Technical Appendix A

Air Quality and Greenhouse Gas (GHG) Assessment
KPC EHS Consultants
June 2014

KPC EHS Consultants

AIR QUALITY & GREENHOUSE GAS (GHG) ASSESSMENT

Balboa Marina West Project
Newport Beach, California

June 2014

PREPARED FOR:
CAA Planning, Inc.
65 Enterprise, Suite 130
Aliso Viejo, CA. 92656

PREPARED BY:
KPC EHS Consultants
915 Doyle Road, Suite 303-151
Deltona, FL. 32725
Contact Person:
Kevin Carr
Principal
(951)294-0822

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1.0 Introduction

1.1 Project Description and Location

The proposed Balboa Marina West project includes construction of a 16,274-square foot restaurant, a 2,926-square foot patio, and 200-square foot marine commercial building for a total of 19,400-square feet. Construction of the facilities will include dredging and improvements to the marina to include an additional 36 boat slips consisting of 24 private docks and 12 public transient docks. The proposed project will require the removal/demolition of an existing parking lot and approximately 1,200 square foot marine commercial structure.

The proposed project site is located south of East Coast Highway, west of North Bayside Drive in the Lower Newport Bay in the incorporated City of Newport Beach, Orange County, California. The physical address of the current marine commercial site on the property is 201 East Coast Highway. The site is located in an air quality region known as the South Coast Air Basin (SCAB) under the jurisdiction of the South Coast Air Quality Management District (SCAQMD) for air quality administration.

This air assessment includes various phasing in the construction of the proposed project which including: dredging, pile installation on land and water sides, demolition, site preparation, site grading, building construction, architectural coatings, and asphalt paving. This air analysis includes estimates of emissions and condition for area, operations, and greenhouse gases following the construction and occupancy of the project.

2.0 Air Assessment Description

This assessment is based on guidance contained in the South Coast Air Quality Management Districts CEQA Air Quality Handbook and acceptable environmental practices. Modeling programs including California Emissions Estimator Model, (CalEEMod 2013.2.2) and SCAQMD's Localized Significance Threshold (LST) models were utilized to determine the projects air quality impacts on the environment.

The emissions estimates represent a "worst-case," because they incorporate the assumption that grading and construction activities occur at the peak daily emissions levels throughout the entire construction period. Data utilized to forecast emissions was obtained from available project data, development plans, and resource material where indicated. The information for the modeling programs used to forecast emissions is based on the project data, resource material, or default values where no data was available.

3.0 Regional Setting

3.1 South Coast Air Basin (SCAB)

The proposed project physical address is 201 East Coast Highway, Newport Beach, Orange County, California and is located in the South Coast Air Basin (SCAB). The SCAB's severe air pollution problem is a consequence of the combination of emissions and meteorological conditions which are adverse to the dispersion of those emissions. The summertime maximum mixing height (an index of how well pollutants can be dispersed vertically in the atmosphere) in Southern California averages the lowest in the U.S. additionally, the Southern California area is also an area with abundant sunshine, which drives the photochemical reactions, which form pollutants such as ozone.

In the SCAB, high concentrations of ozone are normally recorded during the spring and summer months, while high concentrations of carbon monoxide are generally recorded in late fall and winter. High PM10 and PM2.5 concentrations can occur throughout the year, but occur most frequently in the fall and winter. Although there are changes in emissions by season, the observed variations in the pollutant concentrations are largely a result of seasonal differences in weather conditions.

3.2 Description of Regional Climate and Its Effect on Air Quality

Section 15125 of the State CEQA Guidelines requires that environmental studies include a description of the environment in the vicinity of the project, as it exists before initiation of the project. The information describing the Environment Setting of the project site includes information on the climate, the existing quality of ambient air at the proposed project site, significant air pollutant sources, both stationary and mobile.

3.2.1 Climate

The climate of the South Coast Air Basin (SCAB) is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean and high mountains forming the remainder to the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds.

The climate of Southern California found in the Newport Beach area of the SCAB is described as a Mediterranean-type climate characterized by long warm summers and moderate winters with moderate precipitation and a maritime influence giving a marine layer and a temperature inversion layer.

The extent and severity of air pollution problems in the SCAB is a function of both natural physical characteristics of the region (weather patterns, topography) and man-made influences (traffic, development). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the SCAB.

Historical Climate data is collected by the Western Regional Climate Center with the closest monitoring station located at John Wayne Airport. Climate data collected includes temperature and precipitation.

3.2.2 Temperature

The annual average temperature varies little throughout the SCAB, averaging 62-degrees Fahrenheit, with the Newport Beach area annual maximum temperature averaging 72.1-degrees and an annual minimum temperature averaging 56.0-degrees. Extreme low temperatures can average 33-degrees Fahrenheit and extreme high temperatures can average 102.0-degrees Fahrenheit.

3.2.3 Rainfall

Practically all of the annual rainfall in the SCAB occurs during the November- April period. Summer rainfall normally is restricted to widely scattered thundershowers near the coast and slightly heavier shower activity in the east and over the mountains. Annual average rainfall in the area is 9.42 inches.

3.2.4 Humidity

Although the SCAB has a semi-arid climate, the air near the surface is surprisingly moist because of the presence of a shallow marine layer on most days. Except for infrequent periods when dry, continental air is brought into the SCAB by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent; and low stratus clouds, sometimes referred to as “high fog” are a characteristic climate feature. Annual average relative humidity in the SCAB ranges from 70% coastal to 57% inland.

3.2.5 Wind

Winds play a significant role in the air quality conditions of the SCAB. The area is characterized by light average wind speeds which limit the capability to disperse air contaminates horizontally. The average daily wind speed in the project area is between approximately 5-miles per hour (mph) with average gusts of 17.5 out of the West-Southwest. The dominant daily wind patterns consist of sea breezes during the day with nighttime offshore breezes as the air drains off the mountains that surround the region.

During spring and early summer days, most of the pollution produced on an average day is lifted by the warm air and moved out through the mountain passes. This effectively creates a flushing of the SCAB of pollutants away from the valleys. During the late summer and winter months, this flushing effect is less pronounced due to the lower wind speeds and early offshore winds. This stagnation causes the pollutants to be trapped in the regions valleys.

3.2.6 Inversions

Vertical dispersion of air pollutants in the SCAB is hindered by the presence of a temperature inversion in the layers of the atmosphere near the earth's surface. The height of the base of the inversion is known as the "mixing height." The mixing height changes under atmospheric conditions while the top end of the inversion remains constant. Usually the mixing height is lower in the morning and increases in altitude as the day progresses. The mixing height presents a barrier to the vertical dispersal of air contaminants. During winter months the inversion normally breaks down by mid morning.

Pollutants generated by both stationary and mobile sources mix with less contaminated air beneath the inversion layer and will become more concentrated unless the inversion breaks down. On days of no inversion layer or when winds average 15 mph or greater, there will be no significant smog effects.

The potential for high concentrations varies with each season. Late spring, summer and early fall, light winds, low mixing height, and increased sunlight combine to produce conditions for the production of photochemical oxidants, e.g. ozone.

When strong inversions are formed on cool winter nights with light winds, carbon monoxide generated by automobile exhaust becomes concentrated. CO values are normally at their highest levels from the period of November through February.

4.0 Air Quality Data for SCAB

4.1 Air Quality Management Planning & Regulatory Setting

The Federal Clean Air Act (1977 Amendments) required that designated agencies in any area of the nation not meeting national clean air standards must prepare a plan demonstrating the steps that would bring the area into compliance with all national standards. Table 4-1 contains the federal and state emissions standards with relevant health concerns.

Table 4-1 Ambient Air Quality Standards

AIR POLLUTANT	STATE STANDARD	FEDERAL PRIMARY STANDARD	MAJOR SOURCES	MOST RELEVANT EFFECTS
Ozone (O_3)	1 hr - 0.09 ppm 8 hrs - 0.07 ppm	1 hr - * 8 hrs - 0.075 ppm	Motor vehicles, paints, coatings, solvents.	Short-term exposures: Pulmonary function decrements and breathing difficulty. Long-term exposures: Risk to public health, vegetation damage, and property damage.
Carbon Monoxide (CO)	1 hr - 20 ppm 8 hrs - 9 ppm	1 hr - 35 ppm 8 hrs - 9 ppm	Internal combustion engines (vehicles).	Aggravation of aspects of coronary heart disease; decreased exercise tolerance in persons w. vascular and lung disease; impairment of CNS functions; possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	Annual Average - 0.03 ppm 1 hr - 0.018 ppm	Annual Average - 0.053 ppm 1 hr - 110 ppb	Internal combustion engines (vehicles).	Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contributions to atmospheric discoloration.
Sulfur Dioxide (SO_2)	Annual Average - * 1 hr - 0.25 ppm 24 hrs - 0.04 ppm	Annual Average - 0.03 ppm 1 hr - 75 ppb 24 hrs - 0.14 ppm	Fuel combustion, petroleum refining processes, and chemical facilities.	Broncial constriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness during exercise or physical activity in persons w. asthma.
Suspended Particulate Matter (PM_{10})	Annual Arithmetic Mean - 20µg/m3 24 hrs - 50µg/m3	Annual Arithmetic Mean - * 24 hrs - 150µg/m3	Construction, industry, agriculture, vehicles, and natural occurrences (wind, storms)	Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients w/ respiratory disease; declines in pulmonary function especially in children; increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean - 12µg/m3 24 hrs - *	Annual Arithmetic Mean - 15µg/m3 24 hrs - 35µg/m3	Construction, industry, agriculture, vehicles, and natural occurrences (wind, storms)	
Lead (Pb)	Monthly - 1.5µg/m3 Quarterly - *	Monthly - * Quarterly - 1.5µg/m3	Battery manufacturing and recycling. Combustion processes.	Learning disabilities in children; impairment of blood formation and nerve conduction.
Sulfates (SO_4)	24 hrs - 25µg/m3	*	Industrial Processes.	Decrease in ventilatory function; aggravation of asthma symptoms; vegetation damage; degradation of visibility.

Sources – CARB and SCAQMD * - no standard established ppm – parts per million, µg/m3 – micrograms per cubic meter

The South Coast Air Basin (SCAB) could not meet the deadline for ozone, nitrogen dioxide, carbon monoxide, or PM-10. In the SCAB, the agencies designated by the governor to develop regional air quality plans are the SCAQMD and the Southern California Association of Governments (SCAG). The two agencies first adopted an Air Quality Management Plan (AQMP) in 1979 and revised it several times as earlier attainment forecasts were shown to be overly optimistic.

The 1990 Federal Clean Air Act Amendment (CAAA) required that all states with airshed designated with "serious" or worse ozone problems submit a revision to the State Implementation Plan (SIP). Amendments to the SIP have been proposed, revised and approved over the past decade. The currently adopted clean air plan for the basin is the 1999 SIP Amendment, which accelerates the schedule for a number of new SCAQMD rules and regulations, approved by the U.S. EPA in 2000. The U.S. EPA has yet to approve the 2003 Air Quality Management Plan (AQMP).

The Air Quality Management District (AQMD) adopted the most recent updates to the clean air "blueprint" in December 2012. The 2012 Air Quality Management Plan (AQMP) provides an outline to achieve reductions in emissions while increasing air quality within the SCAB.

Table 4-2

Regional Criteria Pollutant Attainment Status SCAB		
Pollutant	**State**	**Federal**
Ozone	Extreme Non-attainment	Non-attainment
PM10	Serious Non-attainment	Non-attainment
PM2.5	Non-attainment	Non-attainment
SOx	Attainment	Attainment
CO	Attainment	Attainment
NOx	Attainment	Attainment
Lead	Attainment	Attainment
Other (vinyl chloride, hydrogen sulfide, etc)	Unclassified or Attainment	Unclassified or Attainment

Ozone: The EPA has replaced the one-hour ozone standard with an eight-hour standard set at 0.075 ppm. The new standard accepted by the USEPA includes a calculation where the three highest measurements are disregarded and the fourth highest measurement is averaged over a 3-year period in determining if the standard is met.

PM10 (Course particulate matter): On September 21, 2006 the Federal standard of 50 ug/m3 was replaced with a new 24-hour standard of 150 ug/m3.

PM2.5 (Fine particulate matter): In September 2006 the Federal standard of 65 ug/m3 was reduced to 35 ug/m3 for the new 24-hour standard.

Nitrogen Dioxide: California reduced the NO2 1-hour standard from 0.25 ppm to .18 ppm in February of 2007.

4.2 Greenhouse Gases (GHG):

4.2.1 Background

The green house gas effect is a natural process in which energy is trapped in the earth's atmosphere. Greenhouse gases (GHGs) essentially act as a blanket causing a warming of the earth. The greenhouse effect is necessary for life on earth; however excessive heat captured as a result of a buildup of GHGs may result in changes in the earth's climate, which ultimately could affect human health and ecosystems.

GHGs are the six gases identified in the Kyoto Protocol: carbon dioxide (CO2), nitrous oxide (N2O), methane (CH4), hydro fluorocarbons (HFCs), per fluorocarbons (PFCs), and sulfur hexafluoride (SF6). GHGs are expressed in metric tons (MT) of CO2e (carbon dioxide equivalents). CO2e is calculated by the various individual GHGs and multiplying by their global warming potential (GWP). The global warming potential is a ratio of a gas' atmospheric heat trapping characteristics as compared to CO2, which is represented by a GWP of 1. The CO2e estimated value is calculated as part of the CalEEMod program data output, as developed by the SCAQMD.

The GHGs associated with construction projects similar to the proposed project include CO2, CH4, and N2O, which are emitted as a result of internal combustion sources and activities. The other gases listed as part of the overall GHG makeup generally are related to industrial activities.

Presently there are no federal regulations on the reduction of GHG or to reduce their effects on global climate changes.

4.2.2 State GHG Regulatory Setting

The following discussion is a brief summary of the regulatory setting regarding Greenhouse Gases (GHGs) and resulting CEQA changes. Detailed discussion on these rules and regulations can be found in the City of Newport Beach General Plan Land Use Element Section 5 on Green House Gas Emissions dated March 2014.

Assembly Bill 32 (AB32)

In the State of California Assembly Bill 32 (AB32), known as the Global Warming Solutions Act was passed by the state legislature in August of 2006. AB32 requires that levels of GHG be reduced to 1990 levels by the year 2020 and by 80 percent of the 1990 levels by the year 2050.

Under the requirements of AB32 The California Air Resources Board (CARB), approved the 1990 greenhouse gas emissions inventory, which established the emissions limits for the year 2020. The 2020 emission limit was established at 427 million MTCO2e. The inventory breakdown of GHG sources for 1990 indicated transportation accounted for 35%; industrial emissions, 24%; imported electricity generation, 14%; local electricity generation, 11%; residential usage, 7%; agriculture, 5%; commercial usage, 3%; and forestry emissions, 1%. Reducing GHG's to 427 MMTCO2e would require a reduction

of approximately 173 MMTCO2e. Compliance with AB32 does not require that each individual sector meet or lower their 1990 GHG inventory percentage, the law instead requires the total inventory be reduced to 1990 levels by 2020.

As part of the requirements of AB32 in December of 2008, CARB adopted an initial scoping plan to reduce GHG to 1990's levels. The scoping plan included recommendation to reduce GHG's to 1990 levels by 2020 through the use of green building policies, recycling and solid waste reduction, and a cap-and-trade program.

Senate Bill 97 (SB97)

In order to address GHG emissions and comply with AB32 in General Plans and CEQA documents Senate Bill 97 (SB97) required the State's Governor's Office of Planning and Research (OPR) to develop guidelines for CEQA compliance on how to address GHG emissions along with mitigation measures to reduce project GHG emissions.

Summary of California Climate Change Regulations:

- Global Warming Solutions Act of 2006 (AB32)
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (SB 375)
- Pavely Fuel Efficiency Standards (AB1493). Establishes fuel efficiency ratings for new vehicles.
- Title 24 California Code of Regulations (California Building Code). Establishes energy efficiency requirements for new construction.
- Title 20 California Code of Regulations (Appliance Energy Efficiency Standards). Establishes energy efficiency requirements for appliances.
- Title 17 California Code of Regulations (Low Carbon Fuel Standard). Requires carbon content of fuel sold in California to be 10% less by 2020.
- California Water Conservation in Landscaping Act of 2006 (AB1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent to ensure efficient landscapes in new development and reduced water waste in existing landscapes.
- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions.
- Renewable Portfolio Standards (SB 1078). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20 percent by 2010 and 33 percent by 2020.

CEQA Guidelines

Guidelines for CEQA 15064.4 Determining the Significance of Greehouse Gas Emissions encourages lead agencies to quantify GHG emissions of proposed projects where possible and recommends that lead agencies consider several other qualitative factors in determining significance including: 1) the extent to which a project may increase or reduce GHG as compared to the existing environmental setting; 2) whether the project emissions exceed a threshold of significance that the lead agency determines is applicable to the project; and 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 GHG emissions.

4.2.3 Local GHG Regulations

The South Coast Air Quality Management District (SCAQMD) in 2008 provided guidance to lead agencies to on determine significance of GHG project emissions. As part of the process the SCAQMD organized the GHG Significance Threshold Working Group with the goal to develop and reach a consensus on acceptable significance thresholds to be used in CEQA determination. The working group developed and presented significance threshold for various project types (e.g.: residential, industrial, and commercial), however as of 2012 only the threshold approved by the SCAQMD Board is for industrial projects stationary source emissions with a significance threshold of 10,000 MTCO2e/year.

The SCAQMD is considering a tiered approach in determining the significance of residential and commercial projects as indicated in the draft issued in 2012 which includes:

- **Tier 1**: If the project is exempt under existing statutory or categorical exemptions? There is a presumption of "less-than-significant" impacts with respect to climate change.
- **Tier 2**: If the project's GHG emissions are within the GHG budgets in an approved regional plan (plans consistent with CEQA sections 15064(h)(3), 15125(d), or 15152(s))? There is a presumption of "less-than-significant" impacts with respect to climate change.
- **Tier 3:** Is the projects incremental increase in GHG emissions below or mitigated to less than the significance screening level (10,000 MTCO2e/year for industrial projects stationary source emissions; 3,000 MTCO2e/year for residential projects, commercial projects, and mixed-use or other land use projects)? If yes, there is a presumption of "less-than-significant" impacts with respect to climate change.

- **Tier 4**: Does the project meet one of the following performance standards? If yes, there is a presumption of "less-than-significant" impacts with respect to climate change.
    - Option 1: Achieve some percentage reduction of GHG emissions from a base case scenario, including land use sector reductions from AB32 (e.g., 28% reduction as recommended by the San Joaquin Valley Air Pollution Control District)
    - Option 2: For individual projects, achieve a project-level efficiency target of 4.6 MTCO2e per service population by 2020 or a target of 3.0 MTCO2e per service population by 2035. For plans, which achieve a plan-level efficiency target of 6.6 MTCO2e per service population by 2020.
- **Tier 5**: Projects should obtain GHG emissions offsets to reduce significant impacts. Offsets in combination with any mitigation measures should achieve the target thresholds for any of the above Tiers. Otherwise, project impacts would remain significant.

With the exception of the Industrial Stationary Source threshold of 10,000 MTCO2e/year the SCAQMD has not finalized or presented the final version of the threshold guidelines to the SCAQMD Governing Board.

4.3 Regional Air Quality Summary 2012

According to the current data from the South Coast Air Quality Management District (SCAQMD) and the California Air Resource Board (CARB) in 2012, there were a total of 111 days for the new 8-hour ozone standard in the SCAB (Basin) locations were exceeded. The number of days exceeding the federal ozone standard varied widely by area, from zero to 86 exceedances, depending on location with the majority of exceedances occurring in the Riverside and San Bernardino County regions. Exceedances were fewer at the coast, increasing to a maximum in the Basin's Central San Bernardino Mountains and inland valleys, and then decreasing further downwind in the Basin's far inland areas. The Central San Bernardino Mountains area exceeded the federal ozone standard most frequently, 86 days. The more stringent state standard was exceeded on 100 days in the same area.

In 2012, carbon monoxide concentrations did not exceed the Federal or State standards in the SCAB for either the 1-hour or 8-hour concentrations. The highest carbon monoxide concentrations were recorded in Riverside County and central Los Angeles county areas. The maximum 8-hour average concentration of 4.0 ppm, recorded in South Central Los Angeles County, which is below the federal and state standards by 5.0 ppm.

The following tables contain the most recently released air quality monitoring data for the area closest to the project site according to the SCAQMD SRA/City Table, monitoring station in SRA #18. Since SRA #18 does not provide data for PM10 and PM2.5, data for SRA-17 Central Orange County was included to provide comprehensive emissions data. Table 4-3 includes the data from SRA #18 and Table 4-4 includes the data from SRA #17.

The most recent data (2012) from the air quality monitoring station SRA #18 indicates there was 1 day on which the Federal 8-hour ozone standard was exceeded, the State 8-

hour standard was exceeded 1 day, and the State 1-hour standard was exceeded a total of 2 days. The CO concentrations in the region did not exceed federal or state standards with the maximum measured levels at 1.7 ppm for the 8-hour CO standards.

Table 4-3 Regional Air Quality Summary
Source Receptor Area 18 Year 2010 - 2012

Pollutant	California Standard	Federal Standard	Year	Maximum Measured Concentration	Number of Days samples exceed State/Federal Standards
Carbon Monoxide	9.0 ppm 8-hour	9.0 ppm 8-hour	**2012** **2011** **2010**	**1.7** **2.2** **2.1**	**0/0** **0/0** **0/0**
Ozone	0.09 ppm 1-hour	0.124 ppm “old” 1-hour	**2012** **2011** **2010**	**0.90** **0.093** **0.117**	**2/0** **0/0** **1/0**
Ozone	0.070ppm 8-hour	0.075 ppm 8-hour	**2012** **2011** **2010**	**0.076** **0.077** **0.076**	**1/1** **2/1** **2/1**
Nitrogen Dioxide (NO2)	180 ppb 1-hour	100 ppb 1-hour	**2012** **2011** **2010**	**74.4** **60.5** **70.0**	**0/0** **0/0** **0/0**
Sulfur Dioxide (SO2)	25 ppb 1-hour	75 ppb 1-hour	**2012** **2011** **2010**	**6.2** **7.7** **9.5**	**0/0** **0/0** **0/0**
Fine Particulate Matter (PM-10)	50 ug/m3 24-hour	150 ug/m3 24-hour	**2012** **2011** **2010**	**--** **--** **--**	**--** **--** **--**
Fine Particulate Matter (PM-2.5)	12.0 ug/m3 AAM	35 ug/m3 24-hour	**2012** **2011** **2010**	**--** **--** **--**	**--** **--** **--**

ppm - Parts Per Million AAM – Annual Arithmetic Mean --- Pollutant Not Monitored

(a) The federal standard is annual arithmetic mean N)2 greater than 0.0534 ppm.

(b) The state standards are 1-hour average SO2 > 0.03 ppm, 24-hour average > 0.04 ppm, and 3-hour average > 0.05 ppm. The federal standards are annual arithmetic mean SO2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm.

(c) Less than 12-months of data available.

(d) Revised Federal standard for PM2.5 from 65 down to 35 ug/m3 effective December 17, 2006.

(e) AAM results for PM2.5 were and above the standard for 2010, 2011, and 2012.

The most recent data (2012) from the air quality monitoring station SRA #17 indicates there were 0 days on which the Federal 8-hour ozone standard was exceeded, the State 8-hour and the State 1-hour standard were also not exceeded. The CO concentrations in the region did not exceed federal or state standards with the maximum measured levels at 2.3 ppm for the 8-hour CO standards.

Table 4-4 Regional Air Quality Summary
Source Receptor Area 17 Year 2010 - 2012

Pollutant	California Standard	Federal Standard	Year	Maximum Measured Concentration	Number of Days samples exceed State/Federal Standards
Carbon Monoxide	9.0 ppm 8-hour	9.0 ppm 8-hour	**2012** **2011** **2010**	**2.3** **2.1** **2.0**	**0/0** **0/0** **0/0**
Ozone	0.09 ppm 1-hour	0.12 ppm "old" 1-hour	**2012** **2011** **2010**	**0.079** **0.088** **0.104**	**0/0** **0/0** **1/0**
Ozone	0.070ppm 8-hour	0.075 ppm 8-hour	**2012** **2011** **2010**	**0.067** **0.72** **0.088**	**0/0** **1/0** **1/1**
Nitrogen Dioxide (NO2)	180 ppb 1-hour	100 ppb 1-hour	**2012** **2011** **2010**	**67.3** **73.8** **73.3**	**0/0** **0/0** **0/0**
Sulfur Dioxide (SO2)	25 ppb 1-hour	75 ppb 1-hour	**2012** **2011** **2010**	**---** **---** **---**	**---** **---** **---**
Fine Particulate Matter (PM-10)	50 ug/m3 24-hour	150 ug/m3 24-hour	**2012** **2011** **2010**	**48** **53** **43**	**0/0** **2/0** **0/0**
Fine Particulate Matter (PM-2.5)	12.0 ug/m3 AAM	35 ug/m3 24-hour	**2012** **2011** **2010**	**10.8AAM/50.1** **11.0AAM/51.6** **10.2AAM/31.7**	***(e)/4** ***(e)/2** ***(e)/0**

ppm - Parts Per Million AAM – Annual Arithmetic Mean --- Pollutant Not Monitored

(a) The federal standard is annual arithmetic mean N)2 greater than 0.0534 ppm.

(b) The state standards are 1-hour average SO2 > 0.03 ppm, 24-hour average > 0.04 ppm, and 3-hour average > 0.05 ppm. The federal standards are annual arithmetic mean SO2 > 0.03 ppm, 24-hour average > 0.14 ppm, and 3-hour average > 0.50 ppm.

(c) Less than 12-months of data available.

(d) Revised Federal standard for PM2.5 from 65 down to 35 ug/m3 effective December 17, 2006.

(e) AAM results for PM2.5 were below the State Standard for 2010 and 2012, and above the standard for 2011.

4.4 Determining Emission Significance

The determination for a projects effects concerning air quality and greenhouse gas emissions is based on the significance criterea found in Appendix G of the California Environmental Quality Act (CEQA) Guidelines. Appendix G provides a series of questions to assist in determining what level of impact the proposed project would have on each environmental category. This assessment provides the emissions modeling, estimated emissions, discussion of local thresholds, and regulations for determining the projects impacts for air quality and greenhouse gas emissions. The questions from Appendix G for determining emissions significance are provide in this section.

AIR QUALITY: Would the project:

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

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

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

d) Expose sensitive receptors to substantial pollutant concentrations?

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

GREENHOUSE GAS EMISSIONS: Would the project:

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

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

4.4.1 Emission Significance Thresholds

To identify projects that will adversely affect the regional air quality through direct and indirect sources the SCAQMD has established significance thresholds to determine air quality impacts of a project. The SCAQMD established these significance thresholds, in part, based on Section 182 (e) of the Federal Clean Air Act, which identified levels of volatile organic gases from stationary sources operating in extreme non-attainment regions for ozone at 10 tons per year. The value set by the CAA was converted into threshold levels in pounds per day for the construction and operational phases of a project.

The SCAQMD states that any project located in the South Coast Air Basin (SCAB) having daily emissions from both direct and indirect sources that exceed the emissions thresholds should be considered significant.

To determine whether or not air quality impacts from the proposed project are significant, impacts were be evaluated and compared to the significance criteria in the following table. If impacts equal or exceed any of the following criteria, they will be considered significant.

Table 4-5

Mass Daily Thresholds		
Pollutant	**Construction**	**Operation**
NO_x	100 lbs/day	55 lbs/day
ROG/VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
PM2.5	55 lbs/day	55 lbs/day

In addition to the significance threshold for NOx, ROG/VOC, PM10, SOx and CO, the California State 1-hour and 8-hour CO standard is used for determining the existence of CO Hotspots created directly or indirectly by a project. The criteria for CO Hotspots are covered in the CO Hotspot Analysis of this report.

4.4.2 Sensitive Receptors

When considering land uses and population densities in their jurisdiction, local public agencies should be aware of land use compatibility issues, particularly in reference to sensitive receptors. A sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant than is the population at large. Sensitive receptors and associated facilities that house them in proximity to local CO sources, toxic air contaminants or odors are of particular concern.

Sensitive receptors include the very young, elderly, and persons suffering from illness are normally associated with locations such as schools, day-care facilities, convalescent care facilities, medical facilities, and residential areas. Sensitive receptors located closest to the proposed project site include the residential area on Linda Island south of the project site.

Evaluations according to SCAQMD recommendations need to be conducted to ensure that sensitive receptors will not be exposed to localized concentrations of the criteria pollutant carbon monoxide (CO), additionally the SCAQMD recommends the use of their Localized Significance Thresholds (LSTs) to determine if sensitive receptors may be impacted by construction emissions. High levels of CO are associated with traffic congestion in particular slow moving and idling vehicles. Depending on the existing background concentrations of CO, roadways have the potential to be CO hot spots. Therefore projects with sensitive receptors or projects that could negatively impact levels of service (LOS) should utilize the Emfac 2007 v. 2.3 and CALINE 4 programs to evaluate the effects of vehicle emissions to determine if the project will cause the state 1-hour or 8-hour CO standards to be exceeded, creating a "CO hotspot."

LSTs are discussed in section 5.4 of this assessment and CO Hotspots are discussed in section 6.0 of this assessment.

5.0 Air Quality Impact Analysis

Air quality impacts/emissions associated with a project can be placed into two categories, temporary (short-term) or long-term emissions. Temporary (short-term) emissions are generally associated with the demolition, grading, and construction activities of the project while long-term emissions are associated with the day-to-day operation, use, and area emissions from such activities as vehicle use, consumer product use, and energy generation/consumption. Short-term emissions will be covered under section 5.1 Construction Emissions while long-term emissions know as Area and Operational Emissions will be covered in section 5.3 of this assessment.

The construction schedule is based on 15-months for all construction related activities (dredging, pile installation (water & land), demolition, site preparation, grading, building construction, paving, and architectural coating). The emissions calculations assume that the majority of the equipment is operating 5-days per week for 6 to 8-hours each day. It is highly unlikely that the majority of the equipment on-site will be operated at this projected schedule producing the calculated emissions each day.

The proposed project construction equipment estimates are based on details from the project proponent or CalEEMod Defaults. The type and number of equipment chosen for

each phase has been selected to present a "worst-case" scenario for construction related emissions, in most cases the equipment types and numbers may be less than those used in this study.

The area and operations emissions were generated with no mitigation measures to present the "worst-case" scenario for the site's impact on the local area, the emissions also were modeled with mitigation measures that shall be employed along with additional mitigation measures that could be employed to further reduce emissions of the construction and operation of the proposed project will be discussed in section 8.2 of this assessment.

5.1 Construction Emissions:

Construction emissions can be distinguished as either onsite or offsite. Onsite emissions generated during construction principally consist of exhaust emissions (CO, ROG/VOC, NO_X, SO_X, PM_{10}, CO_2 and $PM_{2.5}$) from construction equipment, fugitive dust (PM_{10} and $PM_{2.5}$) from grading and excavation, and ROG emissions from asphalt paving and architectural painting. Offsite emissions during construction typically consist of exhaust emissions from truck traffic and worker commute trips; road dust associated with traffic to and from the construction site; and fugitive dust (PM_{10} and $PM_{2.5}$) from trucks hauling materials, construction debris, or excavated soils from the site.

The analysis for the proposed project is unique in that it includes both landside and waterside projects. The schedule for activities including dredging, waterside pile installation, demolition, site prep, grading, landside pile installation, construction, paving, and architectural coatings estimating the project completion in 15-months of active construction. Increasing the construction timeline would allow for each task in the project to be completed over a greater timeline, which in some cases such as demolition, grading and coatings would decrease the estimated emissions presented in this analysis. This analysis is presenting a "worst-case" scenario as it assumes all equipment in the various phases will be operating each day for the total estimated hours during project schedule. By analyzing the total number of equipment and hours each day it provides estimations for emissions at the highest anticipated levels. The values displayed in the tables are unmitigated emissions unless noted. Regulatory and required mitigation will decrease the emissions lower than indicated in the emissions tables. Emissions from the various project phases were estimated using the CalEEMod modeling program.

The maximum daily-unmitigated construction emissions for the project were estimated to be below the SCAQMD's thresholds and therefore the project would be considered to present a less than significant for air quality impacts.

Table 5.1 Maximum Daily Unmitigated Construction Emissions

Maximum Daily Emissions	Emissions (pounds per day)					
	NOx	**ROG**	**CO**	**SOx**	**PM10**	**PM2.5**
	70.23	33.96	47.81	0.11	7.96	4.96
Regional Threshold	**100**	**75**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO
Source: SCAQMD and CalEEMod						

In order to assess the entire project each of the various phases are presented in the following sections along with the estimated unmitigated emissions for each phase.

5.1.1 Dredging

The project will include dredging of approximately 7,100 cubic yards of material with an additional 2-feet of over-dredge for a maximum of 9,900 cubic yards of material. The dredged material will be removed with a clamshell on floating barge and moved to an approved disposal site referred to as LA-3 located approximately 4-miles from Newport Harbor.

Dredging operations air emissions were estimated using 2-pieces of heavy equipment an 800 horsepower tugboat for towing the hopper barge and a crane to operate the clamshell. As CalEEMod does not have a tugboat as a selectable piece of equipment the tugboat emissions were estimated using the Other Material Handling Equipment option with horsepower (HP) increased to 800 HP. Dredging operations included the crane estimated as operating 8-hours per day with the tugboat estimated as operating for 4-hours per day over a 30-day period. For the dredging phase the maximum VMT used was 147 miles per day and a maximum total horsepower for heavy equipment of 974 HP. The Emissions include both on-site and off-site estimated emissions.

Table 5-2 Dredging

Maximum Daily Emissions	Emissions (pounds per day)					
	NOx	**ROG**	**CO**	**SOx**	**PM10**	**PM2.5**
	10.51	1.11	5.26	0.006	0.63	0.54
Regional Threshold	**100**	**75**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO
Source: SCAQMD and CalEEMod						

5.1.2 Demolition & Site Prep Emissions

The demolition and site preparation emissions estimates are included together in this section since both phases are to be conducted during the same or overlapping schedule.

Demolition on the proposed project site will include the removal of the existing 1,200-square foot marine commercial structure and associated appurtenances. The emissions estimates for the demolition were based on the complete demolition the structure utilizing 3-pieces of heavy equipment including 1 rubber tired dozer, 1 tractor/loader/backhoe, and 1 concrete saw over a period of approximately 22 active work days for 8-hours per day. Emissions include both on-site and off-site estimated emissions including worker and hauling trips.

The proposed project site will require preparations prior to grading, which includes clearing and grubbing of vegetation, and securing of any onsite utilities. Emissions estimates were based on utilizing 3-pieces of heavy equipment including 1 rubber tired dozer 7-hours per day, 1 tractors/loaders/backhoe at 8-hours per day, and 1 grader at 8-hours per day over a period of 22 active workdays. For the demolition & site prep phase the maximum VMT used was 235.2 miles per day and a maximum total horsepower for heavy equipment of 433 HP. Emissions include both on-site and off-site estimated emissions including worker and vendor trips

Table 5-3 Demolition & Site Prep Emissions

Maximum Daily Emissions	**Emissions (pounds per day)**					
	NOx	**ROG**	**CO**	**SOx**	**PM10**	**PM2.5**
Demolition Emissions	22.93	2.57	17.79	0.019	1.47	1.29
Site Prep Emissions	32.52	3.03	19.21	0.021	1.85	1.49
Total Emissions	55.45	5.60	37.00	0.040	3.32	2.78
Regional Threshold	**100**	**75**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO
Source: SCAQMD and CalEEMod						

5.1.3 Site Grading Emissions

Sitegrading includes work on the site to prepare the ground surface for project construction and achieving final site grade. Grading estimates in this assessment are based on a default CalEEMod scenario utilizing 4-pieces of heavy equipment including 1 grader at 8-hours per day, 1 rubber tired dozer at 8-hours per day, 2 tractors/loaders/backhoes at 7-hours per day, over a period of 51 active workdays. Site grading also included the disturbance of 3.45-acres with an import of approximately 1,364 cubic yards of material with 171 hauling trips at 1-mile one-way for the imported fill material were estimated. For the site grading phase the maximum VMT used was 294 miles per day and a maximum total horsepower for heavy equipment of 623 HP. Emissions include both on-site and off-site estimated emissions including worker and vendor trips

Table 5-4 Site Grading

Maximum Daily Emissions	Emissions (pounds per day)					
	NOx	**VOC**	**CO**	**SOx**	**PM10**	**PM2.5**
	32.41	3.38	21.66	0.025	8.04	4.99
Regional Threshold	**100**	**75**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO
Source: SCAQMD and CalEEMod						

5.1.4 Pile Installation - Landside

The project will include the installation of approximately 235 piles using an auger with pressure grouted pile method. Equipment used for modeling this phase was picked from CalEEMod selections to best represent the equipment type and size estimated for the installation of the piles.

Project air emissions for pile installation on the landside were estimated using 6-pieces of heavy equipment 2 bore/drill rigs at 8–hours each per day, 2 air compressors at 8– hours each per day, and 2 welds at 4–hours each per day over a period of 52 active work days. For the pile installation - landside phase the maximum VMT used was 441 miles per day and a maximum total horsepower for heavy equipment of 1264 HP. Emissions include both on-site and off-site estimated emissions including worker and vendor trips

Table 5-5 Pile Installation (Landside)

Maximum Daily Emissions	Emissions (pounds per day)					
	NOx	**ROG**	**CO**	**SOx**	**PM10**	**PM2.5**
	34.25	3.79	18.32	0.049	1.56	1.40
Regional Threshold	**100**	**75**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO
Source: SCAQMD and CalEEMod						

5.1.5 Building Construction Emissions

Construction proposed as part of this project will include the dredging, upgrades and expansion of the marina, a 16,274 square foot restaurant w/patio, and 200 square foot marine commercial, and parking areas. Default conditions were used in CalEEMod to model potential emissions that would be associated with the construction activities and the movement of materials and work crews to/from the site. Building construction estimates were based on utilizing 6-pieces of equipment including: 1 crane at 6-hours per day, 1 forklifts at 7-hours per day, 1 generator set at 8-hours per day, 2 welding units at 6-hours per day, and 1 tractor/loader/backhoes at 6-hours per day over a period of approximately 148 active working days. The run hours present a worst-case scenario, as most equipment will not be continuously in operation for an entire work shift over the 148-day estimated construction schedule. For the building construction phase the maximum VMT used was 1,877 miles per day and a maximum total horsepower for heavy equipment of 588 HP. Emissions include both on-site and off-site estimated emissions including worker and vendor trips.

Table 5-6 Building Construction

Maximum Daily Emissions	Emissions (pounds per day)					
	NOx	**VOC**	**CO**	**SOx**	**PM10**	**PM2.5**
	34.25	3.79	18.32	0.052	1.56	1.41
Regional Threshold	**100**	**75**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO
Source: SCAQMD and CalEEMod						

5.1.6 Pile Installation & Dock Construction- Waterside

The project will include the installation of approximately 37 piles using the water jet method with the final 4-feet driven into place. Equipment used for modeling this phase was picked from CalEEMod selections to best represent the equipment type and size estimated for the installation of the piles.

Project air emissions for pile installation on the waterside were estimated using 5-pieces of heavy equipment 1 bore/drill rig, 1 air compressor, 1 welder, 1 forklift, and a 150-horse powerboat to push the barge with pile installation equipment into position. As CalEEMod does not have emissions for boats as a selectable piece of equipment the emissions were estimated using the Other Material Handling Equipment option with horsepower at 150. Waterside pile installation operations included the bore/drill estimated as operating 6-hours per day, the air compressor at 4-hours per day, a push boat estimated as operating for 4-hours per day, and a forklift operating at 2-hours per day over a 150-day period. For the pile installation & dock construction - waterside phase the maximum VMT used was 382 miles per day and a maximum total horsepower for heavy equipment of 902 HP. Emissions include both on-site and off-site estimated emissions.

Table 5-7 Pile Installation & Dock Construction (Waterside)

Maximum Daily Emissions	Emissions (pounds per day)					
	NOx	**ROG**	**CO**	**SOx**	**PM10**	**PM2.5**
	13.44	1.78	8.38	0.02	0.76	0.62
Regional Threshold	**100**	**75**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO
Source: SCAQMD and CalEEMod						

5.1.7 Pile Installation & Dock Construction- Landside

The project will include the installation of approximately 8 piles augured with the final 4-feet driven into place to tie the marina in with the landside of the project site. Equipment used for modeling this phase was picked from CalEEMod selections to best represent the equipment type and size estimated for the installation of the piles.

Project air emissions for pile installation on the waterside were estimated using 2-pieces of heavy equipment 1 bore/drill rig, and 1 air compressor. Landside pile installation operations for the dock/marina included the bore/drill estimated as operating 6-hours per day, the air compressor at 4-hours per day over a 30-day period. For the pile installation & dock construction - landside phase the maximum VMT used was 147 miles per day and a maximum total horsepower for heavy equipment of 283 HP. Emissions include both on-site and off-site estimated emissions.

Table 5-8 Pile Installation & Dock Construction (Landside)

Maximum Daily Emissions	Emissions (pounds per day)					
	NOx	**ROG**	**CO**	**SOx**	**PM10**	**PM2.5**
	34.25	3.79	18.32	0.052	1.56	1.41
Regional Threshold	**100**	**75**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO
Source: SCAQMD and CalEEMod						

5.1.8 Site work, Drainage, & Paving

The project will include the installation and construction of landscaping, curbing, drainage improvements, and parking surface paving.

Project air emissions for site work and drainage construction included 4 pieces of heavy equipment 2 cement and mortar mixers at 6-hours per day, 1 skid steer loader at 8-hours per day, and 1 tractor/loader/backhoe at 8-hours per day over a 107-day period. Emissions include both on-site and off-site estimated emissions.

Asphalt estimates are based on CalEEMod defaults utilizing 6 pieces of heavy equipment including: 1 paver at 8-hours per day, 1 paving equipment unit at 8-hours per day, 2 rollers for 8-hours per day, 1 tractor/loader/backhoe at 8-hours per day, and 1 cement mixer at 8-hours per day over a 9-day period. No mitigation values were used for the asphalt operations. For the site work, drainage, & paving phase the maximum VMT used was 294 miles per day and a maximum total horsepower for heavy equipment of 179 HP. Emissions include both on-site and off-site estimated emissions including worker and vendor trips.

Table 5-9 Site work, Drainage, & Paving Construction

Maximum Daily Emissions	**Emissions (pounds per day)**					
	NOx	**ROG**	**CO**	**SOx**	**PM10**	**PM2.5**
Site work & Drainage Construction	5.33	0.78	4.85	0.007	0.47	0.36
Paving	18.02	2.87	13.03	0.019	1.30	1.09
Total Emissions	23.35	3.65	17.88	0.026	1.77	1.45
Regional Threshold	**100**	**75**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO
Source: SCAQMD and CalEEMod						

5.1.9 Tenant Improvements & Architectural Coatings

The project will include the improvements to the structures to accommodate the tenant and their intended property usage. Tenant Improvements will include interior and exterior work including coatings, decorating, and finish work.

Project air emissions for tenant improvements were estimated using 2 pieces of heavy equipment 1 air compressor operating at 6-hours per day, and 1 forklift at 4-hours per day over a 98-day period. The air compressor operating for the tenant improvements is in addition to the one used in the architectural coatings estimates. Emissions include both on-site and off-site estimated emissions.

Architectural coatings estimates were based on coatings taking place over 16 active working days during construction using CalEEMod defaults with the emissions results displayed with no mitigation measures applied. Additional decreases in ROG (VOC) can be obtained by using High Velocity Low Pressure Applicators (HVLP), and Low or No VOC coatings, which contain <1g/l VOC. The majority of architectural coatings will be applied as interior paints which would offer the best reduction using Low VOC and No VOC paints. Using Low and No VOC coatings along with HVLP equipment it is estimated would likely reduce the VOC emissions below the calculated unmitigated values. Equipment used in the modeling included 1 air compressor for 6-hours each day. For the tenant improvements & architectural coatings phase the maximum VMT used was 1,877 miles per day and a maximum total horsepower for heavy equipment of 167 HP. Emissions include both on-site and off-site estimated emissions including worker and vendor trips.

Table 5-10 Tenant Improvements & Architectural Coatings

Maximum Daily Emissions	**Emissions (pounds per day)**					
	NOx	**ROG**	**CO**	**SOx**	**PM10**	**PM2.5**
Tenant Improvement Emissions	5.53	2.12	8.25	0.016	1.05	0.50
Architectural Coatings Emissions	2.43	31.84	2.54	0.004	0.31	0.22
Total Emissions	7.96	33.96	10.79	0.020	1.36	0.72
Regional Threshold	**100**	**75**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO
Source: SCAQMD and CalEEMod						

5.2 Construction Impacts

Construction emissions would be below the SCAQMD's significance thresholds for CO ROG, NO_x, PM10, PM2.5 and SO_x. With no exceedances of the significance thresholds predicted emissions would be considered to have a ***less than significant*** adverse impact during the construction phase of the project. Emissions levels however, can be further lowered through implementation of mitigation measures found in this study. The highest level of emissions from the project will be short-term and cease at the completion of the construction of the project.

PM10 and PM2.5 generated as a result of grading operations can be mitigated to the lowest possible levels by adhering to SCAQMD Rules 402, 403, and 403.1 along with the implementation of mitigation measures recommended in this assessment

5.3 Area and Operational Emissions:

Data contained herein was obtained using the CalEEMod program reports and EPA NonRoad Model to calculate the total values for Area and Operational Emissions.

5.3.1 Watercraft/Marina Operational Emissions:

Operational emissions associated from boat usage were determined using the USEPA's Nonroad Model emissions software version 2008a. Emissions factors were obtained using the Orange County Region inventory for the summer season, weekend usage. The summer season and weekend use presents a worst-case scenario as CARB has indicated that the majority of annual pleasure craft use takes place between April and September.

The Nonroad Model provides emissions output reports in grams per hour; the grams per hour value is than calculated into pounds per operating hour and then an estimate of engine run hours per day is used to calculate the emission into pounds per day to compare with the SCAQMD's operational significance thresholds. The Nonroad Model datasheets are provided in Appendix D.

An inventory of boats in the local marina was provided by California Recreation Company a copy of which is in Appendix E. All boats 20-feet and under in length are electric powered zero emission boats, using the local inventory of marina boat and the sizes of the proposed slips the horsepower ratings of the 14-remaining marina slips were placed into two engine categories: inboard/sterndrive diesel fuel 750 <= 1000 HP and inboard/sterndrive diesel fuel 1200 <= 2000 HP. The engine categories were than used to obtain the emissions factors that were generated using the Nonroad Model emissions program.

Table 5-11 Emissions Factors Grams/Operating Hour

Pollutant	Inboard/Sterndrive Diesel Fuel 750 <= 1000 HP	Inboard/Sterndrive Diesel Fuel 1200 <= 2000 HP
THC (Total Hydrocarbon)	86.34	126.76
NOx	1,637.87	2,700.66
CO	315.39	495.26
PM10	35.22	54.78
SO_2	43.36	67.73
CO2	162,637.21	254,048.84

Table 5-12 Emissions Factors Converted Pounds/Operating Hour

Pollutant	Inboard/Sterndrive Diesel Fuel 750 <= 1000 HP	Inboard/Sterndrive Diesel Fuel 1200 <= 2000 HP
THC (Total Hydrocarbon)	.02	.28
NOx	3.61	5.95
CO	.70	1.09
PM10	.08	.12
SO_2	.10	.15
CO2	358.62	560.20

Emissions in the harbor area attributed to this project will include limited idling emissions and vessel egress and ingress. The majority of vessel usage and emissions will occur off the coast. According to CARB (1998) estimates the annual average hours for pleasure craft is less than 60-hours. According to the inventory and operational data from California Recreational Company the larger boats leave the marina less than 12 times per year. Based on the operation estimates maximum daily emissions were based on 8-watercraft in the 1200 – 2000 HP and 6-watercraft in the 750 – 1000 HP categories with ½ of each category operating each at 1-hour pier side and transiting out of the harbor.

Table 5-13 Estimated Boat Emissions Pounds/ Day

Pollutant	Inboard/Sterndrive Diesel Fuel 750 <= 1000 HP	Inboard/Sterndrive Diesel Fuel 1200 <= 2000 HP	Total
THC (Total Hydrocarbon)	0.06	1.12	1.18
NOx	10.83	23.80	34.63
CO	2.10	4.36	6.46
PM10	0.24	0.48	0.72
SO_2	0.30	0.60	0.90
CO2	1,075.86	2,240.80	3,316.66

5.3.2 Total Area and Operational Emissions

The Area and Operations Emissions Table 5-14 includes emissions from the day-to-day operation and maintenance of the facilities, consumer product use and from vehicle trips associated with the movement of materials, products, residents, visitors and employees, and watercraft/marina operations. No mitigation measures employed in the modeling and calculation of the area and operational emissions.

Table 5-14. Area and Operational Emissions

Maximum Daily Emissions	Emissions (pounds per day)					
	NOx	**VOC**	**CO**	**SOx**	**PM10**	**PM2.5**
Area	0.00029	2.6713	0.0307	0.0000	0.0001	0.0001
Energy	1.1468	0.1262	0.9633	0.0068	0.0872	0.0872
Mobile	8.1948	9.3431	36.2211	0.0680	4.7338	1.3327
Watercraft/Marina	34.63	(*2)	6.46	0.90	0.72	(*2)
Total (*1)	43.97	12.14	43.68	0.97	5.54	1.4200
Regional Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Regional Threshold?	NO	NO	NO	NO	NO	NO

Source: SCAQMD, CalEEMod, and EPA NonRoad Model.
(*1) Totals are from the CalEEMod reports and NonRoad Calculations for watercraft, due to rounding total may higher than total of the columns when added.
(*2) Emissions VOC & PM2.5 are not modeled for watercraft by EPA NonRoad Model.

5.4 Localized Significance Thresholds (LST) – Construction Activity:

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (Methodology) (SCAQMD, June 2003/Revised July 2008). LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor.

The significance of localized emissions impacts depends on whether ambient levels in the vicinity of the project are above or below State standards. In the case of CO and NO2, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM10 and PM2.5; both of which are non-attainment pollutants.

The LST methodology is applicable to projects where emission sources occupy a fixed location. This means that the LST methodology will apply to projects during construction because, although construction equipment may move around the construction site, their movements are restricted to a fixed location.

The analysis is based on the applicable localized significance thresholds established by the State of California and SCAQMD. This analysis assumes the Project would comply with applicable regional air quality requirements, including: SCAQMD Rule 403, "Fugitive Dust;" SCAQMD Rule 431.2, "Sulfur Content of Liquid Fuels;" SCAQMD Rule 1113, "Architectural Coatings;" SCAQMD Rule 1186, "PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations;" and SCAQMD Rule 1186.1, "Less-Polluting Street Sweepers." Table 5.11 below describes the results of the LST analysis.

Table 5-15 LST Emissions- Construction

Pollutant	LST Significance Threshold Lbs/Day*	Project Emissions CalEEMod Lbs/Day	Exceeds Threshold?
(NO_X)	**190**	70.23	**No**
(CO)	**1,864**	47.81	**No**
PM10 (Construction)	**44**	7.96	**No**
PM10 (Operations)	**11**	5.54	**No**
PM2.5 (Construction)	**11**	4.96	**No**
PM2.5 (Operations)	**3**	1.42	**No**

*Based on LST SRA #18 Receptor at 50-meters.

The LST Emissions analysis was based on the SCAQMD's 5-acre model with emissions data from the CalEEMod analysis with values for equipment and construction phase scheduling per project proponent estimates or default values. The Appendix C Mass Rate LST Look-up Table values for the significance thresholds are from SRA#18 for the North Coastal Orange County region with receptors at the closest selection of 50-meters from the site boundary. The project's construction impacts to sensitive receptors is less than significant as the LST emissions are all projected to be below the SCAQMD's LST significance thresholds.

6.0 CO Hotspot Analysis

CO Hot Spots are typically associated with idling vehicles at extremely busy intersections (i.e., intersections with an excess of 100,000 vehicle trips per day) in areas with unusual meteorological and topographical conditions. Over the years CO standards have become increasingly strict resulting in a decrease in CO emissions form mobile sources (cars, trucks, etc.). Carbon Monoxide attainment was analyzed as part of the 2003 Air Quality Management Plan prepared by the SCAQMD, and the 1992 Federal Attainment Plan for Carbon Monoxide. The 1992 Federal CO Attainment Plan included CO Hotspot analysis which were conducted at four major intersections in the City of Los Angeles. The busiest of the four intersections evaluated was at Wilshire Boulevard and Veteran Avenue, with at daily traffic volume at the time of the study being in excess of 100,000 vehicles per day. None of the four intersections modeled as part of the study were found to have CO emissions that exceed State or Federal Standards.

At Project buildout, the busiest intersections in the Project vicinity would attract traffic that is well below the 100,000 vehicle trips per day threshold typically associated with CO Hot Spots. In addition, there are no unique topographical or meteorological conditions in the Project vicinity that could contribute to the formation of a CO Hot Spot. The SCAB has been designated as an attainment area for CO since 2007. Therefore, Project-related vehicular emissions would not create a Hot Spot and would not substantially contribute to an existing or projected CO Hot Spot. Impacts would be less than significant and mitigation is not required.

7.0 Greenhouse Gas Emissions

Greenhouse gas emissions were estimated using the CalEEMod program with data from the annual emissions report generated by the program. CO2e as previously discussed in section 4.2.1 is calculated using various GHGs and multiplying by the GWP of the various constituents. Although NO2, CO2, and CH4 are the primary emissions GHG constituents modeled these separate totals will not directly add up to the CO2e number because of the various weighting applied. The CO2e estimated value is calculated as part of the CalEEMod program data output, as developed by the SCAQMD.

7.1 Impacts of Greenhouse Gas Emissions

7.1.1 Tier 3 Approach Proposed Threshold Level

Using the SCAQMD's proposed Tier 3 option for determining the significance of a project's GHG impacts the proposed project will produce approximately 1,402.00 MTCO2e/year from operational, area, and amortized construction GHG emissions. The proposed project's estimated GHG emissions of 1,402.00 MTCO2e/year is less then the guidance from the SCAQMD as presented for mixed-use projects at 3,000 MTCO2e/year and there is a presumption of "less-than-significant" impacts with respect to climate change.

Table 7-1. Project Greenhouse Gas Emissions (Unmitigated)

Source		GHG Emissions MT/yr.		
	N20	Total CO2	CH4	CO2e
Mobile Sources	0.000	901.4828	0.0379	902.2795
Area	0.000	0.0528	0.00001	0.00559
Energy	0.00619	439.1639	0.0141	441.3775
Solid Waste	0.000	3.3778	0.1996	7.5698
Water/Wastewater	0.00426	23.0104	0.1728	27.9596
30-year Amortized Construction GHG				22.81
TOTAL				*1,402.00*
SCAQMD Threshold				**3,000**
Exceed Threshold?				**NO**

8.0 Odor Impacts

As part of the review or the proposed project the potential for objectionable odors being generated during both construction and operations was considered. Normally, odor impacts that generate complaints are associated with projects that involve agriculture and livestock operations, wastewater treatment, chemical manufacturing, refineries, landfills, and composting facilities.

The proposed project is for marine commercial, a restaurant, and marina and does not include land use that would normally be considered to create objectionable odors. Businesses similar to those proposed on the project site are operating in the immediate vicinity and as discussed in the following sections 8.1 and 8.2 the proposed project's impact on objectionable odors would be considered less than significant.

8.1 Construction Odor

During the construction of the proposed project odors associated with diesel exhaust from heavy equipment, dust from earth movement, asphalt paving, and architectural coatings are temporary, short-term in duration ending at the completion of construction.

Construction activities occur during normal working hours Monday to Friday times when the majority of residents in the area would not be subject to any potential odor creating equipment and activities. The short-term and temporary nature of construction odors would be considered less than significant.

8.2 Operational Odor

Odors emitted following the construction during the operation of the proposed project would be the result of cooking odors from the restaurant and diesel exhaust from the marina. The proposed project's source(s) of odors are not due to operations normally associated with nuisance odors and complaints. The closest sensitive receptors would be located approximate 400 to 500 feet west/south west of the site on Linda Island. Two other waterside restaurants the Sol Cocina and 3 Thirty 3 are operating within 800 to 1000 feet of the proposed restaurant site and are situated closer to the potential sensitive receptors that are located on Linda Island.

The project site currently contains a marina and associated operations, with the addition of a limited number of boat slips that include electric boats the project would not contribute to significant changes in operational odors already present around the proposed project site and the project operational odors would be considered less than significant.

9.0 Conclusion

9.1 Consistency with the Air Quality Management Plan (AQMP)

The proposed project is in an area covered by a General Plan and designated for the type of land use(s) that the project is proposing and would be covered under the City's General Plan. General Plan forecasts for development, population growth, and traffic are used within the AQMP. The AQMP provides a basis for assessing air quality within the South Coast Air Basin (SCAB) and provides for pollutant control strategies and is used in establishing the State Implementation Plan (SIP). The SIP defines how the SCAB will achieve the federal ambient air quality standards. Because the projects are not predicted to increase the population or traffic conditions beyond what is forecast in the General Plan, regional emissions associated with the project are accounted for within the AQMP and are therefore consistent with the AQMP.

9.2 Cumulative Impacts

The proposed project is located in the South Coast Air Basin (SCAB), which designated as an extreme non-attainment area for ozone and a non-attainment area for PM10 and PM2.5. The project specific estimated emissions presented in this analysis demonstrate that the project without mitigation measures applied would not result in exceedances of any applicable thresholds, which are designed to assist the region in attaining the applicable state and national ambient air quality standards.

The Project would comply with the mandatory requirements of SCAQMD's Rules during construction, as well as all other adopted 2012 AQMP emissions control measures. Per SCAQMD rules and mandates, and California Code of Regulation requirements, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements are imposed on all projects in the SCAB.

In developing the thresholds of significance for air pollutants discussed in Section 4.4.1 of this analysis, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Emissions modeling using CalEEMod for the construction of the proposed project indicates that the project emissions should remain below levels of significance for each of the air quality constituents for which the SCAB is currently in non-attainment (Ozone, PM10 and PM2.5) and as such the project would not significantly add to the cumulative impacts or increases in the non-attainment criteria pollutants in the SCAB. The Project's emissions do not exceed the SCAQMD's thresholds and as such, cumulative impacts would be less than significant.

9.3 Level of Significance

As indicated in the impact sections the proposed project is not projected to generate short-term emissions during construction phases that will exceed significance thresholds. Long-term area and operational emissions are also not projected to exceed significance thresholds. Additionally, the project's impact to sensitive receptors and generation of odors are projected to be less than significant. Therefore, both the project-specific direct impact and contribution to cumulative air quality impacts are both considered less than significant.

Short-term construction emissions and long-term area & operational emissions associated with the project are not expected to exceed the significance thresholds, therefore no mitigation measures were used in modeling and calculating the impacts of the proposed project. Adherence to the mandatory SCAQMD rules/regulations would further reduce the impacts of the project on the regions air quality. Project-specific impacts and contribution to cumulative air quality impacts are thus projected to remain less than significant.

References:

1. California Air Resources Board, 2007. *California Air Resources Board Almanac.*

2. California Air Resources Board, CARB: "Preliminary Draft Regulation for a California Cap-and-Trade Program," Section 95802(a)(18), Dec., 2009)

3. California Air Resources Board, 2007. *EMFAC 2007 v. 2.3.*

4. California Air Pollution Control Officers Association (CAPCOA), (2008) CEQA & Climate Change.

5. California Air Pollution Control Officers Association (CAPCOA), (2010) Quantifying Greenhouse Gas Mitigation Measures.

6. South Coast Air Quality Management District (SCAQMD), 1993. *CEQA Air Quality Handbook.*

7. South Coast Air Quality Management District (SCAQMD), 2013. *California Emissions Estimator Model (CalEEMod™).*

8. South Coast Air Quality Management District (SCAQMD), March 2009. *CEQA Air Quality Significance Thresholds.*

9. South Coast Air Quality Management District (SCAQMD), 2003. *Final Localized Significance Threshold Methodology.*

10. South Coast Air Quality Management District (SCAQMD), 2008. *MULTIPLE Air Toxics Exposure Study III.*

11. South Coast Air Quality Management District, (SCAQMD), (2012) Air Quality Management Plan.

12. South Coast Air Quality Management District, (SCAQMD), (2007) Air Quality Management Plan.

13. South Coast Air Quality Management District, (SCAQMD), (1993) CEQA Air Quality Handbook.

14. South Coast Air Quality Management District, (SCAQMD), SRA/City Lookup Tables.

15. South Coast Air Quality Management District (SCAQMD), (2013). *California Emissions Estimator Model (CalEEMod™) v. 2013.2.2*

16. Emfac 2007 version 2.3, Calculating emission inventories for vehicles in California.

17. CALINE 4 dispersion model.

18. Western Regional Climate Center: www.wrcc.dri.edu

19. NOAA Historical Records Winter Temperature.

20. Caltrans CO Protocol Manual.

21. Road Construction Emissions Model, Version 6.3.2 (Offroad 2007)

22. Newport Beach General Plan

23. CEQA Guidelines.

24. EPA NonRoad Model Manual.

Appendix A

Balboa Marina

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.20	1000sqft	0.00	200.00	0
Parking Lot	279.00	Space	2.51	111,600.00	0
Quality Restaurant	16.20	1000sqft	0.37	16,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Climate Zone 8 per CalEEMod lookup table. Project located in the City of Newport Beach, Orange County. Dredging in winter of 2015 remainder of Project constuction fall of 2015 until fall of 2016 with operational year 2016.

Land Use - Land use per project description, plans, and schedule provided by project proponent.
Parking estimates per project drawings and specifications. Parking includes spaces under raised structure and open parking.

Off-road Equipment - Dock Constrction - landside pile install for 8 piles on shore portion of project.

Off-road Equipment - Air compressors and forklifts used on as needed basis and not run during entire construction period.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	9,874.00	10,774.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	29,622.00	32,322.00

tblAreaCoating	Area_Nonresidential_Interior	29622	32322
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	10
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	NumDays	220.00	98.00
tblConstructionPhase	NumDays	220.00	148.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	51.00
tblConstructionPhase	NumDays	10.00	9.00
tblConstructionPhase	NumDays	3.00	22.00
tblConstructionPhase	NumDays	3.00	52.00
tblConstructionPhase	NumDays	3.00	150.00
tblConstructionPhase	NumDays	3.00	30.00
tblConstructionPhase	NumDays	3.00	107.00
tblConstructionPhase	PhaseEndDate	09/30/16	10/31/16
tblConstructionPhase	PhaseEndDate	01/24/17	10/31/16
tblConstructionPhase	PhaseEndDate	09/02/16	07/26/16
tblConstructionPhase	PhaseEndDate	03/17/15	09/15/15
tblConstructionPhase	PhaseEndDate	11/11/16	09/08/16
tblConstructionPhase	PhaseEndDate	10/15/15	09/15/15
tblConstructionPhase	PhaseEndDate	02/05/16	02/09/16
tblConstructionPhase	PhaseEndDate	02/21/17	07/29/16
tblConstructionPhase	PhaseEndDate	09/09/16	02/12/16
tblConstructionPhase	PhaseEndDate	07/12/16	09/08/16
tblConstructionPhase	PhaseStartDate	09/09/16	10/10/16
tblConstructionPhase	PhaseStartDate	09/09/16	06/16/16
tblConstructionPhase	PhaseStartDate	02/10/16	01/01/16
tblConstructionPhase	PhaseStartDate	02/14/15	08/17/15

tblConstructionPhase	PhaseStartDate	11/01/16	08/29/16
tblConstructionPhase	PhaseStartDate	09/16/15	08/17/15
tblConstructionPhase	PhaseStartDate	11/26/15	11/30/15
tblConstructionPhase	PhaseStartDate	07/27/16	01/04/16
tblConstructionPhase	PhaseStartDate	07/30/16	01/04/16
tblConstructionPhase	PhaseStartDate	02/13/16	04/13/16
tblGrading	AcresOfGrading	25.50	3.45
tblGrading	AcresOfGrading	33.00	3.45
tblGrading	MaterialImported	0.00	1,364.00
tblLandscapeEquipment	NumberSummerDays	250	180
tblOffRoadEquipment	HorsePower	78.00	361.00
tblOffRoadEquipment	HorsePower	78.00	361.00
tblOffRoadEquipment	HorsePower	205.00	174.00
tblOffRoadEquipment	HorsePower	205.00	174.00
tblOffRoadEquipment	HorsePower	226.00	174.00
tblOffRoadEquipment	HorsePower	89.00	171.00
tblOffRoadEquipment	HorsePower	167.00	800.00
tblOffRoadEquipment	HorsePower	167.00	150.00
tblOffRoadEquipment	HorsePower	46.00	97.00
tblOffRoadEquipment	LoadFactor	0.50	0.41
tblOffRoadEquipment	LoadFactor	0.50	0.41
tblOffRoadEquipment	LoadFactor	0.29	0.41
tblOffRoadEquipment	LoadFactor	0.20	0.42
tblOffRoadEquipment	LoadFactor	0.40	0.37
tblOffRoadEquipment	LoadFactor	0.45	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblSolidWaste	SolidWasteGenerationRate	0.19	1.86
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblWater	IndoorWaterUseRate	35,546.75	355,467.50
tblWater	OutdoorWaterUseRate	21,786.72	217,867.17

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.2044	1.9808	1.2520	1.7400e-003	0.1655	0.1022	0.2678	0.0869	0.0953	0.1823	0.0000	166.1939	166.1939	0.0367	0.0000	166.9645
2016	0.8831	3.6878	3.0381	5.7900e-003	0.1102	0.1981	0.3083	0.0296	0.1890	0.2186	0.0000	515.8209	515.8209	0.0778	0.0000	517.4549
Total	**1.0875**	**5.6686**	**4.2900**	**7.5300e-003**	**0.2757**	**0.3003**	**0.5760**	**0.1165**	**0.2843**	**0.4008**	**0.0000**	**682.0148**	**682.0148**	**0.1145**	**0.0000**	**684.4194**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.2042	1.9784	1.2505	1.7400e-003	0.0727	0.1021	0.1748	0.0360	0.0952	0.1312	0.0000	166.0056	166.0056	0.0367	0.0000	166.7752
2016	0.8826	3.6838	3.0355	5.7800e-003	0.1102	0.1979	0.3080	0.0296	0.1888	0.2184	0.0000	515.3730	515.3730	0.0777	0.0000	517.0052
Total	**1.0868**	**5.6622**	**4.2860**	**7.5200e-003**	**0.1828**	**0.3000**	**0.4828**	**0.0656**	**0.2840**	**0.3496**	**0.0000**	**681.3785**	**681.3785**	**0.1144**	**0.0000**	**683.7804**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.07**	**0.11**	**0.09**	**0.13**	**33.68**	**0.12**	**16.18**	**43.73**	**0.12**	**12.79**	**0.00**	**0.09**	**0.09**	**0.11**	**0.00**	**0.09**

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					
Mobile	1.4344	1.4164	6.1410	0.0117	0.7714	0.0175	0.7890	0.2064	0.0161	0.2226	0.0000	901.4828	901.4828	0.0379	0.0000	902.2795
Waste						0.0000	0.0000		0.0000	0.0000	3.3778	0.0000	3.3778	0.1996	0.0000	7.5698
Water						0.0000	0.0000		0.0000	0.0000	1.6728	21.3376	23.0104	0.1728	4.2600e-003	27.9596
Area	0.4872	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.5900e-003
Energy	0.0230	0.2093	0.1758	1.2600e-003		0.0159	0.0159		0.0159	0.0159	0.0000	439.1639	439.1639	0.0141	6.1900e-003	441.3775
Total	**1.9447**	**1.6257**	**6.3196**	**0.0129**	**0.7714**	**0.0335**	**0.8049**	**0.2064**	**0.0321**	**0.2385**	**5.0506**	**1,361.9896**	**1,367.0401**	**0.4244**	**0.0105**	**1,379.1920**

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					
Waste						0.0000	0.0000		0.0000	0.0000	3.3778	0.0000	3.3778	0.1996	0.0000	7.5698
Water						0.0000	0.0000		0.0000	0.0000	1.6728	21.3376	23.0104	0.1728	4.2500e-003	27.9569
Area	0.4872	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.5900e-003
Energy	0.0230	0.2093	0.1758	1.2600e-003		0.0159	0.0159		0.0159	0.0159	0.0000	439.1639	439.1639	0.0141	6.1900e-003	441.3775
Mobile	1.4344	1.4164	6.1410	0.0117	0.7714	0.0175	0.7890	0.2064	0.0161	0.2226	0.0000	901.4828	901.4828	0.0379	0.0000	902.2795
Total	**1.9447**	**1.6257**	**6.3196**	**0.0129**	**0.7714**	**0.0335**	**0.8049**	**0.2064**	**0.0321**	**0.2385**	**5.0506**	**1,361.9896**	**1,367.0401**	**0.4244**	**0.0104**	**1,379.1893**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.01**	**0.10**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Dredging	Grading	1/5/2015	2/13/2015	5	30	
2	Demolition	Demolition	8/17/2015	9/15/2015	5	22	
3	Site Preparation	Site Preparation	8/17/2015	9/15/2015	5	22	
4	Grading	Grading	9/16/2015	11/25/2015	5	51	
5	Piling Installation Land	Site Preparation	11/30/2015	2/9/2016	5	52	
6	Building Construction	Building Construction	1/1/2016	7/26/2016	5	148	
7	Piling Installation Water & Dock Construction	Site Preparation	1/4/2016	7/29/2016	5	150	
8	Dock Construction - Landside Piling	Site Preparation	1/4/2016	2/12/2016	5	30	
9	Sitework & Drainage	Site Preparation	4/13/2016	9/8/2016	5	107	
10	Tenant Improvements	Building Construction	6/16/2016	10/31/2016	5	98	
11	Paving	Paving	8/29/2016	9/8/2016	5	9	
12	Architectural Coating	Architectural Coating	10/10/2016	10/31/2016	5	16	

Acres of Grading (Site Preparation Phase): 3.45

Acres of Grading (Grading Phase): 3.45

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 32,322; Non-Residential Outdoor: 10,774

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Dredging	Cranes	1	8.00	174	0.41
Dredging	Other Material Handling Equipment	1	4.00	800	0.40
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Piling Installation Land	Air Compressors	2	8.00	361	0.48
Piling Installation Land	Bore/Drill Rigs	2	8.00	174	0.41
Piling Installation Land	Welders	2	4.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	2	6.00	46	0.45
Piling Installation Water & Dock Construction	Air Compressors	1	4.00	361	0.48
Piling Installation Water & Dock Construction	Bore/Drill Rigs	1	6.00	174	0.41
Piling Installation Water & Dock Construction	Forklifts	1	2.00	171	0.42
Piling Installation Water & Dock Construction	Other Material Handling Equipment	1	4.00	150	0.37
Piling Installation Water & Dock Construction	Welders	1	4.00	46	0.45
Dock Construction - Landside Piling	Air Compressors	1	4.00	78	0.48
Dock Construction - Landside Piling	Bore/Drill Rigs	1	6.00	205	0.50
Sitework & Drainage	Cement and Mortar Mixers	2	6.00	9	0.56
Sitework & Drainage	Skid Steer Loaders	1	8.00	64	0.37
Sitework & Drainage	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Tenant Improvements	Air Compressors	1	6.00	78	0.48
Tenant Improvements	Forklifts	1	4.00	89	0.20
Paving	Cement and Mortar Mixers	1	8.00	9	0.56

Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Dredging	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	3	8.00	0.00	5.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	171.00	14.70	6.90	1.00	LD_Mix	HDT_Mix	HHDT
Piling Installation Land	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	54.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Piling Installation Water & Dock Constru	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dock Construction - Landside Piling	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Sitework & Drainage	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tenant Improvements	2	54.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Dredging - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0148	0.1571	0.0740	9.0000e-005		8.4900e-003	8.4900e-003		7.8200e-003	7.8200e-003	0.0000	8.8050	8.8050	2.6300e-003	0.0000	8.8602
Total	**0.0148**	**0.1571**	**0.0740**	**9.0000e-005**	**0.0000**	**8.4900e-003**	**8.4900e-003**	**0.0000**	**7.8200e-003**	**7.8200e-003**	**0.0000**	**8.8050**	**8.8050**	**2.6300e-003**	**0.0000**	**8.8602**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	4.9000e-004	5.0900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7985	0.7985	5.0000e-005	0.0000	0.7995
Total	**1.6800e-003**	**4.9000e-004**	**5.0900e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.7985**	**0.7985**	**5.0000e-005**	**0.0000**	**0.7995**

3.2 Dredging - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0147	0.1569	0.0739	9.0000e-005		8.4800e-003	8.4800e-003		7.8100e-003	7.8100e-003	0.0000	8.7945	8.7945	2.6300e-003	0.0000	8.8496
Total	**0.0147**	**0.1569**	**0.0739**	**9.0000e-005**	**0.0000**	**8.4800e-003**	**8.4800e-003**	**0.0000**	**7.8100e-003**	**7.8100e-003**	**0.0000**	**8.7945**	**8.7945**	**2.6300e-003**	**0.0000**	**8.8496**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6800e-003	4.9000e-004	5.0900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.3000e-004	0.0000	0.7985	0.7985	5.0000e-005	0.0000	0.7995
Total	**1.6800e-003**	**4.9000e-004**	**5.0900e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.3000e-004**	**0.0000**	**0.7985**	**0.7985**	**5.0000e-005**	**0.0000**	**0.7995**

3.3 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.9000e-004	0.0000	5.9000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0258	0.2510	0.1893	2.0000e-004		0.0146	0.0146		0.0138	0.0138	0.0000	18.5020	18.5020	4.3900e-003	0.0000	18.5942
Total	**0.0258**	**0.2510**	**0.1893**	**2.0000e-004**	**5.9000e-004**	**0.0146**	**0.0152**	**9.0000e-005**	**0.0138**	**0.0139**	**0.0000**	**18.5020**	**18.5020**	**4.3900e-003**	**0.0000**	**18.5942**

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	1.1000e-004	8.3000e-004	5.9000e-004	0.0000	4.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1705	0.1705	0.0000	0.0000	0.1705
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9700e-003	5.7000e-004	5.9700e-003	1.0000e-005	9.7000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.9369	0.9369	5.0000e-005	0.0000	0.9380
Total	**2.0800e-003**	**1.4000e-003**	**6.5600e-003**	**1.0000e-005**	**1.0100e-003**	**2.0000e-005**	**1.0300e-003**	**2.7000e-004**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**1.1074**	**1.1074**	**5.0000e-005**	**0.0000**	**1.1086**

3.3 Demolition - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3000e-004	0.0000	2.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0258	0.2507	0.1890	2.0000e-004		0.0146	0.0146		0.0138	0.0138	0.0000	18.4800	18.4800	4.3900e-003	0.0000	18.5721
Total	**0.0258**	**0.2507**	**0.1890**	**2.0000e-004**	**2.3000e-004**	**0.0146**	**0.0148**	**3.0000e-005**	**0.0138**	**0.0138**	**0.0000**	**18.4800**	**18.4800**	**4.3900e-003**	**0.0000**	**18.5721**

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	1.1000e-004	8.3000e-004	5.9000e-004	0.0000	7.2000e-004	1.0000e-005	7.4000e-004	1.8000e-004	1.0000e-005	1.9000e-004	0.0000	0.1705	0.1705	0.0000	0.0000	0.1705
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9700e-003	5.7000e-004	5.9700e-003	1.0000e-005	9.7000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.9369	0.9369	5.0000e-005	0.0000	0.9380
Total	**2.0800e-003**	**1.4000e-003**	**6.5600e-003**	**1.0000e-005**	**1.6900e-003**	**2.0000e-005**	**1.7100e-003**	**4.4000e-004**	**2.0000e-005**	**4.5000e-004**	**0.0000**	**1.1074**	**1.1074**	**5.0000e-005**	**0.0000**	**1.1086**

3.4 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.8300e-003	0.0000	1.8300e-003	2.0000e-004	0.0000	2.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0310	0.3572	0.2055	2.6000e-004		0.0176	0.0176		0.0162	0.0162	0.0000	25.0294	25.0294	7.4700e-003	0.0000	25.1863
Total	**0.0310**	**0.3572**	**0.2055**	**2.6000e-004**	**1.8300e-003**	**0.0176**	**0.0194**	**2.0000e-004**	**0.0162**	**0.0164**	**0.0000**	**25.0294**	**25.0294**	**7.4700e-003**	**0.0000**	**25.1863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9700e-003	5.7000e-004	5.9700e-003	1.0000e-005	9.7000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.9369	0.9369	5.0000e-005	0.0000	0.9380
Total	**1.9700e-003**	**5.7000e-004**	**5.9700e-003**	**1.0000e-005**	**9.7000e-004**	**1.0000e-005**	**9.7000e-004**	**2.6000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.9369**	**0.9369**	**5.0000e-005**	**0.0000**	**0.9380**

3.4 Site Preparation - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.1000e-004	0.0000	7.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0310	0.3567	0.2052	2.6000e-004		0.0176	0.0176		0.0162	0.0162	0.0000	24.9996	24.9996	7.4600e-003	0.0000	25.1564
Total	**0.0310**	**0.3567**	**0.2052**	**2.6000e-004**	**7.1000e-004**	**0.0176**	**0.0183**	**8.0000e-005**	**0.0162**	**0.0162**	**0.0000**	**24.9996**	**24.9996**	**7.4600e-003**	**0.0000**	**25.1564**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.9700e-003	5.7000e-004	5.9700e-003	1.0000e-005	9.7000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.9369	0.9369	5.0000e-005	0.0000	0.9380
Total	**1.9700e-003**	**5.7000e-004**	**5.9700e-003**	**1.0000e-005**	**9.7000e-004**	**1.0000e-005**	**9.7000e-004**	**2.6000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.9369**	**0.9369**	**5.0000e-005**	**0.0000**	**0.9380**

3.5 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1555	0.0000	0.1555	0.0846	0.0000	0.0846	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0756	0.7972	0.5152	5.2000e-004		0.0447	0.0447		0.0411	0.0411	0.0000	50.0626	50.0626	0.0150	0.0000	50.3765
Total	**0.0756**	**0.7972**	**0.5152**	**5.2000e-004**	**0.1555**	**0.0447**	**0.2002**	**0.0846**	**0.0411**	**0.1257**	**0.0000**	**50.0626**	**50.0626**	**0.0150**	**0.0000**	**50.3765**

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	7.5000e-004	3.1900e-003	0.0131	0.0000	7.0000e-005	3.0000e-005	1.0000e-004	2.0000e-005	3.0000e-005	5.0000e-005	0.0000	0.4215	0.4215	1.0000e-005	0.0000	0.4217
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7200e-003	1.6600e-003	0.0173	3.0000e-005	2.8000e-003	3.0000e-005	2.8200e-003	7.4000e-004	2.0000e-005	7.7000e-004	0.0000	2.7150	2.7150	1.5000e-004	0.0000	2.7182
Total	**6.4700e-003**	**4.8500e-003**	**0.0304**	**3.0000e-005**	**2.8700e-003**	**6.0000e-005**	**2.9200e-003**	**7.6000e-004**	**5.0000e-005**	**8.2000e-004**	**0.0000**	**3.1365**	**3.1365**	**1.6000e-004**	**0.0000**	**3.1399**

3.5 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0606	0.0000	0.0606	0.0330	0.0000	0.0330	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0755	0.7962	0.5145	5.2000e-004		0.0446	0.0446		0.0411	0.0411	0.0000	50.0031	50.0031	0.0149	0.0000	50.3165
Total	**0.0755**	**0.7962**	**0.5145**	**5.2000e-004**	**0.0606**	**0.0446**	**0.1053**	**0.0330**	**0.0411**	**0.0741**	**0.0000**	**50.0031**	**50.0031**	**0.0149**	**0.0000**	**50.3165**

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	7.5000e-004	3.1900e-003	0.0131	0.0000	2.8400e-003	3.0000e-005	2.8700e-003	7.0000e-004	3.0000e-005	7.3000e-004	0.0000	0.4215	0.4215	1.0000e-005	0.0000	0.4217
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7200e-003	1.6600e-003	0.0173	3.0000e-005	2.8000e-003	3.0000e-005	2.8200e-003	7.4000e-004	2.0000e-005	7.7000e-004	0.0000	2.7150	2.7150	1.5000e-004	0.0000	2.7182
Total	**6.4700e-003**	**4.8500e-003**	**0.0304**	**3.0000e-005**	**5.6400e-003**	**6.0000e-005**	**5.6900e-003**	**1.4400e-003**	**5.0000e-005**	**1.5000e-003**	**0.0000**	**3.1365**	**3.1365**	**1.6000e-004**	**0.0000**	**3.1399**

3.6 Piling Installation Land - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0410	0.4099	0.2079	5.6000e-004		0.0168	0.0168		0.0164	0.0164	0.0000	55.8991	55.8991	6.8300e-003	0.0000	56.0427
Total	**0.0410**	**0.4099**	**0.2079**	**5.6000e-004**	**0.0000**	**0.0168**	**0.0168**	**0.0000**	**0.0164**	**0.0164**	**0.0000**	**55.8991**	**55.8991**	**6.8300e-003**	**0.0000**	**56.0427**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0400e-003	1.1700e-003	0.0122	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	2.0000e-005	5.4000e-004	0.0000	1.9165	1.9165	1.1000e-004	0.0000	1.9187
Total	**4.0400e-003**	**1.1700e-003**	**0.0122**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**2.0000e-005**	**5.4000e-004**	**0.0000**	**1.9165**	**1.9165**	**1.1000e-004**	**0.0000**	**1.9187**

3.6 Piling Installation Land - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0409	0.4094	0.2077	5.6000e-004		0.0168	0.0168		0.0163	0.0163	0.0000	55.8326	55.8326	6.8300e-003	0.0000	55.9760
Total	**0.0409**	**0.4094**	**0.2077**	**5.6000e-004**	**0.0000**	**0.0168**	**0.0168**	**0.0000**	**0.0163**	**0.0163**	**0.0000**	**55.8326**	**55.8326**	**6.8300e-003**	**0.0000**	**55.9760**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.0400e-003	1.1700e-003	0.0122	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	2.0000e-005	5.4000e-004	0.0000	1.9165	1.9165	1.1000e-004	0.0000	1.9187
Total	**4.0400e-003**	**1.1700e-003**	**0.0122**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**2.0000e-005**	**5.4000e-004**	**0.0000**	**1.9165**	**1.9165**	**1.1000e-004**	**0.0000**	**1.9187**

3.6 Piling Installation Land - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0451	0.4325	0.2382	6.5000e-004		0.0178	0.0178		0.0173	0.0173	0.0000	65.0311	65.0311	7.7700e-003	0.0000	65.1941
Total	**0.0451**	**0.4325**	**0.2382**	**6.5000e-004**	**0.0000**	**0.0178**	**0.0178**	**0.0000**	**0.0173**	**0.0173**	**0.0000**	**65.0311**	**65.0311**	**7.7700e-003**	**0.0000**	**65.1941**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3900e-003	1.2400e-003	0.0129	3.0000e-005	2.3000e-003	2.0000e-005	2.3200e-003	6.1000e-004	2.0000e-005	6.3000e-004	0.0000	2.1586	2.1586	1.2000e-004	0.0000	2.1610
Total	**4.3900e-003**	**1.2400e-003**	**0.0129**	**3.0000e-005**	**2.3000e-003**	**2.0000e-005**	**2.3200e-003**	**6.1000e-004**	**2.0000e-005**	**6.3000e-004**	**0.0000**	**2.1586**	**2.1586**	**1.2000e-004**	**0.0000**	**2.1610**

3.6 Piling Installation Land - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0450	0.4320	0.2379	6.5000e-004		0.0177	0.0177		0.0173	0.0173	0.0000	64.9537	64.9537	7.7600e-003	0.0000	65.1166
Total	**0.0450**	**0.4320**	**0.2379**	**6.5000e-004**	**0.0000**	**0.0177**	**0.0177**	**0.0000**	**0.0173**	**0.0173**	**0.0000**	**64.9537**	**64.9537**	**7.7600e-003**	**0.0000**	**65.1166**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.3900e-003	1.2400e-003	0.0129	3.0000e-005	2.3000e-003	2.0000e-005	2.3200e-003	6.1000e-004	2.0000e-005	6.3000e-004	0.0000	2.1586	2.1586	1.2000e-004	0.0000	2.1610
Total	**4.3900e-003**	**1.2400e-003**	**0.0129**	**3.0000e-005**	**2.3000e-003**	**2.0000e-005**	**2.3200e-003**	**6.1000e-004**	**2.0000e-005**	**6.3000e-004**	**0.0000**	**2.1586**	**2.1586**	**1.2000e-004**	**0.0000**	**2.1610**

3.7 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1833	1.3384	0.8814	1.3500e-003		0.0868	0.0868		0.0831	0.0831	0.0000	117.8541	117.8541	0.0255	0.0000	118.3903
Total	**0.1833**	**1.3384**	**0.8814**	**1.3500e-003**		**0.0868**	**0.0868**		**0.0831**	**0.0831**	**0.0000**	**117.8541**	**117.8541**	**0.0255**	**0.0000**	**118.3903**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0243	0.1411	0.1811	3.4000e-004	9.5600e-003	2.2000e-003	0.0118	2.7300e-003	2.0200e-003	4.7500e-003	0.0000	30.6525	30.6525	2.2000e-004	0.0000	30.6572
Worker	0.0836	0.0235	0.2448	5.4000e-004	0.0438	3.7000e-004	0.0442	0.0116	3.4000e-004	0.0120	0.0000	41.0748	41.0748	2.2100e-003	0.0000	41.1212
Total	**0.1079**	**0.1646**	**0.4259**	**8.8000e-004**	**0.0534**	**2.5700e-003**	**0.0560**	**0.0144**	**2.3600e-003**	**0.0167**	**0.0000**	**71.7273**	**71.7273**	**2.4300e-003**	**0.0000**	**71.7784**

3.7 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1830	1.3368	0.8804	1.3500e-003		0.0867	0.0867		0.0830	0.0830	0.0000	117.7139	117.7139	0.0255	0.0000	118.2495
Total	**0.1830**	**1.3368**	**0.8804**	**1.3500e-003**		**0.0867**	**0.0867**		**0.0830**	**0.0830**	**0.0000**	**117.7139**	**117.7139**	**0.0255**	**0.0000**	**118.2495**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0243	0.1411	0.1811	3.4000e-004	9.5600e-003	2.2000e-003	0.0118	2.7300e-003	2.0200e-003	4.7500e-003	0.0000	30.6525	30.6525	2.2000e-004	0.0000	30.6572
Worker	0.0836	0.0235	0.2448	5.4000e-004	0.0438	3.7000e-004	0.0442	0.0116	3.4000e-004	0.0120	0.0000	41.0748	41.0748	2.2100e-003	0.0000	41.1212
Total	**0.1079**	**0.1646**	**0.4259**	**8.8000e-004**	**0.0534**	**2.5700e-003**	**0.0560**	**0.0144**	**2.3600e-003**	**0.0167**	**0.0000**	**71.7273**	**71.7273**	**2.4300e-003**	**0.0000**	**71.7784**

3.8 Piling Installation Water & Dock Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1104	1.0026	0.6282	1.3100e-003		0.0461	0.0461		0.0438	0.0438	0.0000	126.7475	126.7475	0.0231	0.0000	127.2329
Total	**0.1104**	**1.0026**	**0.6282**	**1.3100e-003**	**0.0000**	**0.0461**	**0.0461**	**0.0000**	**0.0438**	**0.0438**	**0.0000**	**126.7475**	**126.7475**	**0.0231**	**0.0000**	**127.2329**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0204	5.7400e-003	0.0597	1.3000e-004	0.0107	9.0000e-005	0.0108	2.8400e-003	8.0000e-005	2.9200e-003	0.0000	10.0220	10.0220	5.4000e-004	0.0000	10.0333
Total	**0.0204**	**5.7400e-003**	**0.0597**	**1.3000e-004**	**0.0107**	**9.0000e-005**	**0.0108**	**2.8400e-003**	**8.0000e-005**	**2.9200e-003**	**0.0000**	**10.0220**	**10.0220**	**5.4000e-004**	**0.0000**	**10.0333**

3.8 Piling Installation Water & Dock Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1103	1.0014	0.6274	1.3100e-003		0.0460	0.0460		0.0437	0.0437	0.0000	126.5967	126.5967	0.0231	0.0000	127.0815
Total	**0.1103**	**1.0014**	**0.6274**	**1.3100e-003**	**0.0000**	**0.0460**	**0.0460**	**0.0000**	**0.0437**	**0.0437**	**0.0000**	**126.5967**	**126.5967**	**0.0231**	**0.0000**	**127.0815**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0204	5.7400e-003	0.0597	1.3000e-004	0.0107	9.0000e-005	0.0108	2.8400e-003	8.0000e-005	2.9200e-003	0.0000	10.0220	10.0220	5.4000e-004	0.0000	10.0333
Total	**0.0204**	**5.7400e-003**	**0.0597**	**1.3000e-004**	**0.0107**	**9.0000e-005**	**0.0108**	**2.8400e-003**	**8.0000e-005**	**2.9200e-003**	**0.0000**	**10.0220**	**10.0220**	**5.4000e-004**	**0.0000**	**10.0333**

3.9 Dock Construction - Landside Piling - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6000e-003	0.0827	0.0419	1.3000e-004		3.7000e-003	3.7000e-003		3.5600e-003	3.5600e-003	0.0000	11.8175	11.8175	3.1000e-003	0.0000	11.8825
Total	**7.6000e-003**	**0.0827**	**0.0419**	**1.3000e-004**	**0.0000**	**3.7000e-003**	**3.7000e-003**	**0.0000**	**3.5600e-003**	**3.5600e-003**	**0.0000**	**11.8175**	**11.8175**	**3.1000e-003**	**0.0000**	**11.8825**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5700e-003	4.4000e-004	4.5900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7709	0.7709	4.0000e-005	0.0000	0.7718
Total	**1.5700e-003**	**4.4000e-004**	**4.5900e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7709**	**0.7709**	**4.0000e-005**	**0.0000**	**0.7718**

3.9 Dock Construction - Landside Piling - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.5900e-003	0.0827	0.0418	1.3000e-004		3.6900e-003	3.6900e-003		3.5600e-003	3.5600e-003	0.0000	11.8035	11.8035	3.0900e-003	0.0000	11.8684
Total	**7.5900e-003**	**0.0827**	**0.0418**	**1.3000e-004**	**0.0000**	**3.6900e-003**	**3.6900e-003**	**0.0000**	**3.5600e-003**	**3.5600e-003**	**0.0000**	**11.8035**	**11.8035**	**3.0900e-003**	**0.0000**	**11.8684**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5700e-003	4.4000e-004	4.5900e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	1.0000e-005	2.2000e-004	0.0000	0.7709	0.7709	4.0000e-005	0.0000	0.7718
Total	**1.5700e-003**	**4.4000e-004**	**4.5900e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**1.0000e-005**	**2.2000e-004**	**0.0000**	**0.7709**	**0.7709**	**4.0000e-005**	**0.0000**	**0.7718**

3.10 Sitework & Drainage - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0291	0.2827	0.2282	3.3000e-004		0.0190	0.0190		0.0176	0.0176	0.0000	29.6498	29.6498	8.2200e-003	0.0000	29.8224
Total	**0.0291**	**0.2827**	**0.2282**	**3.3000e-004**	**0.0000**	**0.0190**	**0.0190**	**0.0000**	**0.0176**	**0.0176**	**0.0000**	**29.6498**	**29.6498**	**8.2200e-003**	**0.0000**	**29.8224**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0112	3.1500e-003	0.0328	7.0000e-005	5.8700e-003	5.0000e-005	5.9200e-003	1.5600e-003	5.0000e-005	1.6000e-003	0.0000	5.4993	5.4993	3.0000e-004	0.0000	5.5055
Total	**0.0112**	**3.1500e-003**	**0.0328**	**7.0000e-005**	**5.8700e-003**	**5.0000e-005**	**5.9200e-003**	**1.5600e-003**	**5.0000e-005**	**1.6000e-003**	**0.0000**	**5.4993**	**5.4993**	**3.0000e-004**	**0.0000**	**5.5055**

3.10 Sitework & Drainage - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0290	0.2824	0.2279	3.3000e-004		0.0190	0.0190		0.0176	0.0176	0.0000	29.6146	29.6146	8.2100e-003	0.0000	29.7869
Total	**0.0290**	**0.2824**	**0.2279**	**3.3000e-004**	**0.0000**	**0.0190**	**0.0190**	**0.0000**	**0.0176**	**0.0176**	**0.0000**	**29.6146**	**29.6146**	**8.2100e-003**	**0.0000**	**29.7869**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0112	3.1500e-003	0.0328	7.0000e-005	5.8700e-003	5.0000e-005	5.9200e-003	1.5600e-003	5.0000e-005	1.6000e-003	0.0000	5.4993	5.4993	3.0000e-004	0.0000	5.5055
Total	**0.0112**	**3.1500e-003**	**0.0328**	**7.0000e-005**	**5.8700e-003**	**5.0000e-005**	**5.9200e-003**	**1.5600e-003**	**5.0000e-005**	**1.6000e-003**	**0.0000**	**5.4993**	**5.4993**	**3.0000e-004**	**0.0000**	**5.5055**

3.11 Tenant Improvements - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0236	0.1641	0.1233	1.8000e-004		0.0136	0.0136		0.0133	0.0133	0.0000	16.0387	16.0387	2.5400e-003	0.0000	16.0920
Total	**0.0236**	**0.1641**	**0.1233**	**1.8000e-004**		**0.0136**	**0.0136**		**0.0133**	**0.0133**	**0.0000**	**16.0387**	**16.0387**	**2.5400e-003**	**0.0000**	**16.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0161	0.0934	0.1199	2.2000e-004	6.3300e-003	1.4600e-003	7.7900e-003	1.8100e-003	1.3400e-003	3.1500e-003	0.0000	20.2969	20.2969	1.5000e-004	0.0000	20.3001
Worker	0.0553	0.0156	0.1621	3.6000e-004	0.0290	2.5000e-004	0.0293	7.7100e-003	2.3000e-004	7.9400e-003	0.0000	27.1982	27.1982	1.4600e-003	0.0000	27.2289
Total	**0.0714**	**0.1090**	**0.2820**	**5.8000e-004**	**0.0354**	**1.7100e-003**	**0.0371**	**9.5200e-003**	**1.5700e-003**	**0.0111**	**0.0000**	**47.4951**	**47.4951**	**1.6100e-003**	**0.0000**	**47.5290**

3.11 Tenant Improvements - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0236	0.1639	0.1231	1.8000e-004		0.0136	0.0136		0.0133	0.0133	0.0000	16.0196	16.0196	2.5400e-003	0.0000	16.0729
Total	**0.0236**	**0.1639**	**0.1231**	**1.8000e-004**		**0.0136**	**0.0136**		**0.0133**	**0.0133**	**0.0000**	**16.0196**	**16.0196**	**2.5400e-003**	**0.0000**	**16.0729**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0161	0.0934	0.1199	2.2000e-004	6.3300e-003	1.4600e-003	7.7900e-003	1.8100e-003	1.3400e-003	3.1500e-003	0.0000	20.2969	20.2969	1.5000e-004	0.0000	20.3001
Worker	0.0553	0.0156	0.1621	3.6000e-004	0.0290	2.5000e-004	0.0293	7.7100e-003	2.3000e-004	7.9400e-003	0.0000	27.1982	27.1982	1.4600e-003	0.0000	27.2289
Total	**0.0714**	**0.1090**	**0.2820**	**5.8000e-004**	**0.0354**	**1.7100e-003**	**0.0371**	**9.5200e-003**	**1.5700e-003**	**0.0111**	**0.0000**	**47.4951**	**47.4951**	**1.6100e-003**	**0.0000**	**47.5290**

3.12 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.0200e-003	0.0807	0.0546	8.0000e-005		5.0600e-003	5.0600e-003		4.6600e-003	4.6600e-003	0.0000	7.3680	7.3680	2.1800e-003	0.0000	7.4139
Paving	3.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0113**	**0.0807**	**0.0546**	**8.0000e-005**		**5.0600e-003**	**5.0600e-003**		**4.6600e-003**	**4.6600e-003**	**0.0000**	**7.3680**	**7.3680**	**2.1800e-003**	**0.0000**	**7.4139**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4100e-003	4.0000e-004	4.1300e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.6938	0.6938	4.0000e-005	0.0000	0.6946
Total	**1.4100e-003**	**4.0000e-004**	**4.1300e-003**	**1.0000e-005**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6938**	**0.6938**	**4.0000e-005**	**0.0000**	**0.6946**

3.12 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.0100e-003	0.0806	0.0546	8.0000e-005		5.0600e-003	5.0600e-003		4.6600e-003	4.6600e-003	0.0000	7.3593	7.3593	2.1800e-003	0.0000	7.4050
Paving	3.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0113**	**0.0806**	**0.0546**	**8.0000e-005**		**5.0600e-003**	**5.0600e-003**		**4.6600e-003**	**4.6600e-003**	**0.0000**	**7.3593**	**7.3593**	**2.1800e-003**	**0.0000**	**7.4050**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4100e-003	4.0000e-004	4.1300e-003	1.0000e-005	7.4000e-004	1.0000e-005	7.5000e-004	2.0000e-004	1.0000e-005	2.0000e-004	0.0000	0.6938	0.6938	4.0000e-005	0.0000	0.6946
Total	**1.4100e-003**	**4.0000e-004**	**4.1300e-003**	**1.0000e-005**	**7.4000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6938**	**0.6938**	**4.0000e-005**	**0.0000**	**0.6946**

3.13 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2497					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9500e-003	0.0190	0.0151	2.0000e-005		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003	0.0000	2.0426	2.0426	2.4000e-004	0.0000	2.0477
Total	**0.2526**	**0.0190**	**0.0151**	**2.0000e-005**		**1.5700e-003**	**1.5700e-003**		**1.5700e-003**	**1.5700e-003**	**0.0000**	**2.0426**	**2.0426**	**2.4000e-004**	**0.0000**	**2.0477**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	5.2000e-004	5.3900e-003	1.0000e-005	9.7000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.9046	0.9046	5.0000e-005	0.0000	0.9056
Total	**1.8400e-003**	**5.2000e-004**	**5.3900e-003**	**1.0000e-005**	**9.7000e-004**	**1.0000e-005**	**9.7000e-004**	**2.6000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.9046**	**0.9046**	**5.0000e-005**	**0.0000**	**0.9056**

3.13 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2497					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9400e-003	0.0190	0.0151	2.0000e-005		1.5700e-003	1.5700e-003		1.5700e-003	1.5700e-003	0.0000	2.0402	2.0402	2.4000e-004	0.0000	2.0452
Total	**0.2526**	**0.0190**	**0.0151**	**2.0000e-005**		**1.5700e-003**	**1.5700e-003**		**1.5700e-003**	**1.5700e-003**	**0.0000**	**2.0402**	**2.0402**	**2.4000e-004**	**0.0000**	**2.0452**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	5.2000e-004	5.3900e-003	1.0000e-005	9.7000e-004	1.0000e-005	9.7000e-004	2.6000e-004	1.0000e-005	2.6000e-004	0.0000	0.9046	0.9046	5.0000e-005	0.0000	0.9056
Total	**1.8400e-003**	**5.2000e-004**	**5.3900e-003**	**1.0000e-005**	**9.7000e-004**	**1.0000e-005**	**9.7000e-004**	**2.6000e-004**	**1.0000e-005**	**2.6000e-004**	**0.0000**	**0.9046**	**0.9046**	**5.0000e-005**	**0.0000**	**0.9056**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.4344	1.4164	6.1410	0.0117	0.7714	0.0175	0.7890	0.2064	0.0161	0.2226	0.0000	901.4828	901.4828	0.0379	0.0000	902.2795
Unmitigated	1.4344	1.4164	6.1410	0.0117	0.7714	0.0175	0.7890	0.2064	0.0161	0.2226	0.0000	901.4828	901.4828	0.0379	0.0000	902.2795

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2.20	0.47	0.20	5,375	5,375
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	1,457.19	1,528.63	1168.99	2,030,418	2,030,418
Total	1,459.39	1,529.11	1,169.19	2,035,794	2,035,794

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	211.3280	211.3280	9.7100e-003	2.0100e-003	212.1550
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	211.3280	211.3280	9.7100e-003	2.0100e-003	212.1550
NaturalGas Mitigated	0.0230	0.2093	0.1758	1.2600e-003		0.0159	0.0159		0.0159	0.0159	0.0000	227.8359	227.8359	4.3700e-003	4.1800e-003	229.2225
NaturalGas Unmitigated	0.0230	0.2093	0.1758	1.2600e-003		0.0159	0.0159		0.0159	0.0159	0.0000	227.8359	227.8359	4.3700e-003	4.1800e-003	229.2225

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	1918	1.0000e-005	9.0000e-005	8.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1024	0.1024	0.0000	0.0000	0.1030
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	4.26757e+006	0.0230	0.2092	0.1757	1.2600e-003		0.0159	0.0159		0.0159	0.0159	0.0000	227.7336	227.7336	4.3600e-003	4.1800e-003	229.1195
Total		**0.0230**	**0.2093**	**0.1758**	**1.2600e-003**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**227.8359**	**227.8359**	**4.3600e-003**	**4.1800e-003**	**229.2225**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	1918	1.0000e-005	9.0000e-005	8.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.1024	0.1024	0.0000	0.0000	0.1030
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	4.26757e+006	0.0230	0.2092	0.1757	1.2600e-003		0.0159	0.0159		0.0159	0.0159	0.0000	227.7336	227.7336	4.3600e-003	4.1800e-003	229.1195
Total		**0.0230**	**0.2093**	**0.1758**	**1.2600e-003**		**0.0159**	**0.0159**		**0.0159**	**0.0159**	**0.0000**	**227.8359**	**227.8359**	**4.3600e-003**	**4.1800e-003**	**229.2225**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	3124	0.8940	4.0000e-005	1.0000e-005	0.8975
Parking Lot	98208	28.1039	1.2900e-003	2.7000e-004	28.2139
Quality Restaurant	637146	182.3301	8.3800e-003	1.7300e-003	183.0436
Total		**211.3280**	**9.7100e-003**	**2.0100e-003**	**212.1550**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	3124	0.8940	4.0000e-005	1.0000e-005	0.8975
Parking Lot	98208	28.1039	1.2900e-003	2.7000e-004	28.2139
Quality Restaurant	637146	182.3301	8.3800e-003	1.7300e-003	183.0436
Total		**211.3280**	**9.7100e-003**	**2.0100e-003**	**212.1550**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.4872	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.5900e-003
Unmitigated	0.4872	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.5900e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0245					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4625					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-004	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.5900e-003
Total	**0.4873**	**3.0000e-005**	**2.7700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.2800e-003**	**5.2800e-003**	**1.0000e-005**	**0.0000**	**5.5900e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0245					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4625					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7000e-004	3.0000e-005	2.7700e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	5.2800e-003	5.2800e-003	1.0000e-005	0.0000	5.5900e-003
Total	**0.4873**	**3.0000e-005**	**2.7700e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**5.2800e-003**	**5.2800e-003**	**1.0000e-005**	**0.0000**	**5.5900e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	23.0104	0.1728	4.2500e-003	27.9569
Unmitigated	23.0104	0.1728	4.2600e-003	27.9596

7.2 Water by Land Use

Unmitigated

	Indoor/ Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.355467 / 0.217867	2.1300	0.0117	2.9000e-004	2.4659
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	4.91725 / 0.313867	20.8804	0.1611	3.9700e-003	25.4937
Total		**23.0104**	**0.1728**	**4.2600e-003**	**27.9596**

Mitigated

	Indoor/ Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.355467 / 0.217867	2.1300	0.0117	2.9000e-004	2.4657
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	4.91725 / 0.313867	20.8804	0.1611	3.9600e-003	25.4912
Total		**23.0104**	**0.1728**	**4.2500e-003**	**27.9569**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.3778	0.1996	0.0000	7.5698
Unmitigated	3.3778	0.1996	0.0000	7.5698

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	1.86	0.3776	0.0223	0.0000	0.8461
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	14.78	3.0002	0.1773	0.0000	6.7237
Total		**3.3778**	**0.1996**	**0.0000**	**7.5698**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	1.86	0.3776	0.0223	0.0000	0.8461
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	14.78	3.0002	0.1773	0.0000	6.7237
Total		**3.3778**	**0.1996**	**0.0000**	**7.5698**

9.0 Operational Offroad

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

10.0 Vegetation

Balboa Marina

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.20	1000sqft	0.00	200.00	0
Parking Lot	279.00	Space	2.51	111,600.00	0
Quality Restaurant	16.20	1000sqft	0.37	16,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Climate Zone 8 per CalEEMod lookup table. Project located in the City of Newport Beach, Orange County. Dredging in winter of 2015 remainder of Project constuction fall of 2015 until fall of 2016 with operational year 2016.

Land Use - Land use per project description, plans, and schedule provided by project proponent.
Parking estimates per project drawings and specifications. Parking includes spaces under raised structure and open parking.

Off-road Equipment - Dock Constrction - landside pile install for 8 piles on shore portion of project.

Off-road Equipment - Air compressors and forklifts used on as needed basis and not run during entire construction period.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	9,874.00	10,774.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	29,622.00	32,322.00

tblAreaCoating	Area_Nonresidential_Interior	29622	32322
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	10
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	NumDays	220.00	98.00
tblConstructionPhase	NumDays	220.00	148.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	51.00
tblConstructionPhase	NumDays	10.00	9.00
tblConstructionPhase	NumDays	3.00	22.00
tblConstructionPhase	NumDays	3.00	52.00
tblConstructionPhase	NumDays	3.00	150.00
tblConstructionPhase	NumDays	3.00	30.00
tblConstructionPhase	NumDays	3.00	107.00
tblConstructionPhase	PhaseEndDate	09/30/16	10/31/16
tblConstructionPhase	PhaseEndDate	01/24/17	10/31/16
tblConstructionPhase	PhaseEndDate	09/02/16	07/26/16
tblConstructionPhase	PhaseEndDate	03/17/15	09/15/15
tblConstructionPhase	PhaseEndDate	11/11/16	09/08/16
tblConstructionPhase	PhaseEndDate	10/15/15	09/15/15
tblConstructionPhase	PhaseEndDate	02/05/16	02/09/16
tblConstructionPhase	PhaseEndDate	02/21/17	07/29/16
tblConstructionPhase	PhaseEndDate	09/09/16	02/12/16
tblConstructionPhase	PhaseEndDate	07/12/16	09/08/16
tblConstructionPhase	PhaseStartDate	09/09/16	10/10/16
tblConstructionPhase	PhaseStartDate	09/09/16	06/16/16
tblConstructionPhase	PhaseStartDate	02/10/16	01/01/16
tblConstructionPhase	PhaseStartDate	02/14/15	08/17/15

tblConstructionPhase	PhaseStartDate	11/01/16	08/29/16
tblConstructionPhase	PhaseStartDate	09/16/15	08/17/15
tblConstructionPhase	PhaseStartDate	11/26/15	11/30/15
tblConstructionPhase	PhaseStartDate	07/27/16	01/04/16
tblConstructionPhase	PhaseStartDate	07/30/16	01/04/16
tblConstructionPhase	PhaseStartDate	02/13/16	04/13/16
tblGrading	AcresOfGrading	25.50	3.45
tblGrading	AcresOfGrading	33.00	3.45
tblGrading	MaterialImported	0.00	1,364.00
tblLandscapeEquipment	NumberSummerDays	250	180
tblOffRoadEquipment	HorsePower	78.00	361.00
tblOffRoadEquipment	HorsePower	78.00	361.00
tblOffRoadEquipment	HorsePower	205.00	174.00
tblOffRoadEquipment	HorsePower	205.00	174.00
tblOffRoadEquipment	HorsePower	226.00	174.00
tblOffRoadEquipment	HorsePower	89.00	171.00
tblOffRoadEquipment	HorsePower	167.00	800.00
tblOffRoadEquipment	HorsePower	167.00	150.00
tblOffRoadEquipment	HorsePower	46.00	97.00
tblOffRoadEquipment	LoadFactor	0.50	0.41
tblOffRoadEquipment	LoadFactor	0.50	0.41
tblOffRoadEquipment	LoadFactor	0.29	0.41
tblOffRoadEquipment	LoadFactor	0.20	0.42
tblOffRoadEquipment	LoadFactor	0.40	0.37
tblOffRoadEquipment	LoadFactor	0.45	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Piling Installation Water & Dock Construction
tblOffRoadEquipment	PhaseName		Dock Construction - Landside Piling
tblOffRoadEquipment	PhaseName		Piling Installation Water & Dock Construction
tblOffRoadEquipment	PhaseName		Dock Construction - Landside Piling
tblOffRoadEquipment	PhaseName		Piling Installation Water & Dock Construction
tblOffRoadEquipment	PhaseName		Piling Installation Water & Dock Construction
tblOffRoadEquipment	PhaseName		Piling Installation Water & Dock Construction
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblSolidWaste	SolidWasteGenerationRate	0.19	1.86
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblWater	IndoorWaterUseRate	35,546.75	355,467.50
tblWater	OutdoorWaterUseRate	21,786.72	217,867.17

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	5.5872	55.4587	36.9994	0.0488	6.2116	2.9279	7.9662	3.3489	2.7247	4.9631	0.0000	5,308.2013	5,308.2013	1.1997	0.0000	5,333.3959
2016	33.9616	70.2327	47.8081	0.1072	1.7268	3.3405	4.4442	0.4631	3.2149	3.5102	0.0000	11,032.2240	11,032.2240	1.6154	0.0000	11,066.1473
Total	**39.5488**	**125.6914**	**84.8076**	**0.1559**	**7.9384**	**6.2684**	**12.4104**	**3.8120**	**5.9396**	**8.4733**	**0.0000**	**16,340.4253**	**16,340.4253**	**2.8151**	**0.0000**	**16,399.5432**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	5.5824	55.4080	36.9665	0.0487	2.6034	2.9252	4.3564	1.3519	2.7222	2.9646	0.0000	5,303.4903	5,303.4903	1.1987	0.0000	5,328.6620
2016	33.9608	70.1704	47.7714	0.1071	1.7268	3.3375	4.4412	0.4631	3.2120	3.5072	0.0000	11,023.4099	11,023.4099	1.6140	0.0000	11,057.3032
Total	**39.5433**	**125.5784**	**84.7379**	**0.1558**	**4.3301**	**6.2627**	**8.7975**	**1.8149**	**5.9342**	**6.4719**	**0.0000**	**16,326.9002**	**16,326.9002**	**2.8126**	**0.0000**	**16,385.9652**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.01**	**0.09**	**0.08**	**0.08**	**45.45**	**0.09**	**29.11**	**52.39**	**0.09**	**23.62**	**0.00**	**0.08**	**0.08**	**0.09**	**0.00**	**0.08**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.6713	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684
Energy	0.1262	1.1468	0.9633	6.8800e-003		0.0872	0.0872		0.0872	0.0872		1,376.1431	1,376.1431	0.0264	0.0252	1,384.5181
Mobile	9.3431	8.1948	36.2271	0.0680	4.6299	0.1040	4.7338	1.2370	0.0957	1.3327		5,789.4202	5,789.4202	0.2470		5,794.6061
Total	**12.1406**	**9.3419**	**37.2211**	**0.0749**	**4.6299**	**0.1912**	**4.8211**	**1.2370**	**0.1830**	**1.4200**		**7,165.6279**	**7,165.6279**	**0.2735**	**0.0252**	**7,179.1926**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.6713	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684
Energy	0.1262	1.1468	0.9633	6.8800e-003		0.0872	0.0872		0.0872	0.0872		1,376.1431	1,376.1431	0.0264	0.0252	1,384.5181
Mobile	9.3431	8.1948	36.2271	0.0680	4.6299	0.1040	4.7338	1.2370	0.0957	1.3327		5,789.4202	5,789.4202	0.2470		5,794.6061
Total	**12.1406**	**9.3419**	**37.2211**	**0.0749**	**4.6299**	**0.1912**	**4.8211**	**1.2370**	**0.1830**	**1.4200**		**7,165.6279**	**7,165.6279**	**0.2735**	**0.0252**	**7,179.1926**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Dredging	Grading	1/5/2015	2/13/2015	5	30	
2	Demolition	Demolition	8/17/2015	9/15/2015	5	22	
3	Site Preparation	Site Preparation	8/17/2015	9/15/2015	5	22	
4	Grading	Grading	9/16/2015	11/25/2015	5	51	
5	Piling Installation Land	Site Preparation	11/30/2015	2/9/2016	5	52	
6	Building Construction	Building Construction	1/1/2016	7/26/2016	5	148	
7	Piling Installation Water & Dock Construction	Site Preparation	1/4/2016	7/29/2016	5	150	
8	Dock Construction - Landside Piling	Site Preparation	1/4/2016	2/12/2016	5	30	
9	Sitework & Drainage	Site Preparation	4/13/2016	9/8/2016	5	107	
10	Tenant Improvements	Building Construction	6/16/2016	10/31/2016	5	98	
11	Paving	Paving	8/29/2016	9/8/2016	5	9	
12	Architectural Coating	Architectural Coating	10/10/2016	10/31/2016	5	16	

Acres of Grading (Site Preparation Phase): 3.45

Acres of Grading (Grading Phase): 3.45

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 32,322; Non-Residential Outdoor: 10,774

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Dredging	Cranes	1	8.00	174	0.41
Dredging	Other Material Handling Equipment	1	4.00	800	0.40
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Piling Installation Land	Air Compressors	2	8.00	361	0.48
Piling Installation Land	Bore/Drill Rigs	2	8.00	174	0.41
Piling Installation Land	Welders	2	4.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	2	6.00	46	0.45
Piling Installation Water & Dock Construction	Air Compressors	1	4.00	361	0.48
Piling Installation Water & Dock Construction	Bore/Drill Rigs	1	6.00	174	0.41
Piling Installation Water & Dock Construction	Forklifts	1	2.00	171	0.42
Piling Installation Water & Dock Construction	Other Material Handling Equipment	1	4.00	150	0.37
Piling Installation Water & Dock Construction	Welders	1	4.00	46	0.45
Dock Construction - Landside Piling	Air Compressors	1	4.00	78	0.48
Dock Construction - Landside Piling	Bore/Drill Rigs	1	6.00	205	0.50

Sitework & Drainage	Cement and Mortar Mixers	2	6.00	9	0.56
Sitework & Drainage	Skid Steer Loaders	1	8.00	64	0.37
Sitework & Drainage	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Tenant Improvements	Air Compressors	1	6.00	78	0.48
Tenant Improvements	Forklifts	1	4.00	89	0.20
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Dredging	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	3	8.00	0.00	5.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	171.00	14.70	6.90	1.00	LD_Mix	HDT_Mix	HHDT
Piling Installation Land	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	54.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Piling Installation Water & Dock Constru	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Sitework & Drainage	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tenant Improvements	2	54.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dock Construction - Landside Piling	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Dredging - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9840	10.4752	4.9300	6.1500e-003		0.5663	0.5663		0.5210	0.5210		647.0531	647.0531	0.1932		651.1097
Total	**0.9840**	**10.4752**	**4.9300**	**6.1500e-003**	**0.0000**	**0.5663**	**0.5663**	**0.0000**	**0.5210**	**0.5210**		**647.0531**	**647.0531**	**0.1932**		**651.1097**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1283	0.0317	0.3313	6.6000e-004	0.0559	4.9000e-004	0.0564	0.0148	4.5000e-004	0.0153		57.7822	57.7822	3.3100e-003		57.8518
Total	**0.1283**	**0.0317**	**0.3313**	**6.6000e-004**	**0.0559**	**4.9000e-004**	**0.0564**	**0.0148**	**4.5000e-004**	**0.0153**		**57.7822**	**57.7822**	**3.3100e-003**		**57.8518**

3.2 Dredging - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9831	10.4656	4.9255	6.1500e-003		0.5658	0.5658		0.5205	0.5205	0.0000	646.4595	646.4595	0.1930		650.5124
Total	**0.9831**	**10.4656**	**4.9255**	**6.1500e-003**	**0.0000**	**0.5658**	**0.5658**	**0.0000**	**0.5205**	**0.5205**	**0.0000**	**646.4595**	**646.4595**	**0.1930**		**650.5124**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1283	0.0317	0.3313	6.6000e-004	0.0559	4.9000e-004	0.0564	0.0148	4.5000e-004	0.0153		57.7822	57.7822	3.3100e-003		57.8518
Total	**0.1283**	**0.0317**	**0.3313**	**6.6000e-004**	**0.0559**	**4.9000e-004**	**0.0564**	**0.0148**	**4.5000e-004**	**0.0153**		**57.7822**	**57.7822**	**3.3100e-003**		**57.8518**

3.3 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0537	0.0000	0.0537	8.1300e-003	0.0000	8.1300e-003			0.0000			0.0000
Off-Road	2.3458	22.8135	17.2054	0.0183		1.3278	1.3278		1.2526	1.2526		1,854.0846	1,854.0846	0.4402		1,863.3288
Total	**2.3458**	**22.8135**	**17.2054**	**0.0183**	**0.0537**	**1.3278**	**1.3815**	**8.1300e-003**	**1.2526**	**1.2608**		**1,854.0846**	**1,854.0846**	**0.4402**		**1,863.3288**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0105	0.0739	0.0542	1.7000e-004	3.9600e-003	1.2200e-003	5.1800e-003	1.0800e-003	1.1200e-003	2.2100e-003		17.0603	17.0603	1.4000e-004		17.0632
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2053	0.0507	0.5300	1.0600e-003	0.0894	7.9000e-004	0.0902	0.0237	7.2000e-004	0.0244		92.4515	92.4515	5.3000e-003		92.5628
Total	**0.2158**	**0.1246**	**0.5843**	**1.2300e-003**	**0.0934**	**2.0100e-003**	**0.0954**	**0.0248**	**1.8400e-003**	**0.0267**		**109.5118**	**109.5118**	**5.4400e-003**		**109.6260**

3.3 Demolition - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0209	0.0000	0.0209	3.1700e-003	0.0000	3.1700e-003			0.0000			0.0000
Off-Road	2.3437	22.7926	17.1896	0.0182		1.3266	1.3266		1.2515	1.2515	0.0000	1,852.3836	1,852.3836	0.4398		1,861.6193
Total	**2.3437**	**22.7926**	**17.1896**	**0.0182**	**0.0209**	**1.3266**	**1.3476**	**3.1700e-003**	**1.2515**	**1.2547**	**0.0000**	**1,852.3836**	**1,852.3836**	**0.4398**		**1,861.6193**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0105	0.0739	0.0542	1.7000e-004	0.0671	1.2200e-003	0.0683	0.0166	1.1200e-003	0.0177		17.0603	17.0603	1.4000e-004		17.0632
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2053	0.0507	0.5300	1.0600e-003	0.0894	7.9000e-004	0.0902	0.0237	7.2000e-004	0.0244		92.4515	92.4515	5.3000e-003		92.5628
Total	**0.2158**	**0.1246**	**0.5843**	**1.2300e-003**	**0.1565**	**2.0100e-003**	**0.1585**	**0.0403**	**1.8400e-003**	**0.0421**		**109.5118**	**109.5118**	**5.4400e-003**		**109.6260**

3.4 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1663	0.0000	0.1663	0.0180	0.0000	0.0180			0.0000			0.0000
Off-Road	2.8203	32.4699	18.6797	0.0239		1.5973	1.5973		1.4695	1.4695		2,508.1983	2,508.1983	0.7488		2,523.9231
Total	**2.8203**	**32.4699**	**18.6797**	**0.0239**	**0.1663**	**1.5973**	**1.7636**	**0.0180**	**1.4695**	**1.4875**		**2,508.1983**	**2,508.1983**	**0.7488**		**2,523.9231**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2053	0.0507	0.5300	1.0600e-003	0.0894	7.9000e-004	0.0902	0.0237	7.2000e-004	0.0244		92.4515	92.4515	5.3000e-003		92.5628
Total	**0.2053**	**0.0507**	**0.5300**	**1.0600e-003**	**0.0894**	**7.9000e-004**	**0.0902**	**0.0237**	**7.2000e-004**	**0.0244**		**92.4515**	**92.4515**	**5.3000e-003**		**92.5628**

3.4 Site Preparation - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0649	0.0000	0.0649	7.0000e-003	0.0000	7.0000e-003			0.0000			0.0000
Off-Road	2.8177	32.4401	18.6626	0.0239		1.5958	1.5958		1.4682	1.4682	0.0000	2,505.8971	2,505.8971	0.7481		2,521.6075
Total	**2.8177**	**32.4401**	**18.6626**	**0.0239**	**0.0649**	**1.5958**	**1.6607**	**7.0000e-003**	**1.4682**	**1.4752**	**0.0000**	**2,505.8971**	**2,505.8971**	**0.7481**		**2,521.6075**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2053	0.0507	0.5300	1.0600e-003	0.0894	7.9000e-004	0.0902	0.0237	7.2000e-004	0.0244		92.4515	92.4515	5.3000e-003		92.5628
Total	**0.2053**	**0.0507**	**0.5300**	**1.0600e-003**	**0.0894**	**7.9000e-004**	**0.0902**	**0.0237**	**7.2000e-004**	**0.0244**		**92.4515**	**92.4515**	**5.3000e-003**		**92.5628**

3.5 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0969	0.0000	6.0969	3.3184	0.0000	3.3184			0.0000			0.0000
Off-Road	2.9656	31.2611	20.2019	0.0206		1.7524	1.7524		1.6122	1.6122		2,164.1012	2,164.1012	0.6461		2,177.6687
Total	**2.9656**	**31.2611**	**20.2019**	**0.0206**	**6.0969**	**1.7524**	**7.8493**	**3.3184**	**1.6122**	**4.9307**		**2,164.1012**	**2,164.1012**	**0.6461**		**2,177.6687**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0307	0.1227	0.5262	1.8000e-004	2.9900e-003	1.2000e-003	4.1900e-003	8.2000e-004	1.1000e-003	1.9300e-003		17.8757	17.8757	3.0000e-004		17.8819
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2566	0.0634	0.6625	1.3300e-003	0.1118	9.8000e-004	0.1128	0.0296	9.0000e-004	0.0306		115.5644	115.5644	6.6300e-003		115.7036
Total	**0.2873**	**0.1861**	**1.1888**	**1.5100e-003**	**0.1148**	**2.1800e-003**	**0.1170**	**0.0305**	**2.0000e-003**	**0.0325**		**133.4401**	**133.4401**	**6.9300e-003**		**133.5855**

3.5 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3778	0.0000	2.3778	1.2942	0.0000	1.2942			0.0000			0.0000
Off-Road	2.9629	31.2324	20.1834	0.0206		1.7508	1.7508		1.6108	1.6108	0.0000	2,162.1157	2,162.1157	0.6455		2,175.6708
Total	**2.9629**	**31.2324**	**20.1834**	**0.0206**	**2.3778**	**1.7508**	**4.1286**	**1.2942**	**1.6108**	**2.9050**	**0.0000**	**2,162.1157**	**2,162.1157**	**0.6455**		**2,175.6708**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0307	0.1227	0.5262	1.8000e-004	0.1138	1.2000e-003	0.1150	0.0280	1.1000e-003	0.0291		17.8757	17.8757	3.0000e-004		17.8819
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2566	0.0634	0.6625	1.3300e-003	0.1118	9.8000e-004	0.1128	0.0296	9.0000e-004	0.0306		115.5644	115.5644	6.6300e-003		115.7036
Total	**0.2873**	**0.1861**	**1.1888**	**1.5100e-003**	**0.2256**	**2.1800e-003**	**0.2278**	**0.0577**	**2.0000e-003**	**0.0597**		**133.4401**	**133.4401**	**6.9300e-003**		**133.5855**

3.6 Piling Installation Land - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.4127	34.1563	17.3267	0.0468		1.3978	1.3978		1.3624	1.3624		5,134.8547	5,134.8547	0.6278		5,148.0391
Total	**3.4127**	**34.1563**	**17.3267**	**0.0468**	**0.0000**	**1.3978**	**1.3978**	**0.0000**	**1.3624**	**1.3624**		**5,134.8547**	**5,134.8547**	**0.6278**		**5,148.0391**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3849	0.0951	0.9938	1.9900e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		173.3466	173.3466	9.9400e-003		173.5553
Total	**0.3849**	**0.0951**	**0.9938**	**1.9900e-003**	**0.1677**	**1.4800e-003**	**0.1691**	**0.0445**	**1.3500e-003**	**0.0458**		**173.3466**	**173.3466**	**9.9400e-003**		**173.5553**

3.6 Piling Installation Land - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.4096	34.1250	17.3108	0.0467		1.3965	1.3965		1.3612	1.3612	0.0000	5,130.1438	5,130.1438	0.6273		5,143.3161
Total	**3.4096**	**34.1250**	**17.3108**	**0.0467**	**0.0000**	**1.3965**	**1.3965**	**0.0000**	**1.3612**	**1.3612**	**0.0000**	**5,130.1438**	**5,130.1438**	**0.6273**		**5,143.3161**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3849	0.0951	0.9938	1.9900e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		173.3466	173.3466	9.9400e-003		173.5553
Total	**0.3849**	**0.0951**	**0.9938**	**1.9900e-003**	**0.1677**	**1.4800e-003**	**0.1691**	**0.0445**	**1.3500e-003**	**0.0458**		**173.3466**	**173.3466**	**9.9400e-003**		**173.5553**

3.6 Piling Installation Land - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.2210	30.8948	17.0130	0.0468		1.2682	1.2682		1.2356	1.2356		5,120.3190	5,120.3190	0.6115		5,133.1594
Total	**3.2210**	**30.8948**	**17.0130**	**0.0468**	**0.0000**	**1.2682**	**1.2682**	**0.0000**	**1.2356**	**1.2356**		**5,120.3190**	**5,120.3190**	**0.6115**		**5,133.1594**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3590	0.0858	0.8970	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3543	167.3543	9.1500e-003		167.5464
Total	**0.3590**	**0.0858**	**0.8970**	**1.9900e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**167.3543**	**167.3543**	**9.1500e-003**		**167.5464**

3.6 Piling Installation Land - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.2180	30.8665	16.9974	0.0467		1.2671	1.2671		1.2345	1.2345	0.0000	5,115.6214	5,115.6214	0.6109		5,128.4500
Total	**3.2180**	**30.8665**	**16.9974**	**0.0467**	**0.0000**	**1.2671**	**1.2671**	**0.0000**	**1.2345**	**1.2345**	**0.0000**	**5,115.6214**	**5,115.6214**	**0.6109**		**5,128.4500**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3590	0.0858	0.8970	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3543	167.3543	9.1500e-003		167.5464
Total	**0.3590**	**0.0858**	**0.8970**	**1.9900e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**167.3543**	**167.3543**	**9.1500e-003**		**167.5464**

3.7 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4765	18.0869	11.9108	0.0183		1.1730	1.1730		1.1233	1.1233		1,755.5669	1,755.5669	0.3803		1,763.5536
Total	**2.4765**	**18.0869**	**11.9108**	**0.0183**		**1.1730**	**1.1730**		**1.1233**	**1.1233**		**1,755.5669**	**1,755.5669**	**0.3803**		**1,763.5536**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3447	1.8698	2.5142	4.5400e-003	0.1312	0.0299	0.1612	0.0374	0.0275	0.0649		454.3758	454.3758	3.3900e-003		454.4469
Worker	1.2923	0.3088	3.2292	7.1700e-003	0.6036	5.0400e-003	0.6086	0.1601	4.6400e-003	0.1647		602.4754	602.4754	0.0329		603.1669
Total	**1.6370**	**2.1787**	**5.7434**	**0.0117**	**0.7348**	**0.0350**	**0.7698**	**0.1975**	**0.0322**	**0.2296**		**1,056.8512**	**1,056.8512**	**0.0363**		**1,057.6139**

3.7 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4743	18.0703	11.8999	0.0183		1.1719	1.1719		1.1223	1.1223	0.0000	1,753.9562	1,753.9562	0.3800		1,761.9356
Total	**2.4743**	**18.0703**	**11.8999**	**0.0183**		**1.1719**	**1.1719**		**1.1223**	**1.1223**	**0.0000**	**1,753.9562**	**1,753.9562**	**0.3800**		**1,761.9356**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3447	1.8698	2.5142	4.5400e-003	0.1312	0.0299	0.1612	0.0374	0.0275	0.0649		454.3758	454.3758	3.3900e-003		454.4469
Worker	1.2923	0.3088	3.2292	7.1700e-003	0.6036	5.0400e-003	0.6086	0.1601	4.6400e-003	0.1647		602.4754	602.4754	0.0329		603.1669
Total	**1.6370**	**2.1787**	**5.7434**	**0.0117**	**0.7348**	**0.0350**	**0.7698**	**0.1975**	**0.0322**	**0.2296**		**1,056.8512**	**1,056.8512**	**0.0363**		**1,057.6139**

3.8 Piling Installation Water & Dock Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.4726	13.3673	8.3754	0.0175		0.6146	0.6146		0.5836	0.5836		1,862.8689	1,862.8689	0.3397		1,870.0028
Total	**1.4726**	**13.3673**	**8.3754**	**0.0175**	**0.0000**	**0.6146**	**0.6146**	**0.0000**	**0.5836**	**0.5836**		**1,862.8689**	**1,862.8689**	**0.3397**		**1,870.0028**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3111	0.0744	0.7774	1.7300e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		145.0404	145.0404	7.9300e-003		145.2069
Total	**0.3111**	**0.0744**	**0.7774**	**1.7300e-003**	**0.1453**	**1.2100e-003**	**0.1465**	**0.0385**	**1.1200e-003**	**0.0397**		**145.0404**	**145.0404**	**7.9300e-003**		**145.2069**

3.8 Piling Installation Water & Dock Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.4712	13.3550	8.3677	0.0175		0.6141	0.6141		0.5831	0.5831	0.0000	1,861.1598	1,861.1598	0.3394		1,868.2871
Total	**1.4712**	**13.3550**	**8.3677**	**0.0175**	**0.0000**	**0.6141**	**0.6141**	**0.0000**	**0.5831**	**0.5831**	**0.0000**	**1,861.1598**	**1,861.1598**	**0.3394**		**1,868.2871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3111	0.0744	0.7774	1.7300e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		145.0404	145.0404	7.9300e-003		145.2069
Total	**0.3111**	**0.0744**	**0.7774**	**1.7300e-003**	**0.1453**	**1.2100e-003**	**0.1465**	**0.0385**	**1.1200e-003**	**0.0397**		**145.0404**	**145.0404**	**7.9300e-003**		**145.2069**

3.9 Dock Construction - Landside Piling - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5067	5.5163	2.7921	8.5400e-003		0.2466	0.2466		0.2373	0.2373		868.4387	868.4387	0.2275		873.2157
Total	**0.5067**	**5.5163**	**2.7921**	**8.5400e-003**	**0.0000**	**0.2466**	**0.2466**	**0.0000**	**0.2373**	**0.2373**		**868.4387**	**868.4387**	**0.2275**		**873.2157**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1197	0.0286	0.2990	6.6000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		55.7848	55.7848	3.0500e-003		55.8488
Total	**0.1197**	**0.0286**	**0.2990**	**6.6000e-004**	**0.0559**	**4.7000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**55.7848**	**55.7848**	**3.0500e-003**		**55.8488**

3.9 Dock Construction - Landside Piling - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5062	5.5112	2.7895	8.5300e-003		0.2464	0.2464		0.2371	0.2371	0.0000	867.6419	867.6419	0.2273		872.4145
Total	**0.5062**	**5.5112**	**2.7895**	**8.5300e-003**	**0.0000**	**0.2464**	**0.2464**	**0.0000**	**0.2371**	**0.2371**	**0.0000**	**867.6419**	**867.6419**	**0.2273**		**872.4145**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1197	0.0286	0.2990	6.6000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		55.7848	55.7848	3.0500e-003		55.8488
Total	**0.1197**	**0.0286**	**0.2990**	**6.6000e-004**	**0.0559**	**4.7000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**55.7848**	**55.7848**	**3.0500e-003**		**55.8488**

3.10 Sitework & Drainage - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5429	5.2849	4.2649	6.2200e-003		0.3553	0.3553		0.3287	0.3287		610.9037	610.9037	0.1693		614.4586
Total	**0.5429**	**5.2849**	**4.2649**	**6.2200e-003**	**0.0000**	**0.3553**	**0.3553**	**0.0000**	**0.3287**	**0.3287**		**610.9037**	**610.9037**	**0.1693**		**614.4586**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2393	0.0572	0.5980	1.3300e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		111.5695	111.5695	6.1000e-003		111.6976
Total	**0.2393**	**0.0572**	**0.5980**	**1.3300e-003**	**0.1118**	**9.3000e-004**	**0.1127**	**0.0296**	**8.6000e-004**	**0.0305**		**111.5695**	**111.5695**	**6.1000e-003**		**111.6976**

3.10 Sitework & Drainage - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5424	5.2801	4.2610	6.2100e-003		0.3550	0.3550		0.3284	0.3284	0.0000	610.3432	610.3432	0.1691		613.8949
Total	**0.5424**	**5.2801**	**4.2610**	**6.2100e-003**	**0.0000**	**0.3550**	**0.3550**	**0.0000**	**0.3284**	**0.3284**	**0.0000**	**610.3432**	**610.3432**	**0.1691**		**613.8949**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2393	0.0572	0.5980	1.3300e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		111.5695	111.5695	6.1000e-003		111.6976
Total	**0.2393**	**0.0572**	**0.5980**	**1.3300e-003**	**0.1118**	**9.3000e-004**	**0.1127**	**0.0296**	**8.6000e-004**	**0.0305**		**111.5695**	**111.5695**	**6.1000e-003**		**111.6976**

3.11 Tenant Improvements - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4819	3.3489	2.5154	3.7300e-003		0.2783	0.2783		0.2718	0.2718		360.8090	360.8090	0.0571		362.0085
Total	**0.4819**	**3.3489**	**2.5154**	**3.7300e-003**		**0.2783**	**0.2783**		**0.2718**	**0.2718**		**360.8090**	**360.8090**	**0.0571**		**362.0085**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3447	1.8698	2.5142	4.5400e-003	0.1312	0.0299	0.1612	0.0374	0.0275	0.0649		454.3758	454.3758	3.3900e-003		454.4469
Worker	1.2923	0.3088	3.2292	7.1700e-003	0.6036	5.0400e-003	0.6086	0.1601	4.6400e-003	0.1647		602.4754	602.4754	0.0329		603.1669
Total	**1.6370**	**2.1787**	**5.7434**	**0.0117**	**0.7348**	**0.0350**	**0.7698**	**0.1975**	**0.0322**	**0.2296**		**1,056.8512**	**1,056.8512**	**0.0363**		**1,057.6139**

3.11 Tenant Improvements - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4815	3.3458	2.5131	3.7300e-003		0.2780	0.2780		0.2715	0.2715	0.0000	360.4780	360.4780	0.0571		361.6764
Total	**0.4815**	**3.3458**	**2.5131**	**3.7300e-003**		**0.2780**	**0.2780**		**0.2715**	**0.2715**	**0.0000**	**360.4780**	**360.4780**	**0.0571**		**361.6764**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3447	1.8698	2.5142	4.5400e-003	0.1312	0.0299	0.1612	0.0374	0.0275	0.0649		454.3758	454.3758	3.3900e-003		454.4469
Worker	1.2923	0.3088	3.2292	7.1700e-003	0.6036	5.0400e-003	0.6086	0.1601	4.6400e-003	0.1647		602.4754	602.4754	0.0329		603.1669
Total	**1.6370**	**2.1787**	**5.7434**	**0.0117**	**0.7348**	**0.0350**	**0.7698**	**0.1975**	**0.0322**	**0.2296**		**1,056.8512**	**1,056.8512**	**0.0363**		**1,057.6139**

3.12 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7811	17.9300	12.1433	0.0176		1.1252	1.1252		1.0363	1.0363		1,804.8600	1,804.8600	0.5344		1,816.0828
Paving	0.7307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.5118**	**17.9300**	**12.1433**	**0.0176**		**1.1252**	**1.1252**		**1.0363**	**1.0363**		**1,804.8600**	**1,804.8600**	**0.5344**		**1,816.0828**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3590	0.0858	0.8970	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3543	167.3543	9.1500e-003		167.5464
Total	**0.3590**	**0.0858**	**0.8970**	**1.9900e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**167.3543**	**167.3543**	**9.1500e-003**		**167.5464**

3.12 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7795	17.9135	12.1322	0.0176		1.1241	1.1241		1.0354	1.0354	0.0000	1,803.2041	1,803.2041	0.5339		1,814.4166
Paving	0.7307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.5102**	**17.9135**	**12.1322**	**0.0176**		**1.1241**	**1.1241**		**1.0354**	**1.0354**	**0.0000**	**1,803.2041**	**1,803.2041**	**0.5339**		**1,814.4166**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3590	0.0858	0.8970	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		167.3543	167.3543	9.1500e-003		167.5464
Total	**0.3590**	**0.0858**	**0.8970**	**1.9900e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**167.3543**	**167.3543**	**9.1500e-003**		**167.5464**

3.13 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.2109					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**31.5794**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2633	0.0629	0.6578	1.4600e-003	0.1230	1.0300e-003	0.1240	0.0326	9.4000e-004	0.0336		122.7265	122.7265	6.7100e-003		122.8673
Total	**0.2633**	**0.0629**	**0.6578**	**1.4600e-003**	**0.1230**	**1.0300e-003**	**0.1240**	**0.0326**	**9.4000e-004**	**0.0336**		**122.7265**	**122.7265**	**6.7100e-003**		**122.8673**

3.13 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.2109					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3681	2.3701	1.8822	2.9700e-003		0.1964	0.1964		0.1964	0.1964	0.0000	281.1898	281.1898	0.0332		281.8860
Total	**31.5791**	**2.3701**	**1.8822**	**2.9700e-003**		**0.1964**	**0.1964**		**0.1964**	**0.1964**	**0.0000**	**281.1898**	**281.1898**	**0.0332**		**281.8860**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2633	0.0629	0.6578	1.4600e-003	0.1230	1.0300e-003	0.1240	0.0326	9.4000e-004	0.0336		122.7265	122.7265	6.7100e-003		122.8673
Total	**0.2633**	**0.0629**	**0.6578**	**1.4600e-003**	**0.1230**	**1.0300e-003**	**0.1240**	**0.0326**	**9.4000e-004**	**0.0336**		**122.7265**	**122.7265**	**6.7100e-003**		**122.8673**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.3431	8.1948	36.2271	0.0680	4.6299	0.1040	4.7338	1.2370	0.0957	1.3327		5,789.4202	5,789.4202	0.2470		5,794.6061
Unmitigated	9.3431	8.1948	36.2271	0.0680	4.6299	0.1040	4.7338	1.2370	0.0957	1.3327		5,789.4202	5,789.4202	0.2470		5,794.6061

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2.20	0.47	0.20	5,375	5,375
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	1,457.19	1,528.63	1168.99	2,030,418	2,030,418
Total	1,459.39	1,529.11	1,169.19	2,035,794	2,035,794

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1262	1.1468	0.9633	6.8800e-003		0.0872	0.0872		0.0872	0.0872		1,376.1431	1,376.1431	0.0264	0.0252	1,384.5181
NaturalGas Unmitigated	0.1262	1.1468	0.9633	6.8800e-003		0.0872	0.0872		0.0872	0.0872		1,376.1431	1,376.1431	0.0264	0.0252	1,384.5181

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	5.25479	6.0000e-005	5.2000e-004	4.3000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6182	0.6182	1.0000e-005	1.0000e-005	0.6220
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	11692	0.1261	1.1463	0.9629	6.8800e-003		0.0871	0.0871		0.0871	0.0871		1,375.5249	1,375.5249	0.0264	0.0252	1,383.8961
Total		**0.1262**	**1.1468**	**0.9633**	**6.8800e-003**		**0.0872**	**0.0872**		**0.0872**	**0.0872**		**1,376.1431**	**1,376.1431**	**0.0264**	**0.0252**	**1,384.5181**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	0.00525479	6.0000e-005	5.2000e-004	4.3000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6182	0.6182	1.0000e-005	1.0000e-005	0.6220
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	11.692	0.1261	1.1463	0.9629	6.8800e-003		0.0871	0.0871		0.0871	0.0871		1,375.5249	1,375.5249	0.0264	0.0252	1,383.8961
Total		**0.1262**	**1.1468**	**0.9633**	**6.8800e-003**		**0.0872**	**0.0872**		**0.0872**	**0.0872**		**1,376.1431**	**1,376.1431**	**0.0264**	**0.0252**	**1,384.5181**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.6713	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684
Unmitigated	2.6713	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.5344					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9700e-003	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684
Total	**2.6713**	**2.9000e-004**	**0.0307**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0647**	**0.0647**	**1.8000e-004**		**0.0684**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.5344					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9700e-003	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684
Total	**2.6713**	**2.9000e-004**	**0.0307**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0647**	**0.0647**	**1.8000e-004**		**0.0684**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Balboa Marina

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.20	1000sqft	0.00	200.00	0
Parking Lot	279.00	Space	2.51	111,600.00	0
Quality Restaurant	16.20	1000sqft	0.37	16,200.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	8			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Climate Zone 8 per CalEEMod lookup table. Project located in the City of Newport Beach, Orange County. Dredging in winter of 2015 remainder of Project constuction fall of 2015 until fall of 2016 with operational year 2016.

Land Use - Land use per project description, plans, and schedule provided by project proponent.
Parking estimates per project drawings and specifications. Parking includes spaces under raised structure and open parking.

Off-road Equipment - Dock Constrction - landside pile install for 8 piles on shore portion of project.

Off-road Equipment - Air compressors and forklifts used on as needed basis and not run during entire construction period.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	9,874.00	10,774.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	29,622.00	32,322.00

tblAreaCoating	Area_Nonresidential_Interior	29622	32322
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	10
tblConstructionPhase	NumDays	10.00	16.00
tblConstructionPhase	NumDays	220.00	98.00
tblConstructionPhase	NumDays	220.00	148.00
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	6.00	30.00
tblConstructionPhase	NumDays	6.00	51.00
tblConstructionPhase	NumDays	10.00	9.00
tblConstructionPhase	NumDays	3.00	22.00
tblConstructionPhase	NumDays	3.00	52.00
tblConstructionPhase	NumDays	3.00	150.00
tblConstructionPhase	NumDays	3.00	30.00
tblConstructionPhase	NumDays	3.00	107.00
tblConstructionPhase	PhaseEndDate	09/30/16	10/31/16
tblConstructionPhase	PhaseEndDate	01/24/17	10/31/16
tblConstructionPhase	PhaseEndDate	09/02/16	07/26/16
tblConstructionPhase	PhaseEndDate	03/17/15	09/15/15
tblConstructionPhase	PhaseEndDate	11/11/16	09/08/16
tblConstructionPhase	PhaseEndDate	10/15/15	09/15/15
tblConstructionPhase	PhaseEndDate	02/05/16	02/09/16
tblConstructionPhase	PhaseEndDate	02/21/17	07/29/16
tblConstructionPhase	PhaseEndDate	09/09/16	02/12/16
tblConstructionPhase	PhaseEndDate	07/12/16	09/08/16
tblConstructionPhase	PhaseStartDate	09/09/16	10/10/16
tblConstructionPhase	PhaseStartDate	09/09/16	06/16/16
tblConstructionPhase	PhaseStartDate	02/10/16	01/01/16
tblConstructionPhase	PhaseStartDate	02/14/15	08/17/15

tblConstructionPhase	PhaseStartDate	11/01/16	08/29/16
tblConstructionPhase	PhaseStartDate	09/16/15	08/17/15
tblConstructionPhase	PhaseStartDate	11/26/15	11/30/15
tblConstructionPhase	PhaseStartDate	07/27/16	01/04/16
tblConstructionPhase	PhaseStartDate	07/30/16	01/04/16
tblConstructionPhase	PhaseStartDate	02/13/16	04/13/16
tblGrading	AcresOfGrading	25.50	3.45
tblGrading	AcresOfGrading	33.00	3.45
tblGrading	MaterialImported	0.00	1,364.00
tblLandscapeEquipment	NumberSummerDays	250	180
tblOffRoadEquipment	HorsePower	78.00	361.00
tblOffRoadEquipment	HorsePower	78.00	361.00
tblOffRoadEquipment	HorsePower	205.00	174.00
tblOffRoadEquipment	HorsePower	205.00	174.00
tblOffRoadEquipment	HorsePower	226.00	174.00
tblOffRoadEquipment	HorsePower	89.00	171.00
tblOffRoadEquipment	HorsePower	167.00	800.00
tblOffRoadEquipment	HorsePower	167.00	150.00
tblOffRoadEquipment	HorsePower	46.00	97.00
tblOffRoadEquipment	LoadFactor	0.50	0.41
tblOffRoadEquipment	LoadFactor	0.50	0.41
tblOffRoadEquipment	LoadFactor	0.29	0.41
tblOffRoadEquipment	LoadFactor	0.20	0.42
tblOffRoadEquipment	LoadFactor	0.40	0.37
tblOffRoadEquipment	LoadFactor	0.45	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Piling Installation Water & Dock Construction
tblOffRoadEquipment	PhaseName		Dock Construction - Landside Piling
tblOffRoadEquipment	PhaseName		Piling Installation Water & Dock Construction
tblOffRoadEquipment	PhaseName		Dock Construction - Landside Piling
tblOffRoadEquipment	PhaseName		Piling Installation Water & Dock Construction
tblOffRoadEquipment	PhaseName		Piling Installation Water & Dock Construction
tblOffRoadEquipment	PhaseName		Piling Installation Water & Dock Construction
tblOffRoadEquipment	UsageHours	8.00	6.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	8.00	6.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblSolidWaste	SolidWasteGenerationRate	0.19	1.86
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblWater	IndoorWaterUseRate	35,546.75	355,467.50
tblWater	OutdoorWaterUseRate	21,786.72	217,867.17

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	5.5209	55.4470	37.0790	0.0489	6.2116	2.9279	7.9662	3.3489	2.7247	4.9631	0.0000	5,319.6595	5,319.6595	1.1997	0.0000	5,344.8541
2016	33.6819	70.1420	47.8291	0.1080	1.7268	3.3402	4.4439	0.4631	3.2146	3.5099	0.0000	11,100.3459	11,100.3459	1.6153	0.0000	11,134.2671
Total	**39.2028**	**125.5890**	**84.9082**	**0.1569**	**7.9384**	**6.2681**	**12.4101**	**3.8120**	**5.9393**	**8.4730**	**0.0000**	**16,420.0054**	**16,420.0054**	**2.8150**	**0.0000**	**16,479.1212**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	5.5162	55.3963	37.0461	0.0489	2.6034	2.9252	4.3563	1.3519	2.7222	2.9646	0.0000	5,314.9485	5,314.9485	1.1987	0.0000	5,340.1202
2016	33.6811	70.0798	47.7923	0.1079	1.7268	3.3372	4.4409	0.4631	3.2117	3.5070	0.0000	11,091.5318	11,091.5318	1.6139	0.0000	11,125.4230
Total	**39.1973**	**125.4760**	**84.8385**	**0.1568**	**4.3301**	**6.2624**	**8.7972**	**1.8149**	**5.9339**	**6.4715**	**0.0000**	**16,406.4804**	**16,406.4804**	**2.8125**	**0.0000**	**16,465.5432**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.01**	**0.09**	**0.08**	**0.08**	**45.45**	**0.09**	**29.11**	**52.39**	**0.09**	**23.62**	**0.00**	**0.08**	**0.08**	**0.09**	**0.00**	**0.08**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Area	2.6713	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684
Energy	0.1262	1.1468	0.9633	6.8800e-003		0.0872	0.0872		0.0872	0.0872		1,376.1431	1,376.1431	0.0264	0.0252	1,384.5181
Mobile	8.3087	7.8427	34.5218	0.0715	4.6299	0.1031	4.7330	1.2370	0.0949	1.3319		6,081.2785	6,081.2785	0.2465		6,086.4557
Total	**11.1062**	**8.9898**	**35.5158**	**0.0784**	**4.6299**	**0.1904**	**4.8203**	**1.2370**	**0.1822**	**1.4192**		**7,457.4863**	**7,457.4863**	**0.2731**	**0.0252**	**7,471.0422**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Area	2.6713	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684
Energy	0.1262	1.1468	0.9633	6.8800e-003		0.0872	0.0872		0.0872	0.0872		1,376.1431	1,376.1431	0.0264	0.0252	1,384.5181
Mobile	8.3087	7.8427	34.5218	0.0715	4.6299	0.1031	4.7330	1.2370	0.0949	1.3319		6,081.2785	6,081.2785	0.2465		6,086.4557
Total	**11.1062**	**8.9898**	**35.5158**	**0.0784**	**4.6299**	**0.1904**	**4.8203**	**1.2370**	**0.1822**	**1.4192**		**7,457.4863**	**7,457.4863**	**0.2731**	**0.0252**	**7,471.0422**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Dredging	Grading	1/5/2015	2/13/2015	5	30	
2	Demolition	Demolition	8/17/2015	9/15/2015	5	22	
3	Site Preparation	Site Preparation	8/17/2015	9/15/2015	5	22	
4	Grading	Grading	9/16/2015	11/25/2015	5	51	
5	Piling Installation Land	Site Preparation	11/30/2015	2/9/2016	5	52	
6	Building Construction	Building Construction	1/1/2016	7/26/2016	5	148	
7	Piling Installation Water & Dock Construction	Site Preparation	1/4/2016	7/29/2016	5	150	
8	Dock Construction - Landside Piling	Site Preparation	1/4/2016	2/12/2016	5	30	
9	Sitework & Drainage	Site Preparation	4/13/2016	9/8/2016	5	107	
10	Tenant Improvements	Building Construction	6/16/2016	10/31/2016	5	98	
11	Paving	Paving	8/29/2016	9/8/2016	5	9	
12	Architectural Coating	Architectural Coating	10/10/2016	10/31/2016	5	16	

Acres of Grading (Site Preparation Phase): 3.45

Acres of Grading (Grading Phase): 3.45

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 32,322; Non-Residential Outdoor: 10,774

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Dredging	Cranes	1	8.00	174	0.41
Dredging	Other Material Handling Equipment	1	4.00	800	0.40
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Scrapers	1	8.00	361	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Piling Installation Land	Air Compressors	2	8.00	361	0.48
Piling Installation Land	Bore/Drill Rigs	2	8.00	174	0.41
Piling Installation Land	Welders	2	4.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	2	6.00	46	0.45
Piling Installation Water & Dock Construction	Air Compressors	1	4.00	361	0.48
Piling Installation Water & Dock Construction	Bore/Drill Rigs	1	6.00	174	0.41
Piling Installation Water & Dock Construction	Forklifts	1	2.00	171	0.42
Piling Installation Water & Dock Construction	Other Material Handling Equipment	1	4.00	150	0.37
Piling Installation Water & Dock Construction	Welders	1	4.00	46	0.45
Dock Construction - Landside Piling	Air Compressors	1	4.00	78	0.48
Dock Construction - Landside Piling	Bore/Drill Rigs	1	6.00	205	0.50

Sitework & Drainage	Cement and Mortar Mixers	2	6.00	9	0.56
Sitework & Drainage	Skid Steer Loaders	1	8.00	64	0.37
Sitework & Drainage	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Tenant Improvements	Air Compressors	1	6.00	78	0.48
Tenant Improvements	Forklifts	1	4.00	89	0.20
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Dredging	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	3	8.00	0.00	5.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	171.00	14.70	6.90	1.00	LD_Mix	HDT_Mix	HHDT
Piling Installation Land	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	6	54.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Piling Installation Water & Dock Constru	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Sitework & Drainage	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Tenant Improvements	2	54.00	21.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	11.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Dock Construction - Landside Piling	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Dredging - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9840	10.4752	4.9300	6.1500e-003		0.5663	0.5663		0.5210	0.5210		647.0531	647.0531	0.1932		651.1097
Total	**0.9840**	**10.4752**	**4.9300**	**6.1500e-003**	**0.0000**	**0.5663**	**0.5663**	**0.0000**	**0.5210**	**0.5210**		**647.0531**	**647.0531**	**0.1932**		**651.1097**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1078	0.0289	0.3582	7.1000e-004	0.0559	4.9000e-004	0.0564	0.0148	4.5000e-004	0.0153		61.6016	61.6016	3.3100e-003		61.6712
Total	**0.1078**	**0.0289**	**0.3582**	**7.1000e-004**	**0.0559**	**4.9000e-004**	**0.0564**	**0.0148**	**4.5000e-004**	**0.0153**		**61.6016**	**61.6016**	**3.3100e-003**		**61.6712**

3.2 Dredging - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.9831	10.4656	4.9255	6.1500e-003		0.5658	0.5658		0.5205	0.5205	0.0000	646.4595	646.4595	0.1930		650.5124
Total	**0.9831**	**10.4656**	**4.9255**	**6.1500e-003**	**0.0000**	**0.5658**	**0.5658**	**0.0000**	**0.5205**	**0.5205**	**0.0000**	**646.4595**	**646.4595**	**0.1930**		**650.5124**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1078	0.0289	0.3582	7.1000e-004	0.0559	4.9000e-004	0.0564	0.0148	4.5000e-004	0.0153		61.6016	61.6016	3.3100e-003		61.6712
Total	**0.1078**	**0.0289**	**0.3582**	**7.1000e-004**	**0.0559**	**4.9000e-004**	**0.0564**	**0.0148**	**4.5000e-004**	**0.0153**		**61.6016**	**61.6016**	**3.3100e-003**		**61.6712**

3.3 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0537	0.0000	0.0537	8.1300e-003	0.0000	8.1300e-003			0.0000			0.0000
Off-Road	2.3458	22.8135	17.2054	0.0183		1.3278	1.3278		1.2526	1.2526		1,854.0846	1,854.0846	0.4402		1,863.3288
Total	**2.3458**	**22.8135**	**17.2054**	**0.0183**	**0.0537**	**1.3278**	**1.3815**	**8.1300e-003**	**1.2526**	**1.2608**		**1,854.0846**	**1,854.0846**	**0.4402**		**1,863.3288**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.8600e-003	0.0713	0.0478	1.7000e-004	3.9600e-003	1.2200e-003	5.1800e-003	1.0800e-003	1.1200e-003	2.2000e-003		17.1008	17.1008	1.4000e-004		17.1036
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1725	0.0462	0.5731	1.1300e-003	0.0894	7.9000e-004	0.0902	0.0237	7.2000e-004	0.0244		98.5625	98.5625	5.3000e-003		98.6739
Total	**0.1823**	**0.1175**	**0.6209**	**1.3000e-003**	**0.0934**	**2.0100e-003**	**0.0954**	**0.0248**	**1.8400e-003**	**0.0266**		**115.6633**	**115.6633**	**5.4400e-003**		**115.7775**

3.3 Demolition - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0209	0.0000	0.0209	3.1700e-003	0.0000	3.1700e-003			0.0000			0.0000
Off-Road	2.3437	22.7926	17.1896	0.0182		1.3266	1.3266		1.2515	1.2515	0.0000	1,852.3836	1,852.3836	0.4398		1,861.6193
Total	**2.3437**	**22.7926**	**17.1896**	**0.0182**	**0.0209**	**1.3266**	**1.3476**	**3.1700e-003**	**1.2515**	**1.2547**	**0.0000**	**1,852.3836**	**1,852.3836**	**0.4398**		**1,861.6193**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.8600e-003	0.0713	0.0478	1.7000e-004	0.0671	1.2200e-003	0.0683	0.0166	1.1200e-003	0.0177		17.1008	17.1008	1.4000e-004		17.1036
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1725	0.0462	0.5731	1.1300e-003	0.0894	7.9000e-004	0.0902	0.0237	7.2000e-004	0.0244		98.5625	98.5625	5.3000e-003		98.6739
Total	**0.1823**	**0.1175**	**0.6209**	**1.3000e-003**	**0.1565**	**2.0100e-003**	**0.1585**	**0.0403**	**1.8400e-003**	**0.0421**		**115.6633**	**115.6633**	**5.4400e-003**		**115.7775**

3.4 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1663	0.0000	0.1663	0.0180	0.0000	0.0180			0.0000			0.0000
Off-Road	2.8203	32.4699	18.6797	0.0239		1.5973	1.5973		1.4695	1.4695		2,508.1983	2,508.1983	0.7488		2,523.9231
Total	**2.8203**	**32.4699**	**18.6797**	**0.0239**	**0.1663**	**1.5973**	**1.7636**	**0.0180**	**1.4695**	**1.4875**		**2,508.1983**	**2,508.1983**	**0.7488**		**2,523.9231**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1725	0.0462	0.5731	1.1300e-003	0.0894	7.9000e-004	0.0902	0.0237	7.2000e-004	0.0244		98.5625	98.5625	5.3000e-003		98.6739
Total	**0.1725**	**0.0462**	**0.5731**	**1.1300e-003**	**0.0894**	**7.9000e-004**	**0.0902**	**0.0237**	**7.2000e-004**	**0.0244**		**98.5625**	**98.5625**	**5.3000e-003**		**98.6739**

3.4 Site Preparation - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0649	0.0000	0.0649	7.0000e-003	0.0000	7.0000e-003			0.0000			0.0000
Off-Road	2.8177	32.4401	18.6626	0.0239		1.5958	1.5958		1.4682	1.4682	0.0000	2,505.8971	2,505.8971	0.7481		2,521.6075
Total	**2.8177**	**32.4401**	**18.6626**	**0.0239**	**0.0649**	**1.5958**	**1.6607**	**7.0000e-003**	**1.4682**	**1.4752**	**0.0000**	**2,505.8971**	**2,505.8971**	**0.7481**		**2,521.6075**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1725	0.0462	0.5731	1.1300e-003	0.0894	7.9000e-004	0.0902	0.0237	7.2000e-004	0.0244		98.5625	98.5625	5.3000e-003		98.6739
Total	**0.1725**	**0.0462**	**0.5731**	**1.1300e-003**	**0.0894**	**7.9000e-004**	**0.0902**	**0.0237**	**7.2000e-004**	**0.0244**		**98.5625**	**98.5625**	**5.3000e-003**		**98.6739**

3.5 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.0969	0.0000	6.0969	3.3184	0.0000	3.3184			0.0000			0.0000
Off-Road	2.9656	31.2611	20.2019	0.0206		1.7524	1.7524		1.6122	1.6122		2,164.1012	2,164.1012	0.6461		2,177.6687
Total	**2.9656**	**31.2611**	**20.2019**	**0.0206**	**6.0969**	**1.7524**	**7.8493**	**3.3184**	**1.6122**	**4.9307**		**2,164.1012**	**2,164.1012**	**0.6461**		**2,177.6687**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0268	0.1222	0.4298	1.9000e-004	2.9900e-003	1.1400e-003	4.1300e-003	8.2000e-004	1.0500e-003	1.8700e-003		18.4731	18.4731	2.7000e-004		18.4788
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2156	0.0577	0.7163	1.4200e-003	0.1118	9.8000e-004	0.1128	0.0296	9.0000e-004	0.0306		123.2032	123.2032	6.6300e-003		123.3424
Total	**0.2424**	**0.1799**	**1.1461**	**1.6100e-003**	**0.1148**	**2.1200e-003**	**0.1169**	**0.0305**	**1.9500e-003**	**0.0324**		**141.6763**	**141.6763**	**6.9000e-003**		**141.8211**

3.5 Grading - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.3778	0.0000	2.3778	1.2942	0.0000	1.2942			0.0000			0.0000
Off-Road	2.9629	31.2324	20.1834	0.0206		1.7508	1.7508		1.6108	1.6108	0.0000	2,162.1157	2,162.1157	0.6455		2,175.6708
Total	**2.9629**	**31.2324**	**20.1834**	**0.0206**	**2.3778**	**1.7508**	**4.1286**	**1.2942**	**1.6108**	**2.9050**	**0.0000**	**2,162.1157**	**2,162.1157**	**0.6455**		**2,175.6708**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0268	0.1222	0.4298	1.9000e-004	0.1138	1.1400e-003	0.1150	0.0280	1.0500e-003	0.0291		18.4731	18.4731	2.7000e-004		18.4788
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2156	0.0577	0.7163	1.4200e-003	0.1118	9.8000e-004	0.1128	0.0296	9.0000e-004	0.0306		123.2032	123.2032	6.6300e-003		123.3424
Total	**0.2424**	**0.1799**	**1.1461**	**1.6100e-003**	**0.2256**	**2.1200e-003**	**0.2277**	**0.0577**	**1.9500e-003**	**0.0596**		**141.6763**	**141.6763**	**6.9000e-003**		**141.8211**

3.6 Piling Installation Land - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.4127	34.1563	17.3267	0.0468		1.3978	1.3978		1.3624	1.3624		5,134.8547	5,134.8547	0.6278		5,148.0391
Total	**3.4127**	**34.1563**	**17.3267**	**0.0468**	**0.0000**	**1.3978**	**1.3978**	**0.0000**	**1.3624**	**1.3624**		**5,134.8547**	**5,134.8547**	**0.6278**		**5,148.0391**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3234	0.0866	1.0745	2.1300e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		184.8048	184.8048	9.9400e-003		185.0135
Total	**0.3234**	**0.0866**	**1.0745**	**2.1300e-003**	**0.1677**	**1.4800e-003**	**0.1691**	**0.0445**	**1.3500e-003**	**0.0458**		**184.8048**	**184.8048**	**9.9400e-003**		**185.0135**

3.6 Piling Installation Land - 2015

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.4096	34.1250	17.3108	0.0467		1.3965	1.3965		1.3612	1.3612	0.0000	5,130.1438	5,130.1438	0.6273		5,143.3161
Total	**3.4096**	**34.1250**	**17.3108**	**0.0467**	**0.0000**	**1.3965**	**1.3965**	**0.0000**	**1.3612**	**1.3612**	**0.0000**	**5,130.1438**	**5,130.1438**	**0.6273**		**5,143.3161**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3234	0.0866	1.0745	2.1300e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		184.8048	184.8048	9.9400e-003		185.0135
Total	**0.3234**	**0.0866**	**1.0745**	**2.1300e-003**	**0.1677**	**1.4800e-003**	**0.1691**	**0.0445**	**1.3500e-003**	**0.0458**		**184.8048**	**184.8048**	**9.9400e-003**		**185.0135**

3.6 Piling Installation Land - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.2210	30.8948	17.0130	0.0468		1.2682	1.2682		1.2356	1.2356		5,120.3190	5,120.3190	0.6115		5,133.1594
Total	**3.2210**	**30.8948**	**17.0130**	**0.0468**	**0.0000**	**1.2682**	**1.2682**	**0.0000**	**1.2356**	**1.2356**		**5,120.3190**	**5,120.3190**	**0.6115**		**5,133.1594**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3013	0.0781	0.9730	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4374	178.4374	9.1500e-003		178.6295
Total	**0.3013**	**0.0781**	**0.9730**	**2.1200e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**178.4374**	**178.4374**	**9.1500e-003**		**178.6295**

3.6 Piling Installation Land - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	3.2180	30.8665	16.9974	0.0467		1.2671	1.2671		1.2345	1.2345	0.0000	5,115.6214	5,115.6214	0.6109		5,128.4500
Total	**3.2180**	**30.8665**	**16.9974**	**0.0467**	**0.0000**	**1.2671**	**1.2671**	**0.0000**	**1.2345**	**1.2345**	**0.0000**	**5,115.6214**	**5,115.6214**	**0.6109**		**5,128.4500**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3013	0.0781	0.9730	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4374	178.4374	9.1500e-003		178.6295
Total	**0.3013**	**0.0781**	**0.9730**	**2.1200e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**178.4374**	**178.4374**	**9.1500e-003**		**178.6295**

3.7 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4765	18.0869	11.9108	0.0183		1.1730	1.1730		1.1233	1.1233		1,755.5669	1,755.5669	0.3803		1,763.5536
Total	**2.4765**	**18.0869**	**11.9108**	**0.0183**		**1.1730**	**1.1730**		**1.1233**	**1.1233**		**1,755.5669**	**1,755.5669**	**0.3803**		**1,763.5536**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3148	1.8238	2.0947	4.5700e-003	0.1312	0.0296	0.1609	0.0374	0.0272	0.0646		458.2157	458.2157	3.2900e-003		458.2847
Worker	1.0848	0.2812	3.5026	7.6500e-003	0.6036	5.0400e-003	0.6086	0.1601	4.6400e-003	0.1647		642.3746	642.3746	0.0329		643.0661
Total	**1.3996**	**2.1049**	**5.5973**	**0.0122**	**0.7348**	**0.0347**	**0.7695**	**0.1975**	**0.0319**	**0.2293**		**1,100.5903**	**1,100.5903**	**0.0362**		**1,101.3509**

3.7 Building Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4743	18.0703	11.8999	0.0183		1.1719	1.1719		1.1223	1.1223	0.0000	1,753.9562	1,753.9562	0.3800		1,761.9356
Total	**2.4743**	**18.0703**	**11.8999**	**0.0183**		**1.1719**	**1.1719**		**1.1223**	**1.1223**	**0.0000**	**1,753.9562**	**1,753.9562**	**0.3800**		**1,761.9356**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3148	1.8238	2.0947	4.5700e-003	0.1312	0.0296	0.1609	0.0374	0.0272	0.0646		458.2157	458.2157	3.2900e-003		458.2847
Worker	1.0848	0.2812	3.5026	7.6500e-003	0.6036	5.0400e-003	0.6086	0.1601	4.6400e-003	0.1647		642.3746	642.3746	0.0329		643.0661
Total	**1.3996**	**2.1049**	**5.5973**	**0.0122**	**0.7348**	**0.0347**	**0.7695**	**0.1975**	**0.0319**	**0.2293**		**1,100.5903**	**1,100.5903**	**0.0362**		**1,101.3509**

3.8 Piling Installation Water & Dock Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.4726	13.3673	8.3754	0.0175		0.6146	0.6146		0.5836	0.5836		1,862.8689	1,862.8689	0.3397		1,870.0028
Total	**1.4726**	**13.3673**	**8.3754**	**0.0175**	**0.0000**	**0.6146**	**0.6146**	**0.0000**	**0.5836**	**0.5836**		**1,862.8689**	**1,862.8689**	**0.3397**		**1,870.0028**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2612	0.0677	0.8432	1.8400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		154.6457	154.6457	7.9300e-003		154.8122
Total	**0.2612**	**0.0677**	**0.8432**	**1.8400e-003**	**0.1453**	**1.2100e-003**	**0.1465**	**0.0385**	**1.1200e-003**	**0.0397**		**154.6457**	**154.6457**	**7.9300e-003**		**154.8122**

3.8 Piling Installation Water & Dock Construction - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.4712	13.3550	8.3677	0.0175		0.6141	0.6141		0.5831	0.5831	0.0000	1,861.1598	1,861.1598	0.3394		1,868.2871
Total	**1.4712**	**13.3550**	**8.3677**	**0.0175**	**0.0000**	**0.6141**	**0.6141**	**0.0000**	**0.5831**	**0.5831**	**0.0000**	**1,861.1598**	**1,861.1598**	**0.3394**		**1,868.2871**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2612	0.0677	0.8432	1.8400e-003	0.1453	1.2100e-003	0.1465	0.0385	1.1200e-003	0.0397		154.6457	154.6457	7.9300e-003		154.8122
Total	**0.2612**	**0.0677**	**0.8432**	**1.8400e-003**	**0.1453**	**1.2100e-003**	**0.1465**	**0.0385**	**1.1200e-003**	**0.0397**		**154.6457**	**154.6457**	**7.9300e-003**		**154.8122**

3.9 Dock Construction - Landside Piling - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5067	5.5163	2.7921	8.5400e-003		0.2466	0.2466		0.2373	0.2373		868.4387	868.4387	0.2275		873.2157
Total	**0.5067**	**5.5163**	**2.7921**	**8.5400e-003**	**0.0000**	**0.2466**	**0.2466**	**0.0000**	**0.2373**	**0.2373**		**868.4387**	**868.4387**	**0.2275**		**873.2157**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1004	0.0260	0.3243	7.1000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		59.4791	59.4791	3.0500e-003		59.5432
Total	**0.1004**	**0.0260**	**0.3243**	**7.1000e-004**	**0.0559**	**4.7000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**59.4791**	**59.4791**	**3.0500e-003**		**59.5432**

3.9 Dock Construction - Landside Piling - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5062	5.5112	2.7895	8.5300e-003		0.2464	0.2464		0.2371	0.2371	0.0000	867.6419	867.6419	0.2273		872.4145
Total	**0.5062**	**5.5112**	**2.7895**	**8.5300e-003**	**0.0000**	**0.2464**	**0.2464**	**0.0000**	**0.2371**	**0.2371**	**0.0000**	**867.6419**	**867.6419**	**0.2273**		**872.4145**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1004	0.0260	0.3243	7.1000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		59.4791	59.4791	3.0500e-003		59.5432
Total	**0.1004**	**0.0260**	**0.3243**	**7.1000e-004**	**0.0559**	**4.7000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**59.4791**	**59.4791**	**3.0500e-003**		**59.5432**

3.10 Sitework & Drainage - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5429	5.2849	4.2649	6.2200e-003		0.3553	0.3553		0.3287	0.3287		610.9037	610.9037	0.1693		614.4586
Total	**0.5429**	**5.2849**	**4.2649**	**6.2200e-003**	**0.0000**	**0.3553**	**0.3553**	**0.0000**	**0.3287**	**0.3287**		**610.9037**	**610.9037**	**0.1693**		**614.4586**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2009	0.0521	0.6486	1.4200e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		118.9583	118.9583	6.1000e-003		119.0863
Total	**0.2009**	**0.0521**	**0.6486**	**1.4200e-003**	**0.1118**	**9.3000e-004**	**0.1127**	**0.0296**	**8.6000e-004**	**0.0305**		**118.9583**	**118.9583**	**6.1000e-003**		**119.0863**

3.10 Sitework & Drainage - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.5424	5.2801	4.2610	6.2100e-003		0.3550	0.3550		0.3284	0.3284	0.0000	610.3432	610.3432	0.1691		613.8949
Total	**0.5424**	**5.2801**	**4.2610**	**6.2100e-003**	**0.0000**	**0.3550**	**0.3550**	**0.0000**	**0.3284**	**0.3284**	**0.0000**	**610.3432**	**610.3432**	**0.1691**		**613.8949**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2009	0.0521	0.6486	1.4200e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		118.9583	118.9583	6.1000e-003		119.0863
Total	**0.2009**	**0.0521**	**0.6486**	**1.4200e-003**	**0.1118**	**9.3000e-004**	**0.1127**	**0.0296**	**8.6000e-004**	**0.0305**		**118.9583**	**118.9583**	**6.1000e-003**		**119.0863**

3.11 Tenant Improvements - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4819	3.3489	2.5154	3.7300e-003		0.2783	0.2783		0.2718	0.2718		360.8090	360.8090	0.0571		362.0085
Total	**0.4819**	**3.3489**	**2.5154**	**3.7300e-003**		**0.2783**	**0.2783**		**0.2718**	**0.2718**		**360.8090**	**360.8090**	**0.0571**		**362.0085**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3148	1.8238	2.0947	4.5700e-003	0.1312	0.0296	0.1609	0.0374	0.0272	0.0646		458.2157	458.2157	3.2900e-003		458.2847
Worker	1.0848	0.2812	3.5026	7.6500e-003	0.6036	5.0400e-003	0.6086	0.1601	4.6400e-003	0.1647		642.3746	642.3746	0.0329		643.0661
Total	**1.3996**	**2.1049**	**5.5973**	**0.0122**	**0.7348**	**0.0347**	**0.7695**	**0.1975**	**0.0319**	**0.2293**		**1,100.5903**	**1,100.5903**	**0.0362**		**1,101.3509**

3.11 Tenant Improvements - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4815	3.3458	2.5131	3.7300e-003		0.2780	0.2780		0.2715	0.2715	0.0000	360.4780	360.4780	0.0571		361.6764
Total	**0.4815**	**3.3458**	**2.5131**	**3.7300e-003**		**0.2780**	**0.2780**		**0.2715**	**0.2715**	**0.0000**	**360.4780**	**360.4780**	**0.0571**		**361.6764**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.3148	1.8238	2.0947	4.5700e-003	0.1312	0.0296	0.1609	0.0374	0.0272	0.0646		458.2157	458.2157	3.2900e-003		458.2847
Worker	1.0848	0.2812	3.5026	7.6500e-003	0.6036	5.0400e-003	0.6086	0.1601	4.6400e-003	0.1647		642.3746	642.3746	0.0329		643.0661
Total	**1.3996**	**2.1049**	**5.5973**	**0.0122**	**0.7348**	**0.0347**	**0.7695**	**0.1975**	**0.0319**	**0.2293**		**1,100.5903**	**1,100.5903**	**0.0362**		**1,101.3509**

3.12 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7811	17.9300	12.1433	0.0176		1.1252	1.1252		1.0363	1.0363		1,804.8600	1,804.8600	0.5344		1,816.0828
Paving	0.7307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.5118**	**17.9300**	**12.1433**	**0.0176**		**1.1252**	**1.1252**		**1.0363**	**1.0363**		**1,804.8600**	**1,804.8600**	**0.5344**		**1,816.0828**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3013	0.0781	0.9730	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4374	178.4374	9.1500e-003		178.6295
Total	**0.3013**	**0.0781**	**0.9730**	**2.1200e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**178.4374**	**178.4374**	**9.1500e-003**		**178.6295**

3.12 Paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7795	17.9135	12.1322	0.0176		1.1241	1.1241		1.0354	1.0354	0.0000	1,803.2041	1,803.2041	0.5339		1,814.4166
Paving	0.7307					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.5102**	**17.9135**	**12.1322**	**0.0176**		**1.1241**	**1.1241**		**1.0354**	**1.0354**	**0.0000**	**1,803.2041**	**1,803.2041**	**0.5339**		**1,814.4166**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3013	0.0781	0.9730	2.1200e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458		178.4374	178.4374	9.1500e-003		178.6295
Total	**0.3013**	**0.0781**	**0.9730**	**2.1200e-003**	**0.1677**	**1.4000e-003**	**0.1691**	**0.0445**	**1.2900e-003**	**0.0458**		**178.4374**	**178.4374**	**9.1500e-003**		**178.6295**

3.13 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.2109					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**31.5794**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2210	0.0573	0.7135	1.5600e-003	0.1230	1.0300e-003	0.1240	0.0326	9.4000e-004	0.0336		130.8541	130.8541	6.7100e-003		130.9950
Total	**0.2210**	**0.0573**	**0.7135**	**1.5600e-003**	**0.1230**	**1.0300e-003**	**0.1240**	**0.0326**	**9.4000e-004**	**0.0336**		**130.8541**	**130.8541**	**6.7100e-003**		**130.9950**

3.13 Architectural Coating - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	31.2109					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3681	2.3701	1.8822	2.9700e-003		0.1964	0.1964		0.1964	0.1964	0.0000	281.1898	281.1898	0.0332		281.8860
Total	**31.5791**	**2.3701**	**1.8822**	**2.9700e-003**		**0.1964**	**0.1964**		**0.1964**	**0.1964**	**0.0000**	**281.1898**	**281.1898**	**0.0332**		**281.8860**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.2210	0.0573	0.7135	1.5600e-003	0.1230	1.0300e-003	0.1240	0.0326	9.4000e-004	0.0336		130.8541	130.8541	6.7100e-003		130.9950
Total	**0.2210**	**0.0573**	**0.7135**	**1.5600e-003**	**0.1230**	**1.0300e-003**	**0.1240**	**0.0326**	**9.4000e-004**	**0.0336**		**130.8541**	**130.8541**	**6.7100e-003**		**130.9950**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.3087	7.8427	34.5218	0.0715	4.6299	0.1031	4.7330	1.2370	0.0949	1.3319		6,081.2785	6,081.2785	0.2465		6,086.4557
Unmitigated	8.3087	7.8427	34.5218	0.0715	4.6299	0.1031	4.7330	1.2370	0.0949	1.3319		6,081.2785	6,081.2785	0.2465		6,086.4557

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	2.20	0.47	0.20	5,375	5,375
Parking Lot	0.00	0.00	0.00		
Quality Restaurant	1,457.19	1,528.63	1168.99	2,030,418	2,030,418
Total	1,459.39	1,529.11	1,169.19	2,035,794	2,035,794

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1262	1.1468	0.9633	6.8800e-003		0.0872	0.0872		0.0872	0.0872		1,376.1431	1,376.1431	0.0264	0.0252	1,384.5181
NaturalGas Unmitigated	0.1262	1.1468	0.9633	6.8800e-003		0.0872	0.0872		0.0872	0.0872		1,376.1431	1,376.1431	0.0264	0.0252	1,384.5181

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	5.25479	6.0000e-005	5.2000e-004	4.3000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6182	0.6182	1.0000e-005	1.0000e-005	0.6220
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	11692	0.1261	1.1463	0.9629	6.8800e-003		0.0871	0.0871		0.0871	0.0871		1,375.5249	1,375.5249	0.0264	0.0252	1,383.8961
Total		**0.1262**	**1.1468**	**0.9633**	**6.8800e-003**		**0.0872**	**0.0872**		**0.0872**	**0.0872**		**1,376.1431**	**1,376.1431**	**0.0264**	**0.0252**	**1,384.5181**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Quality Restaurant	11.692	0.1261	1.1463	0.9629	6.8800e-003		0.0871	0.0871		0.0871	0.0871		1,375.5249	1,375.5249	0.0264	0.0252	1,383.8961
General Office Building	0.00525479	6.0000e-005	5.2000e-004	4.3000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.6182	0.6182	1.0000e-005	1.0000e-005	0.6220
Total		**0.1262**	**1.1468**	**0.9633**	**6.8800e-003**		**0.0872**	**0.0872**		**0.0872**	**0.0872**		**1,376.1431**	**1,376.1431**	**0.0264**	**0.0252**	**1,384.5181**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.6713	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684
Unmitigated	2.6713	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.5344					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9700e-003	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684
Total	**2.6713**	**2.9000e-004**	**0.0307**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0647**	**0.0647**	**1.8000e-004**		**0.0684**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1340					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.5344					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.9700e-003	2.9000e-004	0.0307	0.0000		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004		0.0647	0.0647	1.8000e-004		0.0684
Total	**2.6713**	**2.9000e-004**	**0.0307**	**0.0000**		**1.1000e-004**	**1.1000e-004**		**1.1000e-004**	**1.1000e-004**		**0.0647**	**0.0647**	**1.8000e-004**		**0.0684**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Balboa Marina

South Coast Air Basin, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dock Construction - Landside Piling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dredging	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Piling Installation Land	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Piling Installation Water & Dock Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sitework & Drainage	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tenant Improvements	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	6	No Change	0.00
Bore/Drill Rigs	Diesel	No Change	0	4	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	3	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	3	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	2	No Change	0.00
Graders	Diesel	No Change	0	7	No Change	0.00
Other Material Handling Equipment	Diesel	No Change	0	2	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	1	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	3	No Change	0.00
Scrapers	Diesel	No Change	0	5	No Change	0.00
Skid Steer Loaders	Diesel	No Change	0	1	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	13	No Change	0.00
Welders	Diesel	No Change	0	8	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	1.41110E-001	1.22911E+000	5.30320E-001	1.88000E-003	4.96900E-002	4.96900E-002	0.00000E+000	1.90219E+002	1.90219E+002	1.14500E-002	0.00000E+000	1.90459E+002
Bore/Drill Rigs	4.46200E-002	5.79890E-001	4.42870E-001	8.00000E-004	2.47700E-002	2.27900E-002	0.00000E+000	7.57036E+001	7.57036E+001	2.27900E-002	0.00000E+000	7.61822E+001
Cement and Mortar Mixers	4.99000E-003	3.12900E-002	2.61300E-002	6.00000E-005	1.26000E-003	1.26000E-003	0.00000E+000	3.88390E+000	3.88390E+000	4.00000E-004	0.00000E+000	3.89237E+000
Concrete/ Industrial Saws	7.84000E-003	5.49400E-002	4.18400E-002	7.00000E-005	4.27000E-003	4.27000E-003	0.00000E+000	5.91423E+000	5.91423E+000	6.30000E-004	0.00000E+000	5.92756E+000
Cranes	9.00000E-002	1.04867E+000	3.85870E-001	6.80000E-004	4.89500E-002	4.50300E-002	0.00000E+000	6.43805E+001	6.43805E+001	1.93900E-002	0.00000E+000	6.47877E+001
Forklifts	4.54200E-002	4.43880E-001	2.77670E-001	3.70000E-004	2.93100E-002	2.69600E-002	0.00000E+000	3.46644E+001	3.46644E+001	1.04600E-002	0.00000E+000	3.48840E+001
Generator Sets	7.86200E-002	5.94670E-001	4.67780E-001	8.10000E-004	4.16700E-002	4.16700E-002	0.00000E+000	6.95205E+001	6.95205E+001	6.36000E-003	0.00000E+000	6.96541E+001
Graders	2.27880E-001	2.32494E+000	1.09235E+000	1.38000E-003	1.30650E-001	1.20190E-001	0.00000E+000	1.30639E+002	1.30639E+002	3.92900E-002	0.00000E+000	1.31464E+002
Other Material Handling Equipment	1.79400E-002	1.91300E-001	1.25470E-001	1.80000E-004	1.02600E-002	9.44000E-003	0.00000E+000	1.68606E+001	1.68606E+001	5.09000E-003	0.00000E+000	1.69674E+001
Pavers	1.81000E-003	2.03100E-002	1.28300E-002	2.00000E-005	1.01000E-003	9.30000E-004	0.00000E+000	1.91472E+000	1.91472E+000	5.80000E-004	0.00000E+000	1.92685E+000
Paving Equipment	1.38000E-003	1.60500E-002	1.14400E-002	2.00000E-005	8.00000E-004	7.30000E-004	0.00000E+000	1.70104E+000	1.70104E+000	5.10000E-004	0.00000E+000	1.71182E+000
Rollers	3.03000E-003	2.80100E-002	1.81200E-002	2.00000E-005	2.06000E-003	1.90000E-003	0.00000E+000	2.22469E+000	2.22469E+000	6.70000E-004	0.00000E+000	2.23878E+000
Rubber Tired Dozers	6.55700E-002	7.40930E-001	5.65290E-001	4.60000E-004	3.45700E-002	3.18000E-002	0.00000E+000	4.36333E+001	4.36333E+001	1.30300E-002	0.00000E+000	4.39068E+001
Scrapers	2.50930E-001	3.19910E+000	2.00214E+000	2.69000E-003	1.28980E-001	1.18660E-001	0.00000E+000	2.53751E+002	2.53751E+002	7.64400E-002	0.00000E+000	2.55356E+002
Skid Steer Loaders	6.10000E-003	7.89700E-002	7.43500E-002	1.10000E-004	4.41000E-003	4.06000E-003	0.00000E+000	1.02627E+001	1.02627E+001	3.10000E-003	0.00000E+000	1.03277E+001
Tractors/Loaders/ Backhoes	1.18920E-001	1.13536E+000	8.29460E-001	1.07000E-003	8.78600E-002	8.08300E-002	0.00000E+000	1.01143E+002	1.01143E+002	3.04100E-002	0.00000E+000	1.01782E+002
Welders	1.78200E-001	6.12650E-001	6.43250E-001	8.50000E-004	4.84700E-002	4.84700E-002	0.00000E+000	6.41040E+001	6.41040E+001	1.44900E-002	0.00000E+000	6.44083E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	1.40940E-001	1.22765E+000	5.29690E-001	1.88000E-003	4.96300E-002	4.96300E-002	0.00000E+000	1.89992E+002	1.89992E+002	1.14400E-002	0.00000E+000	1.90233E+002
Bore/Drill Rigs	4.45700E-002	5.79200E-001	4.42350E-001	8.00000E-004	2.47400E-002	2.27700E-002	0.00000E+000	7.56135E+001	7.56135E+001	2.27600E-002	0.00000E+000	7.60916E+001
Cement and Mortar Mixers	4.98000E-003	3.12500E-002	2.61000E-002	6.00000E-005	1.26000E-003	1.26000E-003	0.00000E+000	3.87928E+000	3.87928E+000	4.00000E-004	0.00000E+000	3.88774E+000
Concrete/Industrial Saws	7.83000E-003	5.48700E-002	4.17900E-002	7.00000E-005	4.26000E-003	4.26000E-003	0.00000E+000	5.90719E+000	5.90719E+000	6.30000E-004	0.00000E+000	5.92051E+000
Cranes	8.99000E-002	1.04743E+000	3.85410E-001	6.80000E-004	4.88900E-002	4.49800E-002	0.00000E+000	6.43039E+001	6.43039E+001	1.93700E-002	0.00000E+000	6.47106E+001
Forklifts	4.53700E-002	4.43350E-001	2.77340E-001	3.70000E-004	2.92700E-002	2.69300E-002	0.00000E+000	3.46232E+001	3.46232E+001	1.04400E-002	0.00000E+000	3.48425E+001
Generator Sets	7.85200E-002	5.93970E-001	4.67230E-001	8.10000E-004	4.16200E-002	4.16200E-002	0.00000E+000	6.94378E+001	6.94378E+001	6.35000E-003	0.00000E+000	6.95712E+001
Graders	2.27610E-001	2.32217E+000	1.09105E+000	1.38000E-003	1.30490E-001	1.20050E-001	0.00000E+000	1.30484E+002	1.30484E+002	3.92400E-002	0.00000E+000	1.31308E+002
Other Material Handling Equipment	1.79200E-002	1.91070E-001	1.25320E-001	1.80000E-004	1.02500E-002	9.43000E-003	0.00000E+000	1.68405E+001	1.68405E+001	5.08000E-003	0.00000E+000	1.69472E+001
Pavers	1.80000E-003	2.02800E-002	1.28200E-002	2.00000E-005	1.01000E-003	9.30000E-004	0.00000E+000	1.91244E+000	1.91244E+000	5.80000E-004	0.00000E+000	1.92456E+000
Paving Equipment	1.38000E-003	1.60300E-002	1.14300E-002	2.00000E-005	8.00000E-004	7.30000E-004	0.00000E+000	1.69902E+000	1.69902E+000	5.10000E-004	0.00000E+000	1.70978E+000
Rollers	3.03000E-003	2.79800E-002	1.81000E-002	2.00000E-005	2.06000E-003	1.90000E-003	0.00000E+000	2.22204E+000	2.22204E+000	6.70000E-004	0.00000E+000	2.23612E+000
Rubber Tired Dozers	6.54900E-002	7.40050E-001	5.64610E-001	4.60000E-004	3.45300E-002	3.17700E-002	0.00000E+000	4.35814E+001	4.35814E+001	1.30100E-002	0.00000E+000	4.38546E+001
Scrapers	2.50630E-001	3.19529E+000	1.99976E+000	2.68000E-003	1.28830E-001	1.18520E-001	0.00000E+000	2.53449E+002	2.53449E+002	7.63500E-002	0.00000E+000	2.55053E+002
Skid Steer Loaders	6.10000E-003	7.88800E-002	7.42600E-002	1.10000E-004	4.41000E-003	4.05000E-003	0.00000E+000	1.02505E+001	1.02505E+001	3.09000E-003	0.00000E+000	1.03154E+001
Tractors/Loaders/ Backhoes	1.18780E-001	1.13401E+000	8.28470E-001	1.07000E-003	8.77600E-002	8.07400E-002	0.00000E+000	1.01023E+002	1.01023E+002	3.03800E-002	0.00000E+000	1.01660E+002
Welders	1.77990E-001	6.11920E-001	6.42490E-001	8.50000E-004	4.84100E-002	4.84100E-002	0.00000E+000	6.40278E+001	6.40278E+001	1.44700E-002	0.00000E+000	6.43317E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	1.20473E-003	1.18785E-003	1.18796E-003	0.00000E+000	1.20749E-003	1.20749E-003	0.00000E+000	1.18958E-003	1.18958E-003	8.73362E-004	0.00000E+000	1.18960E-003
Bore/Drill Rigs	1.12057E-003	1.18988E-003	1.17416E-003	0.00000E+000	1.21114E-003	8.77578E-004	0.00000E+000	1.18964E-003	1.18964E-003	1.31637E-003	0.00000E+000	1.18965E-003
Cement and Mortar Mixers	2.00401E-003	1.27836E-003	1.14811E-003	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18953E-003	1.18953E-003	0.00000E+000	0.00000E+000	1.18951E-003
Concrete/Industrial Saws	1.27551E-003	1.27412E-003	1.19503E-003	0.00000E+000	2.34192E-003	2.34192E-003	0.00000E+000	1.19035E-003	1.19035E-003	0.00000E+000	0.00000E+000	1.18936E-003
Cranes	1.11111E-003	1.18245E-003	1.19211E-003	0.00000E+000	1.22574E-003	1.11037E-003	0.00000E+000	1.18965E-003	1.18965E-003	1.03146E-003	0.00000E+000	1.18958E-003
Forklifts	1.10084E-003	1.19402E-003	1.18846E-003	0.00000E+000	1.36472E-003	1.11276E-003	0.00000E+000	1.18969E-003	1.18969E-003	1.91205E-003	0.00000E+000	1.18966E-003
Generator Sets	1.27194E-003	1.17712E-003	1.17577E-003	0.00000E+000	1.19990E-003	1.19990E-003	0.00000E+000	1.18958E-003	1.18958E-003	1.57233E-003	0.00000E+000	1.18959E-003
Graders	1.18483E-003	1.19143E-003	1.19009E-003	0.00000E+000	1.22465E-003	1.16482E-003	0.00000E+000	1.18961E-003	1.18961E-003	1.27259E-003	0.00000E+000	1.18960E-003
Other Material Handling Equipment	1.11483E-003	1.20230E-003	1.19550E-003	0.00000E+000	9.74659E-004	1.05932E-003	0.00000E+000	1.18976E-003	1.18976E-003	1.96464E-003	0.00000E+000	1.18934E-003
Pavers	5.52486E-003	1.47710E-003	7.79423E-004	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19077E-003	1.19077E-003	0.00000E+000	0.00000E+000	1.18847E-003
Paving Equipment	0.00000E+000	1.24611E-003	8.74126E-004	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.18751E-003	1.18751E-003	0.00000E+000	0.00000E+000	1.19171E-003
Rollers	0.00000E+000	1.07105E-003	1.10375E-003	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19118E-003	1.19118E-003	0.00000E+000	0.00000E+000	1.18815E-003
Rubber Tired Dozers	1.22007E-003	1.18770E-003	1.20292E-003	0.00000E+000	1.15707E-003	9.43396E-004	0.00000E+000	1.18946E-003	1.18946E-003	1.53492E-003	0.00000E+000	1.18979E-003
Scrapers	1.19555E-003	1.19096E-003	1.18873E-003	3.71747E-003	1.16297E-003	1.17984E-003	0.00000E+000	1.18959E-003	1.18959E-003	1.17739E-003	0.00000E+000	1.18959E-003
Skid Steer Loaders	0.00000E+000	1.13967E-003	1.21049E-003	0.00000E+000	0.00000E+000	2.46305E-003	0.00000E+000	1.18975E-003	1.18975E-003	3.22581E-003	0.00000E+000	1.19000E-003
Tractors/Loaders/ Backhoes	1.17726E-003	1.18905E-003	1.19355E-003	0.00000E+000	1.13817E-003	1.11345E-003	0.00000E+000	1.18960E-003	1.18960E-003	9.86518E-004	0.00000E+000	1.18961E-003
Welders	1.17845E-003	1.19154E-003	1.18150E-003	0.00000E+000	1.23788E-003	1.23788E-003	0.00000E+000	1.18947E-003	1.18947E-003	1.38026E-003	0.00000E+000	1.18960E-003

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		

No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	61.00	PM2.5 Reduction	61.00	Frequency (per day)	3.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	10.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.05	0.01	0.05	0.01	0.00	0.00
Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.61	0.67
Demolition	Roads	0.00	0.00	0.00	0.00	-0.67	-0.63
Dock Construction - Landside Piling	Fugitive Dust	0.02	0.00	0.01	0.00	0.61	0.61
Dock Construction - Landside Piling	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Dredging	Fugitive Dust	0.10	0.05	0.04	0.02	0.61	0.61
Dredging	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.16	0.08	0.06	0.03	0.61	0.61
Grading	Roads	0.00	0.00	0.01	0.00	-0.97	-0.89
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Piling Installation Land	Fugitive Dust	0.08	0.01	0.03	0.00	0.61	0.61
Piling Installation Land	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Piling Installation Water & Dock Construction	Fugitive Dust	0.12	0.01	0.05	0.01	0.61	0.61
Piling Installation Water & Dock Construction	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Site Preparation	Fugitive Dust	0.00	0.00	0.00	0.00	0.61	0.60
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Sitework & Drainage	Fugitive Dust	0.09	0.01	0.03	0.00	0.61	0.61
Sitework & Drainage	Roads	0.01	0.00	0.01	0.00	0.00	0.00
Tenant Improvements	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Tenant Improvements	Roads	0.04	0.01	0.04	0.01	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	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
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.23	0.01
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.06	0.25		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				

No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	100.00
Yes	Use Low VOC Paint (Non-residential Interior)	250.00
Yes	Use Low VOC Paint (Non-residential Exterior)	250.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	

No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services Percent Reduction in Waste Disposed	

Appendix B

2012 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2012

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide [a]		Ozone								Nitrogen Dioxide [b]				Sulfur Dioxide [c]		
									No. Days Standard Exceeded										
			No. Days of Data	Max Conc. in ppm 8-hour	No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 8-hour	Fourth High Conc. ppm 8-hour	Old Federal > 0.124 ppm 1-hour	Current Federal > 0.075 ppm 8-hour	Current State > 0.09 ppm 1-hour	Current State > 0.070 ppm 8-hour	No. Days of Data	Max Conc. in ppb 1-hour	98th Percentile Conc. ppb 1-hour	Annual Average AAM Conc. ppb	No. Days of Data	Max. Conc. in ppb 1-hour	99th Percentile Conc. ppb 1-hour
LOS ANGELES COUNTY																			
1	Central LA	087	365	1.9	364	0.093	0.077	0.068	0	1	0	2	240*	77.3	68.9	24.8	235*	5.2	5.0
2	Northwest Coastal LA County	091	366	1.4	351	0.093	0.073	0.065	0	0	0	1	324*	61.3	53.6	13.7	--	--	--
3	Southwest Coastal LA County	820	366	2.5	366	0.106	0.075	0.059	0	0	1	1	268*	61.7	55	10.4	203*	4.9	4.7
4	South Coastal LA County 1	072	363	2.2	366	0.084	0.067	0.060	0	0	0	0	221*	77.2	62.5	20.8	285*	22.2	14.3
4	South Coastal LA County 2	077			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 3	033	214*	2.6	212*	0.08	0.066	0.054	0	0	0	0	213*	90.5	77.4	25.3	213*	22.7	21.3
6	West San Fernando Valley	074	366	2.8	366	0.129	0.098	0.095	1	23	18	38	261*	70.9	48.7	14.9	--	--	--
7	East San Fernando Valley	069	366	2.4	366	0.117	0.088	0.081	0	8	8	15	295*	79.5	57	21.9	366	6.5	2.9
8	West San Gabriel Valley	088	319	1.6	318	0.111	0.086	0.08	0	9	8	20	280*	71.2	55.8	17.2	--	--	--
9	East San Gabriel Valley 1	060	366	1.2	366	0.134	0.095	0.079	1	10	18	18	352	71.8	61.5	19.5	--	--	--
9	East San Gabriel Valley 2	591	366	1.1	366	0.147	0.11	0.095	3	45	45	57	287*	60	53.3	14.2	--	--	--
10	Pomona/Walnut Valley	075	364	1.5	364	0.117	0.092	0.085	0	15	21	28	364	81.6	60.6	21.4	--	--	--
11	South San Gabriel Valley	085	366	2.2	357	0.106	0.075	0.071	0	0	5	6	204*	80.8	55.2	20.4	--	--	--
12	South Central LA County	112	366	4.0	357	0.086	0.07	0.064	0	0	0	0	337*	79.3	63.1	17.2	--	--	--
13	Santa Clarita Valley	090	353	1.1	366	0.134	0.112	0.102	6	57	45	81	366	66.1	50.7	13.6	--	--	--
ORANGE COUNTY																			
16	North Orange County	3177	348	2.4	365	0.100	0.078	0.070	0	2	3	3	332*	67.5	53.2	18.0	--	--	--
17	Central Orange County	3176	366	2.3	366	0.079	0.067	0.065	0	0	0	0	366	67.3	53.5	14.6	--	--	--
18	North Coastal Orange County	3195	366	1.7	366	0.090	0.076	0.060	0	1	2	1	348	74.4	50.6	10.4	350	6.2	2
19	Saddleback Valley	3812	366	1.1	336	0.096	0.078	0.071	0	1	0	4	--	--	--	--	--	--	--
RIVERSIDE COUNTY																			
22	Norco/Corona	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	366	1.6	357	0.126	0.102	0.096	1	47	27	70	333*	61.7	54.6	15.5	321*	4.3	2
23	Metropolitan Riverside County 2	4146	365	1.5	--	--	--	--	--	--	--	--	246*	60.3	53.7	16.5	--	--	--
23	Mira Loma	4165	355	1.9	360	0.124	0.102	0.095	0	47	31	70	301*	60.7	49.7	13.9	--	--	--
24	Perris Valley	4149			321	0.111	0.093	0.090	0	46	28	64	--	--	--	--	--	--	--
25	Lake Elsinore	4158	366	0.7	366	0.111	0.089	0.087	0	17	10	29	366	48.3	40.9	10.2	--	--	--
26	Temecula	4031	--	--	306	0.104	0.082	0.077	0	4	1	22	--	--	--	--	--	--	--
29	Banning Airport	4164	--	--	338	0.117	0.098	0.095	0	53	40	71	321*	72.0	49.7	9.5	--	--	--
30	Coachella Valley 1**	4137	366	0.5	366	0.126	0.100	0.094	1	51	17	76	353	45.1	39.3	7.8	--	--	--
30	Coachella Valley 2**	4157	--	--	364	0.102	0.089	0.085	0	24	2	43	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																			
32	Northwest San Bernardino Valley	5175	360	1.1	336	0.136	0.111	0.102	4	45	42	66	328*	66.7	60.2	19.5	--	--	--
33	Southwest San Bernardino Valley	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	366	1.1	366	0.142	0.11	0.106	5	62	60	85	359	69.1	61.2	22.1	366	22.5	4.3
34	Central San Bernardino Valley 2	5203	362	1.7	366	0.124	0.109	0.100	0	54	41	74	315*	67.0	59.7	18.8	--	--	--
35	East San Bernardino Valley	5204	--	--	366	0.136	0.109	0.105	3	79	66	98	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	364	0.140	0.112	0.103	2	86	56	100	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM			4.0		0.147	0.112	0.106	6	86	66	100		90.5	77.4	25.3		22.7	21.3
	SOUTH COAST AIR BASIN			4.0		0.147	0.112	0.106	12	111	98	138		90.5	77.4	25.3		22.7	21.3

* Incomplete data. ** Salton Sea Air Basin

ppm - Parts Per Million parts of air, by volume ppb – Parts Per Billion parts of air, by volume AAM = Annual Arithmetic Mean -- - Pollutant not monitored

a) - The federal 8-hour standard (8-hour average CO > 9 ppm) and state 8-hour standard (8-hour average CO > 9.0 ppm) were not exceeded.
The federal and state 1-hour standards (35 ppm and 20 ppm) were not exceeded either.

b) - The NO_2 federal 1-hour standard is 100 ppb and the annual standard is annual arithmetic mean NO_2 > 0.0534 ppm (53.4 ppb). The state 1-hour and annual standards are 0.18 ppm (180 ppb) and 0.030 ppm (30 ppb).

c) - The federal SO_2 1-hour standard is 75 ppb (0.075 ppm). The state standards are 1-hour average SO_2 > 0.25 ppm (250 ppb) and 24-hour average SO_2 > 0.04 ppm (40 ppb).

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

For information on the current standard levels and most recent revisions please refer to "Appendix II – Current Air Quality" of the "Final 2012 AQMP (December)" which can be accessed at http://www.aqmd.gov/aqmp/2012aqmp/DraftFinal/appII.pdf. Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the AQMD Current Hourly Air Quality Map, accessed from http://www2.aqmd.gov/webappl/gisaqi2/VEMap3D.aspx or at http://www.aqmd.gov/map/MapAQMD2.pdf . A map or copy of the AQMP Appendix II is also available free of charge from the AQMD Public Information Center at 1-800-CUT-SMOG.

2012 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2012

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 [d,g]					Fine Particulates PM2.5 [f,g]					Particulates TSP			Lead [h]			PM10 Sulfate [i]	
			No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standards Federal > 150 µg/m³ 24-hour	No. (%) Samples Exceeding Standards State > 50 µg/m³ 24-hour	Annual. Average Conc. [e] (AAM) µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour	98th Percentile Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Federal Std > 35 µg/m³ 24-hour	Annual. Average Conc. (AAM) µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour	Annual. Average Conc. (AAM) µg/m³	Max. Monthly Average Conc. µg/m³	Max. 3-Months Rolling Averages µg/m³	Max. Quarterly Average Conc. µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour
LOS ANGELES COUNTY																				
1	Central LA	087	60	80	0	4	30.2	342	58.7	31.8	4	12.5								
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	--								
3	Southwest Coastal LA County	820	57	31	0	0	19.8	--	--	--	--	--								
4	South Coastal LA County 1	072	60	45	0	0	23.3	349	49.8	26.4	4	10.4								
4	South Coastal LA County 2	077	60	54	0	1	25.5	340	46.7	25.1	4	10.6								
4	South Coastal LA County 3	033	--	--	--	--	--	--	--	--	--	--								
6	West San Fernando Valley	074	--	--	--	--	--	110	41.6	31.2	2	10.5								
7	East San Fernando Valley	069	60	55	0	1	26.4	355	54.2	28.2	2	12.2								
8	West San Gabriel Valley	088	--	--	--	--	--	96	30.5	24.2	0	10.1								
9	East San Gabriel Valley 1	060	61	78	0	6	30.3	118	39.6	25.6	1	11.0								
9	East San Gabriel Valley 2	591	--	--	--	--	--	--	--	--	--	--								
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--								
11	South San Gabriel Valley	085	--	--	--	--	--	119	45.3	28.5	1	11.9								
12	South Central LA County	112	--	--	--	--	--	115	51.2	30.3	1	11.7								
13	Santa Clarita Valley	090	55	37	0	0	19.6	--	--	--	--	--								
ORANGE COUNTY																				
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--								
17	Central Orange County	3176	61	48	0	0	22.4	347	50.1	24.9	4	10.8								
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--								
19	Saddleback Valley	3812	60	37	0	0	17.3	123	27.6	17.6	0	7.9								
RIVERSIDE COUNTY																				
22	Norco/Corona	4155	59	52	0	1	26.6	--	--	--	--	--								
23	Metropolitan Riverside County 1	4144	121	67	0	19	34.5	352	38.1	33.7	7	13.5								
23	Metropolitan Riverside County 2	4146	--	--	--	--	--	104	30.2	26.8	0	11.4								
23	Mira Loma	4165	56	78	0	15	39.9	351	39.3	35.1	7	15.1								
24	Perris Valley	4149	60	62	0	1	26.5	-	-	-	-	-								
25	Lake Elsinore	4158	--	--	--	--	--	--	--	--	--	--								
26	Temecula	4031	--	--	--	--	--	--	--	--	--	--								
29	Banning Airport	4164	60	45	0	0	19.1	--	--	--	--	--								
30	Coachella Valley 1**	4137	60	37	0	0	16.4	117	15.5	13.7	0	6.5								
30	Coachella Valley 2**	4157	121	124	0	7	29.5	117	20	16.4	0	7.6								
SAN BERNARDINO COUNTY																				
32	Northwest San Bernardino Valley	5175	--	--	--	--	--	--	--	--	--	--								
33	Southwest San Bernardino Valley	5817	61	57	0	4	30.8	120	35.2	28.6	0	12.4								
34	Central San Bernardino Valley 1	5197	60	67	0	9	34.3	110	39.9	35.6	3	12.8								
34	Central San Bernardino Valley 2	5203	55	53	0	1	29.2	107	34.8	27.1	0	11.8								
35	East San Bernardino Valley	5204	61	48	0	0	23.4	--	--	--	--	--								
37	Central San Bernardino Mountains	5181	57	54	0	0	18.9	--	--	--	--	--								
38	East San Bernardino Mountains	5818	--	--	--	--	--	52	36.4	27.4	1	8.0								
	DISTRICT MAXIMUM			124	0	19	39.9		58.7	35.6	7	15.1								
	SOUTH COAST AIR BASIN			80	0		39.9		58.7	35.6	15	15.1								

** Salton Sea Air Basin µg/m³ - Micrograms per cubic meter of air AAM = Annual Arithmetic Mean -- - Pollutant not monitored

d) - Federal Reference Method (FRM) PM10 samples were collected every 6 days at all sites except for Stations 4144 and 4157, where samples were collected every 3 days. PM10 statistics listed above are for the FRM data only. Federal Equivalent Method (FEM) PM10 continuous monitors were operated at some of the above locations. Max 24-hour average PM10 at sites with FEM monitoring was 142 µg/m³, at Palm Springs in Coachella Valley. The FEM Basin's max was 104 µg/m³, at Mira Loma.

e) - Federal annual PM10 standard (AAM > 50 µg/m³) was revoked in 2006. State standard is annual average (AAM) > 20 µg/m³.

f) - PM2.5 samples were collected every 3 days at all sites except for station numbers 069, 072, 077, 087, 3176, 4144 and 4165, where samples were taken daily, and station number 5818 where samples were taken every 6 days. PM2.5 statistics listed above are for the FRM data only. FEM PM2.5 continuous monitoring instruments were operated at some of the above locations. Max 24-hour average PM2.5 concentration recorded at FEM sites was 79.0 µg/m³, at Central LA.. U.S. EPA has revised the annual PM2.5 standard from annual average (AAM) 15.0 µg/m³ to 12.0 µg/m³, effective March 18, 2013. State standard is annual average (AAM) > 12.0 µg/m³.

g) - High PM10 and PM2.5 data samples excluded in accordance with the EPA Exceptional Event Regulation are as follows: PM10 (FEM) data recorded on August 9 (270 µg/m³) and January 21 (207 µg/m³) both at Indio; PM2.5 (FRM) at Azusa (39.6 µg/m³) and Fontana (39.9 µg/m³), both recorded on July 5.

h) – Federal lead standard is 3-months rolling average > 0.15 µg/m³; state standard is monthly average ≥ 1.5 µg/m³. Lead statistics listed above are for population-oriented sites only; standards were not exceeded at any of these sites.

i) – State sulfate standard is 24-hour ≥ 25 µg/m³. There is no federal standard for sulfate.

2011 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2011

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide [a]		Ozone									Nitrogen Dioxide [b]				Sulfur Dioxide [c]		
										No. Days Standard Exceeded										
			No. Days of Data	Max Conc. in ppm 8-hour	No. Days of Data	Max. Conc. in ppm 1-hour	Max. Conc. in ppm 8-hour	Fourth High Conc. ppm 8-hour	Health Advisory ≥ 0.15 ppm 1-hour	Old Federal > 0.124 ppm 1-hour	Current Federal > 0.075 ppm 8-hour	Current State > 0.09 ppm 1-hour	Current State > 0.070 ppm 8-hour	No. Days of Data	Max Conc. in ppb 1-hour	98th Percentile Conc. ppb 1-hour	Annual Average AAM Conc. ppb	No. Days of Data	Max. Conc. in ppb 1-hour	99th Percentile Conc. ppb 1-hour
LOS ANGELES COUNTY																				
1	Central LA	087	365	2.4	365	0.087	0.065	0.060	0	0	0	0	0	365	109.6	67.0	23.1	331	19.8	11.0
2	Northwest Coastal LA County	091	360	1.3	360	0.098	0.068	0.061	0	0	0	2	0	360	81.3	58.2	13.9	--	--	--
3	Southwest Coastal LA County	820	364	1.8	360	0.078	0.067	0.062	0	0	0	0	0	365	97.6	64.8	13.4	365	11.5	8.3
4	South Coastal LA County 1	072	365	2.6	363	0.073	0.061	0.059	0	0	0	0	0	365	106.4	67.6	17.7	365	14.8	10.7
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	South Coastal LA County 3	033	354	3.3	360	0.074	0.063	0.057	0	0	0	0	0	359	90.0	74.0	21.2	350	43.3	24.7
6	West San Fernando Valley	074	355	2.8	365	0.130	0.103	0.091	0	3	26	17	35	359	56.1	53.8	14.9	--	--	--
7	East San Fernando Valley	069	365	2.4	364	0.120	0.084	0.081	0	0	6	8	10	365	67.8	56.2	22.1	363	9.0	5.2
8	West San Gabriel Valley	088	365	2.2	365	0.107	0.084	0.077	0	0	5	5	13	359	87.3	72.8	20.3	--	--	--
9	East San Gabriel Valley 1	060	365	1.4	365	0.111	0.092	0.082	0	0	12	13	19	356	79.5	65.1	19.0	--	--	--
9	East San Gabriel Valley 2	591	362	1.1	362	0.134	0.111	0.095	0	4	30	35	40	361	77.6	53.9	12.9	--	--	--
10	Pomona/Walnut Valley	075	364	1.6	364	0.119	0.096	0.086	0	0	16	15	24	364	87.3	66.7	24.6	--	--	--
11	South San Gabriel Valley	085	365	2.4	362	0.096	0.074	0.061	0	0	0	1	1	362	90.6	72.5	23.7	--	--	--
12	South Central LA County	112	364	4.7	362	0.082	0.065	0.061	0	0	0	0	0	361	75.4	65.3	18.6	--	--	--
13	Santa Clarita Valley	090	363	0.8	363	0.144	0.122	0.101	0	3	30	31	52	360	60.1	46.8	13.3	--	--	--
ORANGE COUNTY																				
16	North Orange County	3177	365	2.1	365	0.095	0.074	0.069	0	0	0	1	3	365	69.8	60.7	17.7	--	--	--
17	Central Orange County	3176	365	2.1	365	0.088	0.072	0.064	0	0	0	0	1	365	73.8	60.8	16.8	--	--	--
18	North Coastal Orange County	3195	344	2.2	360	0.093	0.077	0.063	0	0	1	0	2	350	60.5	52.8	10.0	357	7.7	4.8
19	Saddleback Valley	3812	365	0.8	365	0.094	0.083	0.074	0	0	2	0	5	--	--	--	--	--	--	
RIVERSIDE COUNTY																				
22	Norco/Corona	4155	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	365	1.4	365	0.128	0.115	0.106	0	4	67	52	92	359	63.3	56.5	16.6	365	51.3	12.5
23	Metropolitan Riverside County 2	4146	365	1.5	--	--	--	--	--	--	--	--	--	364	57.1	50.4	16.9	--	--	--
23	Mira Loma	4165	361	1.4	362	0.126	0.104	0.096	0	1	36	32	63	364	58.8	51.8	15.3	--	--	--
24	Perris Valley	4149	--	--	364	0.125	0.112	0.094	0	2	54	44	77	--	--	--	--	--	--	--
25	Lake Elsinore	4158	365	0.7	365	0.133	0.106	0.092	0	1	28	19	45	365	50.3	41.3	9.6	--	--	--
26	Temecula	4031	--	--	355	0.105	0.085	0.073	0	0	14	1	27	--	--	--	--	--	--	--
29	Banning Airport	4164	--	--	362	0.127	0.111	0.100	0	3	41	35	59	350	60.7	50.2	9.5	--	--	--
30	Coachella Valley 1**	4137	350	0.6	350	0.124	0.098	0.092	0	0	49	21	69	350	44.7	39.4	8.0	--	--	--
30	Coachella Valley 2**	4157	--	--	360	0.099	0.090	0.085	0	0	19	3	42	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																				
32	Northwest San Bernardino Valley	5175	365	1.3	365	0.145	0.122	0.098	0	5	36	36	45	353	68.5	60.1	19.6	--	--	--
33	Southwest San Bernardino Valley	5817	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	365	1.1	365	0.144	0.124	0.105	0	5	39	39	53	365	76.4	64.6	21.1	365	12.3	7.2
34	Central San Bernardino Valley 2	5203	365	1.7	365	0.135	0.121	0.101	0	2	39	40	66	365	61.9	52.9	16.9	--	--	--
35	East San Bernardino Valley	5204	--	--	364	0.151	0.133	0.113	1	7	80	64	96	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	360	0.160	0.136	0.106	1	8	84	58	103	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM			4.7		0.160	0.136	0.113	1	8	84	64	103		109.6	74.0	24.6		51.3	24.7
	SOUTH COAST AIR BASIN			4.7		0.160	0.136	0.113	1	16	106	90	125		109.6	74.0	24.6		51.3	24.7

ppm - Parts Per Million parts of air, by volume ppb – Parts Per Billion parts of air, by volume AAM = Annual Arithmetic Mean -- - Pollutant not monitored

** Salton Sea Air Basin

a) - The federal 8-hour standard (8-hour average CO > 9 ppm) and state 8-hour standard (8-hour average CO > 9.0 ppm) were not exceeded. The federal and state 1-hour standards (35 ppm and 20 ppm) were not exceeded either.

b) - The NO_2 federal 1-hour standard is 100 ppb and the annual standard is annual arithmetic mean NO_2 > 0.0534 ppm (5.34 ppb). The state 1-hour and annual standards are 0.18 ppm (180 ppb) and 0.030 ppm (30 ppb).

c) - The federal SO_2 1-hour standard is 75 ppb (0.075 ppm). The state standards are 1-hour average SO_2 > 0.25 ppm (250 ppb) and 24-hour average SO_2 > 0.04 ppm (40 ppb).

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

For information on the current standard levels and most recent revisions please refer to "Appendix II – Current Air Quality" of the "Final 2012 AQMP (December)" which can be accessed at http://www.aqmd.gov/aqmp/2012aqmp/DraftFinal/appII.pdf. Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the AQMD Current Hourly Air Quality Map, accessed from http://www2.aqmd.gov/webappl/gisaqi2/VEMap3D.aspx or at http://www.aqmd.gov/map/MapAQMD2.pdf . A map or copy of the AQMP Appendix II is also available free of charge from the AQMD Public Information Center at 1-800-CUT-SMOG.

2011 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2011

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 [d]					Fine Particulates PM2.5 [f]					Particulates TSP			Lead [h]			PM10 Sulfate [i]	
			No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standards Federal > 150 µg/m³ 24-hour	No. (%) Samples Exceeding Standards State > 50 µg/m³ 24-hour	Annual. Average Conc. [e] (AAM) µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour	98th Percentile Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Federal Std > 35 µg/m³ 24-hour	Annual. Average Conc. (AAM) µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour	Annual. Average Conc. (AAM) µg/m³	Max. Monthly Average Conc. µg/m³	Max. 3-Months Rolling Averages µg/m³	Max. Quarterly Average Conc. µg/m³	No. Days of Data	Max. Conc. in µg/m³ 24-hour
LOS ANGELES COUNTY																				
1	Central LA	087	59	53	0	1(2%)	29.0	331	49.3	31.5	4(1.2%)	13.0	60	84	53.7	0.012	0.011	0.011	58	8.0
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	--	59	155	49.3	--	--	--	--	--
3	Southwest Coastal LA County	820	58	41	0	0	21.7	--	--	--	--	--	55	69	36.1	0.008	0.005	0.005	58	5.9
4	South Coastal LA County 1	072	60	43	0	0	24.2	340	39.7	27.8	1(0.3%)	11.0	61	91	44.0	0.010	0.007	0.007	59	6.1
4	South Coastal LA County 2	077	60	50	0	0	28.7	346	42.0	26.6	3(0.9%)	10.7	56	81	43.9	0.013	0.009	0.009	60	5.9
4	South Coastal LA County 3	033	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6	West San Fernando Valley	074	--	--	--	--	--	117	39.8	23.6	1(0.9%)	10.2	--	--	--	--	--	--	--	--
7	East San Fernando Valley	069	55	61	0	2(4%)	28.4	321	47.8	33.5	5(1.6%)	13.2	--	--	--	--	--	--	54	7.4
8	West San Gabriel Valley	088	--	--	--	--	--	97	43.8	29.8	1(1.0%)	10.8	59	74	44.1	--	--	--	--	--
9	East San Gabriel Valley 1	060	61	65	0	9(15%)	32.7	118 [g]	49.5 [g]	26.9 [g]	1(0.8%) [g]	11.4 [g]	57	154	72.5	--	--	--	60	6.6
9	East San Gabriel Valley 2	591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	114	41.2	31.5	1(0.9%)	12.5	59	140	64.4	0.011	0.010	0.010	--	--
12	South Central LA County	112	--	--	--	--	--	110	35.3	31.5	0	13.0	57	112	52.8	0.014	0.010	0.010	--	--
13	Santa Clarita Valley	090	58	45	0	0	20.8	--	--	--	--	--	--	--	--	--	--	--	58	6.1
ORANGE COUNTY																				
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	60	53	0	2(3%)	24.8	352	39.2	28.1	2(0.6%)	11.0	--	--	--	--	--	--	60	6.5
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	61	48	0	0	19.2	110	33.4	28.8	0	8.6	--	--	--	--	--	--	61	4.8
RIVERSIDE COUNTY																				
22	Norco/Corona	4155	59	60	0	2(3%)	27.6	--	--	--	--	--	--	--	--	--	--	--	56	5.1
23	Metropolitan Riverside County 1	4144	112	82	0	14(13%)	33.7	352	60.8	31.0	4(1.1%)	13.6	60	107	62.7	0.007	0.007	0.007	119	5.1
23	Metropolitan Riverside County 2	4146	--	--	--	--	--	112	51.6	28.0	2(1.8%)	11.8	59	83	43.8	0.007	0.006	0.006	--	--
23	Mira Loma	4165	59	79	0	25(42%)	41.3	343	56.3	36.6	8(3%)	15.3	--	--	--	--	--	--	58	5.4
24	Perris Valley	4149	60	65	0	3(5%)	29.2	--	--	--	--	--	--	--	--	--	--	--	58	4.4
25	Lake Elsinore	4158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
26	Temecula	4031	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning Airport	4164	59	51	0	1(2%)	19.3	--	--	--	--	--	--	--	--	--	--	--	59	4.4
30	Coachella Valley 1**	4137	61 [g]	42 [g]	0 [g]	0 [g]	18.5 [g]	114	26.3	12.5	0	6.1	--	--	--	--	--	--	61	4.4
30	Coachella Valley 2**	4157	119 [g]	106 [g]	0 [g]	3(3%) [g]	28.5 [g]	111	35.4	15.6	0	7.2	--	--	--	--	--	--	110	5.7
SAN BERNARDINO COUNTY																				
32	Northwest San Bernardino Valley	5175	--	--	--	--	--	--	--	--	--	--	58	94	47.2	0.009	0.008	0.007	--	--
33	Southwest San Bernardino Valley	5817	60	70	0	3(5%)	30.8	118	52.9	35.3	2(1.7%)	13.2	--	--	--	--	--	--	60	5.5
34	Central San Bernardino Valley 1	5197	60	84	0	4(7%)	31.8	109	60.1	28.2	2(1.8%)	12.6	54	131	64.7	--	--	--	59	6.0
34	Central San Bernardino Valley 2	5203	58	56	0	3(5%)	31.5	101	65.0	32.5	2(2%)	12.2	61	97	51.4	0.008	0.007	0.007	59	5.5
35	East San Bernardino Valley	5204	58	71	0	2(3%)	24.9	--	--	--	--	--	--	--	--	--	--	--	57	4.9
37	Central San Bernardino Mountains	5181	59	43	0	0	19.0	--	--	--	--	--	--	--	--	--	--	--	57	4.0
38	East San Bernardino Mountains	5818	--	--	--	--	--	55	30.7	30.6	0	8.5	--	--	--	--	--	--	--	--
	DISTRICT MAXIMUM			106	0	25	41.3		65.0	36.6	8	15.3		155	72.5	0.014	0.011	0.011		8.0
	SOUTH COAST AIR BASIN			84 [g]	0	35	41.3		65.0	36.6	17	15.3		155	72.5	0.014	0.011	0.011		8.0

** Salton Sea Air Basin µg/m³ - Micrograms per cubic meter of air AAM = Annual Arithmetic Mean -- - Pollutant not monitored

d) - Federal Reference Method (FRM) PM10 samples were collected every 6 days at all sites except for Stations 4144 and 4157, where samples were collected every 3 days. PM10 statistics listed above are for the FRM data only. Federal Equivalent Method (FEM) PM10 continuous monitoring instruments were operated at some of the above locations. Max 24-hour average PM10 at sites with FEM monitoring was 152 µg/m³, at Mira Loma (155 µg/m³ is needed to exceed the PM10 standard).

e) - Federal annual PM10 standard (AAM > 50 µg/m³) was revoked in 2006. State standard is annual average (AAM) > 20 µg/m³.

f) - PM2.5 samples were collected every 3 days at all sites except for station numbers 069, 072, 077, 087, 3176, 4144 and 4165, where samples were taken daily, and station number 5818 where samples were taken every 6 days. PM2.5 statistics listed above are for the FRM data only. FEM PM2.5 continuous monitoring instruments were operated at some of the above locations. Max 24-hour average PM2.5 concentration recorded at FEM sites was 73.1 µg/m³, at Mira Loma. Federal annual PM2.5 standard is annual average (AAM) > 15.0 µg/m³. State standard is annual average (AAM) > 12.0 µg/m³.

g) - High PM10 and PM2.5 data samples excluded in accordance with the EPA Exceptional Event Regulation due to the special events (i.e., high wind, firework activities, etc.) are as follows: PM10 (FRM) on August 28 at Indio (323 µg/m³); and PM2.5 (FRM) on July 5 at Station 060 (94.6 µg/m³). Also, the following high PM10 FEM data were excluded: July 3 (396 and 344 µg/m³) and August 28 (265 and 375 µg/m³), both dates recorded at Stations 4137 and 4157, respectively.

h) – Federal lead standard is 3-months rolling average > 0.15 µg/m³; state standard is monthly average ≥ 1.5 µg/m³. Lead statistics listed above are for population-oriented sites only; standards were not exceeded at any of these sites. Lead standards were exceeded at source-oriented monitoring sites immediately downwind of stationary lead sources. Maximum monthly and 3-month rolling averages at source-oriented sites were 0.51 µg/m³ and 0.46 µg/m³, respectively.

i) – State sulfate standard is 24-hour ≥ 25 µg/m³. There is no federal standard for sulfate.

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2010 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2010

Source/Receptor Area No.	Location	Station No.	Carbon Monoxide[a] No. Days of Data	CO Max. Conc. in ppm 1-hour	CO Max Conc. in ppm 8-hour	Ozone No. Days of Data	Ozone Max. Conc. in ppm 1-hour	Ozone Max. Conc. in ppm 8-hour	Ozone Fourth High Conc. ppm 8-hour	Ozone Health Advisory ≥ 0.15 ppm 1-hour	Ozone No. Days Standard Exceeded: Federal Old > 0.12 ppm 1-hour	Ozone No. Days Standard Exceeded: Federal Current > 0.075 ppm 8-hour	Ozone No. Days Standard Exceeded: State Current > 0.09 ppm 1-hour	Ozone No. Days Standard Exceeded: State Current > 0.070 ppm 8-hour	Nitrogen Dioxide[b] No. Days of Data	NO2 Max Conc. in ppb 1-hour	NO2 98th Percentile Conc. ppb 1-hour	NO2 Annual Average AAM Conc. ppb	Sulfur Dioxide[c] No. Days of Data	SO2 Max. Conc. in ppb 1-hour	SO2 Max. Conc. in ppb 24-hour
LOS ANGELES COUNTY																					
1	Central LA	087	364	3	2.3	357	0.098	0.080	0.064	0	0	1	1	1	364	89.0	70.5	25.0	355	9.8	1.5
2	Northwest Coastal LA County	091	364	2	1.4	360	0.099	0.078	0.069	0	0	1	2	4	365	70.8	57.4	15.6	--	--	--
3	Southwest Coastal LA County	820	344	3	2.2	319	0.089	0.070	0.059	0	0	0	0	1	358	75.8	60.9	12.1	327	25.9	3.5
4	South Coastal LA County 1	072	358	3	2.1	358	0.101	0.084	0.057	0	0	1	1	1	360	92.8	70.2	19.8	329	40.0	6.0
4	South Coastal LA County 2	077	--	--	--	--	--	--	--	--	--	--	--	--	--			--	--	--	--
6	West San Fernando Valley	074	365	3	2.6	295	0.122	0.091	0.086	0	0	19	11	40	365	75.0	56.0	16.7	--	--	--
7	East San Fernando Valley	069	364	3	2.4	317	0.111	0.084	0.076	0	0	4	3	11	359	82.0	64.3	24.1	233*	14.9	4.1
8	West San Gabriel Valley	088	355	3	2.0	325	0.101	0.081	0.075	0	0	3	1	6	355	71.0	63.0	19.6	--	--	--
9	East San Gabriel Valley 1	060	355	3	1.3	356	0.104	0.081	0.075	0	0	3	5	10	364	77.2	59.6	18.5	--	--	--
9	East San Gabriel Valley 2	591	360	2	1.3	350	0.124	0.099	0.090	0	0	20	25	48	360	78.5	55.5	15.4	--	--	--
10	Pomona/Walnut Valley	075	365	3	1.8	342	0.115	0.082	0.076	0	0	4	9	20	365	97.0	72.5	26.2	--	--	--
11	South San Gabriel Valley	085	364	2	1.9	358	0.112	0.086	0.059	0	0	1	1	1	364	79.0	65.4	22.9	--	--	--
12	South Central LA County	112	353	6	3.6	358	0.081	0.062	0.050	0	0	0	0	0	364	76.8	68.8	17.9	--	--	--
13	Santa Clarita Valley	090	355	2	1.1	331	0.126	0.105	0.087	0	1	23	18	44	364	59.3	54.2	14.3	--	--	--
ORANGE COUNTY																					
16	North Orange County	3177	356	3	1.8	351	0.118	0.096	0.071	0	0	1	2	4	333	82.5	61.6	20.1	--	--	--
17	Central Orange County	3176	358	3	2.0	331	0.104	0.088	0.060	0	0	1	1	1	364	73.3	61.1	17.5	--	--	--
18	North Coastal Orange County	3195	364	2	2.1	353	0.097	0.076	0.060	0	0	1	1	2	364	70.0	56.0	11.3	348	9.5	2.1
19	Saddleback Valley	3812	362	1	0.9	353	0.117	0.082	0.069	0	0	2	2	2	--			--	--	--	--
RIVERSIDE COUNTY																					
22	Norco/Corona	4155	--	--	--	--	--	--	--	--	--	--	--	--	--			--	--	--	--
23	Metropolitan Riverside County 1	4144	364	3	1.8	341	0.128	0.098	0.092	0	1	47	31	78	333	64.5	57.0	16.8	349	17.6	4.6
23	Metropolitan Riverside County 2	4146	355	3	1.7	--	--	--	--	--	--	--	--	--	361	60.8	51.5	17.2	--	--	--
23	Mira Loma	4165	360	3	1.9	324	0.121	0.094	0.090	0	0	38	22	63	365	62.2	50.3	15.1	--	--	--
24	Perris Valley	4149	--	--	--	343	0.122	0.107	0.099	0	0	50	42	82	--			--	--	--	--
25	Lake Elsinore	4158	363	1	0.6	355	0.107	0.091	0.086	0	0	24	15	42	363	51.2	40.6	10.1	--	--	--
29	Banning Airport	4164	--	--	--	328	0.124	0.107	0.099	0	0	60	31	84	365	65.7	53.2	11.6	--	--	--
30	Coachella Valley 1**	4137	365	2	0.5	361	0.114	0.099	0.092	0	0	52	23	83	365	45.7	39.0	8.5	--	--	--
30	Coachella Valley 2**	4157	--	--	--	348	0.100	0.087	0.084	0	0	19	7	47	--			--	--	--	--
SAN BERNARDINO COUNTY																					
32	Northwest San Bernardino Valley	5175	353	2	1.8	349	0.131	0.097	0.090	0	1	39	31	59	365	78.9	58.0	20.4	--	--	--
33	Southwest San Bernardino Valley	5817	--	--	--	--	--	--	--	--	--	--	--	--	--			--	--	--	--
34	Central San Bernardino Valley 1	5197	359	3	1.4	350	0.143	0.100	0.094	0	2	33	28	55	363	71.9	64.8	23.1	330*	6.6	1.6
34	Central San Bernardino Valley 2	5203	326	2	1.7	354	0.129	0.105	0.095	0	1	40	27	63	365	69.2	56.6	18.8	--	--	--
35	East San Bernardino Valley	5204	--	--	--	363	0.128	0.112	0.097	0	1	61	43	86	--			--	--	--	--
37	Central San Bernardino Mountains	5181	--	--	--	364	0.142	0.123	0.109	0	6	74	52	101	--			--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	--	--	--	--	--	--	--	--			--	--	--	--
DISTRICT MAXIMUM				6	3.6		0.143	0.123	0.109	0	6	74	52	101		97.0	72.5	26.2		40.0	6.0
SOUTH COAST AIR BASIN				6	3.6		0.143	0.123	0.109	0	7	102	79	131		97.0	72.5	26.2		40.0	6.0

ppm - Parts Per Million parts of air, by volume ppb – Parts Per Billion parts of air, by volume AAM = Annual Arithmetic Mean -- - Pollutant not monitored

** Salton Sea Air Basin

- In 2010, the State and Federal Ambient Air Quality Standards were met for the gaseous pollutants CO, NO2 and SO2 at all District regular monitoring sites, listed above.
  a) - The federal 8-hour standard is 8-hour average CO > 9 ppm and state 8-hour standard is 8-hour average CO > 9.0 ppm. The federal and state 1-hour standards are 35 ppm and 20 ppm.
  b) - The NO2 federal 1-hour standard is 100 ppb and the annual standard is annual arithmetic mean NO_2 > 0.0534 ppm. The state 1-hour and annual standards are 0.18 ppm and 0.030 ppm.
  c) - The federal SO2 1-hour standard is 75 ppb (0.075 ppm). The state standards are 1-hour average SO_2 > 0.25 ppm and 24-hour average SO_2 > 0.04 ppm.
- Revised/New Standards in 2010:
  -- U.S. EPA established the new NO2 1-hour federal standard of 100 ppb (0.100 ppm), effective April 7, 2010.
  -- U.S. EPA revised the SO2 federal standard by establishing the new 1-hour standard of 75 ppb (0.075 ppm) and revoking the existing annual (0.03 ppm) and 24-hour (0.14 ppm) standards, effective August 2, 2010.

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4182
www.aqmd.gov

2010 AIR QUALITY
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

2010

Source/Receptor Area No.	Location	Station No.	Suspended Particulates PM10 [d] No. Days of Data	Max. Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Standards Federal > 150 µg/m³ 24-hour	No. (%) Samples Exceeding Standards State > 50 µg/m³ 24-hour	Annual Average Conc. (AAM) µg/m³	Fine Particulates PM2.5 [e] No. Days of Data	Max. Conc. in µg/m³ 24-hour	98th Percentile Conc. in µg/m³ 24-hour	No. (%) Samples Exceeding Fzederal Std > 35 µg/m³ 24-hour	Annual Average Conc. (AAM) µg/m³	Particulates TSP [f] No. Days of Data [c]	Max. Conc. in µg/m³ 24-hour	Annual Average Conc. (AAM) µg/m³	Lead [f] Max. Monthly Average Conc. µg/m³	Max. Quarterly Average Conc. µg/m³	Sulfate [f] Max. Conc. in µg/m³ 24-hour	No. Days Exceeding State Std ≥ 25 µg/m³ 24-hour
LOS ANGELES COUNTY																			
1	Central LA	087	56	42	0	0	27.1	335	39.2	27.1	2(0.6%)	11.9	53	105	53.3	0.02	0.01	9.1	0
2	Northwest Coastal LA County	091	--	--	--	--	--	--	--	--	--	--	59	82	40.8	--	--	7.5	0
3	Southwest Coastal LA County	820	55	37	0	0	20.6	--	--	--	--	--	55	85	36.7	0.01	0.01	9.7	0
4	South Coastal LA County 1	072	58	44	0	0	22.0	338	35.0	28.3	0	10.5	60	129	45.5	0.01	0.01	11.8	0
4	South Coastal LA County 2	077	59	76	0	2(3.4%)	27.3	351	33.7	26.5	0	10.4	57	130	50.8	0.01	0.01	12.2	0
6	West San Fernando Valley	074	--	--	--	--	--	100	40.7	30.4	1(1.0%)	10.2	--	--	--	--	--	--	--
7	East San Fernando Valley	069	55	51	0	1(1.8%)	29.6	322	43.7	31.8	4(1.2%)	12.5	--	--	--	--	--	--	--
8	West San Gabriel Valley	088	--	--	--	--	--	97	35.2	24.0	0	10.2	58	58	36.4	--	--	7.7	0
9	East San Gabriel Valley 1	060	55	70	0	5(9.1%)	29.8	93	44.4	35.4	1(1.1%)	10.9	53	136	58.2	--	--	6.4	0
9	East San Gabriel Valley 2	591	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10	Pomona/Walnut Valley	075	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11	South San Gabriel Valley	085	--	--	--	--	--	117	34.9	32.0	0	12.5	59	265	86.1	0.02	0.01	8.5	0
12	South Central LA County	112	--	--	--	--	--	111	38.2	31.8	1(0.9%)	12.5	58	94	49.2	0.01	0.01	7.8	0
13	Santa Clarita Valley	090	57	40	0	0	21.0	--	--	--	--	--	--	--	--	--	--	--	--
ORANGE COUNTY																			
16	North Orange County	3177	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
17	Central Orange County	3176	57	43	0	0	22.4	331	31.7	25.2	0	10.2	--	--	--	--	--	--	--
18	North Coastal Orange County	3195	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
19	Saddleback Valley	3812	58	34	0	0	18.1	116	19.9	17.3	0	8.0	--	--	--	--	--	--	--
RIVERSIDE COUNTY																			
22	Norco/Corona	4155	61	50	0	0	27.2	--	--	--	--	--	--	--	--	--	--	--	--
23	Metropolitan Riverside County 1	4144	122	75	0	7(5.7%)	32.8	351	46.5	32.0	4(1.1%)	13.2	60	131	64.3	0.01	0.01	6.7	0
23	Metropolitan Riverside County 2	4146	--	--	--	--	--	115	43.7	27.3	2(1.7%)	11.0	59	88	45.0	0.01	0.01	5.0	0
23	Mira Loma	4165	60	89	0	25(41.7%)	42.3	340	54.2	36.1	8(2.4%)	15.2	--	--	--	--	--	--	--
24	Perris Valley	4149	61	51	0	1(1.6%)	28.0	--	--	--	--	--	--	--	--	--	--	--	--
25	Lake Elsinore	4158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
29	Banning Airport	4164	60	55	0	1(1.7%)	21.8	--	--	--	--	--	--	--	--	--	--	--	--
30	Coachella Valley 1**	4137	61	37	0	0	18.7	111	12.8	12.6	0	6.0	--	--	--	--	--	--	--
30	Coachella Valley 2**	4157	119	107	0	6(5%)	29.3	112	16.0	12.2	0	6.8	--	--	--	--	--	--	--
SAN BERNARDINO COUNTY																			
32	Northwest San Bernardino Valley	5175	--	--	--	--	--	--	--	--	--	--	59	86	46.7	0.01	0.01	10.1	0
33	Southwest San Bernardino Valley	5817	60	87	0	3(5%)	31.8	112	46.1	31.2	1(0.9%)	13.0	--	--	--	--	--	--	--
34	Central San Bernardino Valley 1	5197	53	62	0	9(17%)	33.9	112	42.6	30.8	2(1.8%)	12.0	61	142	73.3	--	--	6.3	0
34	Central San Bernardino Valley 2	5203	59	63	0	3(5.1%)	32.4	119	39.3	29.7	2(1.7%)	11.1	60	106	57.7	0.01	0.01	11.4	0
35	East San Bernardino Valley	5204	58	57	0	1(1.7%)	25.8	--	--	--	--	--	--	--	--	--	--	--	--
37	Central San Bernardino Mountains	5181	57	39	0	0	18.9	--	--	--	--	--	--	--	--	--	--	--	--
38	East San Bernardino Mountains	5818	--	--	--	--	--	53	35.4	27.5	0	8.4	--	--	--	--	--	--	--
	DISTRICT MAXIMUM			107	0	25	42.3		54.2	36.1	8	15.2		265	86.1	0.02	0.01	12.2	0
	SOUTH COAST AIR BASIN			89	0	34	42.3		54.2	36.1	13	15.2		265	86.1	0.02	0.01	12.2	0

** Salton Sea Air Basin µg/m³ - Micrograms per cubic meter of air AAM = Annual Arithmetic Mean -- - Pollutant not monitored

- In 2010, Particulate Matter concentrations met the Ambient Air Quality Standard levels for the federal PM10 Standard, the State and Federal Lead Standards, and the State Sulfate standard at the regular monitoring sites, listed above.

d) - PM10 samples were collected every 6 days at all sites except for Station Numbers 4144 and 4157, where samples were collected every 3 days. The Federal annual PM10 standard (AAM > 50 µg/m³) was revoked in 2006. State standard is annual average (AAM) > 20 µg/m³.

e) - PM2.5 samples were collected every 3 days at all sites except for station numbers 069, 072, 077, 087, 3176, 4144 and 4165, where samples were taken daily, and station number 5818 where samples were taken every 6 days. Federal annual PM2.5 standard is annual average (AAM) > 15.0 µg/m³. State standard is annual average (AAM) > 12.0 µg/m³.

f) - TSP Particulate, Lead and Sulfate samples were taken every 6 days at all sites monitored.

- Federal Equivalent Method (FEM) continuous monitoring instruments were operated at some of the above locations for PM10 and PM2.5 monitoring. The Federal Reference Method (FRM) data is used for the above statistics.

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For information on the current standard levels and most recent revisions please refer to the previous year "Air Quality" summary card or access the "Ambient Air Quality Standards" chart at http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

Maps showing the source/receptor area boundaries can be accessed via the Internet by entering your address in the AQMD Current Hourly Air Quality Map, accessed from http://www2.aqmd.gov/webappl/gisaqi2/VEMap3D.aspx or at http://www.aqmd.gov/map/MapAQMD2.pdf. A map is also available free of charge from the AQMD Public Information Center at 1-800-CUT-SMOG.

Appendix C

STATION: SANTA ANA-J. WAYNE APT (KSNA), CA

CLIMATOLOGICAL SUMMARY. Period of Record: Feb 1999 to Dec 2008

Summaries based on unedited daily ASOS data. Errors may be present.

TEMPERATURE (F)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Avg Max Temp	66.7	66.1	67.3	68.8	71.9	74.5	78.8	79.4	78.8	75.5	71.2	66.3	72.1
Avg Min Temp	47.2	48.5	51.3	53.5	58.2	61.5	65.0	65.3	63.0	58.6	52.5	46.7	56.0
Avg Temperature	56.9	57.3	59.3	61.2	65.0	68.0	71.9	72.4	70.9	67.1	61.8	56.5	64.0
Extremes:													
Extreme Max Temp	90	90	95	99	98	96	99	92	102	99	94	83	102
Date of Ext-Day	31	08	11	27	02	27	22	25	28	05	15	18	
-Year	2003	2006	2007	2008	2004	2006	2006	2005	2005	2005	2008	2004	
Extreme Min Temp	33	37	41	41	49	54	57	58	56	51	37	36	33
Date of Ext-Day	14	01	01	10	01	03	28	27	21	30	30	27	
-Year	2007	2002	2007	1999	1999	1999	2007	2003	2007	2004	2004	2003	
Heating Degree Days	256	220	184	131	41	6	0	0	0	23	117	264	1242
Cooling Degree Days	6	3	8	16	42	95	214	228	178	86	21	1	898
Avg Number of Days:													
Max Temp >= 90	0.1	0.1	0.4	0.7	0.8	0.7	0.5	0.4	1.6	1.7	0.7	0.0	7.7
Max Temp >= 75	5.3	3.2	4.0	4.2	6.2	11.6	26.3	28.6	22.8	13.0	6.8	3.4	135.4
Max Temp <= 32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Temp <= 32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Temp <= 20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Min Temp <= 0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avg Dew Point Temp	42.1	44.8	46.7	48.7	53.9	57.5	61.3	61.6	59.3	53.6	47.4	42.0	51.6
Avg Wet Bulb Temp	49.8	50.9	52.3	54.2	58.3	61.3	64.8	65.1	63.3	58.7	54.0	49.5	56.8

Avg Sea Level Pres (Inches of Mercury)	30.09	30.06	30.02	29.99	29.94	29.90	29.92	29.90	29.88	29.95	30.04	30.10	29.98

WEATHER See disclaimer below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Avg Number of Days:													
Thunderstorms	0.3	0.3	0.2	0.2	0.1	0.1	0.3	0.0	0.2	1.0	0.1	0.0	2.8
Heavy Fog	2.1	2.0	1.6	0.5	0.9	0.0	0.1	0.4	1.5	2.2	3.1	2.9	17.3
Fog	14.8	13.1	14.6	10.4	13.6	15.1	14.3	15.4	13.0	14.3	13.7	13.0	165.3
Hail	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PRECIPITATION (In)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average Monthly	1.74	2.78	1.03	0.64	0.16	0.02	0.10	0.00	0.09	0.86	0.77	1.20	9.42
Maximum Daily	2.05	2.11	2.19	0.77	0.57	0.10	0.31	0.03	0.38	2.68	1.17	1.50	2.68
Date of Ext-Day	09	12	15	28	22	02	15	02	21	20	30	15	
-Year	2005	2001	2003	2005	2006	1999	1999	1999	2007	2004	2007	2008	
Avg Number of Days:													

>= 0.01	6.1	7.7	5.5	3.8	1.6	0.8	1.6	0.1	1.0	3.6	5.4	7.4	44.6
>= 0.10	3.1	4.9	2.1	1.6	0.4	0.1	0.3	0.0	0.3	1.3	1.5	2.5	18.1
>= 0.25	2.0	3.4	1.4	0.8	0.3	0.0	0.1	0.0	0.1	0.7	0.9	1.2	10.9
>= 0.50	1.1	2.2	0.6	0.4	0.1	0.0	0.0	0.0	0.0	0.5	0.4	0.7	6.0
>= 1.00	0.3	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	1.9

WIND (MPH)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Daily Avg Wind Speed	4.2	4.6	5.2	5.8	6.1	6.3	6.0	5.4	4.8	4.2	3.7	3.6	5.0
Daily Avg Max 2-Min	14.0	14.4	14.7	14.9	14.7	14.4	14.3	13.6	13.3	13.0	12.7	12.7	13.9
Daily Avg Peak Gust	17.8	18.2	18.6	18.9	18.4	18.0	17.8	16.9	16.5	16.3	16.1	16.4	17.5
Maximum Daily Avg	22.2	13.1	15.8	10.6	10.0	9.7	9.3	8.9	9.8	18.9	13.6	17.1	22.2
Maximum 2-Minute Avg	40	29	35	28	26	30	28	20	25	33	35	39	40
Date of Max 2min-Day	06	20	28	01	03	27	27	28	28	13	25	22	
-Year	2003	2000	2003	2000	2001	2006	2002	2001	2005	2008	2002	1999	
Maximum Peak Gust	49	40	45	35	36	35	40	23	35	47	45	48	49
Date of Max Gust-Day	06	20	28	18	03	27	27	29	28	13	25	22	
-Year	2003	2000	2003	2007	2001	2006	2002	2008	2005	2008	2002	1999	
Avg Number of Days:													
Peak Gust >=30	2.8	1.5	1.0	0.7	0.3	0.2	0.1	0.0	0.2	1.0	1.7	2.1	11.6
Peak Gust >=40	0.6	0.1	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.4	0.2	1.8
Peak Gust >=50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 2-Minute >=30	0.7	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.4	0.0	1.6
Max 2-Minute >=40	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

Observations of WEATHER may me innacurate due to early ASOS inconsistancies. Average days with Thunderstorms may be low due to early mis-detection.

Heavy Fog = Visibility less than or equal to 1/4 mile.
Fog = Visibility greater than 1/4 mile or less than 7 miles.
Peak Gust = Maximum 5-second average.
Snowfall data not observed at ASOS stations.

Appendix D

Emission Factors by Horsepower, SCC, and Pollutant

All Fuels **Grams/Operating Hour** **Orange County**

Balboa West
2016 (Balboa West)
Typical weekend day for year: 2016
Date of Model Run: May 24 08:21:42: 2014 Today's Date: 06/21/14

Fuel Type	SCC	Equipment Description	Engine Type / Horsepower	Exhaust THC	Exhaust NOx	Exhaust CO	Exhaust PM10	Exhaust SO2	Exhaust CO2	Crankcase THC	Diurnal THC
Diesel											
	Pleasure Craft										
	2282020005	Inboard/Sterndrive	Diesel								
			6 < HP <= 11	2.69	19.94	15.78	2.01	0.53	2,003.17	0.04	0.00
			11 < HP <= 16	3.13	25.65	15.94	2.35	0.82	3,072.91	0.05	0.00
			16 < HP <= 25	4.50	36.81	22.88	3.38	1.18	4,409.58	0.08	0.00
			25 < HP <= 40	7.63	46.77	26.22	4.52	1.71	6,422.50	0.11	0.00
			40 < HP <= 50	10.37	63.56	35.64	6.14	2.33	8,728.01	0.15	0.00
			50 < HP <= 75	4.21	97.85	20.26	2.80	3.09	11,597.06	0.04	0.00
			75 < HP <= 100	7.07	164.08	33.97	4.70	5.18	19,446.07	0.07	0.00
			100 < HP <= 175	9.81	251.46	52.14	6.88	7.17	26,900.57	0.10	0.00
			175 < HP <= 300	18.38	416.54	80.28	9.37	11.04	41,407.87	0.15	0.00
			300 < HP <= 600	38.17	726.65	139.29	15.65	19.15	71,826.62	0.26	0.00
			600 < HP <= 750	66.75	1,270.84	243.60	27.38	33.49	125,617.72	0.46	0.00
			750 < HP <= 1000	85.74	1,637.87	315.39	35.22	43.36	162,637.21	0.60	0.00
			1000 < HP <= 1200	112.89	2,156.43	415.24	46.37	57.08	214,128.16	0.79	0.00
			1200 < HP <= 2000	125.53	2,700.66	495.26	54.78	67.73	254,048.84	1.23	0.00

Emission Factors by Horsepower, SCC, and Pollutant

All Fuels **Grams/Operating Hour** **Orange County**

Balboa West
2016 (Balboa West)
Typical weekend day for year: 2016
Date of Model Run: May 24 08:21:42: 2014 Today's Date: 06/21/14

Fuel Type	SCC	Equipment Description	Engine Type / Horsepower	Vapor Displacement THC	Spillage THC	Hot Soak THC	Running Loss THC	Tank Permeation THC	Hose Permeation THC	Total THC
Diesel										
	Pleasure Craft									
	2282020005	Inboard/Sterndrive	Diesel							
			6 < HP <= 11	0.00	0.00	0.00	0.00	0.00	0.00	2.73
			11 < HP <= 16	0.00	0.00	0.00	0.00	0.00	0.00	3.19
			16 < HP <= 25	0.00	0.00	0.00	0.00	0.00	0.00	4.57
			25 < HP <= 40	0.00	0.00	0.00	0.00	0.00	0.00	7.74
			40 < HP <= 50	0.00	0.00	0.00	0.00	0.00	0.00	10.52
			50 < HP <= 75	0.00	0.00	0.00	0.00	0.00	0.00	4.26
			75 < HP <= 100	0.00	0.00	0.00	0.00	0.00	0.00	7.14
			100 < HP <= 175	0.00	0.00	0.00	0.00	0.00	0.00	9.90
			175 < HP <= 300	0.00	0.00	0.00	0.00	0.00	0.00	18.53
			300 < HP <= 600	0.00	0.00	0.00	0.00	0.00	0.00	38.43
			600 < HP <= 750	0.00	0.00	0.00	0.00	0.00	0.00	67.21
			750 < HP <= 1000	0.00	0.00	0.00	0.00	0.00	0.00	86.34
			1000 < HP <= 1200	0.00	0.00	0.00	0.00	0.00	0.00	113.67
			1200 < HP <= 2000	0.00	0.00	0.00	0.00	0.00	0.00	126.76

Fuel Type	SCC	Equipment Description	Engine Type / Horsepower	Exhaust THC	Exhaust NOx	Exhaust CO	Exhaust PM10	Exhaust SO2	Exhaust CO2	Crankcase THC	Diurnal THC
			2000 < HP <= 3000	210.35	4,525.43	829.89	91.80	113.49	425,703.39	2.06	0.00
	2282020010	Outboards	Diesel								
			25 < HP <= 40	7.89	48.34	27.11	4.67	1.77	6,638.64	0.12	0.00
Gasoline											
	Pleasure Craft										
	2282005010*	Outboard	2 Stroke								
			1 < HP <= 3	50.36	2.09	166.71	0.97	0.13	630.90	0.00	3.05
			3 < HP <= 6	112.08	3.57	243.91	2.16	0.27	1,325.00	0.00	7.64
			6 < HP <= 11	159.21	9.56	413.54	3.06	0.53	2,594.64	0.00	9.16
			11 < HP <= 16	213.96	16.73	581.99	4.20	0.87	4,243.12	0.00	9.09
			16 < HP <= 25	298.80	19.78	778.65	5.96	1.35	6,586.89	0.00	13.49
			25 < HP <= 40	330.58	34.68	990.79	6.55	1.71	8,346.19	0.00	15.49
			40 < HP <= 50	497.84	48.20	1,381.85	10.07	2.32	11,322.87	0.00	19.65
			50 < HP <= 75	435.98	75.25	1,783.29	8.31	3.04	14,786.04	0.00	28.36
			75 < HP <= 100	622.45	98.18	2,381.65	11.94	4.08	19,869.49	0.00	28.36
			100 < HP <= 175	784.37	146.95	3,320.27	14.61	5.28	25,665.68	0.00	44.99
			175 < HP <= 300	1,104.94	212.58	4,477.95	19.05	8.08	39,321.18	0.00	62.79
	2282005015*	Personal Water Craft	2 Stroke								
			1 < HP <= 3	9.83	1.79	174.49	0.06	0.11	538.49	0.00	0.76
			3 < HP <= 6	22.37	3.29	362.50	0.19	0.28	1,340.39	0.00	0.76
			6 < HP <= 11	30.32	13.29	310.86	0.40	0.51	2,481.89	0.00	0.76
			16 < HP <= 25	77.48	30.17	752.65	1.31	1.39	6,754.85	0.00	1.52
			25 < HP <= 40	48.39	44.52	829.90	0.60	1.59	7,704.17	0.00	1.52
			40 < HP <= 50	340.13	50.03	1,047.04	7.26	2.43	11,802.54	0.00	1.82

Fuel Type	SCC	Equipment Description	Engine Type Horsepower	Vapor Displacement THC	Spillage THC	Hot Soak THC	Running Loss THC	Tank Permeation THC	Hose Permeation THC	Total THC
			2000 < HP <= 3000	0.00	0.00	0.00	0.00	0.00	0.00	212.41
	2282020010	Outboards	Diesel							
			25 < HP <= 40	0.00	0.00	0.00	0.00	0.00	0.00	8.00
Gasoline										
	Pleasure Craft									
	2282005010*	Outboard	2 Stroke							
			1 < HP <= 3	0.32	0.76	0.00	0.00	6.27	29.90	90.67
			3 < HP <= 6	0.69	0.64	0.00	0.00	12.15	29.90	163.10
			6 < HP <= 11	1.27	0.99	0.00	0.00	14.03	29.90	214.56
			11 < HP <= 16	2.02	1.57	0.00	0.00	13.93	29.55	270.11
			16 < HP <= 25	2.85	0.33	0.00	0.00	19.28	28.48	363.23
			25 < HP <= 40	3.55	0.25	3.00	0.00	16.91	22.37	392.16
			40 < HP <= 50	4.88	0.25	3.00	0.00	22.22	29.02	576.87
			50 < HP <= 75	6.11	0.20	3.00	0.00	33.23	34.58	541.45
			75 < HP <= 100	8.26	0.27	3.00	0.00	33.23	34.58	730.15
			100 < HP <= 175	10.64	0.19	3.00	0.00	54.97	38.17	936.34
			175 < HP <= 300	16.19	0.19	3.00	0.00	81.70	41.78	1,310.58
	2282005015*	Personal Water Craft	2 Stroke							
			1 < HP <= 3	0.23	0.25	3.00	2.86	3.21	1.27	21.40
			3 < HP <= 6	0.58	0.61	3.00	2.86	3.21	1.27	34.65
			6 < HP <= 11	1.05	1.11	3.00	2.86	3.21	1.27	43.58
			16 < HP <= 25	2.64	0.32	3.00	2.86	5.59	1.68	95.09
			25 < HP <= 40	2.97	0.36	3.00	2.86	5.59	1.68	66.36
			40 < HP <= 50	4.87	0.49	3.00	2.86	6.51	2.09	361.77

Fuel Type	SCC	Equipment Description	Engine Type Horsepower	Exhaust THC	Exhaust NOx	Exhaust CO	Exhaust PM10	Exhaust SO2	Exhaust CO2	Crankcase THC	Diurnal THC
			50 < HP <= 75	491.00	59.95	1,894.33	9.70	3.07	14,932.63	0.00	2.58
			75 < HP <= 100	638.68	86.49	2,674.64	13.04	4.38	21,324.38	0.00	2.58
			100 < HP <= 175	325.87	145.65	3,590.08	4.29	5.12	24,887.10	0.00	3.10
			175 < HP <= 300	1,215.69	165.87	4,335.71	24.35	7.95	38,667.25	0.00	3.10
	2282010005*	Inboard/Sterndrive	4 Stroke								
			3 < HP <= 6	4.76	5.36	125.83	0.07	0.19	937.99	0.00	2.35
			6 < HP <= 11	9.51	10.72	251.66	0.14	0.39	1,875.98	0.00	3.92
			11 < HP <= 16	14.27	16.08	377.49	0.22	0.58	2,813.97	0.00	4.71
			25 < HP <= 40	28.98	32.67	766.80	0.44	1.18	5,716.10	0.00	7.49
			50 < HP <= 75	53.78	67.91	1,417.49	0.86	2.28	11,051.90	0.00	13.69
			75 < HP <= 100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			100 < HP <= 175	137.38	176.30	3,615.33	2.16	5.73	27,824.56	0.00	32.04
			175 < HP <= 300	158.66	284.51	4,106.46	3.04	7.81	37,898.47	0.00	41.83
			300 < HP <= 600	254.97	562.48	6,503.11	5.48	13.82	67,080.78	0.00	69.42
			600 < HP <= 750	1,109.40	936.11	22,503.77	9.47	23.80	115,580.06	0.00	74.71

* Under 25 horsepower spark-ignition engines are lumped into either 2- or 4-stroke.

Fuel Type	SCC	Equipment Description	Engine Type Horsepower	Vapor Displacement THC	Spillage THC	Hot Soak THC	Running Loss THC	Tank Permeation THC	Hose Permeation THC	Total THC
			50 < HP <= 75	6.23	0.44	3.00	2.86	8.88	2.67	517.67
			75 < HP <= 100	8.83	0.63	3.00	2.86	8.88	2.67	668.12
			100 < HP <= 175	9.79	0.58	3.00	2.86	10.47	3.25	358.92
			175 < HP <= 300	16.08	0.95	3.00	2.86	10.47	3.25	1,255.39
	2282010005*	Inboard/Sterndrive	4 Stroke							
			3 < HP <= 6	0.39	0.61	3.00	2.86	3.28	3.68	20.93
			6 < HP <= 11	0.78	0.73	3.00	2.86	4.80	3.68	29.28
			11 < HP <= 16	1.17	0.91	3.00	2.86	5.54	3.68	36.14
			25 < HP <= 40	2.20	0.23	3.00	2.86	8.58	4.87	58.21
			50 < HP <= 75	4.24	0.23	3.00	2.86	15.57	7.12	100.49
			75 < HP <= 100	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			100 < HP <= 175	10.69	0.23	3.00	0.00	37.10	9.36	229.80
			175 < HP <= 300	14.52	0.22	3.00	0.00	51.76	11.60	281.58
			300 < HP <= 600	25.66	0.22	3.00	0.00	92.24	13.84	459.34
			600 < HP <= 750	45.12	0.23	3.00	0.00	157.11	19.69	1,409.26

* Under 25 horsepower spark-ignition engines are lumped into either 2- or 4-stroke.

Appendix E

California Recreation Company
Engine Specifications
Balboa Marina
June 24, 2014

Slip #	Boat Length	Model Year	Builder	Model	Typical Engine Model(s)	Manufacturer	Fuel	Total Horse Power
3	78	2011	Ocean Alexander	Motoryacht	C32 ACERT	Twin Caterpillar	Diesel	1622HP
8	58	1998	Westbay SonShip		6V92TA	Detroit	Diesel	625
9	56	2002	Sunseeker		D2848LE403	MAN	Diesel	1600 HP
10	58	2007	Carver	Voyager	D9 EVC-500 hp D9 EVC-575 hp C9: 575 hp	Volvo Penta Volvo Penta CAT	Diesel	1650
11	50	1994	Bertram	Convertible	8V92TA	Detroit	Diesel	750
12	50	2004	Mikelson Yachts Inc		6CTA8.3	Cummins	Diesel	960
13	40	2012	Meridian	391 Sedan	8.2	MerCruiser Horizon	Diesel	850
14	52	2010	Ovation	DC	5.7 IB	Volvo	Diesel	1305
34	58	2000	Viking	Flybridge	2842LE406	MAN	Diesel	2400
22	87	2010	Ocean Alexander	Megayacht	C32 ACERT	Twin Caterpillar	Diesel	1200
46	65	2000	Viking	Convertible	DDEC 16V2000	MTU	Diesel	1800