Appendix F:
Climate Change

Climate Change Technical Report

Lewis National Orange Show
San Bernardino, California

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Upland, California

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List of Acronyms

AB	Assembly Bill
CalEEMod	California Emission Estimator Model
CARB	California Air Resources Board
CCAR	California Climate Action Registry
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEUS	Commercial End-Use Survey
CH_4	methane
CNRA	California Natural Resource Agency
CO_2	carbon dioxide
CO_2e	CO_2 equivalents
EIR	Environmental Impact Report
EMFAC	EMission FACtor model
GHG	greenhouse gas
GWP	global warming potential
lb	pound
LCFS	Low Carbon Fuel Standard
LDA	light duty automobiles
MDV	medium duty truck
MPO	Metropolitan Planning Organizations
MT	metric tons
MWh	megawatt hour
N_2O	nitrous oxide
NAT	No Action Taken
RPS	Renewable Portfolio Standards
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
USEPA	United States Environmental Protection Agency
WRP	Water Reclamation Plant

Executive Summary

Lewis Retail Centers (Lewis) is proposing to develop an industrial warehousing complex within the southeastern portion of the City of San Bernardino, California ("Project"). The Project site is specifically located directly east of South Arrowhead Avenue, west of Warm Creek channel and south of Esperanza Street. The southern portion of the Project site is bisected by Central Avenue, while the northeast portion of the Project site extends north to Mill Street.

The proposed Project is associated with the construction of four industrial buildings comprising approximately 752,710 square feet of building area on approximately 37.6 acres. Building sizes will range from approximately 27,810 square feet to 616,000 square feet. The total building area of the Project is 752,710 square feet. The Project would generate 710 average daily truck trips and 860 average daily passenger car trips. The Project is approximately 1.5 miles from the local rail yard, which will be used to transport a portion of the freight associated with the warehouse.

The Project will result in both one-time and annual greenhouse gas (GHG) emissions associated with the construction and operation of the development. This report quantifies the GHG emissions associated with the Project for two scenarios: first, as designed and second, as if no actions to reduce emissions were taken as compared to the assumptions used in preparing the baseline 2020 emissions for the California Air Resources Board (CARB) Scoping Plan (No Action Taken or NAT 2020) to implement Assembly Bill (AB) 32. It then compares these two scenarios with numeric thresholds derived from the Scoping Plan and consistent with an option for draft criteria currently under development by the South Coast Air Quality Management District (SCAQMD).

There is a general scientific consensus that the main contributor to current global warming is the increased emissions of GHGs associated with human activity. The warming that occurs at the earth's surface as a result of increased GHG atmospheric concentrations is called "the greenhouse effect".

The GHG emissions inventory considers eight sources of emissions: energy use associated with buildings, mobile sources, area sources, solid waste disposal, water production and wastewater disposal, construction, and vegetation changes. The ongoing annual operational emissions consist of the first six categories, while the one-time emissions are associated with the construction and vegetation changes. The electrical power will be supplied to the Proposed Project Site by Southern California Edison (SCE). Accordingly, GHG emissions from electricity usage associated with both projects are calculated using the SCE carbon-intensity factors adjusted for mandated renewable energy requirements.

To date, the SCAQMD and California Air Resources Board (CARB) have not established significance thresholds for GHG emissions under the California Environmental Quality Act (CEQA) [1] or a methodology for quantifying GHG emissions. To evaluate the Project's operational GHG emissions, the inventory is compared with a NAT 2020 scenario to determine

[1] SCAQMD has adopted interim significance thresholds for industrial sources of 10,000 metric tons of carbon dioxide equivalents per year. The Board adopted these December 5, 2008.

if the development is likely to be consistent with the Scoping Plan designed to implement AB 32 in California. The one-time GHG emissions change from vegetation is annualized and added to both the NAT 2020 scenario and the Project scenario. The significance thresholds for the NAT 2020 scenario did not include emissions from construction or biogenic CO_2 emissions from solid waste, so these emissions were not included in the calculation. Since no threshold of significance has been adopted for construction GHG emissions, the one-time construction GHG emissions are reported but not compared to thresholds.

Table ES-1 reports the annual operational GHG emissions for the Project and the NAT 2020 scenario; the emissions inventory for the Project reflects the fact that the Project includes design features that would not be included in the CARB 2020 NAT. The emissions are presented by emission source category as calculated in California Emission Estimator Model (CalEEMod), SCAQMD's new program for estimating emissions for CEQA purposes. As Table ES-1 reports, the Project's GHG emissions result in an emissions reduction of 31.7% when compared to the NAT 2020 scenario. This reduction is consistent with the target reduction percentage of 28.4% based on CARB's analysis supporting AB32.

Table ES-1
Summary of Operational GHG Emissions
National Orange Show
Lewis Retail Centers
San Bernardino, California

Category[1]	CO_2e Emissions[2]	
	NAT 2020	Project
	MT/yr	
Energy Use	1,040	-1,225
Water Use	6.9	5.4
Waste Disposed	2,737	2,737
Traffic	26,601	19,232
Vegetation Amortized[3,4]	-7.2	-7.2
Total	**30,379**	**20,742**
Project Improvement over NAT 2020	**31.7%**	
Construction Amortized[3,5]	43	

Notes:
1. All operational categories for which CalEEMod calculates emissions.
2. Emissions as described in previous tables. CO_2e includes CO_2, CH_4, and N_2O emissions, weighted by their respective global warming potentials.
3. One-time emissions were amortized over a 30 year period.
4. A net sequestration of carbon results in a decrease (or negative) CO_2e.
5. As discussed in the report, construction emissions are merely reported but not compared to any thresholds. Including the amortized construction emissions in the total would result in a project improvement over NAT 2020 of 31.7%.

Abbreviations:
CalEEMod - CALifornia Emissions Estimator MODel
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
GHG - greenhouse gases
MT - metric tons
NAT - no actions taken
N_2O - nitrogen dioxide
yr - year

1 Introduction

Lewis Retail Centers (Lewis) is proposing to develop an industrial warehousing complex within the southeastern portion of the City of San Bernardino, California ("Project"). The Project site is specifically located directly east of South Arrowhead Avenue, west of Warm Creek channel and south of Esperanza Street. The southern portion of the Project site is bisected by Central Avenue, while the northeast portion of the Project site extends north to Mill Street.

The proposed Project is associated with the construction of four industrial buildings comprising approximately 752,710 square feet of building area on approximately 37.6 acres (32.86 acres north parcel and 4.32 acres south parcel). Building sizes will range from approximately 27,810 square feet to 616,000 square feet. The total building area of the Project is 752,710 square feet. The Project would generate 710 average daily truck trips and 860 average daily passenger car trips. The Project is approximately 1.5 miles from the local rail yard, which will be used to transport a portion of the freight associated with the warehouse.

The Project will result in both one-time and annual greenhouse gas (GHG) emissions associated with the construction and operation of the development. This report quantifies the GHG emissions associated with the Project for two scenarios: first, as designed and second, as if no actions to reduce emissions were taken as compared to the assumptions used in preparing the baseline 2020 emissions for the California Air Resources Board (CARB) Scoping Plan (No Action Taken or NAT 2020) to implement Assembly Bill (AB) 32. These scenarios are compared using numeric thresholds derived from the AB 32 Scoping Plan and consistent with draft criteria currently under development by the South Coast Air Quality Management District (SCAQMD).

The GHG emissions inventory includes both ongoing, annual operational emissions and emissions associated with the one-time construction and land-use changes. The inventory includes both direct emissions and indirect emissions. The term "direct emissions of GHGs" refers to GHGs that are emitted directly as a result of the project and include land use change and construction emissions. "Indirect emissions" are those emissions that the project entitlement will enable, but that are not controlled by the project proponent, such as automobile use and emissions from electricity generation associated with electricity use in the developed project. This report discusses the regulatory developments related to GHG emissions and provides an estimate of emissions that would result from the Project as compared to the NAT 2020 scenario. The Project scenario takes into account features designed to reduce GHG emissions and regulations that were created to reduce GHG emissions.

The proposed size of the warehouse buildings by type are shown in Table 1. Occupants of industrial developments use electricity, heat their buildings and water (typically with natural gas), consume drinking water, generate wastewater and solid waste, and are commonly transported in motor vehicles, all of which are activities that directly or indirectly emit GHGs. Transportation of goods, such as by trucking, also emits GHGs. The principal GHGs resulting from such activities are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). CO_2 is considered the most important GHG, due primarily to the large quantity of emissions produced by fossil fuel combustion, especially during the powering of motor vehicles and generation of electricity. CH_4

and N_2O are also emitted by fossil fuel combustion, though their emissions are much smaller than CO_2.

The effect that each of these gases can have on global warming is a combination of the mass of their emissions and their global warming potential (GWP). GWP indicates the predicted contribution of a gas to global warming relative to the predicted contribution by the same mass of CO_2. CH_4 and N_2O are substantially more potent as GHGs than CO_2. GHG emissions are typically reported in terms of metric tons (i.e., 1000's of kilograms) of CO_2 equivalents (CO_2e). CO_2e are calculated as the product of the mass emitted of a given GHG and its specific GWP. While CH_4 and N_2O have much higher GWPs than CO_2, CO_2 is emitted in significantly higher quantities such that it accounts for the majority of GHG emissions in CO_2e, both from industrial developments and human activity in general.

Legislation and rules regarding climate change, as well as scientific understanding of the extent to which different activities emit GHGs, continue to evolve; as such, the inventory in this report is a reflection of the guidance and knowledge currently available.

2 Regulatory Environment for the GHG Inventory

The climate change regulatory setting – federal, state and local – is complex and rapidly evolving. This section identifies key legislation, executive orders, and seminal court cases related to climate change germane to this GHG emissions report.

2.1 California Legislation

California has enacted several pieces of legislation that relate to GHG emissions and climate change, much of which sets aggressive goals for GHG reductions within the state. The California Natural Resources Agency adopted amendments to the regulations adopted under the California Environmental Quality Act (CEQA), the Guidelines for California Environmental Quality Act (CEQA Guidelines). These amendments address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment. However, neither a threshold of significance nor any specific mitigation measures are provided in these CEQA Guideline amendments.

2.1.1 Assembly Bill 32 (Statewide GHG Reductions)

The California Global Warming Solutions Act of 2006, widely known as Assembly Bill (AB) 32, requires the California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a statewide GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill sets a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

The heart of the bill is the requirement that statewide GHG emissions be reduced to 1990 levels by 2020. As determined by CARB, California must reduce GHG emissions to a level that is approximately 28.4% below CARB's year 2020 "business-as-usual" GHG emission predictions to achieve this goal. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. Key AB 32 milestones are as follows:

- June 30, 2007—Identification of discrete early action greenhouse gas emissions reduction measures. On June 21, 2007, CARB satisfied this requirement by approving three early action measures. These were later supplemented by adding six other discrete early action measures.
- January 1, 2008—Identification of the 1990 baseline GHG emissions level and approval of a statewide limit equivalent to that level. Adoption of reporting and verification requirements concerning GHG emissions. On December 6, 2007, CARB approved a statewide limit on GHG emissions levels for the year 2020 consistent with the determined 1990 baseline[2].

[2] The development of the 1990 baseline and 2020 emission limit are described in the CARB staff report "California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit". November 16, 2007. http://www.arb.ca.gov/cc/inventory/pubs/reports/staff_report_1990_level.pdf. Documentation of the inventory is available at http://www.arb.ca.gov/cc/inventory/doc/doc.htm.

- January 1, 2009—Adoption of a scoping plan for achieving GHG emission reductions. On October 15, 2008, CARB issued a "discussion draft" Scoping Plan entitled "Climate Change Draft Scoping Plan: A Framework for Change" (Draft Scoping Plan). CARB adopted the Scoping Plan[3] at its December 11, 2008 meeting.
- January 1, 2010—Adoption and enforcement of regulations to implement the “discrete” actions.
- January 1, 2011—Adoption of GHG emissions limits and reduction measures by regulation.
- January 1, 2012—GHG emissions limits and reduction measures adopted in 2011 become enforceable.

2.1.2 Executive Order S-3-05 (Statewide GHG Targets)

California Executive Order S-03-05 (June 1, 2005) mandates a reduction of GHG emissions to 2000 levels by 2010, to 1990 levels by 2020, and to 80% below 1990 levels by 2050. Although the 2020 target is the core of AB 32, and has effectively been incorporated into AB 32, the 2050 target remains the goal of the Executive Order, only.

2.1.3 Senate Bill 375 (Land Use Planning)

Senate Bill (SB) 375 provides for a new planning process to coordinate land use planning and regional transportation plans and funding priorities in order to help California meet the GHG reduction goals established in AB 32. SB 375 requires regional transportation plans, developed by Metropolitan Planning Organizations (MPOs), including the Southern California Association of Governments (SCAG), to incorporate a "sustainable communities strategy" in their regional transportation plans that will achieve GHG emission reduction targets set by CARB. SB 375 also includes provisions for streamlined CEQA review for some infill projects such as transit oriented development. SB 375 will be implemented over the next several years.

SB 375 is similar to the Regional Blueprint Planning Program, established by the California Department of Transportation, which provides discretionary grants to fund regional transportation and land use plans voluntarily developed by MPOs working in cooperation with Council of Governments. SCAG is currently developing its 2012 Regional Transportation Plan (RTP) which will be its first plan subject to SB 375.

2.1.4 Energy Conservation Standards

Energy Conservation Standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2008 (Title 24, Part 6 of the California Code of Regulations [CCF]).[4] Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible

[3] CARB. “Climate Change Scoping Plan: a framework for change.” December 2008. http://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf

[4] Although new building energy efficiency standards were adopted in April 2008, these standards did not go into effect until 2009.

incorporation of new energy efficiency technologies and methods. The 2006 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608), dated December 2006, were adopted by the California Energy Commission on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally-regulated appliances and non-federally regulated appliances. While these regulations are now often seen as “business as usual,” they do exceed the standards imposed by any other states and reduce GHG emissions by reducing energy demand.

On July 17, 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code (Title 24, California Code of Regulations). Part 11 established voluntary standards, some of which became mandatory in the 2010 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.

2.1.5 Senate Bill 97 (CEQA Guidelines)

SB 97 required that the California Natural Resource Agency (CNRA) coordinate on the preparation of amendments to the CEQA Guidelines regarding feasible mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions. Pursuant to SB 97, CNRA adopted CEQA Guidelines amendments on December 30, 2009. The amendments were approved by the Office of Administrative Law on February 16, 2010, and became effective on March 18, 2010.

With respect to the significance assessment, newly added CEQA Guidelines section 15064.4, subdivision (b), provides:

> A lead agency should consider the following factors, among others, when assessing the significance of impacts from greenhouse gas emissions on the environment:
>
> (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
>
> (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
>
> (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an Environmental Impact Report (EIR) must be prepared for the project.

The new CEQA Guidelines do not include or recommend any particular threshold of significance; instead, they leave that decision to the discretion of the lead agency. However, with respect to adopting thresholds of significance, newly added CEQA Guidelines section 15064.7 subdivision (c) provides:[A] lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

The new CEQA Guidelines also do not suggest or recommend the use of any specific GHG emission mitigation measures. Instead, newly added CEQA Guidelines section 15126.4 subdivision (c), provides that lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Mitigation measures may include the following, among others:

(1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;

(2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in Appendix F;

(3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions;

(4) Measures that sequester greenhouse gases;

(5) In the case of the adoption of a plan, such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

Among other things, CNRA noted in its Public Notice for these changes that the impacts of GHG emissions should be considered in the context of a cumulative impact, rather than a project impact. The Public Notice states:

> "While the Proposed Amendments do not foreclose the possibility that a single project may result in greenhouse gas emissions with a direct impact on the environment, the evidence before [CNRA] indicates that in most cases, the impact will be cumulative. Therefore, the Proposed Amendments emphasize that the analysis of greenhouse gas emissions should center on whether a project's incremental contribution of greenhouse gas emissions is cumulatively considerable."

2.2 Local Air Quality Management District (SCAQMD) Guidance and Significance Determination

On December 5, 2008, the SCAQMD Governing Board adopted its staff proposal for an interim CEQA GHG significance threshold for projects where the SCAQMD is the lead agency. As to all other projects, where the SCAQMD is not the lead agency, the Board has, to date, adopted thresholds only for stationary source projects.[5] The SCAQMD has not yet adopted any significance thresholds for new residential/commercial development projects, but has over the last few years proposed several draft thresholds.[6] To assist interested parties in assessing the significance of GHG emissions from new residential/commercial development projects under CEQA, SCAQMD staff has been working on developing thresholds together with the SCAQMD's GHG CEQA Significance Thresholds Working Group. To achieve its policy objective of capturing 90% of GHG emissions from new residential/commercial development projects and implementing a “fair share” approach to reducing emission increases from each new residential/commercial development sector, SCAQMD staff has proposed combining performance standards and screening thresholds. They have proposed a multiple tier analysis to determine the appropriate threshold to be used. The most recent proposal suggests the following tiers: Tier 1 is any applicable CEQA exemptions, Tier 2 is consistency with a GHG reduction plan, Tier 3 is a screening value or bright line, Tier 4 is a performance based standard, and Tier 5 is GHG mitigation offsets. According to the presentation given at the September 28th, 2010 GHG CEQA Significance Working Group meeting (the last Working Group meeting prior to the date of this report), SCAQMD staff proposed a Tier 3 draft threshold of 1400 to 3500 metric tons per year of CO_2e depending on if the project was commercial, mixed use or residential.[7] For the Tier 4 draft threshold SCAQMD staff presented two main options. The first option is to utilize a percent emission reduction target similar to what has been used in this report. SCAQMD does not provide any specific recommendation for a percent emission reduction target but references the San Joaquin Valley Air Pollution Control District (SJVAPCD) approach. The second option is to utilize an efficiency target for 2020 of 4.8 MT/SP/YR for project level thresholds.

This report evaluated the Project’s emissions using an approach consistent with Tier 4 option 1. To evaluate the Project’s GHG emissions, the inventory is compared with a California Air Resources Board 2020 No Action Taken (CARB 2020 NAT) scenario, consistent with SB 97 and the first factor in CEQA Guidelines section 15064.4, subdivision (b). The Project would be considered less than significant if its emissions are reduced by more than 28.4% when compared to the NAT 2020 scenario, consistent with CARB’s determination that a GHG emission reduction of 28.4% from “business as usual” would reduce California’s emissions to 1990 levels by 2020. Since the goal of AB 32 is to return to 1990 GHG emission levels by 2020, the basis for this threshold is the statewide emission inventory for 1990 based on “land use” related sectors divided by the statewide service population. These land use related sectors currently used do not include biogenic solid waste landfill emissions or construction emissions.

[5] http://www.aqmd.gov/hb/2008/December/081231a.htm

[6] http://www.aqmd.gov/ceqa/handbook/GHG/GHG.html

[7] http://www.aqmd.gov/ceqa/handbook/GHG/2010/sept28mtg/ghgmtg15-web.pdf

Therefore, these sources are not included in the comparison. Construction emissions are reported separately, but are not compared to thresholds.

2.3 County of San Bernardino

The San Bernardino County Board of Supervisors initiated "Green County San Bernardino" in August 2007.[8] This program encourages the use of "green" technologies and business practices, raises public awareness about conserving resources, and incorporates other efforts to reduce the impact of development on the environment. The program provides information about fuel efficiency of vehicles, bicycle routes, recycling, telecommuting, and water-efficient landscaping.

San Bernardino County has also established a Green Building Program.[9] Builders can earn a "green building designation" by following any one of these green rating systems: California Green Builder (CGB), Leadership in Energy and Environmental Design (LEED), any County-approved green rating program or the County's *Green Building Basics Checklist*. Participating builders, receive accelerated plan review, priority inspections, design assistance and recognition for all qualified projects

2.4 City of San Bernardino

The City of San Bernardino does not have any regulations in place applicable to the climate change impacts of this Project.

2.5 Impact of Regulatory Developments on the Project's GHG Inventory

Promulgated regulations that will affect the Project's emissions are accounted for in the Project's inventory provided by this report. In particular, the Pavley Standards, Low Carbon Fuel Standards, Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure, and the Renewable Portfolio Standards (RPS) will be in effect at the anticipated time of build out, and therefore are accounted for in the Project's emission calculations. The NAT 2020 scenario emissions do not include regulations designed to meet AB 32 standards; therefore these regulations were not included in that scenario. This section provides an overview of the impact of these three rules on the GHG inventory presented in this report.

2.5.1 Renewable Power Requirements

A major component of California's Renewable Energy Program is the RPS established under Senate Bills (SBs) 1078 (Sher), 107 (Simitian), and most recently, SB 2X (Simitian). Under the first two RPS standards, certain retail sellers of electricity are required to increase the amount of renewable energy each year by at least 1% in order to reach at least 20% by December 31, 2010.[10] The third, most recent bill requires 33% renewable content in electricity to be 33% by 2020.[11] Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease

[8] http://www.sbcounty.gov/greencountysb/about_gc.aspx
[9] http://www.sbcounty.gov/greencountysb/builders/green_building.aspx
[10] 2002 Senate Bill 1078 and 2006 Senate Bill 107.
[11] 2011 Extraordinary Session Senate Bill 2

indirect GHG emissions from development projects because electricity production from renewable sources is generally considered to be "carbon neutral." For purposes of this analysis, ENVIRON assumes that the production of electricity from these renewable sources does not produce any net emissions of CO_2 or other GHGs.

As noted above, indirect GHG emissions are associated with electricity use, as the electricity used in a building is typically generated offsite at a power plant. As stated previously, development at the Proposed Project Site would be supplied power by SCE. The 2006 SCE carbon-intensity factor is presented in Table 2 in pounds (lbs) of CO_2 per megawatt hour (MWh).[12] This emission factor (641 lb/MWh) is used in the NAT 2020 scenario for this report, which takes into account the mix of energy sources used to generate electricity for SCE,[13] and the relative carbon intensities of these sources. As shown in Table 2, SCE's 2007 mix of energy sources contains some portion of renewable sources.[14] Table 2 shows ENVIRON's adjustments of the 2007 emission factor to this 33% goal. The resultant carbon intensity factor of 501.9 lb/MWh was used for the Project scenario. ENVIRON scaled the values for N_2O and CH_4 emissions by the same reduction as seen for CO_2.

2.5.2 Vehicle Emissions Standards/Improved Fuel Economy

The two regulatory measures considered in this section are the vehicle GHG emission standards enacted under AB 1493 (Pavley I) and the Low Carbon Fuel Standard (LCFS). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light duty auto – medium duty vehicle [LDA-MDV]) from 2009 through 2016 and is anticipated to reduce GHG emissions from passenger vehicles by 30% in 2016. The LCFS requires a reduction of 2.5% in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10% by 2020.[15] The Heavy Duty Vehicle GHG Emissions Reduction measure reduces greenhouse gas emissions by improving the fuel efficiency of heavy-duty tractors that pull 53-foot or longer box-type trailers. Fuel efficiency is improved through improvements in tractor and trailer aerodynamics and the use of low rolling resistance tires. The fuel efficiency improvements are estimated at 8.5% and the regulation is expected to reduce emissions by approximately 1 million metric tons of carbon dioxide-equivalents by 2020, statewide

For on-road vehicle CO_2 emissions, California Emission Estimator Model version 2011.1.1 (CalEEMod), the model used to develop the GHG emission inventory,[16] applies Pavley I and LCFS reductions to the appropriate vehicle classes for scenario years 2011 and after based on

[12] California Climate Action Registry (CCAR) Database. MID PUP Report. 2007.

[13] Natural gas, nuclear, coal, wind, solar, biogas, biomass, hydropower, and geothermal.

[14] According to SCE, their renewable portfolio percentage for 2010 was 19.4% showing that they were on track to achieve the 2010 requirement of 20%. Therefore it is reasonable to assume that they will continue to increase their renewable portfolio to meet the 2020 requirement of 33%. http://www.sce.com/PowerandEnvironment/Renewables/default.htm

[15] CARB's user guide for the Pavley I + Low Carbon Fuel Standard Postprocessor provides more detail. Available at: http://www.arb.ca.gov/cc/sb375/tools/pavleylcfs-userguide.pdf, accessed August 2010.

[16] The California Emission Estimator Model (CalEEMod) is a comprehensive statewide model that estimates the GHG and criteria pollutant emissions from land use development projects.

CARB's EMission FACtor model (EMFAC) model and associated post-processors.[17] The Heavy – Duty Vehicle GHG Emission Reduction was applied in a post processing step by adjusting the running emissions from the affected vehicles. The effects of these regulations were taken into account in the Project scenario, but not the NAT 2020 scenario.

[17] Adapted from page 14 of the CalEEMod User's Guide, Appendix A. "Calculation Details". Available at: http://www.caleemod.com

3 GHG Emissions Inventory

This section describes the methodology that was used to develop the GHG emissions inventories associated with the Project and the NAT 2020 scenario. These inventories consider eight categories of GHG emissions: energy use buildings, mobile sources, area sources, non-biogenic solid waste, water and wastewater, construction, and vegetation changes. Electrical power will be supplied to the proposed Project site by SCE. Accordingly, indirect GHG emissions from electricity usage are calculated using the SCE carbon-intensity factors adjusted for mandated renewable energy requirements, as described earlier. Legislation and rules regarding climate change, as well as the scientific understanding of the extent to which different activities emit GHGs, continue to evolve; as such, the inventory in this report are a reflection of the guidance and knowledge currently available.

3.1 Overall Calculation Methodology

ENVIRON quantified GHG emissions to evaluate whether the Project results in a 28.4% reduction in emissions from the NAT 2020 scenario. This section outlines the methodologies used to calculate the emissions from each scenario.

ENVIRON primarily utilized the CalEEMod[18] to assist in quantifying the GHG emissions in the inventory presented in this report for the Project and the NAT 2020 scenario. CalEEMod is a statewide program designed to calculate both criteria and GHG emissions from development projects in California. This model was developed under the auspices of the SCAQMD and received input from other California air districts, and is currently supported by SCAQMD for use in quantifying the emissions associated with development projects undergoing environmental review.[19] CalEEMod utilizes widely accepted models for emission estimates combined with appropriate default data that can be used if site-specific information is not available. These models and default estimates use sources such as the United States Environmental Protection Agency (USEPA) AP-42 emission factors,[20] CARB's on-road and off-road equipment emission models such as the EMFAC and the Offroad Emissions Inventory Program model (OFFROAD), and studies commissioned by California agencies such as the California Energy Commission (CEC) and CalRecycle. With respect to the estimation of GHG emissions, CalEEMod is not only more current than URBEMIS 9.2.4, but it also includes all of the GHG emission source categories required for a comprehensive GHG impacts analysis and updated vehicle emission factors that incorporate recent regulations such as Pavley I and the LCFS, discussed above, and incorporates state-of-the-science methods for quantifying mitigation and project design features not available in URBEMIS 9.2.4.[21]

ENVIRON used San Bernardino County CalEEMod defaults in the model runs unless otherwise noted in the methodology descriptions below. Details regarding the specific methodologies used

[18] Available at: http://www.caleemod.com/

[19] http://www.aqmd.gov/ceqa/models.html

[20] The USEPA maintains a compilation of Air Pollutant Emission Factors and process information for several air pollution source categories. The data is based on source test data, material balance studies, and engineering estimates. More information is available at http://www.epa.gov/ttnchie1/ap42/

[21] See the Frequently Asked Questions (FAQs) available at www.caleemod.com for a list of differences between CalEEMod and URBEMIS.

by CalEEMod can be found in the CalEEMod User's Guide and associated appendices.[22] The CalEEMod output files are provided for reference in Appendices A and B to this report.

Emissions from the Project and NAT 2020 scenario were calculated independently since the Project incorporates design features and regulations that the NAT 2020 scenario would not. The project design features include the proximity to the railyard, a 10% improvement over 2008 Title 24 building standards, and solar panel installation. Regulations that would affect the Project scenario include Low Carbon Fuel Standard, Pavley vehicle emissions reductions, Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure, and 2008 Title 24 improvements over 2005 Title 24 standards.

3.2 Annual Operational Emissions

Emissions from mobile and area sources and indirect emissions from energy and water use, wastewater, as well as waste management, would occur every year after build out. This section outlines the operational GHG emissions associated with the two inventory scenarios.

3.2.1 Area Sources

In a typical development, area source GHG emissions could result from landscaping-related fuel combustion sources, such as lawn mowers, and from natural gas fireplaces.[23] There are no substantial direct GHG emissions associated with consumer products and architectural coating. GHG emissions due to natural gas combustion in buildings from sources besides fireplaces are excluded from this section since they are included in the emissions associated with energy use. There are no fireplaces associated with the Project. Because the landscaped area was minimal, GHG emissions from landscaping equipment were too small for CalEEMod to report. Therefore, area emissions for both development scenarios are assumed to be zero.

3.2.2 Buildings Energy Use

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. As discussed earlier, Table 2 lists the emission factors for electricity used in this analysis. The land use categories used with CalEEMod are the same as those listed in Table 1. Unless otherwise noted, CalEEMod default parameters were used. Climate zone 10 was selected based on the CEC forecast climate zone map shown in CalEEMod's User's Guide. Project emissions have been calculated using a SCE emission factor that accounts for the 33% RPS required by 2020, as discussed earlier. NAT 2020 emissions were calculated using the default SCE emission factor, which is consistent with the 2006 unadjusted emission factor shown in Table 2.

To calculate the building energy input parameters shown in Table 3 (e.g., electricity, and natural gas), ENVIRON utilized default values for the land uses provided in CalEEMod, which are

[22] Available at: http://www.caleemod.com.

[23] Wood-burning fireplaces and stoves are banned in the South Coast Air District as of March 9, 2009. Rule 445.

based on the California Commercial End Use Survey (CEUS).[24] Because older buildings tend to be less energy efficient, and because the majority of the buildings in the CEUS datasets were constructed before 2001, the CEUS data likely overestimate energy use for a 2001 Title 24-compliant building. To account for updates since the 2001 Title 24 standards, CalEEMod uses the percentage reductions for each end use category taken directly from the CEC's "Impact Analysis for 2005 Energy Efficiency Standards"[25] and "Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings"[26] reports applied to the dataset for improvements from 2001 to 2005, and 2005 to 2008, respectively. As a result, CalEEMod's energy intensity defaults are conservative. The resulting 2008 numbers were then used as the energy intensities for both the Project. The 2005 numbers were used for the NAT 2020 scenario as the "business as usual" scenario was defined when the 2005 standard would have been in place. The Project's GHG emissions also reflect Lewis Retail Centers' commitment to construct buildings that are 10% more energy efficient than the 2008 Title 24 part 6 building code.[27] These project design features were not incorporated into the NAT 2020 scenario.

Lewis Retail Centers also committed to installing 3 MW of solar panels.[28] Solar panels of this size would generate 5,884,959 kWh/year of energy in the San Bernardino area.[29] Because this energy would replace non-renewable electricity that would have needed to be generated without the installation of these solar panels and renewable energy is assumed to be "carbon neutral," the solar panels would result in a reduction in GHG emissions. The reduction in emissions from solar panels is shown in Table 4.

Table 5 summarizes the total electricity use, total natural gas use, and total GHG emissions relating to building energy use based on the CalEEMod output.

3.2.3 Water Supply, Treatment and Distribution

Indirect GHG emissions result from the production of electricity used to convey, treat and distribute water and wastewater. The amount of electricity required to convey, treat and distribute water depends on the volume of water as well as the sources of the water.

ENVIRON used indoor and outdoor water use information provided by RPM Engineers, Inc and Conceptual Design & Planning Company. In addition, ENVIRON used CalEEMod default

[24] A detailed explanation how the RASS and CEUS data was processed for use in CalEEMod is available in CalEEMod User's Guide Appendix E pages 27-32.

[25] California Energy Commission. 2003. Impact Analysis: 2005 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: http://www.energy.ca.gov/title24/2005standards/archive/rulemaking/documents/2003-07-11_400-03-014.PDF

[26] California Energy Commission. 2007. Impact Analysis 2008 Update to the California Energy Efficiency Standards for Residential and Nonresidential Buildings. Available at: http://www.energy.ca.gov/title24/2008standards/rulemaking/documents/2007-11-07_IMPACT_ANALYSIS.PDF

[27] Information was provided by Lewis Retail Centers to ENVIRON.

[28] Lewis Retail Centers will install solar panels between 3 MW and 5 MW in size. Because the exact size was unknown at the time of this report, ENVIRON conservatively chose 3 MW.

[29] http://gosolarcalifornia.cleanpowerestimator.com/gosolarcalifornia.htm

assumptions for average embodied energy[30] for Southern California, which are based on analyses by the California Energy Commission. ENVIRON assumed that all wastewater was treated aerobically.[31] This is consistent with the types of treatment utilized in San Bernardino Municipal Water Department's Water Reclamation Plant (WRP), where the City of San Bernardino's water is treated.[32]

The resulting water GHG emissions are shown in Table 5; supporting information is contained in Appendix A to this report. Emissions from both the Project and NAT 2020 scenarios are the same for this category.

3.2.4 Solid Waste

The residential and non-residential land uses will result in the generation and disposal of solid waste. A large percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. CalEEMod's solid waste module determines the GHG emissions associated with the disposal of solid waste into landfills, in quantities that are based upon land use type according to waste disposal studies conducted by CalRecycle. For this module, CalEEMod default waste generation rates were used since site specific information was not available. GHG emissions associated with non-landfill diverted waste streams are not considered, because it is generally assumed that these diversions do not result in any appreciable amounts of GHG emissions when operated effectively.[33] These waste diversion alternatives may result in differences in life-cycle emissions of GHGs, but it is not appropriate to combine life-cycle emissions for only one category of emissions.[34] As mentioned previously, biogenic CO_2 emissions were not included when CARB analyzed the GHG emissions inventory under AB 32. Therefore, they are not included in either the Project or NAT 2020 scenarios.

The resulting solid waste GHG emissions are reported in Table 6, and the supporting information is included in Appendix A to this report.

3.2.5 Mobile Source Emissions

GHG emissions will result from mobile sources associated with both inventory scenarios. These mobile source emissions will result from the truck trips to and from the site and typical commute of workers to and from the site.

[30] Embodied energy refers to the amount of energy that was used in delivering water to the specific land use.

[31] Aerobic wastewater treatment refers to wastewater treatment processes that are based on aerobic digestion or in the presence of oxygen.

[32] http://www.ci.san-bernardino.ca.us/water/divisions/water_reclamation/default.asp

[33] CARB. 2010. Local Government Operations Protocol. Chapter 9.4

[34] This inventory represents scope 1 and 2 emission categories. A life-cycle analysis of waste diversion would be a scope 3 inventory. CARB's Local Government Operations Protocol Version 1.1 (May 2010) clearly states that scope 3 emissions should not be combined with scope 1 and 2 emissions.

The resulting mobile source GHG emissions are reported in Table 8 and the supporting information is provided in Appendix A to this report. The estimation of emissions from these sources is described in detail below.

3.2.5.1 Commute Vehicles

ENVIRON estimated emissions from passenger cars in CalEEMod using trip rates specified by Urban Crossroads in the traffic study[35] and CalEEMod default inputs for trip type. The CalEEMod default fleet mix for San Bernardino County was adjusted to only include light duty automobiles, light duty trucks, medium duty trucks, and motorcycles. ENVIRON assumed all passenger cars were used for worker commute trips and hence applied the default CalEEMod worker commute trip distance. CalEEMod emission factors for the Project scenario were reduced to account for the Low Carbon Fuel Standard and Pavley regulations as discussed in Section 2.5.2. CalEEMod default emission factors incorporate the Low Carbon Fuel Standard (LCFS) and Pavley emission reductions, which are discussed in Section 2.5.2. Because these emission reduction regulations would not apply to the NAT 2020 scenario, the default emission factors were overridden with emission factors without Pavley or LCFS reductions, provided in Appendix D of the CalEEMod Users Guide.[36]

3.2.5.2 Non-work Vehicles (Trucks)

ENVIRON estimated emissions from trucks in CalEEMod using trip rates specified by Urban Crossroads in the traffic study. The CalEEMod default fleet mix for San Bernardino County was adjusted to include only light heavy duty trucks, medium heavy duty trucks, and heavy heavy duty trucks. The fleet mix of these vehicle types was calculated by converting the distribution of truck trips by axle provided by Urban Crossroads to a distribution by weight class using ARB's "Assessment of Heavy-Duty Gasoline and Diesel Vehicles in California: Population and Use Patterns."[37] ENVIRON assumed all truck trips were non-work trips in CalEEMod. For the General Light Industry buildings, the non-work trip distance was assumed to be the CalEEMod default for San Bernardino County. For the Warehouse buildings, the average trip distance in SCAQMD was calculated assuming a distribution of trip origins and destinations as described in Table 7. It was conservatively assumed that none of the Project truck trips were diverted or pass-by trips. As mentioned above, CalEEMod default emission factors incorporate the LCFS. The effects of this regulation were not incorporated into the emission factor used for NAT 2020 scenario. To calculate the emission rate in the absence of LCFS, it was assumed that the LCFS reduced emissions by 90%.[38]

The Heavy-Duty Vehicle Greenhouse Gas Emission Reduction Measure described in section 2.4.2 is designed to reduce fuel consumption of heavy-duty diesel-fueled trucks (greater than 26,000 lb gross weight) through improvements in aerodynamic drag and tire rolling resistance.

[35] Urban Crossroads. 2011. National Orange Show Industrial Traffic Impact Analysis. July 6.

[36] http://caleemod.com/

[37] California Air Resources Board. 1985. Horie Yuji, Rapoport Richard. A1-155-32. July.

[38] California Air Resources Board. Pavley 1 + Low Caron Fuel Standard Postprocessor User's Guide. V1. Available at: http://www.arb.ca.gov/cc/sb375/tools/postprocessor.htm

This reduction in fuel consumption will also reduce emissions.[39] According to CARB, currently certified aerodynamic devices achieve between 7% and 10% (average of 8.5%) fuel savings at 60 mph. Due to the Project's proximity to the highway and the long highway travel distances expected for the heavy-duty trucks associated with the Project, running emissions for diesel-fueled vehicles above 26,000 lbs were reduced by 8.5% to account for the improvement in fuel efficiency in the Project scenario. This calculation is described in Table 8.

3.3 One-Time Emissions

One-time emissions are those emissions that are not re-occurring over the life of the project. This includes emissions associated with construction and emissions associated with land use changes. These are both described in this section.

3.3.1 Construction Emissions

This section describes the estimation of GHG emissions from construction activities at the Proposed Project Site. Typically there are four major construction phases for an urban development: demolition (if it is a redevelopment project), site preparation, grading, and building construction. The building construction phase can be broken down into three subphases: building construction, architectural painting, and asphalt paving. GHG emissions from these construction phases are largely attributable to fuel use from construction equipment and worker commuting.

ENVIRON used CalEEMod to assist in quantification of the construction emissions. The construction schedule, offroad equipment lists and equipment specifications, and daily trip counts for workers, vendors and haul trucks were provided by Lewis Retail Centers, and are shown in Appendix C. CalEEMod default values were used for equipment and vehicle emission factors, equipment load factors and vehicle trip lengths. No specific mitigation measures related to GHG emissions associated with construction were assumed in this model. Use of newer model engines and higher Tier (i.e., lower emitting) off-road equipment would only serve in most cases to reduce the GHG emissions. The exceptions are the use of compressed natural gas vehicles which could increase the GHG emissions from off-road vehicles slightly, and the use of diesel particulate filters, which have a small energy penalty associated with them.

The GHG emissions calculated for the various pieces of construction equipment and vehicles are reported in Appendix B. However, in the calculation of total GHG emissions from construction, off-road emissions were adjusted from the CalEEMod output to account for a 33% reduction attributable to overestimation of load factors, which CARB has indicated to be appropriate (Appendix D to this report contains supporting material for this reduction). The GHG

[39] California Air Resources Board. 2008. Public hearing to consider adoption of the regulation to reduce greenhouse gas emissions from heavy-duty vehicles, Appendix C: Emission Inventory Development - Analysis and Results. October. Available at: http://www.arb.ca.gov/regact/2008/ghghdv08/ghgisor.pdf

emissions associated with construction of the Project total 1,286 MT, or 43 MT/year, amortized over a 30 year project lifetime.[40]

3.3.2 Vegetation Changes

Permanent vegetation changes that occur as a result of project development constitute a one-time change in the carbon sequestration capacity of a project site. In this case, paved or dirt ground will be converted to landscaped areas with trees. This will result in an overall net sequestration of carbon once the vegetation reaches a steady state (i.e., new vegetation replaces dying vegetation).[41] Consequently, vegetation change results in a GHG emissions offset.

Sequestration quantities were calculated assuming that 230 net new trees would be planted within the Project property based on information from Lewis Retail Centers. Since the exact species of trees to be planted is not known at this time, the miscellaneous tree type was selected which represents an average of several tree species. Sequestration quantities that result from the land use change of dirt ground to scrubland were calculated assuming 3.8 acres of new scrubland would be created as a result of the project. The change in vegetation at the proposed Project site results in a one-time net sequestration of 216 MT of CO_2e emissions. The CalEEMod input parameters are summarized in Appendix A to this report. Table 9 reports the GHG emissions associated with the change in the Proposed Project Site's carbon sequestration, which is applicable to both the Project and the NAT 2020 scenario.

3.4 Emissions Summary

The summary of annual operational GHG emissions is reported in Table 10. The operational GHG emissions for the Project total 20,742 MT per year, and those for the NAT 2020 scenario total 30,379 MT per year. The percent reduction of the Project when compared to the NAT 2020 scenario is 31.7%. The Project's percent reduction from NAT 2020 is greater than the target percent reduction consistent with AB32 goals.

[40] This approach to one-time construction and vegetation change GHG emissions is based on the GHG Threshold Working Group Meeting #13 Minutes from August 26, 2009. Available at: http://www.aqmd.gov/ceqa/handbook/GHG/2009/aug26mtg/wkgp13minutes.pdf

[41] CalEEMod User's Guide Appendix A pages 42-43.

4 Determination of Significance

No numeric threshold for determining the significance of construction or operational GHG emissions from a commercial development project has yet been adopted by the SCAQMD or the County of San Bernardino. Based on Appendix G to the CEQA Guidelines, a project's GHG emissions would be considered to have a significant effect on the environment if the project would (1) generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or (2) conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

This analysis evaluates the significance of the GHG emissions resulting from the Project as reported in Table 10 using the CARB 2020 NAT comparison. This threshold is derived from average reductions needed to be consistent with AB 32. As Table 10 reports, the Project's annual operational GHG emissions are estimated to be 20,742 MT/YR, and NAT 2020 scenario annual operational GHG emissions are estimated to be 30,379 MT/YR, which results in a Project reduction of 31.7% from the CARB 2020 NAT.[42] Thus, using the CARB 2020 NAT comparison as a numeric threshold, the Project would have less than significant operational GHG emission impacts.

As noted earlier, climate change impacts are interpreted by the OPR to be cumulative in nature only, as no typical single project can result in emissions of such a magnitude that it, in and of itself, will be significant on project basis. Therefore, using these numeric thresholds, the Project would result in less than significant cumulative impacts on global climate change.

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[42] As discussed previously, construction related emissions were quantified, but not included in the total for either scenario. If the amortized construction emissions were included in the totals, the project reduction from the CARB 2020 NAT scenario would be 31.7% and the Project would have less than significant GHG emission impacts.

5 Conclusion

This report provides the inventory of the GHG emissions that would result from approving the Project as compared to the CARB 2020 NAT. Both development scenarios would result in annual and on-time GHG emissions. The Project's GHG emissions were evaluated against the numeric threshold associated with CARB 2020 NAT comparison, which is based on the reductions necessary to meet the goals of AB 32. The Project's design features, along with improved vehicle fuel efficiency and cleaner electricity generation, enable the Project to achieve reductions consistent with AB32 goals. Based on these numeric thresholds, the Project's GHG emissions would have a less than significant cumulative impact on global climate change.

Tables

Table 1
Land Use Inputs
National Orange Show
Lewis Retail Centers
San Bernardino, California

Land Use Category	Land Use Subtype[1]	Size[2]	Size Metric	Acreage[2]
Industrial	General Light Industry	58	1000sqft	4.0
Industrial	Unrefrigerated Warehouse- Rail	695	1000sqft	34

Notes:
1. Land uses as available in CalEEMod. Buildings C and D are assumed to be General Light Industry and Buildings A and B are assumed to be Unrefrigerated Warehouse- Rail.
2. Information obtained from Lewis Retail Centers.

Abbreviations:
CalEEMod - CALifornia Emissions Estimator MODel
sqft - square feet
yr - year

Table 2
GHG Emissions from Renewable Power Standards for Southern California Edison
National Orange Show
Lewis Retail Centers
San Bernardino, California

	2006	2007	Average	Units
Total Energy Delivery[1]	82,776,309	83,958,770		MWh
from renewables[2]	12,670,583	12,476,219		MWh
from non-renewables	70,105,726	71,482,551		MWh
% of Total Energy From Renewables[2]	15%	15%		
Total CO_2 Emissions[1]	24,077,133	24,026,108		metric tonnes CO_2
CO_2 Emissions per Total Energy	641.26	630.89	636.07	lbs CO_2/MWh delivered
CO_2 Emissions per Total Non-Renewable Energy[3]	757.16	741.00	749.08	lbs CO_2/MWh delivered
Estimated Emission Factors for Total Energy Delivered[4]				
2010 RPS (20%)	605.7	592.8	599.3	lbs CO_2/MWh delivered
2020 RPS (33%)	507.3	496.5	501.9	lbs CO_2/MWh delivered

Notes:
1. Total energy delivery and total CO_2 emissions are provided in SCE's Power/Utility Protocol (PUP) Reports available at: https://www.climateregistry.org/CARROT/public/reports.aspx
2. Renewable energy delivered is the sum of biogenic, geothermal and other renewable generations in PUP reports.
3. The emissions metric presented here is calculated based on the total CO_2 emissions divided by the energy delivered from non-renewable sources.
4. The emission factors for total energy delivered are estimated by multiplying the percentage of energy delivered from non-renewable energy by the CO_2 emissions per total non-renewable energy metric calculated above. Two emission factors are presented here: the current 20% RPS goal for 2010 and the 33% RPS for 2020. The 33% reduction is used for Project emissions in this report. The estimate provided here and the PUP reports issued by SCE assume that renewable energy sources do not result in any CO_2 emissions. This is not necessarily true for biogas- and biomass-sourced energy but some consider these sources to be "carbon neutral."

Abbreviations:
CO_2 - carbon dioxide
GHG - Greenhouse gas
kWh - kilowatt-hour
lbs - pounds
MWh - Megawatt-hour
PUP - Power/Utility Protocol
RPS - Renewables Portfolio Standard
SCE - Southern California Edison

Table 3
GHG Emissions Associated with Electricity and Natural Gas Use
National Orange Show
Lewis Retail Centers
San Bernardino, California

Land Use Subtype	Electricity Use[1]		Natural Gas Use[1]		CO_2e Emissions from Energy Use[2]					
					Associated with Electricity Use		Associated with Natural Gas Burning		Total	
	NAT 2020	Project	NAT 2020	Project	NAT 2020	Project	NAT 2020	Project	NAT 2020	Project[3]
	kWh/yr		kBTU/yr		MT/yr					
General Light Industry	665,858	623,758	1,957,150	1,829,170	195	-1,395	105	98	300	**-1,225**
Unrefrigerated Warehouse-Rail	2,209,970	2,067,510	1,744,350	1,340,580	647		94	72	740	
Total	**2,875,828**	**2,691,268**	**3,701,500**	**3,169,750**	**842**		**199**	**170**	**1,040**	

Notes:
1. Energy usage for each land use is assumed to be consistent with CalEEMod defaults, which is obtained from CEUS studies on energy use and adjusted to account for 2008 Title 24 building standards. See Appendix A of the CalEEMod user's guide for details. The Project reflects a 10% improvement over Title 24 building standards and incorporates the renewable energy generated from the 3 MW solar panels.
2. Project emissions (excluding solar panel impacts) and NAT 2020 emissions were estimated by CalEEMod. Project emissions from electricity assume a carbon intensity of 501.9 lb/MWh, which takes into account 33% renewable energy as mandated by California's Renewable Portfolio Standard. NAT 2020 emissions from electricity assume a carbon intensity of 641.26 lb/MWh,
3. Total Project emissions are not broken down by land use because they incorporate the impact of solar power, which is not land use dependent. Solar power emissions calculations are shown in Table 4.

Abbreviations:
CalEEMod - CALifornia Emissions Estimator MODel
CEUS - California Commercial End-Use Survey
CO_2e - carbon dioxide equivalents
GHG - greenhouse gases
kBTU - 1,000 British thermal units
kWh - kilowatt hours
MT - metric tons
NAT - no actions taken
SCAQMD - South Coast Air Quality Management District
yr - year

Sources:
California Climate Action Registry Reporting Online Tool. Online: https://www.climateregistry.org/CARROT/public/reports.aspx

Table 4
GHG Reductions Associated with Solar Power
National Orange Show
Lewis Retail Centers
San Bernardino, California

	Units	Project[1]	Solar Panels[2]	Total
Electricity Use	kWh/yr	2,691,268	-5,884,959	-3,193,691
GHG Emissions	MT CO_2e/yr	617	-2,012	-1,395

Notes:
1. Project values include 10% improvement over 2008 Title 24 building standards as described in the report. These values are as reported by CalEEMod and shown in the appendix. GHG intensities used by CalEEMod to calculate the GHG emissions associated with electricity use assume 33% renewable energy as described in the report.
2. Electricity generated by solar panels assumes 3 megawatt panels are installed. Electricity generated per year was obtained from Go Solar California and is characteristic of the area. The solar electricity generated by the project is assumed to displace non-renewable energy, so the GHG intensities used to calculate the GHG reduction are those for non-renewable energy, as shown in Table 2. CH_4 and N_20 intensities were calculated by scaling CalEEMod defaults.

Abbreviations:
CalEEMod - CALifornia Emissions Estimator MODel
CO_2e - carbon dioxide equivalents
GHG - greenhouse gases
kWh - kilowatt hours
MT - metric tons
SCAQMD - South Coast Air Quality Management District
yr - year

Sources:
Go Solar California. Clean Power Estimator. Available at:
http://gosolarcalifornia.cleanpowerestimator.com/gosolarcalifornia.htm

Table 5
GHG Emissions Associated with Water Use
National Orange Show
Lewis Retail Centers
San Bernardino, California

	Units	NAT 2020	Project
Indoor Water Use[1]	**gallons/yr**	341,900	341,900
Outdoor Water Use[1]	**gallons/yr**	1,693,320	1,693,320
CO_2e Emissions Associated with Water Use[2]	**MT/yr**	6.9	5.4

Notes:
1. Indoor water use estimates are consistent with the total amount quantified in the water use report by RPM Engineers, Inc. Outdoor water use estimates are consistent with the report from the Conceptual Design and Planning Company.

2. Emissions as estimated by CalEEMod. Emissions associated with water include emissions that result from the energy used to supply, distribute, and treat water and wastewater. The wastewater treatment plant was assumed to be an aerobic system. Electricity emission factor takes into account 33% renewable energy as mandated by California's Renewable Portfolio Standard.

Abbreviations:
CalEEMod - CALifornia Emissions Estimator MODel
CO_2e - carbon dioxide equivalents
GHG - greenhouse gases
MT - metric tons
NAT - no actions taken
SCAQMD - South Coast Air Quality Management District
yr - year

Sources:
California Climate Action Registry Reporting Online Tool. Online: https://www.climateregistry.org/CARROT/public/reports.aspx
SCAQMD. 2011. CalEEMod User's Guide. Online: http://caleemod.com/. Accessed March 30, 2011.

Table 6
GHG Emissions Associated with Waste
National Orange Show
Lewis Retail Centers
San Bernardino, California

Land Use Subtype	Waste Disposed[1,3]	CO_2e Emissions Associated with Waste[2,3]
	tons/yr	MT/yr
General Light Industry	3,360	846
Unrefrigerated Warehouse-Rail	7,506	1,891
Total	**10,865**	**2,737**

Notes:
1. Waste disposed for each land use is based on CalEEMod defaults derived from waste disposal surveys by land use in California conducted by Cal Recycle. See Appendix A of the CalEEMod user's guide for more details. This is different than the amount of waste generated that may be partially diverted from a landfill such as by recycling or composting.
2. Emissions as estimated by CalEEMod. Emissions associated with waste are indirect emissions from waste that is disposed in a landfill.
3. The waste disposed and CO_2e emissions for NAT 2020 and the Project scenarios are the same, so only one scenario is shown.

Abbreviations:
CalEEMod - CALifornia Emissions Estimator MODel
CO_2e - carbon dioxide equivalents
GHG - greenhouse gases
MT - metric tons
NAT - no actions taken
SCAQMD - South Coast Air Quality Management District
yr - year

Sources:
SCAQMD. 2011. CalEEMod User's Guide. Online: http://caleemod.com/. Accessed

Table 7
On-road Trip Assumptions
National Orange Show
Lewis Retail Centers
San Bernardino, California

Category	Subcategory	Land Use Subtype	
		General Light Industry	Unrefrigerated Warehouse-No Rail
Weekday Passenger Car Trip Rates[1] (trips/TSF)	-	5.6	0.77
Weekday Truck Trip Rates[1] (trips/TSF)	-	1.4	0.91
Commute Vehicle Fleet Mix[2]	Light Duty Autos	52%	
	Light Duty Trucks 1	9.8%	
	Light Duty Trucks 2	25%	
	Medium Duty Trucks	13%	
	Motorcycles	0.81%	
Non-work Vehicle (Truck) Fleet Mix	Light Heavy Duty Trucks 1	5.4%	
	Light Heavy Duty Trucks 2	1.5%	
	Medium Heavy Duty Trucks	45%	
	Heavy Heavy Duty Trucks	48%	
Trip Distances[4] (mi/trip)	Passenger Car	8.9	8.9
	Trucks	7.4	61

Notes:
1. Trip rates consistent with trip rates used in traffic study. Saturday and Sunday trip rates were generated by scaling the project specific trip rates with default trip rates.
2. Commute vehicle fleet mix is assumed to be the CalEEMod default mix for only the vehicle classes shown here.
3. Non-work (truck) fleet mix is consistent with trip rates by axle provided in the traffic study. Trip rates by axle were converted to CalEEMod vehicle classes (ARB 1985).
4. Default trip distances were used for passenger cars for both land uses and trucks for General Light Industry. The trip rate for the warehouse was calculated with the following assumptions. Trip destination distribution specified by Lewis Retail Centers based on typical truck goods movement patterns for the region (Jackson et. al.). Note the distance for outbound trips are the distances to the SCAQMD boundary (with the exception of the railyard).

Inbound trips:	Percent of trips	Distance within SCAQMD
From Port of LA:	90%	77.7 miles
From Railyard:	10%	1.5 miles
Outbound trips:		
To Las Vegas:	27%	19 miles
To San Diego:	27%	52 miles
To Mexicali:	13%	106 miles
To Arizona:	13%	142 miles
To Railyard	20%	1.5 miles

Abbreviations:
CalEEMod - CALifornia Emissions Estimator MODel
LA - Los Angeles
mi - miles
SCAQMD - South Coast Air Quality Management District
TSF - thousand square feet

Sources:
California Air Resources Board. 1985. Horie Yuji, Rapoport Richard. Assessment of Heavy-duty Gasoline and Diesel Vehicles in California: Population and Use Patterns. A1-155-32. July.
Jackson, R. et. al. "Visions for Regional Sustainability. Part I: The Intersection of Transportation, Air Quality, Land Use, & Energy" http://leonard.csusb.edu/outreach/documents/TALE_01_Randy_Jackson.pdf
SCAQMD. 2011. CalEEMod User's Guide. Online: http://caleemod.com/. Accessed March 30, 2011.

Table 8
GHG Emissions Associated with Mobile Sources
National Orange Show
Lewis Retail Centers
San Bernardino, California

Land Use Subtype	Traffic[1]		CO_2e Emissions Associated with Traffic[2]	
	NAT 2020	Project	NAT 2020	Project
	VMT/yr		MT/yr	
General Light Industry	897,869	897,869	**26,601**	**19,232**
Unrefrigerated Warehouse-Rail	18,041,807	15,702,990		
Total	**18,939,675**	**16,600,858**		

Notes:
1. Traffic volumes incorporate on-road trip assumption shown in Table 7.
2. Emissions associated with transportation include running, idling, and startup emissions. CalEEMod default emission factors for the NAT scenario were adjusted to remove the affects of the Low Carbon Fuel Standard and Pavley as discussed in the report. The Project emission factors for medium heavy duty and heavy heavy duty vehicles were reduced to take into account the effects of the Heavy-Duty Vehicle Greenhouse Gas Reduction Measure. As discussed in the report, an 8.5 % reduction in GHG emissions would result from this measure. This reduction was applied directly to heavy heavy duty vehicles and to 35% of medium heavy duty vehicles since only about 35% of medium heavy duty vehicles would be over the weight floor for the measure.

Abbreviations:
CalEEMod - CALifornia Emissions Estimator MODel
CO_2e - carbon dioxide equivalents
EMFAC - Vehicular EMission FACtor model
GHG - greenhouse gases
ITE - Institute of Transportation Engineers
MT - metric tons
NAT - no actions taken
SANDAG - San Diego Association of Governments
SCAG - South Coast Association of Governments
SCAQMD - South Coast Air Quality Management District
TSF - thousand square feet
VMT - vehicle miles traveled
yr - year

Sources:
SCAQMD. 2011. CalEEMod User's Guide. Online: http://caleemod.com/. Accessed March 30, 2011.

Table 9
GHG Sequestration Associated with Vegetation
National Orange Show
Lewis Retail Centers
San Bernardino, California

Type of Land Use Change	Quantity of Vegetation[1]	Units	CO_2 accumulation[2]	CO_2e Sequestered[3]
			MT/unit	MT
New Forest Land	3.8	acres	14	54
New Miscellaneous Trees	230	trees	0.035	163
			Total	**216**

Notes:
1. Number of trees and acres of land use change obtained from a landscaping plan provided by Lewis Retail Centers. Number of trees is approximate.
2. CalEEMod default accumulation for miscellaneous tree types and new forest land.
3. Total CO_2e sequestered over the life of the new trees assuming 20 years of life and CO_2e from the one time land use change.

Abbreviations:
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
GHG - greenhouse gases
MT - metric tons

Table 10
Summary of Operational GHG Emissions
National Orange Show
Lewis Retail Centers
San Bernardino, California

Category[1]	CO_2e Emissions[2]	
	NAT 2020	Project
	MT/yr	
Energy Use	1,040	-1,225
Water Use	6.9	5.4
Waste Disposed	2,737	2,737
Traffic	26,601	19,232
Vegetation Amortized[3,4]	-7.2	-7.2
Total	**30,379**	**20,742**
Project Improvement over NAT 2020	**31.7%**	
Construction Amortized[3,5]	43	

Notes:
1. All operational categories for which CalEEMod calculates emissions.
2. Emissions as described in previous tables. CO_2e includes CO_2, CH_4, and N_2O emissions, weighted by their respective global warming potentials.
3. One-time emissions were amortized over a 30 year period.
4. A net sequestration of carbon results in a decrease (or negative) CO_2e.
5. As discussed in the report, construction emissions are merely reported but not compared to any thresholds.

Abbreviations:
CalEEMod - CALifornia Emissions Estimator MODel
CH_4 - methane
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalents
GHG - greenhouse gases
MT - metric tons
NAT - no actions taken
N_2O - nitrogen dioxide
yr - year

Appendix A
CalEEMod Output
and Additional Traffic Information

Lewis San Bernardino - NAT Passenger 2020

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Light Industry	57.75	1000sqft
Unrefrigerated Warehouse-Rail	694.96	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	32		

1.3 User Entered Comments

Project Characteristics -

Land Use - Acutal lot acreage

Construction Phase - Construction not evaluated in this CalEEMod run. Trenching is a place holder phase.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - Passenger Car Run. Trip Rates based on data request

Energy Use -

Water And Wastewater - Assume 100% of water treatment is Aerobic based on water treatment plant in San Bernardino. Indoor water use calculated assuming the same usage rate per square foot for both office space and total space. Office space water use provided by client.

Land Use Change - Based on site design plan

Sequestration - Based on landscaping plan

Energy Mitigation -

2.0 Emissions Summary

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	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.02	0.18	0.15	0.00		0.00	0.01		0.00	0.01	0.00	1,034.02	1,034.02	0.04	0.02	1,040.47
Mobile	0.47	0.38	4.57	0.01	1.27	0.04	1.31	0.02	0.04	0.06	0.00	1,062.95	1,062.95	0.03	0.00	1,063.65
Waste						0.00	0.00		0.00	0.00	2,205.58	0.00	2,205.58	130.35	0.00	4,942.84
Water						0.00	0.00		0.00	0.00	0.00	6.77	6.77	0.00	0.00	6.89
Total	**4.08**	**0.56**	**4.72**	**0.01**	**1.27**	**0.04**	**1.32**	**0.02**	**0.04**	**0.07**	**2,205.58**	**2,103.74**	**4,309.32**	**130.42**	**0.02**	**7,053.85**

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	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.02	0.18	0.15	0.00		0.00	0.01		0.00	0.01	0.00	1,034.02	1,034.02	0.04	0.02	1,040.47
Mobile	0.47	0.38	4.57	0.01	1.27	0.04	1.31	0.02	0.04	0.06	0.00	1,062.95	1,062.95	0.03	0.00	1,063.65
Waste						0.00	0.00		0.00	0.00	2,205.58	0.00	2,205.58	130.35	0.00	4,942.84
Water						0.00	0.00		0.00	0.00	0.00	6.77	6.77	0.00	0.00	6.89
Total	**4.08**	**0.56**	**4.72**	**0.01**	**1.27**	**0.04**	**1.32**	**0.02**	**0.04**	**0.07**	**2,205.58**	**2,103.74**	**4,309.32**	**130.42**	**0.02**	**7,053.85**

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
New Trees					162.84
Vegetation Land Change					53.62
Total					**216.46**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.47	0.38	4.57	0.01	1.27	0.04	1.31	0.02	0.04	0.06	0.00	1,062.95	1,062.95	0.03	0.00	1,063.65
Unmitigated	0.47	0.38	4.57	0.01	1.27	0.04	1.31	0.02	0.04	0.06	0.00	1,062.95	1,062.95	0.03	0.00	1,063.65
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	322.82	61.22	31.76	736,980	736,980

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-Rail	535.12	535.12	535.12	1,617,140	1,617,140
Total	857.94	596.33	566.88	2,354,120	2,354,120

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Light Industry	8.90	13.30	7.40	100.00	0.00	0.00
Unrefrigerated Warehouse-Rail	8.90	13.30	71.35	100.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	836.49	836.49	0.04	0.01	841.74
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	836.49	836.49	0.04	0.01	841.74
NaturalGas Mitigated	0.02	0.18	0.15	0.00		0.00	0.01		0.00	0.01	0.00	197.53	197.53	0.00	0.00	198.73
NaturalGas Unmitigated	0.02	0.18	0.15	0.00		0.00	0.01		0.00	0.01	0.00	197.53	197.53	0.00	0.00	198.73
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Light Industry	1.95715e+006	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01	0.00	104.44	104.44	0.00	0.00	105.08
Unrefrigerated Warehouse-Rail	1.74435e+006	0.01	0.09	0.07	0.00		0.00	0.01		0.00	0.01	0.00	93.09	93.09	0.00	0.00	93.65
Total		**0.02**	**0.19**	**0.15**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**197.53**	**197.53**	**0.00**	**0.00**	**198.73**

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	tons/yr										MT/yr					
General Light Industry	1.95715e+006	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01	0.00	104.44	104.44	0.00	0.00	105.08
Unrefrigerated Warehouse-Rail	1.74435e+006	0.01	0.09	0.07	0.00		0.00	0.01		0.00	0.01	0.00	93.09	93.09	0.00	0.00	93.65
Total		**0.02**	**0.19**	**0.15**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**197.53**	**197.53**	**0.00**	**0.00**	**198.73**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	665858					193.68	0.01	0.00	194.89
Unrefrigerated Warehouse-Rail	2.20997e+006					642.82	0.03	0.01	646.84
Total						**836.50**	**0.04**	**0.01**	**841.73**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	665858					193.68	0.01	0.00	194.89
Unrefrigerated Warehouse-Rail	2.20997e+006					642.82	0.03	0.01	646.84
Total						**836.50**	**0.04**	**0.01**	**841.73**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.87					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.72					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**3.59**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.87					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.72					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**3.59**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					6.77	0.00	0.00	6.89
Unmitigated					6.77	0.00	0.00	6.89
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	0.07696 / 0					0.29	0.00	0.00	0.31
Unrefrigerated Warehouse-Rail	0.26494 / 1.69332					6.48	0.00	0.00	6.58
Total						**6.77**	**0.00**	**0.00**	**6.89**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	0.07696 / 0					0.29	0.00	0.00	0.31
Unrefrigerated Warehouse-Rail	0.26494 / 1.69332					6.48	0.00	0.00	6.58
Total						**6.77**	**0.00**	**0.00**	**6.89**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					2,205.58	130.35	0.00	4,942.84
Unmitigated					2,205.58	130.35	0.00	4,942.84
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	3359.82					682.01	40.31	0.00	1,528.44
Unrefrigerated Warehouse-Rail	7505.57					1,523.56	90.04	0.00	3,414.40
Total						**2,205.57**	**130.35**	**0.00**	**4,942.84**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	3359.82					682.01	40.31	0.00	1,528.44
Unrefrigerated Warehouse-Rail	7505.57					1,523.56	90.04	0.00	3,414.40
Total						**2,205.57**	**130.35**	**0.00**	**4,942.84**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					216.46	0.00	0.00	216.46
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

9.1 Vegetation Land Change

Vegetation Type

	Initial/Final	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	Acres	tons				MT			
Scrub	0 / 3.75					53.62	0.00	0.00	53.62
Total						**53.62**	**0.00**	**0.00**	**53.62**

9.1 Net New Trees

Species Class

	Number of Trees	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
		tons				MT			
Miscellaneous	230					162.84	0.00	0.00	162.84
Total						**162.84**	**0.00**	**0.00**	**162.84**

Lewis San Bernardino - NAT Truck 2020

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Light Industry	57.75	1000sqft
Unrefrigerated Warehouse-Rail	694.96	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	32		

1.3 User Entered Comments

Project Characteristics -

Land Use - Acutal lot acreage

Construction Phase - Construction not evaluated in this CalEEMod run. Trenching is a place holder phase.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - Passenger Car Run. Trip Rates based on data request

Energy Use -

Water And Wastewater - Assume 100% of water treatment is Aerobic based on water treatment plant in San Bernardino. Indoor water use calculated assuming the same usage rate per square foot for both office space and total space. Office space water use provided by client.

Land Use Change - Based on site design plan

Sequestration - Based on landscaping plan

Energy Mitigation -

2.0 Emissions Summary

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	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.02	0.18	0.15	0.00		0.00	0.01		0.00	0.01	0.00	1,034.02	1,034.02	0.04	0.02	1,040.47
Mobile	5.34	67.44	35.29	0.18	9.27	2.73	12.00	0.25	2.47	2.72	0.00	25,534.49	25,534.49	0.16	0.00	25,537.77
Waste						0.00	0.00		0.00	0.00	2,205.58	0.00	2,205.58	130.35	0.00	4,942.84
Water						0.00	0.00		0.00	0.00	0.00	6.77	6.77	0.00	0.00	6.89
Total	**8.95**	**67.62**	**35.44**	**0.18**	**9.27**	**2.73**	**12.01**	**0.25**	**2.47**	**2.73**	**2,205.58**	**26,575.28**	**28,780.86**	**130.55**	**0.02**	**31,527.97**

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	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.02	0.18	0.15	0.00		0.00	0.01		0.00	0.01	0.00	1,034.02	1,034.02	0.04	0.02	1,040.47
Mobile	5.34	67.44	35.29	0.18	9.27	2.73	12.00	0.25	2.47	2.72	0.00	25,534.49	25,534.49	0.16	0.00	25,537.77
Waste						0.00	0.00		0.00	0.00	2,205.58	0.00	2,205.58	130.35	0.00	4,942.84
Water						0.00	0.00		0.00	0.00	0.00	6.77	6.77	0.00	0.00	6.89
Total	**8.95**	**67.62**	**35.44**	**0.18**	**9.27**	**2.73**	**12.01**	**0.25**	**2.47**	**2.73**	**2,205.58**	**26,575.28**	**28,780.86**	**130.55**	**0.02**	**31,527.97**

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
New Trees					162.84
Vegetation Land Change					53.62
Total					**216.46**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.34	67.44	35.29	0.18	9.27	2.73	12.00	0.25	2.47	2.72	0.00	25,534.49	25,534.49	0.16	0.00	25,537.77
Unmitigated	5.34	67.44	35.29	0.18	9.27	2.73	12.00	0.25	2.47	2.72	0.00	25,534.49	25,534.49	0.16	0.00	25,537.77
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	79.12	15.02	7.51	160,889	160,889

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-Rail	632.41	632.41	632.41	16,424,667	16,424,667
Total	711.53	647.43	639.92	16,585,555	16,585,555

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Light Industry	8.90	13.30	7.40	0.00	0.00	100.00
Unrefrigerated Warehouse-Rail	8.90	13.30	71.35	0.00	0.00	100.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	836.49	836.49	0.04	0.01	841.74
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	836.49	836.49	0.04	0.01	841.74
NaturalGas Mitigated	0.02	0.18	0.15	0.00		0.00	0.01		0.00	0.01	0.00	197.53	197.53	0.00	0.00	198.73
NaturalGas Unmitigated	0.02	0.18	0.15	0.00		0.00	0.01		0.00	0.01	0.00	197.53	197.53	0.00	0.00	198.73
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Light Industry	1.95715e+006	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01	0.00	104.44	104.44	0.00	0.00	105.08
Unrefrigerated Warehouse-Rail	1.74435e+006	0.01	0.09	0.07	0.00		0.00	0.01		0.00	0.01	0.00	93.09	93.09	0.00	0.00	93.65
Total		**0.02**	**0.19**	**0.15**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**197.53**	**197.53**	**0.00**	**0.00**	**198.73**

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	tons/yr										MT/yr					
General Light Industry	1.95715e+006	0.01	0.10	0.08	0.00		0.00	0.01		0.00	0.01	0.00	104.44	104.44	0.00	0.00	105.08
Unrefrigerated Warehouse-Rail	1.74435e+006	0.01	0.09	0.07	0.00		0.00	0.01		0.00	0.01	0.00	93.09	93.09	0.00	0.00	93.65
Total		**0.02**	**0.19**	**0.15**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**197.53**	**197.53**	**0.00**	**0.00**	**198.73**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	665858					193.68	0.01	0.00	194.89
Unrefrigerated Warehouse-Rail	2.20997e+006					642.82	0.03	0.01	646.84
Total						**836.50**	**0.04**	**0.01**	**841.73**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	665858					193.68	0.01	0.00	194.89
Unrefrigerated Warehouse-Rail	2.20997e+006					642.82	0.03	0.01	646.84
Total						**836.50**	**0.04**	**0.01**	**841.73**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.87					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.72					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**3.59**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.87					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.72					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**3.59**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					6.77	0.00	0.00	6.89
Unmitigated					6.77	0.00	0.00	6.89
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	0.07696 / 0					0.29	0.00	0.00	0.31
Unrefrigerated Warehouse-Rail	0.26494 / 1.69332					6.48	0.00	0.00	6.58
Total						**6.77**	**0.00**	**0.00**	**6.89**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	0.07696 / 0					0.29	0.00	0.00	0.31
Unrefrigerated Warehouse-Rail	0.26494 / 1.69332					6.48	0.00	0.00	6.58
Total						**6.77**	**0.00**	**0.00**	**6.89**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					2,205.58	130.35	0.00	4,942.84
Unmitigated					2,205.58	130.35	0.00	4,942.84
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	3359.82					682.01	40.31	0.00	1,528.44
Unrefrigerated Warehouse-Rail	7505.57					1,523.56	90.04	0.00	3,414.40
Total						**2,205.57**	**130.35**	**0.00**	**4,942.84**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	3359.82					682.01	40.31	0.00	1,528.44
Unrefrigerated Warehouse-Rail	7505.57					1,523.56	90.04	0.00	3,414.40
Total						**2,205.57**	**130.35**	**0.00**	**4,942.84**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					216.46	0.00	0.00	216.46
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

9.1 Vegetation Land Change

Vegetation Type

	Initial/Final	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	Acres	tons				MT			
Scrub	0 / 3.75					53.62	0.00	0.00	53.62
Total						**53.62**	**0.00**	**0.00**	**53.62**

9.1 Net New Trees

Species Class

	Number of Trees	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
		tons				MT			
Miscellaneous	230					162.84	0.00	0.00	162.84
Total						**162.84**	**0.00**	**0.00**	**162.84**

Lewis San Bernardino - Project Passenger 2020

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Light Industry	57.75	1000sqft
Unrefrigerated Warehouse-Rail	694.96	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	32		

1.3 User Entered Comments

Project Characteristics - Intensity factors adjusted to take inot account Renewable Portfolio Standard (33% renewable energy by 2020)

Land Use - Acutal lot acreage

Construction Phase - Construction not evaluated in this CalEEMod run. Trenching is a place holder phase.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - Passenger Car Run. Trip Rates based on data request

Vechicle Emission Factors -

Vechicle Emission Factors -

Vechicle Emission Factors -

Energy Use - Default

Water And Wastewater - Assume 100% of water treatment is Aerobic based on water treatment plant in San Bernardino. Indoor water use calculated assuming the same usage rate per square foot for both office space and total space. Office space water use provided by client.

Land Use Change - Based on site design plan

Sequestration - Based on landscaping plan

Energy Mitigation -

2.0 Emissions Summary

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	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.02	0.17	0.14	0.00		0.00	0.01		0.00	0.01	0.00	805.27	805.27	0.03	0.01	810.45
Mobile	0.47	0.38	4.57	0.01	1.27	0.04	1.31	0.02	0.04	0.06	0.00	788.66	788.66	0.03	0.00	789.36
Waste						0.00	0.00		0.00	0.00	2,205.58	0.00	2,205.58	130.35	0.00	4,942.84
Water						0.00	0.00		0.00	0.00	0.00	5.30	5.30	0.00	0.00	5.41
Total	**4.08**	**0.55**	**4.71**	**0.01**	**1.27**	**0.04**	**1.32**	**0.02**	**0.04**	**0.07**	**2,205.58**	**1,599.23**	**3,804.81**	**130.41**	**0.01**	**6,548.06**

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	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.02	0.16	0.13	0.00		0.00	0.01		0.00	0.01	0.00	781.81	781.81	0.03	0.01	786.84
Mobile	0.47	0.38	4.57	0.01	1.27	0.04	1.31	0.02	0.04	0.06	0.00	788.66	788.66	0.03	0.00	789.36
Waste						0.00	0.00		0.00	0.00	2,205.58	0.00	2,205.58	130.35	0.00	4,942.84
Water						0.00	0.00		0.00	0.00	0.00	5.30	5.30	0.00	0.00	5.41
Total	**4.08**	**0.54**	**4.70**	**0.01**	**1.27**	**0.04**	**1.32**	**0.02**	**0.04**	**0.07**	**2,205.58**	**1,575.77**	**3,781.35**	**130.41**	**0.01**	**6,524.45**

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
New Trees					162.84
Vegetation Land Change					53.62
Total					**216.46**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.47	0.38	4.57	0.01	1.27	0.04	1.31	0.02	0.04	0.06	0.00	788.66	788.66	0.03	0.00	789.36
Unmitigated	0.47	0.38	4.57	0.01	1.27	0.04	1.31	0.02	0.04	0.06	0.00	788.66	788.66	0.03	0.00	789.36
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	322.82	61.22	31.76	736,980	736,980

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-Rail	535.12	535.12	535.12	1,617,140	1,617,140
Total	857.94	596.33	566.88	2,354,120	2,354,120

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Light Industry	8.90	13.30	7.40	100.00	0.00	0.00
Unrefrigerated Warehouse-Rail	8.90	13.30	61.19	100.00	0.00	0.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	612.66	612.66	0.03	0.01	616.66
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	623.32	623.32	0.03	0.01	627.38
NaturalGas Mitigated	0.02	0.16	0.13	0.00		0.00	0.01		0.00	0.01	0.00	169.15	169.15	0.00	0.00	170.18
NaturalGas Unmitigated	0.02	0.17	0.14	0.00		0.00	0.01		0.00	0.01	0.00	181.96	181.96	0.00	0.00	183.06
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Light Industry	1.9225e+006	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	102.59	102.59	0.00	0.00	103.22
Unrefrigerated Warehouse-Rail	1.48721e+006	0.01	0.07	0.06	0.00		0.00	0.01		0.00	0.01	0.00	79.36	79.36	0.00	0.00	79.85
Total		**0.02**	**0.16**	**0.14**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**181.95**	**181.95**	**0.00**	**0.00**	**183.07**

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	tons/yr										MT/yr					
General Light Industry	1.82917e+006	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	97.61	97.61	0.00	0.00	98.21
Unrefrigerated Warehouse-Rail	1.34058e+006	0.01	0.07	0.06	0.00		0.00	0.00		0.00	0.00	0.00	71.54	71.54	0.00	0.00	71.97
Total		**0.02**	**0.16**	**0.14**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**169.15**	**169.15**	**0.00**	**0.00**	**170.18**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	639292					145.53	0.01	0.00	146.48
Unrefrigerated Warehouse-Rail	2.09878e+006					477.78	0.02	0.01	480.90
Total						**623.31**	**0.03**	**0.01**	**627.38**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	623758					142.00	0.01	0.00	142.92
Unrefrigerated Warehouse-Rail	2.06751e+006					470.67	0.02	0.01	473.73
Total						**612.67**	**0.03**	**0.01**	**616.65**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.87					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.72					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**3.59**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.87					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.72					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**3.59**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					5.30	0.00	0.00	5.41
Unmitigated					5.30	0.00	0.00	5.41
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	0.07696 / 0					0.23	0.00	0.00	0.25
Unrefrigerated Warehouse-Rail	0.26494 / 1.69332					5.07	0.00	0.00	5.16
Total						**5.30**	**0.00**	**0.00**	**5.41**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	0.07696 / 0					0.23	0.00	0.00	0.25
Unrefrigerated Warehouse-Rail	0.26494 / 1.69332					5.07	0.00	0.00	5.16
Total						**5.30**	**0.00**	**0.00**	**5.41**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					2,205.58	130.35	0.00	4,942.84
Unmitigated					2,205.58	130.35	0.00	4,942.84
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	3359.82					682.01	40.31	0.00	1,528.44
Unrefrigerated Warehouse-Rail	7505.57					1,523.56	90.04	0.00	3,414.40
Total						**2,205.57**	**130.35**	**0.00**	**4,942.84**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	3359.82					682.01	40.31	0.00	1,528.44
Unrefrigerated Warehouse-Rail	7505.57					1,523.56	90.04	0.00	3,414.40
Total						**2,205.57**	**130.35**	**0.00**	**4,942.84**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					216.46	0.00	0.00	216.46
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

9.1 Vegetation Land Change

Vegetation Type

	Initial/Final	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	Acres	tons				MT			
Scrub	0 / 3.75					53.62	0.00	0.00	53.62
Total						**53.62**	**0.00**	**0.00**	**53.62**

9.1 Net New Trees

Species Class

	Number of Trees	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
		tons				MT			
Miscellaneous	230					162.84	0.00	0.00	162.84
Total						**162.84**	**0.00**	**0.00**	**162.84**

Lewis San Bernardino - Project Truck 2020

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Light Industry	57.75	1000sqft
Unrefrigerated Warehouse-Rail	694.96	1000sqft

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**	Southern California Edison
Climate Zone	10	**Precipitation Freq (Days)**	32		

1.3 User Entered Comments

Project Characteristics - Intensity factors adjusted to take inot account Renewable Portfolio Standard (33% renewable energy by 2020)

Land Use - Acutal lot acreage

Construction Phase - Construction not evaluated in this CalEEMod run. Trenching is a place holder phase.

Off-road Equipment -

Off-road Equipment -

Vehicle Trips - Passenger Car Run. Trip Rates based on data request

Energy Use - Default

Water And Wastewater - Assume 100% of water treatment is Aerobic based on water treatment plant in San Bernardino. Indoor water use calculated assuming the same usage rate per square foot for both office space and total space. Office space water use provided by client.

Land Use Change - Based on site design plan

Sequestration - Based on landscaping plan

Energy Mitigation -

2.0 Emissions Summary

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	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.02	0.17	0.14	0.00		0.00	0.01		0.00	0.01	0.00	805.27	805.27	0.03	0.01	810.45
Mobile	4.64	58.05	30.61	0.15	7.96	2.32	10.28	0.21	2.10	2.31	0.00	18,439.67	18,439.67	0.14	0.00	18,442.53
Waste						0.00	0.00		0.00	0.00	2,205.58	0.00	2,205.58	130.35	0.00	4,942.84
Water						0.00	0.00		0.00	0.00	0.00	5.30	5.30	0.00	0.00	5.41
Total	**8.25**	**58.22**	**30.75**	**0.15**	**7.96**	**2.32**	**10.29**	**0.21**	**2.10**	**2.32**	**2,205.58**	**19,250.24**	**21,455.82**	**130.52**	**0.01**	**24,201.23**

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	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.02	0.16	0.13	0.00		0.00	0.01		0.00	0.01	0.00	781.81	781.81	0.03	0.01	786.84
Mobile	4.64	58.05	30.61	0.15	7.96	2.32	10.28	0.21	2.10	2.31	0.00	18,439.67	18,439.67	0.14	0.00	18,442.53
Waste						0.00	0.00		0.00	0.00	2,205.58	0.00	2,205.58	130.35	0.00	4,942.84
Water						0.00	0.00		0.00	0.00	0.00	5.30	5.30	0.00	0.00	5.41
Total	**8.25**	**58.21**	**30.74**	**0.15**	**7.96**	**2.32**	**10.29**	**0.21**	**2.10**	**2.32**	**2,205.58**	**19,226.78**	**21,432.36**	**130.52**	**0.01**	**24,177.62**

2.3 Vegetation

Vegetation

	ROG	NOx	CO	SO2	CO2e
Category	tons				MT
New Trees					162.84
Vegetation Land Change					53.62
Total					**216.46**

3.0 Construction Detail

3.1 Mitigation Measures Construction

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.64	58.05	30.61	0.15	7.96	2.32	10.28	0.21	2.10	2.31	0.00	18,439.67	18,439.67	0.14	0.00	18,442.53
Unmitigated	4.64	58.05	30.61	0.15	7.96	2.32	10.28	0.21	2.10	2.31	0.00	18,439.67	18,439.67	0.14	0.00	18,442.53
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	79.12	15.02	7.51	160,889	160,889

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-Rail	632.41	632.41	632.41	14,085,849	14,085,849
Total	711.53	647.43	639.92	14,246,738	14,246,738

4.3 Trip Type Information

	Miles			Trip %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW
General Light Industry	8.90	13.30	7.40	0.00	0.00	100.00
Unrefrigerated Warehouse-Rail	8.90	13.30	61.19	0.00	0.00	100.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.00	0.00		0.00	0.00	0.00	612.66	612.66	0.03	0.01	616.66
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	623.32	623.32	0.03	0.01	627.38
NaturalGas Mitigated	0.02	0.16	0.13	0.00		0.00	0.01		0.00	0.01	0.00	169.15	169.15	0.00	0.00	170.18
NaturalGas Unmitigated	0.02	0.17	0.14	0.00		0.00	0.01		0.00	0.01	0.00	181.96	181.96	0.00	0.00	183.06
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Light Industry	1.9225e+006	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	102.59	102.59	0.00	0.00	103.22
Unrefrigerated Warehouse-Rail	1.48721e+006	0.01	0.07	0.06	0.00		0.00	0.01		0.00	0.01	0.00	79.36	79.36	0.00	0.00	79.85
Total		**0.02**	**0.16**	**0.14**	**0.00**		**0.00**	**0.02**		**0.00**	**0.02**	**0.00**	**181.95**	**181.95**	**0.00**	**0.00**	**183.07**

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	tons/yr										MT/yr					
General Light Industry	1.82917e+006	0.01	0.09	0.08	0.00		0.00	0.01		0.00	0.01	0.00	97.61	97.61	0.00	0.00	98.21
Unrefrigerated Warehouse-Rail	1.34058e+006	0.01	0.07	0.06	0.00		0.00	0.00		0.00	0.00	0.00	71.54	71.54	0.00	0.00	71.97
Total		**0.02**	**0.16**	**0.14**	**0.00**		**0.00**	**0.01**		**0.00**	**0.01**	**0.00**	**169.15**	**169.15**	**0.00**	**0.00**	**170.18**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	639292					145.53	0.01	0.00	146.48
Unrefrigerated Warehouse-Rail	2.09878e+006					477.78	0.02	0.01	480.90
Total						**623.31**	**0.03**	**0.01**	**627.38**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Light Industry	623758					142.00	0.01	0.00	142.92
Unrefrigerated Warehouse-Rail	2.06751e+006					470.67	0.02	0.01	473.73
Total						**612.67**	**0.03**	**0.01**	**616.65**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Unmitigated	3.59	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.87					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.72					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**3.59**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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	0.87					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	2.72					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**3.59**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					5.30	0.00	0.00	5.41
Unmitigated					5.30	0.00	0.00	5.41
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	0.07696 / 0					0.23	0.00	0.00	0.25
Unrefrigerated Warehouse-Rail	0.26494 / 1.69332					5.07	0.00	0.00	5.16
Total						**5.30**	**0.00**	**0.00**	**5.41**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Light Industry	0.07696 / 0					0.23	0.00	0.00	0.25
Unrefrigerated Warehouse-Rail	0.26494 / 1.69332					5.07	0.00	0.00	5.16
Total						**5.30**	**0.00**	**0.00**	**5.41**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					2,205.58	130.35	0.00	4,942.84
Unmitigated					2,205.58	130.35	0.00	4,942.84
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	3359.82					682.01	40.31	0.00	1,528.44
Unrefrigerated Warehouse-Rail	7505.57					1,523.56	90.04	0.00	3,414.40
Total						**2,205.57**	**130.35**	**0.00**	**4,942.84**

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Light Industry	3359.82					682.01	40.31	0.00	1,528.44
Unrefrigerated Warehouse-Rail	7505.57					1,523.56	90.04	0.00	3,414.40
Total						**2,205.57**	**130.35**	**0.00**	**4,942.84**

9.0 Vegetation

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons				MT			
Unmitigated					216.46	0.00	0.00	216.46
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

9.1 Vegetation Land Change

Vegetation Type

	Initial/Final	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	Acres	tons				MT			
Scrub	0 / 3.75					53.62	0.00	0.00	53.62
Total						**53.62**	**0.00**	**0.00**	**53.62**

9.1 Net New Trees

Species Class

	Number of Trees	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
		tons				MT			
Miscellaneous	230					162.84	0.00	0.00	162.84
Total						**162.84**	**0.00**	**0.00**	**162.84**

Appendix B
Construction CalEEMod Output Summary Reports

Lewis San Bernardino

San Bernardino-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
User Defined Commercial	1	User Defined Unit

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Utility Company**
Climate Zone	10	**Precipitation Freq (Days)**	32	

1.3 User Entered Comments

Project Characteristics -

Land Use -

Construction Phase - start/end dates from client

Trips and VMT - trips obtained from client

Grading -

2.0 Emissions Summary

3.2 Building Construction-Caulking/Dock Equipment - 2013

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	0.01	0.08	0.06	0.00		0.00	0.00		0.00	0.00	0.00	9.74	9.74	0.00	0.00	9.76
Total	**0.01**	**0.08**	**0.06**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**9.74**	**9.74**	**0.00**	**0.00**	**9.76**

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	0.01	0.10	0.05	0.00	0.26	0.00	0.26	0.00	0.00	0.00	0.00	14.21	14.21	0.00	0.00	14.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.28	2.28	0.00	0.00	2.28
Total	**0.01**	**0.10**	**0.07**	**0.00**	**0.26**	**0.00**	**0.26**	**0.00**	**0.00**	**0.00**	**0.00**	**16.49**	**16.49**	**0.00**	**0.00**	**16.50**

3.2 Building Construction-Caulking/Dock Equipment - 2013

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	0.01	0.08	0.06	0.00		0.00	0.00		0.00	0.00	0.00	9.74	9.74	0.00	0.00	9.76
Total	**0.01**	**0.08**	**0.06**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**9.74**	**9.74**	**0.00**	**0.00**	**9.76**

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	0.01	0.10	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.21	14.21	0.00	0.00	14.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.28	2.28	0.00	0.00	2.28
Total	**0.01**	**0.10**	**0.07**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**16.49**	**16.49**	**0.00**	**0.00**	**16.50**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Doors & Frames - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.05	0.02	0.00	0.08	0.00	0.08	0.00	0.00	0.00	0.00	6.35	6.35	0.00	0.00	6.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	1.12	0.00	0.00	1.12
Total	**0.00**	**0.05**	**0.03**	**0.00**	**0.08**	**0.00**	**0.08**	**0.00**	**0.00**	**0.00**	**0.00**	**7.47**	**7.47**	**0.00**	**0.00**	**7.48**

3.2 Building Construction-Doors & Frames - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.35	6.35	0.00	0.00	6.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	1.12	0.00	0.00	1.12
Total	**0.00**	**0.05**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**7.47**	**7.47**	**0.00**	**0.00**	**7.48**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Drywall/Acoustical - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

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	0.01	0.08	0.04	0.00	0.23	0.00	0.24	0.00	0.00	0.00	0.00	9.53	9.53	0.00	0.00	9.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	1.57
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.23**	**0.00**	**0.24**	**0.00**	**0.00**	**0.00**	**0.00**	**11.09**	**11.09**	**0.00**	**0.00**	**11.10**

3.2 Building Construction-Drywall/Acoustical - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

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	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.53	9.53	0.00	0.00	9.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	1.57
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**11.09**	**11.09**	**0.00**	**0.00**	**11.10**

3.2 Building Construction-Drywall/Acoustical - 2013

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.70	6.70	0.00	0.00	6.71
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.70**	**6.70**	**0.00**	**0.00**	**6.71**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.07	0.03	0.00	0.24	0.00	0.24	0.00	0.00	0.00	0.00	9.77	9.77	0.00	0.00	9.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	0.00	0.00	1.57
Total	**0.01**	**0.07**	**0.04**	**0.00**	**0.24**	**0.00**	**0.24**	**0.00**	**0.00**	**0.00**	**0.00**	**11.34**	**11.34**	**0.00**	**0.00**	**11.34**

3.2 Building Construction-Drywall/Acoustical - 2013

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.70	6.70	0.00	0.00	6.71
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.70**	**6.70**	**0.00**	**0.00**	**6.71**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.77	9.77	0.00	0.00	9.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	0.00	0.00	1.57
Total	**0.01**	**0.07**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**11.34**	**11.34**	**0.00**	**0.00**	**11.34**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Electrical - 2012

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	0.01	0.09	0.07	0.00		0.01	0.01		0.01	0.01	0.00	9.10	9.10	0.00	0.00	9.12
Total	**0.01**	**0.09**	**0.07**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**9.10**	**9.10**	**0.00**	**0.00**	**9.12**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.07	0.03	0.00	0.28	0.00	0.29	0.00	0.00	0.00	0.00	8.53	8.53	0.00	0.00	8.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64	1.64	0.00	0.00	1.64
Total	**0.01**	**0.07**	**0.04**	**0.00**	**0.28**	**0.00**	**0.29**	**0.00**	**0.00**	**0.00**	**0.00**	**10.17**	**10.17**	**0.00**	**0.00**	**10.18**

3.2 Building Construction-Electrical - 2012

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	0.01	0.09	0.07	0.00		0.01	0.01		0.01	0.01	0.00	9.10	9.10	0.00	0.00	9.12
Total	**0.01**	**0.09**	**0.07**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**9.10**	**9.10**	**0.00**	**0.00**	**9.12**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.07	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.53	8.53	0.00	0.00	8.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.64	1.64	0.00	0.00	1.64
Total	**0.01**	**0.07**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**10.17**	**10.17**	**0.00**	**0.00**	**10.18**

3.2 Building Construction-Electrical - 2013

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	0.06	0.39	0.30	0.00		0.03	0.03		0.03	0.03	0.00	42.02	42.02	0.00	0.00	42.12
Total	**0.06**	**0.39**	**0.30**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**42.02**	**42.02**	**0.00**	**0.00**	**42.12**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.02	0.28	0.14	0.00	1.31	0.01	1.32	0.00	0.01	0.01	0.00	39.48	39.48	0.00	0.00	39.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	7.39	7.39	0.00	0.00	7.40
Total	**0.02**	**0.28**	**0.19**	**0.00**	**1.32**	**0.01**	**1.33**	**0.00**	**0.01**	**0.01**	**0.00**	**46.87**	**46.87**	**0.00**	**0.00**	**46.90**

3.2 Building Construction-Electrical - 2013

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	0.06	0.39	0.30	0.00		0.03	0.03		0.03	0.03	0.00	42.02	42.02	0.00	0.00	42.12
Total	**0.06**	**0.39**	**0.30**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**42.02**	**42.02**	**0.00**	**0.00**	**42.12**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.02	0.28	0.14	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	39.48	39.48	0.00	0.00	39.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.39	7.39	0.00	0.00	7.40
Total	**0.02**	**0.28**	**0.19**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**46.87**	**46.87**	**0.00**	**0.00**	**46.90**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Fire Sprinkler Systems - 2012

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	0.05	0.36	0.26	0.00		0.03	0.03		0.03	0.03	0.00	38.27	38.27	0.00	0.00	38.35
Total	**0.05**	**0.36**	**0.26**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**38.27**	**38.27**	**0.00**	**0.00**	**38.35**

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	0.01	0.15	0.07	0.00	0.47	0.01	0.47	0.00	0.01	0.01	0.00	19.06	19.06	0.00	0.00	19.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.57	3.57	0.00	0.00	3.58
Total	**0.01**	**0.15**	**0.10**	**0.00**	**0.47**	**0.01**	**0.47**	**0.00**	**0.01**	**0.01**	**0.00**	**22.63**	**22.63**	**0.00**	**0.00**	**22.65**

3.2 Building Construction-Fire Sprinkler Systems - 2012

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	0.05	0.36	0.26	0.00		0.03	0.03		0.03	0.03	0.00	38.27	38.27	0.00	0.00	38.35
Total	**0.05**	**0.36**	**0.26**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**38.27**	**38.27**	**0.00**	**0.00**	**38.35**

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	0.01	0.15	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	19.06	19.06	0.00	0.00	19.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.57	3.57	0.00	0.00	3.58
Total	**0.01**	**0.15**	**0.10**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**22.63**	**22.63**	**0.00**	**0.00**	**22.65**

3.2 Building Construction-Fire Sprinkler Systems - 2013

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	0.05	0.34	0.27	0.00		0.02	0.02		0.02	0.02	0.00	39.16	39.16	0.00	0.00	39.24
Total	**0.05**	**0.34**	**0.27**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**39.16**	**39.16**	**0.00**	**0.00**	**39.24**

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	0.01	0.14	0.07	0.00	0.48	0.01	0.48	0.00	0.01	0.01	0.00	19.54	19.54	0.00	0.00	19.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	3.58	3.58	0.00	0.00	3.58
Total	**0.01**	**0.14**	**0.09**	**0.00**	**0.48**	**0.01**	**0.49**	**0.00**	**0.01**	**0.01**	**0.00**	**23.12**	**23.12**	**0.00**	**0.00**	**23.13**

3.2 Building Construction-Fire Sprinkler Systems - 2013

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	0.05	0.34	0.27	0.00		0.02	0.02		0.02	0.02	0.00	39.16	39.16	0.00	0.00	39.24
Total	**0.05**	**0.34**	**0.27**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**39.16**	**39.16**	**0.00**	**0.00**	**39.24**

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	0.01	0.14	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	19.54	19.54	0.00	0.00	19.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.58	3.58	0.00	0.00	3.58
Total	**0.01**	**0.14**	**0.09**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**23.12**	**23.12**	**0.00**	**0.00**	**23.13**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Glass & Glazing - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

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	0.01	0.08	0.04	0.00	0.17	0.00	0.18	0.00	0.00	0.00	0.00	9.53	9.53	0.00	0.00	9.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	1.12	0.00	0.00	1.12
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.17**	**0.00**	**0.18**	**0.00**	**0.00**	**0.00**	**0.00**	**10.65**	**10.65**	**0.00**	**0.00**	**10.65**

3.2 Building Construction-Glass & Glazing - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

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	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.53	9.53	0.00	0.00	9.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.12	1.12	0.00	0.00	1.12
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**10.65**	**10.65**	**0.00**	**0.00**	**10.65**

3.2 Building Construction-Glass & Glazing - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00	0.00	3.35	3.35	0.00	0.00	3.36
Total	**0.00**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**3.35**	**3.35**	**0.00**	**0.00**	**3.36**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.04	0.02	0.00	0.09	0.00	0.09	0.00	0.00	0.00	0.00	4.88	4.88	0.00	0.00	4.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.56
Total	**0.00**	**0.04**	**0.02**	**0.00**	**0.09**	**0.00**	**0.09**	**0.00**	**0.00**	**0.00**	**0.00**	**5.44**	**5.44**	**0.00**	**0.00**	**5.45**

3.2 Building Construction-Glass & Glazing - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00	0.00	3.35	3.35	0.00	0.00	3.36
Total	**0.00**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**3.35**	**3.35**	**0.00**	**0.00**	**3.36**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.88	4.88	0.00	0.00	4.89
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.56	0.00	0.00	0.56
Total	**0.00**	**0.04**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.44**	**5.44**	**0.00**	**0.00**	**5.45**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-HVAC - 2012

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	0.02	0.12	0.08	0.00		0.01	0.01		0.01	0.01	0.00	12.79	12.79	0.00	0.00	12.81
Total	**0.02**	**0.12**	**0.08**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**12.79**	**12.79**	**0.00**	**0.00**	**12.81**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.04	0.02	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	5.43	5.43	0.00	0.00	5.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.00	0.00	0.76
Total	**0.00**	**0.04**	**0.03**	**0.00**	**0.10**	**0.00**	**0.10**	**0.00**	**0.00**	**0.00**	**0.00**	**6.19**	**6.19**	**0.00**	**0.00**	**6.19**

3.2 Building Construction-HVAC - 2012

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	0.02	0.12	0.08	0.00		0.01	0.01		0.01	0.01	0.00	12.79	12.79	0.00	0.00	12.81
Total	**0.02**	**0.12**	**0.08**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**12.79**	**12.79**	**0.00**	**0.00**	**12.81**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.43	5.43	0.00	0.00	5.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.76	0.76	0.00	0.00	0.76
Total	**0.00**	**0.04**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.19**	**6.19**	**0.00**	**0.00**	**6.19**

3.2 Building Construction-HVAC - 2013

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	0.03	0.22	0.17	0.00		0.01	0.01		0.01	0.01	0.00	26.79	26.79	0.00	0.00	26.84
Total	**0.03**	**0.22**	**0.17**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**26.79**	**26.79**	**0.00**	**0.00**	**26.84**

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	0.01	0.08	0.04	0.00	0.21	0.00	0.21	0.00	0.00	0.00	0.00	11.40	11.40	0.00	0.00	11.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	0.00	0.00	1.57
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.21**	**0.00**	**0.21**	**0.00**	**0.00**	**0.00**	**0.00**	**12.97**	**12.97**	**0.00**	**0.00**	**12.97**

3.2 Building Construction-HVAC - 2013

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	0.03	0.22	0.17	0.00		0.01	0.01		0.01	0.01	0.00	26.79	26.79	0.00	0.00	26.84
Total	**0.03**	**0.22**	**0.17**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**26.79**	**26.79**	**0.00**	**0.00**	**26.84**

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	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.40	11.40	0.00	0.00	11.40
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.57	1.57	0.00	0.00	1.57
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**12.97**	**12.97**	**0.00**	**0.00**	**12.97**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Insulation - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

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	0.01	0.08	0.04	0.00	0.15	0.00	0.15	0.00	0.00	0.00	0.00	9.53	9.53	0.00	0.00	9.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34	1.34	0.00	0.00	1.34
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.15**	**0.00**	**0.15**	**0.00**	**0.00**	**0.00**	**0.00**	**10.87**	**10.87**	**0.00**	**0.00**	**10.87**

3.2 Building Construction-Insulation - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

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	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.53	9.53	0.00	0.00	9.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34	1.34	0.00	0.00	1.34
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**10.87**	**10.87**	**0.00**	**0.00**	**10.87**

3.2 Building Construction-Insulation - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	1.67	1.67	0.00	0.00	1.68
Total	**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.67**	**1.67**	**0.00**	**0.00**	**1.68**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.02	0.01	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00	2.44	2.44	0.00	0.00	2.44
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.34	0.00	0.00	0.34
Total	**0.00**	**0.02**	**0.01**	**0.00**	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**2.78**	**2.78**	**0.00**	**0.00**	**2.78**

3.2 Building Construction-Insulation - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	1.67	1.67	0.00	0.00	1.68
Total	**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.67**	**1.67**	**0.00**	**0.00**	**1.68**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.44	2.44	0.00	0.00	2.44
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.34	0.00	0.00	0.34
Total	**0.00**	**0.02**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**2.78**	**2.78**	**0.00**	**0.00**	**2.78**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Overhead Sectional Doors - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00	0.00	3.35	3.35	0.00	0.00	3.36
Total	**0.00**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**3.35**	**3.35**	**0.00**	**0.00**	**3.36**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.03	0.01	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	3.25	3.25	0.00	0.00	3.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.00	0.00	0.57
Total	**0.00**	**0.03**	**0.01**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**3.82**	**3.82**	**0.00**	**0.00**	**3.82**

3.2 Building Construction-Overhead Sectional Doors - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00	0.00	3.35	3.35	0.00	0.00	3.36
Total	**0.00**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**3.35**	**3.35**	**0.00**	**0.00**	**3.36**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.25	3.25	0.00	0.00	3.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.57	0.00	0.00	0.57
Total	**0.00**	**0.03**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.82**	**3.82**	**0.00**	**0.00**	**3.82**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Painting & Wall Covering - 2013

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	0.10	0.74	0.58	0.00		0.04	0.04		0.04	0.04	0.00	88.60	88.60	0.01	0.00	88.77
Total	**0.10**	**0.74**	**0.58**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**88.60**	**88.60**	**0.01**	**0.00**	**88.77**

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	0.02	0.18	0.09	0.00	0.69	0.01	0.69	0.00	0.01	0.01	0.00	25.12	25.12	0.00	0.00	25.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	4.93	4.93	0.00	0.00	4.93
Total	**0.02**	**0.18**	**0.12**	**0.00**	**0.70**	**0.01**	**0.70**	**0.00**	**0.01**	**0.01**	**0.00**	**30.05**	**30.05**	**0.00**	**0.00**	**30.07**

3.2 Building Construction-Painting & Wall Covering - 2013

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	0.10	0.74	0.58	0.00		0.04	0.04		0.04	0.04	0.00	88.60	88.60	0.01	0.00	88.77
Total	**0.10**	**0.74**	**0.58**	**0.00**		**0.04**	**0.04**		**0.04**	**0.04**	**0.00**	**88.60**	**88.60**	**0.01**	**0.00**	**88.77**

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	0.02	0.18	0.09	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	25.12	25.12	0.00	0.00	25.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.93	4.93	0.00	0.00	4.93
Total	**0.02**	**0.18**	**0.12**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**30.05**	**30.05**	**0.00**	**0.00**	**30.07**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Panelized Roof - 2012

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	0.01	0.09	0.06	0.00		0.01	0.01		0.01	0.01	0.00	9.90	9.90	0.00	0.00	9.92
Total	**0.01**	**0.09**	**0.06**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**9.90**	**9.90**	**0.00**	**0.00**	**9.92**

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	0.03	0.39	0.18	0.00	0.88	0.02	0.90	0.00	0.02	0.02	0.00	48.01	48.01	0.00	0.00	48.04
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	1.61	0.00	0.00	1.61
Worker	0.00	0.00	0.04	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	5.40	5.40	0.00	0.00	5.41
Total	**0.03**	**0.40**	**0.23**	**0.00**	**0.89**	**0.02**	**0.91**	**0.00**	**0.02**	**0.02**	**0.00**	**55.02**	**55.02**	**0.00**	**0.00**	**55.06**

3.2 Building Construction-Panelized Roof - 2012

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	0.01	0.09	0.06	0.00		0.01	0.01		0.01	0.01	0.00	9.90	9.90	0.00	0.00	9.92
Total	**0.01**	**0.09**	**0.06**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**9.90**	**9.90**	**0.00**	**0.00**	**9.92**

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	0.03	0.39	0.18	0.00	0.00	0.02	0.02	0.00	0.02	0.02	0.00	48.01	48.01	0.00	0.00	48.04
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	1.61	0.00	0.00	1.61
Worker	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.40	5.40	0.00	0.00	5.41
Total	**0.03**	**0.40**	**0.23**	**0.00**	**0.00**	**0.02**	**0.02**	**0.00**	**0.02**	**0.02**	**0.00**	**55.02**	**55.02**	**0.00**	**0.00**	**55.06**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Plumbing - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

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	0.01	0.08	0.04	0.00	0.18	0.00	0.18	0.00	0.00	0.00	0.00	9.53	9.53	0.00	0.00	9.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	1.57
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.18**	**0.00**	**0.18**	**0.00**	**0.00**	**0.00**	**0.00**	**11.09**	**11.09**	**0.00**	**0.00**	**11.10**

3.2 Building Construction-Plumbing - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

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	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.53	9.53	0.00	0.00	9.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.56	1.56	0.00	0.00	1.57
Total	**0.01**	**0.08**	**0.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**11.09**	**11.09**	**0.00**	**0.00**	**11.10**

3.2 Building Construction-Plumbing - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00	0.00	3.65	3.65	0.00	0.00	3.66
Total	**0.00**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**3.65**	**3.65**	**0.00**	**0.00**	**3.66**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.04	0.02	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	5.33	5.33	0.00	0.00	5.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.85	0.00	0.00	0.85
Total	**0.00**	**0.04**	**0.03**	**0.00**	**0.10**	**0.00**	**0.10**	**0.00**	**0.00**	**0.00**	**0.00**	**6.18**	**6.18**	**0.00**	**0.00**	**6.18**

3.2 Building Construction-Plumbing - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00	0.00	3.65	3.65	0.00	0.00	3.66
Total	**0.00**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**3.65**	**3.65**	**0.00**	**0.00**	**3.66**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.33	5.33	0.00	0.00	5.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.85	0.85	0.00	0.00	0.85
Total	**0.00**	**0.04**	**0.03**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.18**	**6.18**	**0.00**	**0.00**	**6.18**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Rebar - 2012

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	0.02	0.12	0.08	0.00		0.01	0.01		0.01	0.01	0.00	13.09	13.09	0.00	0.00	13.12
Total	**0.02**	**0.12**	**0.08**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**13.09**	**13.09**	**0.00**	**0.00**	**13.12**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.06	0.03	0.00	0.10	0.00	0.10	0.00	0.00	0.00	0.00	7.94	7.94	0.00	0.00	7.95
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34	1.34	0.00	0.00	1.34
Total	**0.01**	**0.06**	**0.04**	**0.00**	**0.10**	**0.00**	**0.10**	**0.00**	**0.00**	**0.00**	**0.00**	**9.28**	**9.28**	**0.00**	**0.00**	**9.29**

3.2 Building Construction-Rebar - 2012

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	0.02	0.12	0.08	0.00		0.01	0.01		0.01	0.01	0.00	13.09	13.09	0.00	0.00	13.12
Total	**0.02**	**0.12**	**0.08**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**13.09**	**13.09**	**0.00**	**0.00**	**13.12**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.06	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.94	7.94	0.00	0.00	7.95
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.34	1.34	0.00	0.00	1.34
Total	**0.01**	**0.06**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**9.28**	**9.28**	**0.00**	**0.00**	**9.29**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Roofing - 2012

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	0.03	0.26	0.11	0.00		0.01	0.01		0.01	0.01	0.00	25.58	25.58	0.00	0.00	25.63
Total	**0.03**	**0.26**	**0.11**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**25.58**	**25.58**	**0.00**	**0.00**	**25.63**

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	0.02	0.28	0.13	0.00	0.67	0.01	0.68	0.00	0.01	0.01	0.00	35.16	35.16	0.00	0.00	35.18
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.00	0.00	0.69
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04	2.04	0.00	0.00	2.04
Total	**0.02**	**0.29**	**0.14**	**0.00**	**0.67**	**0.01**	**0.68**	**0.00**	**0.01**	**0.01**	**0.00**	**37.89**	**37.89**	**0.00**	**0.00**	**37.91**

3.2 Building Construction-Roofing - 2012

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	0.03	0.26	0.11	0.00		0.01	0.01		0.01	0.01	0.00	25.58	25.58	0.00	0.00	25.63
Total	**0.03**	**0.26**	**0.11**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**25.58**	**25.58**	**0.00**	**0.00**	**25.63**

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	0.02	0.28	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	35.16	35.16	0.00	0.00	35.18
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.69	0.00	0.00	0.69
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04	2.04	0.00	0.00	2.04
Total	**0.02**	**0.29**	**0.14**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**37.89**	**37.89**	**0.00**	**0.00**	**37.91**

3.2 Building Construction-Roofing - 2013

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	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	5.03	5.03	0.00	0.00	5.03
Total	**0.01**	**0.05**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**5.03**	**5.03**	**0.00**	**0.00**	**5.03**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.05	0.02	0.00	0.13	0.00	0.13	0.00	0.00	0.00	0.00	6.92	6.92	0.00	0.00	6.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.00	0.00	0.14
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.00	0.00	0.39
Total	**0.00**	**0.05**	**0.02**	**0.00**	**0.13**	**0.00**	**0.13**	**0.00**	**0.00**	**0.00**	**0.00**	**7.45**	**7.45**	**0.00**	**0.00**	**7.45**

3.2 Building Construction-Roofing - 2013

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	0.01	0.05	0.02	0.00		0.00	0.00		0.00	0.00	0.00	5.03	5.03	0.00	0.00	5.03
Total	**0.01**	**0.05**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**5.03**	**5.03**	**0.00**	**0.00**	**5.03**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.92	6.92	0.00	0.00	6.92
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14	0.00	0.00	0.14
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.00	0.00	0.39
Total	**0.00**	**0.05**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**7.45**	**7.45**	**0.00**	**0.00**	**7.45**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Sheet Metal - 2012

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	0.01	0.08	0.06	0.00		0.00	0.00		0.00	0.00	0.00	8.53	8.53	0.00	0.00	8.54
Total	**0.01**	**0.08**	**0.06**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**8.53**	**8.53**	**0.00**	**0.00**	**8.54**

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	0.01	0.15	0.07	0.00	0.35	0.01	0.36	0.00	0.01	0.01	0.00	18.61	18.61	0.00	0.00	18.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75	1.75	0.00	0.00	1.75
Total	**0.01**	**0.15**	**0.08**	**0.00**	**0.35**	**0.01**	**0.36**	**0.00**	**0.01**	**0.01**	**0.00**	**20.36**	**20.36**	**0.00**	**0.00**	**20.37**

3.2 Building Construction-Sheet Metal - 2012

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	0.01	0.08	0.06	0.00		0.00	0.00		0.00	0.00	0.00	8.53	8.53	0.00	0.00	8.54
Total	**0.01**	**0.08**	**0.06**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**8.53**	**8.53**	**0.00**	**0.00**	**8.54**

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	0.01	0.15	0.07	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	18.61	18.61	0.00	0.00	18.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.75	1.75	0.00	0.00	1.75
Total	**0.01**	**0.15**	**0.08**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**20.36**	**20.36**	**0.00**	**0.00**	**20.37**

3.2 Building Construction-Sheet Metal - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	1.67	1.67	0.00	0.00	1.68
Total	**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.67**	**1.67**	**0.00**	**0.00**	**1.68**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.03	0.01	0.00	0.07	0.00	0.07	0.00	0.00	0.00	0.00	3.66	3.66	0.00	0.00	3.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.34	0.00	0.00	0.34
Total	**0.00**	**0.03**	**0.01**	**0.00**	**0.07**	**0.00**	**0.07**	**0.00**	**0.00**	**0.00**	**0.00**	**4.00**	**4.00**	**0.00**	**0.00**	**4.01**

3.2 Building Construction-Sheet Metal - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	1.67	1.67	0.00	0.00	1.68
Total	**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.67**	**1.67**	**0.00**	**0.00**	**1.68**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.66	3.66	0.00	0.00	3.67
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.34	0.00	0.00	0.34
Total	**0.00**	**0.03**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.00**	**4.00**	**0.00**	**0.00**	**4.01**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Skylights - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.04	0.02	0.00	0.07	0.00	0.07	0.00	0.00	0.00	0.00	4.76	4.76	0.00	0.00	4.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67	0.00	0.00	0.67
Total	**0.00**	**0.04**	**0.02**	**0.00**	**0.07**	**0.00**	**0.07**	**0.00**	**0.00**	**0.00**	**0.00**	**5.43**	**5.43**	**0.00**	**0.00**	**5.44**

3.2 Building Construction-Skylights - 2012

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	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	6.55	6.55	0.00	0.00	6.56
Total	**0.01**	**0.06**	**0.04**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.55**	**6.55**	**0.00**	**0.00**	**6.56**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.04	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.76	4.76	0.00	0.00	4.77
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.67	0.67	0.00	0.00	0.67
Total	**0.00**	**0.04**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.43**	**5.43**	**0.00**	**0.00**	**5.44**

3.2 Building Construction-Skylights - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	1.67	1.67	0.00	0.00	1.68
Total	**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.67**	**1.67**	**0.00**	**0.00**	**1.68**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.01	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	1.22	1.22	0.00	0.00	1.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.00	0.00	0.17
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**1.39**	**1.39**	**0.00**	**0.00**	**1.39**

3.2 Building Construction-Skylights - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	1.67	1.67	0.00	0.00	1.68
Total	**0.00**	**0.01**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.67**	**1.67**	**0.00**	**0.00**	**1.68**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	1.22	0.00	0.00	1.22
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.17	0.00	0.00	0.17
Total	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.39**	**1.39**	**0.00**	**0.00**	**1.39**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Structural Concrete - 2012

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	0.31	2.17	1.50	0.00		0.13	0.13		0.13	0.13	0.00	232.56	232.56	0.03	0.00	233.09
Total	**0.31**	**2.17**	**1.50**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**232.56**	**232.56**	**0.03**	**0.00**	**233.09**

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	0.13	1.49	0.71	0.00	4.60	0.06	4.67	0.01	0.06	0.07	0.00	185.24	185.24	0.01	0.00	185.36
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	1.09	0.00	0.00	1.09
Worker	0.01	0.01	0.11	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	15.09	15.09	0.00	0.00	15.11
Total	**0.14**	**1.51**	**0.82**	**0.00**	**4.62**	**0.06**	**4.69**	**0.01**	**0.06**	**0.07**	**0.00**	**201.42**	**201.42**	**0.01**	**0.00**	**201.56**

3.2 Building Construction-Structural Concrete - 2012

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	0.31	2.17	1.50	0.00		0.13	0.13		0.13	0.13	0.00	232.56	232.56	0.03	0.00	233.09
Total	**0.31**	**2.17**	**1.50**	**0.00**		**0.13**	**0.13**		**0.13**	**0.13**	**0.00**	**232.56**	**232.56**	**0.03**	**0.00**	**233.09**

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	0.13	1.49	0.71	0.00	0.01	0.06	0.07	0.01	0.06	0.07	0.00	185.24	185.24	0.01	0.00	185.36
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.09	1.09	0.00	0.00	1.09
Worker	0.01	0.01	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.09	15.09	0.00	0.00	15.11
Total	**0.14**	**1.51**	**0.82**	**0.00**	**0.01**	**0.06**	**0.07**	**0.01**	**0.06**	**0.07**	**0.00**	**201.42**	**201.42**	**0.01**	**0.00**	**201.56**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Building Construction-Structural Steel - 2012

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	0.04	0.34	0.14	0.00		0.01	0.01		0.01	0.01	0.00	34.26	34.26	0.00	0.00	34.33
Total	**0.04**	**0.34**	**0.14**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**34.26**	**34.26**	**0.00**	**0.00**	**34.33**

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	0.02	0.24	0.12	0.00	0.65	0.01	0.66	0.00	0.01	0.01	0.00	30.47	30.47	0.00	0.00	30.49
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.00	0.00	0.93
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.90	3.90	0.00	0.00	3.90
Total	**0.02**	**0.25**	**0.15**	**0.00**	**0.66**	**0.01**	**0.67**	**0.00**	**0.01**	**0.01**	**0.00**	**35.30**	**35.30**	**0.00**	**0.00**	**35.32**

3.2 Building Construction-Structural Steel - 2012

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	0.04	0.34	0.14	0.00		0.01	0.01		0.01	0.01	0.00	34.26	34.26	0.00	0.00	34.33
Total	**0.04**	**0.34**	**0.14**	**0.00**		**0.01**	**0.01**		**0.01**	**0.01**	**0.00**	**34.26**	**34.26**	**0.00**	**0.00**	**34.33**

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	0.02	0.24	0.12	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	30.47	30.47	0.00	0.00	30.49
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.93	0.00	0.00	0.93
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.90	3.90	0.00	0.00	3.90
Total	**0.02**	**0.25**	**0.15**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**35.30**	**35.30**	**0.00**	**0.00**	**35.32**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Site Preparation-AC Paving - 2013

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	0.06	0.50	0.27	0.00		0.03	0.03		0.03	0.03	0.00	49.22	49.22	0.01	0.00	49.33
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.06**	**0.50**	**0.27**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**49.22**	**49.22**	**0.01**	**0.00**	**49.33**

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	0.02	0.18	0.09	0.00	0.12	0.01	0.13	0.00	0.01	0.01	0.00	24.53	24.53	0.00	0.00	24.54
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	1.27	0.00	0.00	1.27
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	1.99	0.00	0.00	1.99
Total	**0.02**	**0.19**	**0.10**	**0.00**	**0.12**	**0.01**	**0.13**	**0.00**	**0.01**	**0.01**	**0.00**	**27.79**	**27.79**	**0.00**	**0.00**	**27.80**

3.2 Site Preparation-AC Paving - 2013

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	0.06	0.50	0.27	0.00		0.03	0.03		0.03	0.03	0.00	49.22	49.22	0.01	0.00	49.33
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.06**	**0.50**	**0.27**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**49.22**	**49.22**	**0.01**	**0.00**	**49.33**

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	0.02	0.18	0.09	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	24.53	24.53	0.00	0.00	24.54
Vendor	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27	1.27	0.00	0.00	1.27
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.99	1.99	0.00	0.00	1.99
Total	**0.02**	**0.19**	**0.10**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**27.79**	**27.79**	**0.00**	**0.00**	**27.80**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Site Preparation-Grading - 2012

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					0.18	0.00	0.18	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.11	0.73	0.40	0.00		0.05	0.05		0.05	0.05	0.00	65.18	65.18	0.01	0.00	65.36
Total	**0.11**	**0.73**	**0.40**	**0.00**	**0.18**	**0.05**	**0.23**	**0.05**	**0.05**	**0.10**	**0.00**	**65.18**	**65.18**	**0.01**	**0.00**	**65.36**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.11	0.05	0.00	0.24	0.00	0.25	0.00	0.00	0.01	0.00	13.74	13.74	0.00	0.00	13.75
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92	1.92	0.00	0.00	1.92
Worker	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	1.93	1.93	0.00	0.00	1.94
Total	**0.01**	**0.12**	**0.07**	**0.00**	**0.25**	**0.00**	**0.26**	**0.00**	**0.00**	**0.01**	**0.00**	**17.59**	**17.59**	**0.00**	**0.00**	**17.61**

3.2 Site Preparation-Grading - 2012

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					0.18	0.00	0.18	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.11	0.73	0.40	0.00		0.05	0.05		0.05	0.05	0.00	65.18	65.18	0.01	0.00	65.36
Total	**0.11**	**0.73**	**0.40**	**0.00**	**0.18**	**0.05**	**0.23**	**0.05**	**0.05**	**0.10**	**0.00**	**65.18**	**65.18**	**0.01**	**0.00**	**65.36**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.01	0.11	0.05	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	13.74	13.74	0.00	0.00	13.75
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.92	1.92	0.00	0.00	1.92
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.93	1.93	0.00	0.00	1.94
Total	**0.01**	**0.12**	**0.07**	**0.00**	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.01**	**0.00**	**17.59**	**17.59**	**0.00**	**0.00**	**17.61**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Site Preparation-Irrigation/Landscaping - 2013

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	5.90	5.90	0.00	0.00	5.92
Total	**0.01**	**0.06**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.90**	**5.90**	**0.00**	**0.00**	**5.92**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.02	0.01	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	3.11	3.11	0.00	0.00	3.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.00	0.00	0.64
Total	**0.00**	**0.02**	**0.01**	**0.00**	**0.02**	**0.00**	**0.02**	**0.00**	**0.00**	**0.00**	**0.00**	**3.75**	**3.75**	**0.00**	**0.00**	**3.75**

3.2 Site Preparation-Irrigation/Landscaping - 2013

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.06	0.04	0.00		0.00	0.00		0.00	0.00	0.00	5.90	5.90	0.00	0.00	5.92
Total	**0.01**	**0.06**	**0.04**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**5.90**	**5.90**	**0.00**	**0.00**	**5.92**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.11	3.11	0.00	0.00	3.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.64	0.64	0.00	0.00	0.64
Total	**0.00**	**0.02**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.75**	**3.75**	**0.00**	**0.00**	**3.75**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

3.2 Site Preparation-Wet Utilities - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.11	0.80	0.56	0.00		0.06	0.06		0.06	0.06	0.00	80.28	80.28	0.01	0.00	80.47
Total	**0.11**	**0.80**	**0.56**	**0.00**	**0.00**	**0.06**	**0.06**	**0.00**	**0.06**	**0.06**	**0.00**	**80.28**	**80.28**	**0.01**	**0.00**	**80.47**

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	0.02	0.23	0.11	0.00	0.53	0.01	0.54	0.00	0.01	0.01	0.00	28.81	28.81	0.00	0.00	28.82
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	1.61	0.00	0.00	1.61
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	3.71	3.71	0.00	0.00	3.72
Total	**0.02**	**0.24**	**0.15**	**0.00**	**0.53**	**0.01**	**0.55**	**0.00**	**0.01**	**0.01**	**0.00**	**34.13**	**34.13**	**0.00**	**0.00**	**34.15**

3.2 Site Preparation-Wet Utilities - 2012

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.11	0.80	0.56	0.00		0.06	0.06		0.06	0.06	0.00	80.28	80.28	0.01	0.00	80.47
Total	**0.11**	**0.80**	**0.56**	**0.00**	**0.00**	**0.06**	**0.06**	**0.00**	**0.06**	**0.06**	**0.00**	**80.28**	**80.28**	**0.01**	**0.00**	**80.47**

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	0.02	0.23	0.11	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00	28.81	28.81	0.00	0.00	28.82
Vendor	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	1.61	0.00	0.00	1.61
Worker	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.71	3.71	0.00	0.00	3.72
Total	**0.02**	**0.24**	**0.15**	**0.00**	**0.00**	**0.01**	**0.01**	**0.00**	**0.01**	**0.01**	**0.00**	**34.13**	**34.13**	**0.00**	**0.00**	**34.15**

4.0 Mobile Detail

4.1 Mitigation Measures Mobile

Appendix C
Construction Equipment List Provided by Lewis Retail Centers

Table C1
Construction Equipment and Scheduling Data
National Orange Show
Lewis Retail Centers
San Bernardino, CA

Phase Type		Phase Start Date	Phase End Date	Operating Hours Per Day[1]	Work Days Per Week	Equipment Type		Number of Equipment	Daily Construction Trips[2]		
									Workers	Vendors	Haul Trucks
Site Preparation	Grading	06/01/2012	07/15/2012	6	5	Rubber Tired Dozers		1	1	1	1
Site Preparation	Grading	06/01/2012	07/15/2012	6	5	Rubber Tired Loaders		1	1	1	1
Site Preparation	Grading	06/01/2012	07/15/2012	6	5	Scrapers		6	6	1	6
Site Preparation	Grading	06/01/2012	07/15/2012	6	5		Water Truck	-	2	0	2
Site Preparation	Grading	06/01/2012	07/15/2012	6	5	Other	Blade	1	1	1	1
Site Preparation	Grading	06/01/2012	07/15/2012	6	5	Sweepers/Scrubbers		1	1	1	1
Site Preparation	AC Paving	02/01/2013	02/25/2013	6	5	Paving Equipment	Paving Machine	1	3	1	1
Site Preparation	AC Paving	02/01/2013	02/25/2013	6	5	Rollers		2	2	1	2
Site Preparation	AC Paving	02/01/2013	02/25/2013	6	5	Scrapers		2	2	1	2
Site Preparation	AC Paving	02/01/2013	02/25/2013	6	5	Tractors/Loaders/Backhoes		1	1	1	1
Site Preparation	AC Paving	02/01/2013	02/25/2013	6	5	Sweepers/Scrubbers		1	1	1	1
Site Preparation	AC Paving	02/01/2013	02/25/2013	6	5	Other	Blade	1	1	1	1
Site Preparation	AC Paving	02/01/2013	02/25/2013	6	5	Other	Paving Trucks	-	6	0	10
Site Preparation	AC Paving	02/01/2013	02/25/2013	6	5	Other	Base Trucks	-	6	0	20
Site Preparation	AC Paving	02/01/2013	02/25/2013	6	5		Water Truck	-	1	0	1
Site Preparation	Wet Utilities	07/01/2012	09/30/2012	6	5	Excavators		2	2	1	2
Site Preparation	Wet Utilities	07/01/2012	09/30/2012	6	5	Tractors/Loaders/Backhoes		4	4	1	4
Site Preparation	Wet Utilities	07/01/2012	09/30/2012	6	5		Water Truck	-	1	0	1
Site Preparation	Wet Utilities	07/01/2012	09/30/2012	6	5	Other	Hauling of Materials	-	4	0	5
Site Preparation	Irrigation / Landscaping	02/15/2013	03/15/2013	6	5	Tractors/Loaders/Backhoes		2	2	0	2
Site Preparation	Irrigation / Landscaping	02/15/2013	03/15/2013	6	5	Other	Hauling of Materials	-	4	0	2
Building Construction	Rebar	08/01/2012	09/30/2012	6	5	Forklifts	Gradall	2	2	0	2
Building Construction	Rebar	08/01/2012	09/30/2012	6	5	Other	Hauling of Materials	-	4	0	3
Building Construction	Structural Concrete	08/01/2012	11/30/2012	6	5	Tractors/Loaders/Backhoes		4	4	0	4
Building Construction	Structural Concrete	08/01/2012	11/30/2012	6	5	Other	Gradall	2	2	0	2
Building Construction	Structural Concrete	08/01/2012	11/30/2012	6	5	Forklifts	Boom Lift	1	4	0	2
Building Construction	Structural Concrete	08/01/2012	11/30/2012	6	5		Water Truck	-	1	0	1
Building Construction	Structural Concrete	08/01/2012	11/30/2012	6	5	Cranes		1	3	1	4
Building Construction	Structural Concrete	08/01/2012	11/30/2012	6	5	Cement and Mortar Mixers		75	10	0	35
Building Construction	Structural Concrete	08/01/2012	11/30/2012	6	5	Other	Hauling of Materials	-	8	0	8
Building Construction	Structural Concrete	08/01/2012	11/30/2012	6	5	Other	Blade	1	1	0	1
Building Construction	Structural Steel	09/15/2012	12/30/2012	6	5	Forklifts	Gradall	1	1	0	1
Building Construction	Structural Steel	09/15/2012	12/30/2012	6	5	Cranes		1	2	1	2
Building Construction	Structural Steel	09/15/2012	12/30/2012	6	5	Other	Hauling of Materials	-	4	0	5
Building Construction	Panelized Roof	10/01/2012	12/30/2012	6	5	Forklifts	Gradall	1	4	1	2
Building Construction	Panelized Roof	10/01/2012	12/30/2012	6	5	Other	Hauling of Materials	-	6	0	15
Building Construction	Insulation	11/01/2012	01/15/2013	6	5	Forklifts	Scissor Lift	1	2	0	1
Building Construction	Insulation	11/01/2012	01/15/2013	6	5	Other	Hauling of Materials	-	4	0	5
Building Construction	Roofing	10/15/2012	01/15/2013	6	5	Forklifts		1	1	0	1
Building Construction	Roofing	10/15/2012	01/15/2013	6	5	Cranes		1	1	1	1
Building Construction	Roofing	10/15/2012	01/15/2013	6	5	Other	Hauling of Materials	-	5	0	15
Building Construction	Sheet Metal	10/15/2012	01/15/2013	6	5	Forklifts	Boom Lift	1	3	0	2
Building Construction	Sheet Metal	10/15/2012	01/15/2013	6	5	Other	Hauling of Materials	-	3	0	7
Building Construction	Skylights	11/01/2012	01/15/2013	6	5	Forklifts	Gradall	1	1	0	1
Building Construction	Skylights	11/01/2012	01/15/2013	6	5	Other	Hauling of Materials	-	2	0	2
Building Construction	Doors & Frames	08/01/2012	09/30/2012	6	5	Forklifts	Gradall	1	2	0	1
Building Construction	Doors & Frames	08/01/2012	09/30/2012	6	5	Other	Hauling of Materials	-	3	0	3
Building Construction	Overhead Sectional Doors	11/01/2012	11/30/2012	6	5	Forklifts	Gradall	1	1	0	1
Building Construction	Overhead Sectional Doors	11/01/2012	11/30/2012	6	5	Other	Hauling of Materials	-	2	0	2
Building Construction	Glass & Glazing	11/01/2012	01/30/2013	6	5	Other	Hauling of Materials	-	3	0	4
Building Construction	Glass & Glazing	11/01/2012	01/30/2013	6	5	Forklifts	Boom Lift	1	1	0	1
Building Construction	Drywall / Acoustical	11/01/2012	2/30/2013	6	5	Forklifts		1	1	0	1

Table C1
Construction Equipment and Scheduling Data
National Orange Show
Lewis Retail Centers
San Bernardino, CA

Phase Type		Phase Start Date	Phase End Date	Operating Hours Per Day[1]	Work Days Per Week	Equipment Type		Number of Equipment	Daily Construction Trips[2]		
									Workers	Vendors	Haul Trucks
Building Construction	Drywall / Acoustical	11/01/2012	2/30/2013	6	5	Other	Hauling of Materials	-	3	0	3
Building Construction	Painting & Wall Covering	01/01/2013	05/15/2013	6	5	Other	Hauling of Materials	-	4	0	4
Building Construction	Painting & Wall Covering	01/01/2013	05/15/2013	6	5	Forklifts	Boom Lift	6	6	0	3
Building Construction	Caulking / Dock Equipment	02/15/2013	05/15/2013	6	5	Forklifts		1	1	0	1
Building Construction	Caulking / Dock Equipment	02/15/2013	05/15/2013	6	5	Other	Hauling of Materials	-	6	0	5
Building Construction	Plumbing	11/01/2012	02/01/2013	6	5	Other	Hauling of Materials	-	4	0	4
Building Construction	Plumbing	11/01/2012	02/01/2013	6	5	Forklifts	Scissor Lift	1	2	0	1
Building Construction	Plumbing	11/01/2012	02/01/2013	6	5		Water Truck	-	1	0	1
Building Construction	Fire Sprinkler Systems	11/01/2012	2/30/2013	6	5	Forklifts	Boom Lift	2	3	0	2
Building Construction	Fire Sprinkler Systems	11/01/2012	2/30/2013	6	5	Forklifts	Scissor Lift	2	6	0	3
Building Construction	Fire Sprinkler Systems	11/01/2012	2/30/2013	6	5	Other	Hauling of Materials	-	4	0	5
Building Construction	Fire Sprinkler Systems	11/01/2012	2/30/2013	6	5	Tractors/Loaders/Backhoes		2	2	0	1
Building Construction	Fire Sprinkler Systems	11/01/2012	2/30/2013	6	5		Water Truck	-	1	0	1
Building Construction	HVAC	12/01/2012	2/30/2013	6	5	Other	Hauling of Materials	-	3	0	4
Building Construction	HVAC	12/01/2012	2/30/2013	6	5	Forklifts		1	1	0	1
Building Construction	HVAC	12/01/2012	2/30/2013	6	5	Forklifts	Scissor Lift	3	3	0	2
Building Construction	Electrical	12/01/2012	05/15/2013	6	5	Forklifts		1	1	0	1
Building Construction	Electrical	12/01/2012	05/15/2013	6	5	Other	Hauling of Materials	-	5	0	5
Building Construction	Electrical	12/01/2012	05/15/2013	6	5	Tractors/Loaders/Backhoes		2	2	0	1
Building Construction	Electrical	12/01/2012	05/15/2013	6	5		Water Truck	-	1	0	1

Notes:

[1] Five days per week is assumed to be Monday through Friday,six days per week is Monday through Saturday. Seven days per week is Monday through Sunday per CalEEMod's assumption.

[2] Trip information was used to estimate emissions from water trucks, paving trucks, base trucks and hauling of materials, in lieu of equipment counts.

Appendix D
Justification for OFFROAD Equipment Reductions

From: Dolney, Nicole@ARB
To: Kai Zhao;
cc: Sax, Todd@ARB;
Subject: RE: Workshop Follow Up Questions
Date: Wednesday, September 08, 2010 4:52:41 PM

Hello Kai,

I wanted to follow up on a workshop question regarding the off-road inventory. As Todd indicated you can directly apply a 33% reduction for the LF correction. With regards to the CO2 correction you won't be able to ratio the BSFCs. OFFROAD uses CO2 emission factors and then backcalculates fuel. For the updated inventory we're going to use the new BSFC values to calculate fuel. Also, at the workshop we said that we are using USEPA values for BSFC – this means that for the 50 HP bin the BSFC is 0.408 and for every other HP bin the BSFC is 0.367 lb/hr-hr.

Call or email if you have additional questions.

Nicole Dolney
Manager, Off-Road Diesel Analysis Section
Planning and Technical Support Division
California Air Resources Board
916-322-1695
ndolney@arb.ca.gov

From: Kai Zhao [mailto:kaizhao@Environcorp.com]
Sent: Wednesday, September 08, 2010 4:03 PM
To: Sax, Todd@ARB
Subject: Workshop Follow Up Questions

Hi Todd,

It was good meeting to you today at the workshop in Oakland. Thank you and the other ARB/Cal EPA staff members for putting together this spirited discussion. I was hoping you could help me with one follow-up issue. As we discussed at the workshop, some of the updates regarding the offroad construction equipment presented during the workshop are important to our analysis and I would like to confirm the following to make sure I implement the changes properly.

I understand that ARB staff concluded that the load factor should be reduced by 33% for the updated inventory based on the collected engine load data from ARB testing programs and manufacturer provided data. I want to confirm that we can apply 33% reduction to the current default construction equipment load factors used by OFFROAD 2007 during our construction emissions calculation (i.e., updated emissions = 0.67 * emissions calculated using the current OFFROAD default equipment parameters).

In addition, for the CO2 emissions, we can further reduce the emissions multiplying the following fuel consumption ratio:

0.367lb/hp-hr (USEPA's NonROAD Model fuel consumption rate)

0.401 lb/hp-hr (OFFROAD fuel consumption rate)

Please let me know if the approaches above are correct. Lastly, are there any restrictions on applying these emissions reductions (e.g., specific equipment types, sizes)?

Thanks for your help with this matter.

Best,

-Kai

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