281.00
3766648.32	275.00	273.70	273.00	272.30	271.50	270.70	281.00	281.00	281.00
3766598.32	275.30	274.00	273.60	272.80	272.00	270.90	269.00	281.00	281.00
3766548.32	276.90	275.10	274.50	273.00	272.20	271.40	269.80	268.20	268.00
3766498.32	279.60	277.80	275.50	274.60	273.80	272.10	270.50	269.70	268.30
3766448.32	281.00	279.40	276.80	275.90	274.40	273.10	271.70	270.00	268.40
3766398.32	281.90	280.20	278.40	276.80	275.20	274.40	271.80	274.00	274.00
3766348.32	282.00	280.80	279.10	277.50	276.20	275.10	273.50	273.90	274.00
3766298.32	283.30	281.40	279.80	279.10	277.40	276.10	274.80	272.90	269.10
3766248.32	284.90	283.10	281.40	279.80	279.00	275.50	281.00	272.20	281.00
3766198.32	286.60	285.40	283.40	281.40	280.60	279.60	280.00	281.00	281.00

3766148.32	287.00	287.00	285.50	283.10	282.30	281.60	281.20	281.00	281.00
3766098.32	287.00	287.00	285.50	283.80	283.00	282.90	282.00	281.90	281.40
3766048.32	286.40	286.40	284.80	284.00	284.00	283.60	282.60	282.10	281.50
3765998.32	285.00	285.70	285.10	285.00	285.00	284.10	283.90	282.40	281.80
3765948.32	283.10	284.10	285.50	285.90	285.20	285.00	284.00	284.00	283.00
3765898.32	283.00	284.80	286.30	286.50	286.00	285.30	285.00	285.00	284.60
3765848.32	283.30	286.20	288.30	288.10	286.20	285.50	286.00	286.20	285.80
3765798.32	284.90	288.60	290.40	290.00	286.20	285.50	293.00	293.00	293.00
3765748.32	292.00	290.80	292.90	289.50	286.20	293.00	293.00	292.90	293.00
3765698.32	286.00	290.50	292.40	289.20	285.30	285.50	292.00	291.70	291.00

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

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 465734.67	465784.67	465834.67
3766698.32	281.00	274.00	274.00
3766648.32	273.80	273.80	274.20
3766598.32	281.00	274.00	274.00
3766548.32	266.80	273.00	274.00
3766498.32	266.90	266.10	266.50
3766448.32	267.60	267.00	267.10
3766398.32	266.80	266.80	267.50
3766348.32	267.00	267.50	267.80
3766298.32	268.20	268.00	268.00
3766248.32	269.00	268.20	268.50
3766198.32	271.40	269.80	269.00
3766148.32	282.00	281.00	268.10
3766098.32	282.00	282.00	287.00
3766048.32	280.00	287.00	289.00
3765998.32	281.40	281.40	287.00
3765948.32	283.00	283.00	285.80
3765898.32	284.50	284.50	286.50
3765848.32	284.80	284.50	286.40
3765798.32	285.60	284.90	286.00
3765748.32	285.80	285.00	285.70
3765698.32	286.10	284.80	284.70

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

(	465465.8,	3766008.7,	284.9,	284.9,	0.0);	(	465515.4,	3766002.8,	284.2,	284.2,	0.0);
(	465356.1,	3766079.5,	286.1,	286.1,	0.0);	(	465350.8,	3766016.3,	285.6,	285.6,	0.0);
(	465313.8,	3766084.4,	287.0,	287.0,	0.0);	(	465295.6,	3765991.2,	285.0,	285.0,	0.0);
(	465275.8,	3765986.9,	285.0,	285.0,	0.0);	(	465134.8,	3766407.6,	282.5,	282.5,	0.0);
(	465146.0,	3766342.8,	283.4,	283.4,	0.0);	(	465142.2,	3766262.4,	285.3,	285.3,	0.0);
(	465595.1,	3766046.6,	282.7,	282.7,	0.0);	(	465648.8,	3766034.7,	282.0,	282.0,	0.0);
(	465678.6,	3766028.0,	281.7,	281.7,	0.0);						

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

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
L0000009	465634.7	3766148.3	-1.56
L0000010	465634.7	3766148.3	-1.37
L0000019	465684.7	3766098.3	-1.08
L0000020	465684.7	3766098.3	0.90
L0000026	465734.7	3766098.3	0.60
L0000027	465734.7	3766098.3	0.64
L0000125	465634.7	3765898.3	-5.46
L0000126	465634.7	3765898.3	-1.75
L0000150	465534.7	3765748.3	-2.67
L0000151	465534.7	3765748.3	0.72
L0000189	465484.7	3766248.3	-2.80
L0000190	465484.7	3766248.3	-4.21
L0000209	465534.7	3766148.3	0.74
L0000210	465534.7	3766148.3	-6.52
L0000211	465534.7	3766148.3	-0.73
L0000238	465384.7	3766048.3	-0.33
L0000243	465434.7	3766048.3	0.50
L0000244	465434.7	3766048.3	-6.15

*** 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
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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,

*** AERMOD - VERSION 12345 ***   *** Agua Mansa DPM   ***   08/12/14
*** 15 min idling   ***   12:01:07
PAGE 23
**MODELOPTs: NonDFAULT CONC   ELEV   FASTALL

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

Surface file: C:\Users\Kate Wilson\Desktop\Met data\rivr8.sfc   Met Version: 14134
Profile file: C:\Users\Kate Wilson\Desktop\Met data\rivr8.PFL
Surface format: FREE
Profile format: FREE
Surface station no.:   0   Upper air station no.:   3190
Name: UNKNOWN   Name: UNKNOWN
Year: 2008   Year: 2008

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
08	01	01	1	01	-64.0	0.616	-9.000	-9.000	-999.	1157.	319.6	0.31	1.00	1.00	5.40	27.	9.1	287.5	5.5
08	01	01	1	02	-54.0	0.502	-9.000	-9.000	-999.	866.	204.9	0.31	1.00	1.00	4.50	40.	9.1	287.5	5.5
08	01	01	1	03	-16.4	0.152	-9.000	-9.000	-999.	347.	18.8	0.31	1.00	1.00	2.20	62.	9.1	287.0	5.5
08	01	01	1	04	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.31	1.00	1.00	3.10	67.	9.1	287.0	5.5
08	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.31	1.00	1.00	4.90	96.	9.1	286.4	5.5
08	01	01	1	06	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.31	1.00	1.00	3.10	342.	9.1	286.4	5.5
08	01	01	1	07	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.31	1.00	1.00	4.00	38.	9.1	287.0	5.5
08	01	01	1	08	-35.7	0.448	-9.000	-9.000	-999.	719.	220.9	0.31	1.00	0.53	4.00	62.	9.1	287.0	5.5
08	01	01	1	09	26.7	0.649	0.357	0.005	59.	1253.	-895.5	0.31	1.00	0.32	5.40	294.	9.1	288.1	5.5

```
08 01 01   1 10   76.5  0.503  0.700  0.009  157.  879.   -146.3  0.31   1.00   0.25    4.00   42.    9.1  289.2    5.5
08 01 01   1 11  123.5  0.418  1.124  0.012  404.  655.    -51.7  0.31   1.00   0.22    3.10   30.    9.1  290.9    5.5
08 01 01   1 12  130.9  0.715  1.311  0.005  605. 1451.   -245.0  0.31   1.00   0.21    5.80   37.    9.1  290.9    5.5
08 01 01   1 13   81.1  0.560  1.174  0.006  701. 1033.   -189.8  0.31   1.00   0.21    4.50    4.    9.1  290.9    5.5
08 01 01   1 14   76.4  0.604  1.171  0.005  739. 1124.   -252.5  0.31   1.00   0.23    4.90   13.    9.1  290.9    5.5
08 01 01   1 15   52.3  0.805  1.043  0.005  762. 1730.   -875.8  0.31   1.00   0.26    6.70   39.    9.1  290.9    5.5
08 01 01   1 16   11.1  0.377  0.624  0.011  767.  800.   -422.2  0.31   1.00   0.35    3.10  346.    9.1  290.4    5.5
08 01 01   1 17  -43.3  0.441 -9.000 -9.000 -999.  705.    173.6  0.31   1.00   0.63    4.00    9.    9.1  290.4    5.5
08 01 01   1 18  -29.0  0.400 -9.000 -9.000 -999.  608.    192.9  0.31   1.00   1.00    3.60   45.    9.1  289.9    5.5
08 01 01   1 19  -49.6  0.505 -9.000 -9.000 -999.  860.    227.3  0.31   1.00   1.00    4.50   25.    9.1  289.9    5.5
08 01 01   1 20  -64.0  0.730 -9.000 -9.000 -999. 1496.    533.1  0.31   1.00   1.00    6.30   60.    9.1  289.9    5.5
08 01 01   1 21  -29.1  0.400 -9.000 -9.000 -999.  736.    192.1  0.31   1.00   1.00    3.60  238.    9.1  288.8    5.5
08 01 01   1 22  -41.2  0.562 -9.000 -9.000 -999. 1010.    378.5  0.31   1.00   1.00    4.90   87.    9.1  287.5    5.5
08 01 01   1 23  -53.8  0.733 -9.000 -9.000 -999. 1504.    642.6  0.31   1.00   1.00    6.30   95.    9.1  287.0    5.5
08 01 01   1 24  -29.5  0.399 -9.000 -9.000 -999.  738.    189.5  0.31   1.00   1.00    3.60   37.    9.1  285.4    5.5


First hour of profile data
YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
08 01 01 01    5.5 0 -999.  -99.00   287.6   99.0  -99.00  -99.00
08 01 01 01    9.1 1   27.    5.40  -999.0   99.0  -99.00  -99.00

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

*** AERMOD - VERSION  12345 ***   *** Agua Mansa DPM                                                    ***        08/12/14
                                  *** 15 min idling                                                     ***        12:01:07
                                                                                                                   PAGE  24
**MODELOPTs:  NonDFAULT CONC                                          ELEV                                    FASTALL


                          *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP: ALL      ***
                              INCLUDING SOURCE(S):     STCK1       , STCK2       , L0000001    , L0000002    , L0000003    ,
                 L0000004    , L0000005    , L0000006    , L0000007    , L0000008    , L0000009    , L0000010    , L0000011    ,
                 L0000012    , L0000013    , L0000014    , L0000015    , L0000016    , L0000017    , L0000018    , L0000019    ,
                 L0000020    , L0000021    , L0000022    , L0000023    , L0000024    , L0000025    , L0000026    ,  . . .      ,

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

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

   Y-COORD  |                                          X-COORD (METERS)
   (METERS) |     464834.67    464884.67    464934.67    464984.67    465034.67    465084.67    465134.67    465184.67    465234.67
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 3766698.32 |       0.00022      0.00024      0.00025      0.00027      0.00029      0.00032      0.00034      0.00036      0.00038
 3766648.32 |       0.00024      0.00026      0.00028      0.00030      0.00033      0.00036      0.00039      0.00041      0.00044
 3766598.32 |       0.00027      0.00029      0.00031      0.00034      0.00037      0.00040      0.00044      0.00048      0.00052
 3766548.32 |       0.00030      0.00032      0.00035      0.00038      0.00042      0.00045      0.00050      0.00055      0.00061
 3766498.32 |       0.00033      0.00036      0.00040      0.00044      0.00048      0.00053      0.00058      0.00065      0.00074
 3766448.32 |       0.00037      0.00040      0.00045      0.00050      0.00056      0.00063      0.00071      0.00081      0.00100
 3766398.32 |       0.00040      0.00044      0.00050      0.00057      0.00065      0.00075      0.00088      0.00125      0.00100
```

3766348.32	0.00042	0.00048	0.00054	0.00062	0.00072	0.00086	0.00110	0.00134	0.00135
3766298.32	0.00043	0.00050	0.00057	0.00066	0.00077	0.00092	0.00121	0.00124	0.00173
3766248.32	0.00043	0.00049	0.00057	0.00066	0.00077	0.00092	0.00116	0.00130	0.00173
3766198.32	0.00042	0.00048	0.00055	0.00063	0.00073	0.00086	0.00105	0.00123	0.00152
3766148.32	0.00040	0.00045	0.00052	0.00059	0.00068	0.00080	0.00096	0.00122	0.00135
3766098.32	0.00038	0.00043	0.00049	0.00056	0.00064	0.00075	0.00089	0.00109	0.00137
3766048.32	0.00036	0.00041	0.00046	0.00053	0.00061	0.00071	0.00084	0.00100	0.00120
3765998.32	0.00034	0.00038	0.00043	0.00050	0.00057	0.00067	0.00078	0.00091	0.00108
3765948.32	0.00032	0.00036	0.00041	0.00046	0.00054	0.00062	0.00071	0.00082	0.00096
3765898.32	0.00030	0.00034	0.00038	0.00043	0.00050	0.00056	0.00064	0.00074	0.00086
3765848.32	0.00028	0.00032	0.00036	0.00040	0.00045	0.00051	0.00059	0.00068	0.00077
3765798.32	0.00027	0.00030	0.00034	0.00037	0.00042	0.00047	0.00054	0.00062	0.00070
3765748.32	0.00025	0.00028	0.00031	0.00034	0.00039	0.00044	0.00050	0.00056	0.00064
3765698.32	0.00024	0.00026	0.00029	0.00032	0.00036	0.00041	0.00046	0.00051	0.00058

**MODELOPTs: NonDFAULT CONC ELEV FASTALL

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): STCK1 , STCK2 , L0000001 , L0000002 , L0000003 ,
L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 ,
L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 ,
L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , . . . ,

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

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

Y-COORD (METERS)	X-COORD (METERS) 465284.67	465334.67	465384.67	465434.67	465484.67	465534.67	465584.67	465634.67	465684.67
3766698.32	0.00040	0.00042	0.00044	0.00044	0.00043	0.00041	0.00039	0.00038	0.00038
3766648.32	0.00047	0.00049	0.00051	0.00051	0.00049	0.00047	0.00044	0.00042	0.00043
3766598.32	0.00055	0.00059	0.00062	0.00061	0.00059	0.00054	0.00051	0.00050	0.00050
3766548.32	0.00067	0.00072	0.00077	0.00075	0.00071	0.00065	0.00061	0.00062	0.00063
3766498.32	0.00085	0.00099	0.00101	0.00097	0.00089	0.00081	0.00081	0.00081	0.00078
3766448.32	0.00112	0.00125	0.00135	0.00141	0.00122	0.00115	0.00111	0.00104	0.00098
3766398.32	0.00148	0.00177	0.00211	0.00214	0.00195	0.00179	0.00153	0.00136	0.00122
3766348.32	0.00188	0.00293	0.00412	0.00439	0.00329	0.00292	0.00223	0.00186	0.00156
3766298.32	0.00259	0.00441	0.00761	0.01073	0.00592	0.00410	0.00341	0.00247	0.00202
3766248.32	0.00262	0.00454	0.00575	0.00776	0.01160	0.00726	0.00506	0.00336	0.00268
3766198.32	0.00210	0.00294	0.00368	0.00446	0.00608	0.01133	0.00917	0.00515	0.00370
3766148.32	0.00172	0.00208	0.00249	0.00314	0.00378	0.00550	0.00834	0.01305	0.00637
3766098.32	0.00155	0.00176	0.00217	0.00264	0.00323	0.00416	0.00441	0.00645	0.01211
3766048.32	0.00149	0.00166	0.00240	0.00284	0.00320	0.00293	0.00314	0.00375	0.00525
3765998.32	0.00129	0.00159	0.00209	0.00254	0.00259	0.00247	0.00262	0.00313	0.00534
3765948.32	0.00112	0.00130	0.00163	0.00199	0.00199	0.00214	0.00245	0.00354	0.00599

3765898.32	0.00098	0.00112	0.00132	0.00153	0.00172	0.00198	0.00262	0.00435	0.00354
3765848.32	0.00087	0.00099	0.00116	0.00136	0.00161	0.00206	0.00385	0.00435	0.00257
3765798.32	0.00079	0.00090	0.00104	0.00128	0.00165	0.00262	0.00609	0.00280	0.00202
3765748.32	0.00072	0.00082	0.00096	0.00128	0.00192	0.00361	0.00324	0.00197	0.00166
3765698.32	0.00067	0.00077	0.00094	0.00140	0.00294	0.00440	0.00226	0.00163	0.00139

**MODELOPTs: NonDFAULT CONC ELEV FASTALL

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): STCK1 , STCK2 , L0000001 , L0000002 , L0000003 ,
L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 ,
L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 ,
L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , . . . ,

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

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

Y-COORD (METERS)	X-COORD (METERS) 465734.67	465784.67	465834.67
3766698.32	0.00037	0.00037	0.00037
3766648.32	0.00044	0.00044	0.00044
3766598.32	0.00051	0.00051	0.00051
3766548.32	0.00062	0.00060	0.00060
3766498.32	0.00075	0.00073	0.00073
3766448.32	0.00093	0.00090	0.00090
3766398.32	0.00114	0.00111	0.00114
3766348.32	0.00143	0.00141	0.00150
3766298.32	0.00184	0.00185	0.00214
3766248.32	0.00240	0.00258	0.00434
3766198.32	0.00330	0.00463	0.00794
3766148.32	0.00495	0.01030	0.00404
3766098.32	0.00800	0.00556	0.00325
3766048.32	0.00741	0.00394	0.00279
3765998.32	0.00457	0.00303	0.00239
3765948.32	0.00316	0.00239	0.00195
3765898.32	0.00244	0.00196	0.00166
3765848.32	0.00198	0.00166	0.00143
3765798.32	0.00165	0.00143	0.00125
3765748.32	0.00141	0.00124	0.00111
3765698.32	0.00121	0.00108	0.00098

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): STCK1 , STCK2 , L0000001 , L0000002 , L0000003 ,
L0000004 , L0000005 , L0000006 , L0000007 , L0000008 , L0000009 , L0000010 , L0000011 ,
L0000012 , L0000013 , L0000014 , L0000015 , L0000016 , L0000017 , L0000018 , L0000019 ,
L0000020 , L0000021 , L0000022 , L0000023 , L0000024 , L0000025 , L0000026 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

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

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
465465.81	3766008.74	0.00268	465515.38	3766002.79	0.00250
465356.10	3766079.46	0.00190	465350.81	3766016.34	0.00194
465313.80	3766084.42	0.00164	465295.63	3765991.23	0.00131
465275.80	3765986.93	0.00121	465134.80	3766407.61	0.00085
465145.98	3766342.81	0.00131	465142.25	3766262.38	0.00127
465595.14	3766046.64	0.00320	465648.78	3766034.68	0.00372
465678.57	3766027.98	0.00454			

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

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

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	0.01305 AT	(465634.67, 3766148.32, 281.00, 281.00, 0.00)	GC	UCART1
	2ND HIGHEST VALUE IS	0.01211 AT	(465684.67, 3766098.32, 281.40, 281.40, 0.00)	GC	UCART1
	3RD HIGHEST VALUE IS	0.01160 AT	(465484.67, 3766248.32, 279.00, 279.00, 0.00)	GC	UCART1
	4TH HIGHEST VALUE IS	0.01133 AT	(465534.67, 3766198.32, 279.60, 279.60, 0.00)	GC	UCART1
	5TH HIGHEST VALUE IS	0.01073 AT	(465434.67, 3766298.32, 279.10, 279.10, 0.00)	GC	UCART1
	6TH HIGHEST VALUE IS	0.01030 AT	(465784.67, 3766148.32, 270.60, 281.00, 0.00)	GC	UCART1
	7TH HIGHEST VALUE IS	0.00917 AT	(465584.67, 3766198.32, 277.80, 280.00, 0.00)	GC	UCART1
	8TH HIGHEST VALUE IS	0.00834 AT	(465584.67, 3766148.32, 281.20, 281.20, 0.00)	GC	UCART1
	9TH HIGHEST VALUE IS	0.00800 AT	(465734.67, 3766098.32, 274.60, 282.00, 0.00)	GC	UCART1
	10TH HIGHEST VALUE IS	0.00794 AT	(465834.67, 3766198.32, 269.00, 269.00, 0.00)	GC	UCART1

*** RECEPTOR TYPES: GC = GRIDCART

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

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

A Total of   0 Fatal Error Message(s)
A Total of   2 Warning Message(s)
A Total of   2006 Informational Message(s)

A Total of   43848 Hours Were Processed

A Total of   7 Calm Hours Identified

A Total of   1999 Missing Hours Identified (4.56 Percent)

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

   ********   WARNING MESSAGES   ********
SO W320   380 PPARM:Input Parameter May Be Out-of-Range for Parameter   VS
SO W320   381 PPARM:Input Parameter May Be Out-of-Range for Parameter   VS

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