

# **APPENDIX B**

## **AIR QUALITY TECHNICAL REPORT FOR THE FORRESTER CREEK INDUSTRIAL PARK Scientific Resources Associated, January 19, 2009**



**Air Quality Technical Report**  
for the  
**Forrester Creek Industrial Park**

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## Contents

<b>1.0</b>	<b>Introduction.....</b>	<b>2</b>
<b>2.0</b>	<b>Existing Conditions.....</b>	<b>2</b>
2.1	Climate and Meteorology.....	2
2.2	Regulatory Setting.....	3
2.3	Background Air Quality.....	8
<b>3.0</b>	<b>Thresholds of Significance .....</b>	<b>9</b>
<b>4.0</b>	<b>Impacts.....</b>	<b>12</b>
4.1	Construction .....	12
4.2	Operational Impacts .....	17
4.3	Odors .....	23
4.4	Toxic Air Contaminant Impacts.....	24
<b>5.0</b>	<b>Global Climate Change .....</b>	<b>27</b>
5.1	Regulatory Framework.....	27
5.2	Approach to Climate Change Evaluations .....	30
5.3	Existing Conditions.....	31
5.4	Guidelines for the Determination of Significance.....	33
5.5	Greenhouse Gas Impacts.....	36
<b>6.0</b>	<b>Cumulative Impacts.....</b>	<b>37</b>
<b>7.0</b>	<b>Conclusions and Recommendations.....</b>	<b>39</b>
<b>8.0</b>	<b>References.....</b>	<b>41</b>



## **1.0 Introduction**

This report presents an assessment of potential air quality impacts associated with the proposed Forrester Creek Industrial Park located in the City of El Cajon. The Forrester Creek Industrial Park is part of the Gillespie Field Airport, which consists of approximately 750 acres. The project proposes to construct a 463,000 square foot industrial park on the northwest corner of the Cuyamaca Street and Weld Boulevard intersection. Access to the site will be provided via Weld Boulevard opposite of Gillespie Way.

The evaluation in this Air Quality Technical Report addresses the potential for air emissions during construction and after full buildout of the project, including an assessment of the potential for CO “hot spots” which form due to traffic associated with the proposed project, as well as cumulative impacts.

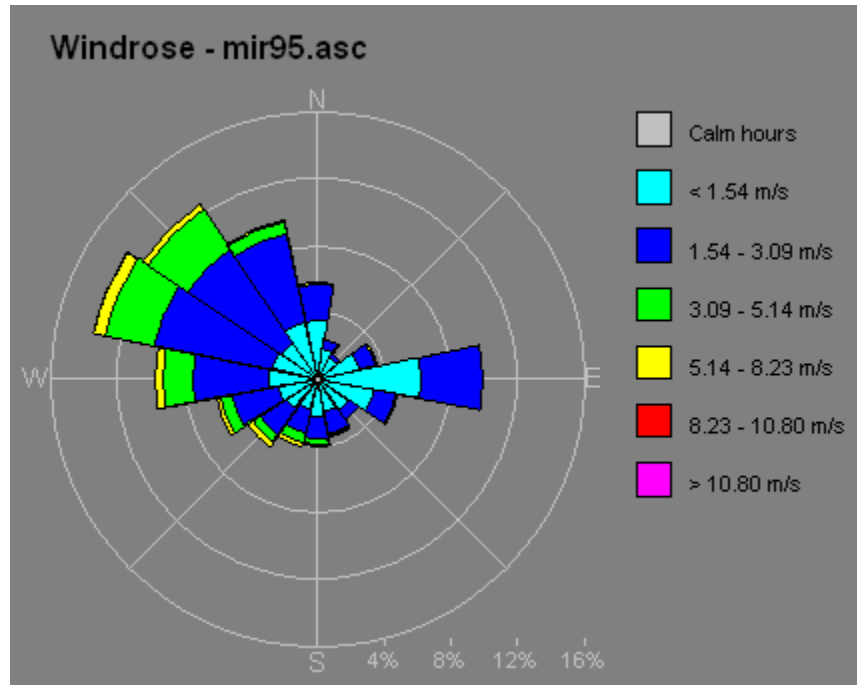
## **2.0 Existing Conditions**

### 2.1 Climate and Meteorology

The project site is located in the San Diego Air Basin (SDAB). The climate of the SDAB is dominated by a semi-permanent high pressure cell located over the Pacific Ocean. This cell influences the direction of prevailing winds (westerly to northwesterly) and maintains clear skies for much of the year. Figure 1 provides a graphic representation of the prevailing winds in the project vicinity, as measured at the MCAS Miramar Monitoring Station (the most representative meteorological monitoring station for the site). The high pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Subsidence inversions occur during the warmer months as descending air associated with the Pacific high pressure cell comes into contact with cool marine air. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by heat radiation and air aloft remains warm. The shallow inversion layer formed between these

two air masses also can trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions occur that produce ozone, commonly known as smog.



**Figure 1. Wind Rose – MCAS Miramar Monitoring Station**

## 2.2 Regulatory Setting

Air quality is defined by ambient air concentrations of specific pollutants identified by the United States Environmental Protection Agency (USEPA) to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called “criteria” pollutants). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere.



In September 1997, the EPA promulgated 8-hour O<sub>3</sub> and 24-hour and annual PM<sub>2.5</sub> national standards (particulate matter less than 2.5 microns in diameter). However, due to a lawsuit in May 1999, the United States District Court rescinded these standards and the EPA's authority to enforce them. Subsequent to an appeal of this decision by the EPA, the United States Supreme Court upheld these standards in February 2001. As a result, this action has initiated a new planning process to monitor and evaluate emission control measures for these pollutants. The EPA is moving forward to develop policies to implement these standards.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. The California Air Resources Board (ARB) has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. In December 2002, the APCD submitted a maintenance plan for the 1-hour NAAQS for O<sub>3</sub> and requested redesignation from a serious O<sub>3</sub> nonattainment area to attainment. As of July 28, 2003, the San Diego Air Basin has been reclassified as an attainment area for the 1-hour NAAQS for O<sub>3</sub>. On April 15, 2004, the SDAB was designated a basic nonattainment area for the 8-hour NAAQS for O<sub>3</sub>. The SDAB is in attainment for the NAAQS for all other criteria pollutants. The SDAB is currently classified as a nonattainment area under the CAAQS for O<sub>3</sub> and PM<sub>10</sub>.

The ARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The ARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the CAAQS. The ARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a nonattainment area to develop its own strategy for achieving the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The APCD is the

local agency responsible for the administration and enforcement of air quality regulations for San Diego County.

The APCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is updated on a triennial basis. The RAQS was updated in 1995, 1998, 2001, and most recently in 2004. The RAQS outlines APCD's plans and control measures designed to attain the state air quality standards for O<sub>3</sub>. The APCD has also developed the air basin's input to the SIP, which is required under the Federal Clean Air Act for areas that are out of attainment of air quality standards. The SIP includes the APCD's plans and control measures for attaining the O<sub>3</sub> NAAQS. The SIP is also updated on a triennial basis. A new SIP planning process is underway to address the 8-hour NAAQS for ozone. As part of that process, the APCD has adopted the *Eight Hour Ozone Attainment Plan for San Diego County* (APCD 2007). The plan presents the APCD's strategies for attaining and maintaining the 8-hour NAAQS for ozone, and has been submitted to the ARB as the San Diego County portion of the SIP. The ARB submitted the California state-wide SIP to the EPA on November 16, 2007, for their review and approval. The 2007 SIP has not yet been approved by the EPA.

The RAQS relies on information from ARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The ARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the County's General Plan. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project would propose development which is less dense than anticipated within the general plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the general plan and SANDAG's growth projections, the project might be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin. The SIP also includes rules and regulations that have been adopted by the APCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the NAAQS for O<sub>3</sub>.

Table 1 presents a summary of the ambient air quality standards adopted by the federal and California Clean Air Acts.

Table 1  
 AMBIENT AIR QUALITY STANDARDS

POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS		NATIONAL STANDARDS		
		Concentration	Method	Primary	Secondary	Method
Ozone	1 hour	0.09 ppm (180 µg/m <sup>3</sup> )	Ultraviolet Photometry	--	--	Ethylene Chemiluminescence
	8 hour	0.070 ppm (137 µg/m <sup>3</sup> )		0.075 ppm (147 µg/m <sup>3</sup> )	0.075 ppm (147 µg/m <sup>3</sup> )	
Carbon Monoxide	8 hours	9.0 ppm (10 mg/m <sup>3</sup> )	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m <sup>3</sup> )	None	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m <sup>3</sup> )		35 ppm (40 mg/m <sup>3</sup> )		
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Average	0.030 ppm (56 µg/m <sup>3</sup> )	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (338 µg/m <sup>3</sup> )		--	--	
Sulfur Dioxide (SO <sub>2</sub> )	Annual Average	--	Ultraviolet Fluorescence	0.03 ppm (80 µg/m <sup>3</sup> )	--	Pararosaniline
	24 hours	0.04 ppm (105 µg/m <sup>3</sup> )		0.14 ppm (365 µg/m <sup>3</sup> )	--	
	3 hours	--		--	0.5 ppm (1300 µg/m <sup>3</sup> )	
	1 hour	0.25 ppm (655 µg/m <sup>3</sup> )		--	--	
Respirable Particulate Matter (PM <sub>10</sub> )	24 hours	50 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m <sup>3</sup>		--	--	
Fine Particulate Matter (PM <sub>2.5</sub> )	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	Gravimetric or Beta Attenuation	15 µg/m <sup>3</sup>	--	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 µg/m <sup>3</sup>	--	
Sulfates	24 hours	25 µg/m <sup>3</sup>	Ion Chromatography	--	--	--
Lead	30-day Average	1.5 µg/m <sup>3</sup>	Atomic Absorption	--	--	Atomic Absorption
	Calendar Quarter	--		1.5 µg/m <sup>3</sup>	1.5 µg/m <sup>3</sup>	
Hydrogen Sulfide Vinyl Chloride	24 hours	0.010 ppm (26 µg/m <sup>3</sup> )	Gas Chromatography	--	--	--

ppm= parts per million

µg/m<sup>3</sup> = micrograms per cubic meter

mg/m<sup>3</sup> = milligrams per cubic meter

Source: California Air Resources Board 2008

### 2.3 Background Air Quality

The APCD operates a network of ambient air monitoring stations throughout San Diego County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring stations to the project site are the El Cajon monitoring station and the downtown San Diego station (which is the nearest station that measures CO and SO<sub>2</sub>). Because the downtown San Diego monitoring station is located in areas where there is substantial traffic congestion, it is likely that pollutant concentrations measured at that monitoring station are higher than concentrations that would be observed or measured in the Project area, and would thus provide a conservative estimate of background ambient air quality. Ambient concentrations of pollutants over the last three years are presented in Table 2.

Air quality has shown improvement in the SDAB such that the 8-hour federal ozone standard was only exceeded once (in 2006) at the El Cajon monitoring station during the period from 2005 through 2007. Multiple exceedances of both the 1-hour and 8-hour CAAQS for ozone were recorded at the El Cajon monitoring station. El Cajon regularly experiences exceedances of the 24-hour and annual CAAQS for PM<sub>10</sub> and PM<sub>2.5</sub>. An exceedance of the 24-hour NAAQS for PM<sub>2.5</sub> was measured in 2007, but it was associated with the San Diego County fire events in October and was not considered representative of PM<sub>10</sub> concentrations in the Project area. The data from the monitoring stations indicate that air quality is in attainment of all other standards.

**Table 2**  
**Ambient Background Concentrations**  
**(ppm unless otherwise indicated)**

Pollutant	Averaging Time	2005	2006	2007	Most Stringent Ambient Air Quality Standard	Monitoring Station
Ozone	8 hour	0.073	0.090	0.082	0.070	El Cajon
	1 hour	0.092	0.106	0.110	0.09	El Cajon
PM <sub>10</sub>	Annual	28.2 µg/m <sup>3</sup>	27.0 µg/m <sup>3</sup>	26.0 µg/m <sup>3</sup>	20 µg/m <sup>3</sup>	El Cajon
	24 hour	50 µg/m <sup>3</sup>	49 µg/m <sup>3</sup>	61 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	El Cajon
PM <sub>2.5</sub> <sup>2</sup>	Annual	11.4 µg/m <sup>3</sup>	11.6 µg/m <sup>3</sup>	12.8 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	El Cajon
	24 hour	40.9 µg/m <sup>3</sup>	37.6 µg/m <sup>3</sup>	395.1 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>	El Cajon
NO <sub>2</sub>	Annual	0.019	0.018	0.016	0.030	El Cajon
	1 hour	0.079	0.069	0.065	0.18	El Cajon
CO	8 hour	3.10	3.27	3.01	9.0	San Diego
	1 hour	4.5	5.3	4.4	20	San Diego
SO <sub>2</sub>	Annual	0.003	0.004	0.003	80	San Diego
	24 hour	0.005	0.009	0.006	105	San Diego
	3 hour	0.026	0.030	0.010	1300 <sup>1</sup>	San Diego
	1 hour	0.036	0.034	0.018	655	San Diego

<sup>1</sup>Secondary NAAQS

<sup>2</sup>Highest level occurred during the 2007 autumn fire event or during subsequent conditions associated with that event

Source: [www.arb.ca.gov/aqd/aqd.htm](http://www.arb.ca.gov/aqd/aqd.htm) (Measurements of all pollutants at El Cajon and San Diego stations, except 1-hour and 3-hour SO<sub>2</sub>, 1-hour CO, and annual PM<sub>2.5</sub>)

[www.epa.gov/air/data/monvals.html](http://www.epa.gov/air/data/monvals.html) (1-hour and 3-hour SO<sub>2</sub>, 1-hour CO, and annual PM<sub>2.5</sub>)

### 3.0 Thresholds of Significance

The guidelines to address the significance of air quality impacts are based on Appendix G of the State CEQA Guidelines. The State CEQA Guidelines provide guidance that a project would have a significant environmental impact if it would:

1. Conflict or obstruct the implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP);
2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation;
3. Result in a cumulatively considerable net increase of PM<sub>10</sub> or exceed quantitative thresholds for O<sub>3</sub> precursors, oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOCs);

4. Expose sensitive receptors (including, but not limited to, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations.
5. Create objectionable odors affecting a substantial number of people.

As stated above, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS and SIP. Also, projects that are consistent with the SIP rules (i.e., the federally-approved rules and regulations adopted by the APCD) are consistent with the SIP. Thus projects would be required to conform with measures adopted in the RAQS (including use of low-VOC architectural coatings, use of low-NO<sub>x</sub> water heaters, and compliance with rules and regulations governing stationary sources) and would also be required to comply with all applicable rules and regulations adopted by the APCD.

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation; or (b) result in a cumulatively considerable net increase of PM<sub>10</sub> or exceed quantitative thresholds for O<sub>3</sub> precursors, oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOCs), project emissions may be evaluated based on the quantitative emission thresholds established by the San Diego APCD. As part of its air quality permitting process, the APCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments (AQIA).

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. Since the APCD does not have AQIA thresholds for emissions of VOCs, the use of the threshold for VOCs from the City of San Diego's CEQA Significance Determination Thresholds is appropriate. The screening thresholds are included in the table below.

Table 3  
SCREENING-LEVEL CRITERIA FOR AIR QUALITY IMPACTS

Pollutant	Total Emissions		
<b>Construction Emissions</b>			
	Lb. per Day		
Respirable Particulate Matter (PM <sub>10</sub> )	100		
Oxides of Nitrogen (NO <sub>x</sub> )	250		
Oxides of Sulfur (SO <sub>x</sub> )	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	137		
<b>Operational Emissions</b>			
	Lb. Per Hour	Lb. per Day	Tons per Year
Respirable Particulate Matter (PM <sub>10</sub> )	---	100	15
Oxides of Nitrogen (NO <sub>x</sub> )	25	250	40
Oxides of Sulfur (SO <sub>x</sub> )	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	137	15

In the event that emissions exceed these thresholds, modeling would be required to demonstrate that the project’s total air quality impacts result in ground-level concentrations that are below the State and Federal Ambient Air Quality Standards, including appropriate background levels. For nonattainment pollutants (ozone, with ozone precursors NO<sub>x</sub> and VOCs) and PM<sub>10</sub>, if emissions exceed the thresholds shown in Table 3, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or Hazardous Air Pollutants (HAPs). If a project has the potential to result in emissions of any TAC or HAP which could affect a sensitive receptor, the project would be deemed to have a potentially significant impact.



With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as schools (Preschool-12<sup>th</sup> Grade), hospitals, resident care facilities, or day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Any project which has the potential to directly impact a sensitive receptor located within 1 mile and results in a health risk greater than the risk significance thresholds discussed above would be deemed to have a potentially significant impact.

APCD Rule 51 (Public Nuisance) also prohibits emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of any person. A project that proposes a use which would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

The impacts associated with construction and operation of the Forrester Creek Industrial Park project were evaluated for significance based on these significance criteria.

## **4.0 Impacts**

The proposed Forrester Creek Industrial Park Project would include both construction and operational impacts. Construction impacts would include emissions associated with the construction stage of the project, and would be relatively short-term in nature. Operational impacts would include emissions associated with the project after construction and full buildout is complete, including traffic, and would continue for the life of the project.

### 4.1 Construction

The proposed Forrester Creek Industrial Park Project involves the construction of four buildings totaling 463,000 square feet at the site. Emissions associated with construction were estimated using the URBEMIS Model, Version 9.2.4 (Rimpo and Associates 2007). Construction of the project would proceed in three phases:

- Phase 1: March 2010 to July 2011, includes grading and site preparation plus building construction and paving (196,500 square feet)
- Phase 2: July 2011 to April 2012, includes building construction and paving (191,473 square feet)
- Phase 3: April 2012 to February 2013, includes building construction and paving (75,000 square feet)

Table 4 presents a summary of the construction phases and estimated equipment needs for the construction activities.

Construction Phase	Equipment	Number
Grading and Site Preparation	Scrapers	2
	Graders	2
	Dozers	2
	Water truck	1
Phase 1, 2, and 3 Building Construction	Cranes	2
	Rough-terrain Forklifts	6
	Welders	3
	Concrete/Industrial Saws	6
Phase 1, 2, and 3 Paving	Pavers	2
	Rollers	2
	Paving Equipment	2

Tables 5a through 5c present a summary of the construction emission estimates from the URBEMIS model for each phase of construction.

<b>Table 5a</b>						
<b>MAXIMUM DAILY ESTIMATED CONSTRUCTION EMISSIONS</b>						
<b>Phase 1 Construction</b>						
<b>Emission Source</b>	<b>VOC</b>	<b>NOx</b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
lbs/day						
<b><i>Grading and Site Preparation</i></b>						
Fugitive Dust – Grading	-	-	-	-	3.08	0.64
Heavy Equipment Exhaust	9.51	84.17	42.80	0.00	3.70	3.40
Worker Travel – Vehicle Emissions	0.06	0.11	1.92	0.00	0.01	0.01
<b>TOTAL</b>	<b>9.57</b>	<b>84.28</b>	<b>44.72</b>	<b>0.00</b>	<b>6.79</b>	<b>4.05</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b><i>Building Construction</i></b>						
Heavy Equipment Exhaust	6.71	39.88	22.01	0.00	3.01	2.77
Vendor Trips	1.13	15.09	10.60	0.03	0.68	0.57
Worker Travel – Vehicle Emissions	0.50	1.00	18.32	0.02	0.13	0.07
Architectural Coatings	59.33	-	-	-	-	-
Architectural Coating Worker Travel	0.04	0.06	1.18	0.00	0.01	0.00
<b>TOTAL</b>	<b>67.71</b>	<b>56.03</b>	<b>52.11</b>	<b>0.05</b>	<b>3.83</b>	<b>3.41</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b><i>Paving</i></b>						
Heavy Equipment Exhaust	4.17	25.17	14.26	0.00	2.24	2.06
Asphalt On-Road Diesel	0.03	0.41	0.14	0.00	0.02	0.02
Worker Travel – Vehicle Emissions	0.05	0.08	1.53	0.00	0.01	0.01
Asphalt Off-Gassing	0.14	-	-	-	-	-
<b>TOTAL</b>	<b>4.39</b>	<b>25.66</b>	<b>15.93</b>	<b>0.00</b>	<b>2.27</b>	<b>2.09</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Maximum Daily Emissions</b>	<b>72.10</b>	<b>84.28</b>	<b>68.04</b>	<b>0.05</b>	<b>6.79</b>	<b>5.50</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

<b>Table 5b</b>						
<b>MAXIMUM DAILY ESTIMATED CONSTRUCTION EMISSIONS</b>						
<b>Phase 2 Construction</b>						
<b>Emission Source</b>	<b>VOC</b>	<b>NOx</b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
lbs/day						
<b><i>Building Construction</i></b>						
Heavy Equipment Exhaust	6.23	37.63	22.38	0.00	2.87	2.64
Vendor Trips	0.93	11.74	8.85	0.02	0.55	0.45
Worker Travel – Vehicle Emissions	0.52	0.89	16.40	0.02	0.12	0.06
Architectural Coatings	57.23	-	-	-	-	-
Architectural Coating Worker Travel	0.03	0.06	1.05	0.00	0.01	0.00
<b>TOTAL</b>	<b>64.94</b>	<b>50.32</b>	<b>48.68</b>	<b>0.04</b>	<b>3.55</b>	<b>3.15</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b><i>Paving</i></b>						
Heavy Equipment Exhaust	3.95	23.90	14.12	0.00	2.12	1.95
Asphalt On-Road Diesel	0.02	0.35	0.12	0.00	0.02	0.01
Worker Travel – Vehicle Emissions	0.04	0.08	1.42	0.00	0.01	0.01
Asphalt Off-Gassing	0.13	-	-	-	-	-
<b>TOTAL</b>	<b>4.17</b>	<b>24.39</b>	<b>16.71</b>	<b>0.00</b>	<b>2.16</b>	<b>1.97</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Maximum Daily Emissions</b>	<b>69.11</b>	<b>74.71</b>	<b>65.39</b>	<b>0.00</b>	<b>5.71</b>	<b>5.12</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

<b>Table 5c</b>						
<b>MAXIMUM DAILY ESTIMATED CONSTRUCTION EMISSIONS</b>						
<b>Phase 3 Construction</b>						
<b>Emission Source</b>	<b>VOC</b>	<b>NOx</b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
lbs/day						
<b>Building Construction</b>						
Heavy Equipment Exhaust	5.86	35.37	31.31	0.00	2.62	2.41
Vendor Trips	0.37	4.60	3.47	0.01	0.21	0.17
Worker Travel – Vehicle Emissions	0.19	0.32	5.95	0.01	0.05	0.03
Architectural Coatings	16.70	-	-	-	-	-
Architectural Coating Worker Travel	0.01	0.02	0.38	0.00	0.00	0.00
<b>TOTAL</b>	<b>23.13</b>	<b>40.31</b>	<b>41.11</b>	<b>0.02</b>	<b>2.88</b>	<b>2.61</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Paving</b>						
Heavy Equipment Exhaust	3.95	23.90	14.12	0.00	2.12	1.95
Asphalt On-Road Diesel	0.01	0.13	0.04	0.00	0.01	0.00
Worker Travel – Vehicle Emissions	0.04	0.08	1.42	0.00	0.01	0.01
Asphalt Off-Gassing	0.05	-	-	-	-	-
<b>TOTAL</b>	<b>4.05</b>	<b>24.11</b>	<b>15.58</b>	<b>0.00</b>	<b>2.14</b>	<b>1.96</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>Maximum Daily Emissions</b>	<b>27.18</b>	<b>64.42</b>	<b>56.69</b>	<b>0.02</b>	<b>5.02</b>	<b>4.57</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

During the maximum daily construction scenario for the site grading and preparation phase, emissions of criteria pollutant would be below the screening-level thresholds. In addition, the construction phase of the project is short term in nature. Thus criteria pollutants emissions during construction would result in a less than significant impact on the ambient air quality.

The project could produce objectionable odors, which would result from volatile organic compounds, ammonia, carbon dioxide, hydrogen sulfide, methane, alcohols, aldehydes, amines, carbonyls, esters, disulfides dust and endotoxins from the construction phase of the project. However, these substances, if present at all, would only be in trace amounts (less than 1 µg/m<sup>3</sup>). Subsequently, no significant odor impacts are expected to affect surrounding receptors. Moreover, the affects of objectionable odors are localized to the immediate surrounding area and

will not contribute to a cumulatively considerable odor. A list of past, present and future projects within the surrounding area were evaluated and none of these projects create objectionable odors.

#### 4.2 Operational Impacts

Because specific tenants, buildings or uses are not known at this time, emissions associated with specific industrial park operations were not evaluated. Emission sources associated with industrial uses would be subject to the permitting requirements of the SDAPCD and would be required to comply with SDAPCD Rules and Regulations governing the emissions of air contaminants. As such, these sources would not be allowed to emit pollutants that would cause a significant impact on the ambient air quality.

The main operational impacts associated with the Forrester Creek Industrial Park project would include impacts associated with traffic. Minor emissions would be associated with energy use. Project-generated traffic was addressed in the Traffic Impact Analysis, Forrester Creek Industrial Park (Linscott, Law & Greenspan 2009). Based on the Traffic Impact Analysis, at full buildout the project would generate 3,704 average daily trips (ADT). Of those trips, it is estimated that 3,334 would be attributable to passenger vehicles, and 370 total trips would be attributable to large trucks. To estimate emissions associated with project-related traffic, the EMFAC2007 model (ARB 2007a) was used. The EMFAC2007 model is the latest version of the Caltrans emission factor model for on-road traffic. Project phasing was taken into account in the calculation of emissions; Phase 1 was assumed to be completely operational in 2011, Phase 2 in 2012, and Phase 3 in 2013. It should be noted that emissions would decrease on an annual basis from 2011 onward due to phase-out of higher polluting vehicles and implementation of more stringent emission standards that are taken into account in the EMFAC2007 model. The passenger vehicles were represented as a mix of light-duty autos and light-duty trucks (78% autos and 22% trucks); the truck trips were represented as heavy-duty trucks. Vehicle speed was assumed to be 27 miles per hour, based on an average free-flow speed of 30 miles per hour in the project area, and utilizing the recommended average cruise speed in Appendix B of the Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol, Table B.10, Average Cruise Speed as a Function of Arterial Classification and Free-Flow Speed, for a principal arterial, suburban.

The average vehicle miles traveled was assumed to be 20 miles per trip (40 miles round trip). Operational impacts associated with energy use were estimated using the URBEMIS Model, Version 9.2.4 (Rimpo and Associates 2007). URBEMIS Model outputs are provided in Appendix A.

The results of the emission calculations, in lbs/day and tons/year, are summarized in Table 6, along with emissions associated with area sources and a comparison with the screening-level thresholds. The EMFAC2007 and URBEMIS model outputs are presented in Appendix A.

<b>Table 6 OPERATIONAL EMISSIONS</b>						
<b>Emission Source</b>	<b>VOC</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>2011</b>						
lbs/day						
Energy Use	0.06	0.81	0.68	0.00	0.00	0.00
Landscaping	0.13	0.02	1.60	0.00	0.00	0.00
Architectural Coatings	2.71	-	-	-	-	-
Vehicular Emissions	27.30	122.01	253.45	0.39	43.04	9.35
<b>TOTAL</b>	<b>30.20</b>	<b>122.84</b>	<b>255.73</b>	<b>0.39</b>	<b>43.04</b>	<b>9.35</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
tons/year						
Energy Use	0.01	0.15	0.12	0.00	0.00	0.00
Landscaping	0.01	0.00	0.14	0.00	0.00	0.00
Architectural Coatings	0.49	-	-	-	-	-
Vehicular Emissions	3.41	15.25	31.68	0.05	5.38	1.17
<b>TOTAL</b>	<b>3.92</b>	<b>15.40</b>	<b>31.94</b>	<b>0.05</b>	<b>5.38</b>	<b>1.17</b>
Screening-Level Thresholds	15	40	100	100	15	10
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>2012</b>						
lbs/day						
Energy Use	0.06	0.81	0.68	0.00	0.00	0.00
Landscaping	0.13	0.02	1.60	0.00	0.00	0.00
Architectural Coatings	2.71	-	-	-	-	-
Vehicular Emissions	51.08	221.78	475.43	0.79	84.47	17.68
<b>TOTAL</b>	<b>53.98</b>	<b>222.61</b>	<b>477.71</b>	<b>0.79</b>	<b>84.47</b>	<b>17.68</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
tons/year						
Energy Use	0.01	0.15	0.12	0.00	0.00	0.00
Landscaping	0.01	0.00	0.14	0.00	0.00	0.00
Architectural Coatings	0.49	-	-	-	-	-
Vehicular Emissions	6.38	27.72	59.43	0.10	10.56	2.21
<b>TOTAL</b>	<b>6.89</b>	<b>27.87</b>	<b>59.69</b>	<b>0.10</b>	<b>10.56</b>	<b>2.21</b>
Screening-Level Thresholds	15	40	100	100	15	10
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

<b>Table 6 OPERATIONAL EMISSIONS</b>						
<b>Emission Source</b>	<b>VOC</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
<b>2013</b>						
lbs/day						
Energy Use	0.06	0.81	0.68	0.00	0.00	0.00
Landscaping	0.13	0.02	1.60	0.00	0.00	0.00
Architectural Coatings	2.71	-	-	-	-	-
Vehicular Emissions	53.85	238.86	497.31	0.91	99.26	20.06
<b>TOTAL</b>	<b>56.75</b>	<b>239.69</b>	<b>499.59</b>	<b>0.91</b>	<b>99.26</b>	<b>20.06</b>
Screening-Level Thresholds	137	250	550	250	100	55
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
tons/year						
Energy Use	0.01	0.15	0.12	0.00	0.00	0.00
Landscaping	0.01	0.00	0.14	0.00	0.00	0.00
Architectural Coatings	0.49	-	-	-	-	-
Vehicular Emissions	6.73	29.86	62.16	0.11	12.41	2.51
<b>TOTAL</b>	<b>7.24</b>	<b>30.01</b>	<b>62.42</b>	<b>0.11</b>	<b>12.41</b>	<b>2.51</b>
Screening-Level Thresholds	15	40	100	100	15	10
<i>Above Thresholds?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Based on the estimates of the emissions associated with project operations, the emissions of criteria pollutants are below the screening-level thresholds during operations. Impacts would therefore be less than significant.

It should be noted that during 2011 and 2012, operations would occur simultaneously with construction of subsequent phases. Given that operation and construction activities could occur simultaneously, worst-case daily emissions were totaled to evaluate whether emissions would be above the significance thresholds. Table 7 presents a summary of emissions during simultaneous construction and operations in 2011 and 2012.



Table 7 SIMULTANEOUS CONSTRUCTION AND OPERATIONAL EMISSIONS						
Emission Source	VOC	NOx	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
<b>2011</b>						
Phase 1 Operational Emissions	30.20	122.84	255.73	0.39	43.79	9.35
Phase 2 Construction Emissions	69.11	74.71	65.39	0.00	5.71	5.12
<b>Total</b>	<b>99.31</b>	<b>197.55</b>	<b>321.12</b>	<b>0.39</b>	<b>49.50</b>	<b>14.47</b>
Screening-Level Thresholds	137	250	550	250	100	55
Above Thresholds?	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<b>2012</b>						
Phase 1 and 2 Operational Emissions	53.98	222.61	477.71	0.79	84.47	17.68
Phase 3 Construction Emissions	27.18	64.42	56.69	0.02	5.02	4.57
<b>Total</b>	<b>81.16</b>	<b>287.03</b>	<b>534.4</b>	<b>0.81</b>	<b>89.49</b>	<b>22.25</b>
Screening-Level Thresholds	137	250	550	250	100	55
Above Thresholds?	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

As shown in Table 7, simultaneous construction and operational emissions are less than the significance thresholds for all pollutants except NOx during 2012, and would not result in a significant air quality impact for all other pollutants. Impacts associated with simultaneous construction and operations would be temporary, and would only have the potential to occur on days when construction activities are at their maximum level. To reduce emissions below the significance level for NOx would require a reduction in daily construction hours to approximately 4 hours per day, which would extend the construction schedule to essentially double its duration for Phase 3.

Projects involving traffic impacts may result in the formation of locally high concentrations of CO, known as CO “hot spots.” To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO “hot spots” was conducted. The Traffic Impact Analysis evaluated whether or not there would be a decrease in the level of service at the roadways and/or intersections affected by the proposed project. The potential for CO “hot spots” was evaluated based on the results of the Traffic Impact Analysis. The Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol (Caltrans 1998) should be followed to determine whether a CO “hot spot” is likely to form due to Project-

generated traffic. In accordance with the Protocol, CO “hot spots” are typically evaluated when (a) the level of service (LOS) of an intersection or roadway decreases to a LOS E or worse; (b) signalization and/or channelization is added to an intersection; and (c) sensitive receptors such as residences, schools, hospitals, etc. are located in the vicinity of the affected intersection or roadway segment.

The Traffic Impact Analysis evaluated 13 intersections in the project vicinity to evaluate the LOS for the Existing, Existing plus Project, and Existing plus Project plus Cumulative Projects scenarios. According to the Traffic Impact Analysis, degradations in LOS were predicted for the following intersections:

- Gillespie Way and Weld Avenue (Phase 2 and Phase 3, LOS F pm peak hour, direct impact)
- Fanita Drive/Grossmont College Drive (All Phases, LOS F pm peak hour, cumulative impact)
- SR67 SB Ramps/W. Bradley Ave (All Phases, LOS E am peak hour; no impact)

Because the Traffic Impact Analysis identified intersections operating at LOS E or F at the three intersections listed above, a CO “hot spots” evaluation was conducted to assess the potential for an exceedance of an ambient air quality standard. To evaluate the potential for CO “hot spots,” the procedures in the Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol (Caltrans 1998) were used. As recommended in the Protocol, CALINE4 modeling was conducted for the intersections identified above for the scenario without Project traffic, and the Project scenarios. Modeling was conducted based on the guidance in Appendix B of the Protocol to calculate maximum predicted 1-hour CO concentrations. Predicted 1-hour CO concentrations were then scaled to evaluate maximum predicted 8-hour CO concentrations using the recommended scaling factor of 0.7 for urban locations.

Inputs to the CALINE4 model were obtained from the Traffic Impact Analysis. As recommended in the Protocol, receptors were located at locations that were approximately 3 meters from the mixing zone, and at a height of 1.8 meters. Average approach and departure

speeds were conservatively assumed to be 1 mile per hour, and emission factors for those speeds were estimated from the EMFAC2007 emissions model (ARB 2007a). As a worst case, the CALINE4 model was run for the Existing plus Cumulative plus Project scenarios. CO emission factors for the year 2013 were used to estimate CO emissions and evaluate whether a CO “hot spot” could form due to project-related traffic congestion in the CALINE4 model.

In accordance with the Caltrans ITS Transportation Project-Level Carbon Monoxide Protocol, it is also necessary to estimate future background CO concentrations in the project vicinity to determine the potential impact plus background and evaluate the potential for CO “hot spots” due to the project. As a conservative estimate of background CO concentrations, the existing maximum 1-hour background concentration of CO that was measured at the downtown San Diego monitoring station for the period 2005 – 2007 of 5.3 ppm was used to represent future maximum background 1-hour CO concentrations. The existing maximum 8-hour background concentration of CO that was measured at the downtown San Diego monitoring station during the period 2005 – 2007 of 3.27 ppm was also used to provide a conservative estimate of the maximum 8-hour background concentrations in the project vicinity. CO concentrations in the future may be lower as inspection and maintenance programs and more stringent emission controls are placed on vehicles.

The CALINE4 model outputs are provided in Appendix A of this report. Table 8 presents a summary of the predicted CO concentrations (impact plus background) for the intersections evaluated for the Project. As shown in Table 8, the predicted CO concentrations would be substantially below the 1-hour and 8-hour NAAQS and CAAQS for CO shown in Table 1 of this report. Therefore, no exceedances of the CO standard are predicted, and the project would not cause or contribute to a violation of this air quality standard.

**Table 8**  
**CO “Hot Spots” Evaluation**  
**Predicted CO Concentrations, ppm**

Intersection	Existing Plus Cumulative Plus Project
Maximum 1-hour Concentration Plus Background, ppm CAAQS = 20 ppm; NAAQS = 35 ppm	
SB SR 67 and Bradley Avenue	5.8
Fanita Drive and Grossmont College Drive	5.8
Weld Blvd. and Gillespie Way	5.7
Maximum 8-hour Concentration Plus Background, ppm CAAQS = 9.0 ppm; NAAQS = 9 ppm	
SB SR 67 and Bradley Avenue	3.62
Fanita Drive and Grossmont College Drive	3.62
Weld Blvd. and Gillespie Way	3.55

#### 4.3 Odors

During construction, diesel equipment operating at the site could generate some nuisance odors; however, due to the distance of sensitive receptors to the project site and the temporary nature of construction, odors associated with project construction would not be significant.

The project could produce objectionable odors, which would result from volatile organic compounds, ammonia, carbon dioxide, hydrogen sulfide, methane, alcohols, aldehydes, amines, carbonyls, esters, disulfides dust and endotoxins from the construction and operational phases. However, these substances, if present at all, would only be in trace amounts (less than 1 µg/m<sup>3</sup>). Specific industrial uses are not known at this time; however, the project’s emissions would be consistent with land uses in the surrounding area. In accordance with the City of El Cajon’s Zoning Ordinance, Section 17.60.070 Performance standard—Air quality (C), “No emission shall be permitted of odorous gases or other odorous matter in such quantities as to be readily detectable at the property line of the use from which such odor emits, or at the point of greatest concentration if further than the lot line. Any process which may involve the creation or emission of any odors shall be provided with an adequate secondary safeguard system of control, so that control will be maintained if the primary safeguard system should fail. In no event shall odors,

gases or other odorous matter be emitted in such quantities as to be readily detectable when diluted in a ratio of one volume of odorous air to four volumes of clean air.”

Thus any emissions emanating from the Forrester Creek Industrial Park would be subject to the requirements in the City’s Zoning Code, and emissions would be required to be diluted by a volume of 4 to 1 at the property line at a minimum.

To evaluate whether odors could affect nearby sensitive receptors, the SCREEN3 model was run using a unit emission rate of 1 gram per second, and the amount of dilution was projected at distances from the Forrester Creek Industrial Park site. Based on the SCREEN3 model, odors would be diluted four-fold from 15 feet (5 meters) from the source to 115 feet (35 meters) from the source. The nearest sensitive receptors are residences located approximately 150 feet (46 meters) to the west of Building D, and also located approximately 150 feet north of Building C. Therefore any odor compounds would be diluted by a volume of at least four to one by the time they would reach sensitive receptors. Thus odors would be diluted at the property line in accordance with the City of El Cajon’s Zoning Code requirements.

#### 4.4 Toxic Air Contaminant Impacts

To evaluate whether the project could pose a significant impact to nearby sensitive receptors, an evaluation of diesel exhaust particulate matter was conducted. Diesel exhaust particulate matter is known to the state of California as carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of chronic exposure, which is defined in the California Office of Environmental Health Hazard Assessment (OEHHA) guidelines, *The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA 2003a) as 24 hours per day, 7 days per week, 365 days per year, for 70 years. Diesel exhaust particulate matter would be emitted during construction due to the operation of heavy equipment at the site. Because diesel exhaust particulate matter is considered to be carcinogenic, long-term exposure to diesel exhaust emissions have the potential to result in adverse health impacts.

Due to the nature of the project as an industrial development, the project will attract truck traffic to the site. The project may also involve specific industrial uses that emit substances classified a by the State of California as toxic air contaminants; however, specific uses and emissions are not known at this time and an evaluation of potential risks is speculative. All such uses would be subject to the requirements of the APCD under Rule 1200, which require a health risk assessment to demonstrate that risks would be less than significant.

To assess whether there is a potential for a significant impact associated with exposure to diesel exhaust particulate matter, a health risk evaluation was conducted on the particulate emissions.

To estimate emissions from truck traffic associated with the Project, truck traffic volumes were obtained from the Traffic Impact Analysis (Linscott, Law and Greenspan 2009). By full operation, the Project would generate 370 daily truck trips. The Traffic Impact Analysis also provided the traffic distribution for truck traffic over 7 tons. Based on the traffic distribution, truck trips were allocated to surface streets. The health risk analysis focused on those roadway segments with the majority of the truck trips that are located in the vicinity of sensitive (residential) receptors, including Cuyumaca Street, Mission Gorge Road, Bradley Avenue, and Fletcher Parkway.

Truck emission factors were modeled using the EMFAC2007 Model (ARB 2007a). Because the residential exposure scenario is based on 70 years of exposure, emission factors from the EMFAC2007 model were averaged over the exposure period, assuming full buildout of the project in 2013. The EMFAC2007 model provides emission factors out to the year 2040. After the year 2040, emission factors were conservatively assumed to be constant. Vehicle speed on surface roadway segments was assumed to be 27 mph.

Because the emission factors provided are based on grams per vehicle mile traveled, emissions were allocated to the individual volume sources used to represent the each roadway segment. The volume sources were placed at 50-meter intervals along the roadways that will be used for project traffic. Each volume therefore represents 0.031 mile of vehicle travel per volume source. Truck idling on site was represented as a single volume source at the project location. Emission

estimates on a per source basis are summarized in Table 9. Detailed emission calculations are provided in Appendix A.

**Table 9  
On-Road Diesel Particulate Emission Estimates**

Idling Emissions, lbs/year	Average On-Road Emissions per 50-meter Segment, lbs/year					
	Cuyumaca North	Mission Gorge	Cuyumaca Segment 1	Cuyumaca Segment 2	Bradley	Fletcher Parkway
6.709	1.3126	0.5209	0.6250	0.7292	0.0417	0.2083

HARP (OEHHA 2003b) was used to estimate the high-end excess cancer risks associated with exposure to diesel particulate from on site traffic. The high-end excess cancer risk was calculated based on guidance from the Office of Environmental Health Hazard Assessment (OEHHA 2003a), using the 80<sup>th</sup> percentile exposure assumptions for inhalation risks (ARB 2003). The risks were calculated for a grid of receptors designed to overlay the residential area to the west of the Forrester Creek Industrial Park. The maximum residential excess cancer risk associated with exposure to diesel particulate from project-generated trips was estimated to be 0.984 in a million, which is below the significance threshold of 1 in a million. The maximum chronic noncancer hazard index at the nearest residence was 0.000618, which is below the significance threshold of 1. Impacts that are farther from the roadway would be lower as concentrations decrease with increasing distance from the roads.

The use of low-sulfur diesel fuel has been mandated since 2007. Increasingly stringent emission requirements and phase-out of older vehicles can be considered to be T-BACT. Because the project will not own the trucks that will be used for transport, the project cannot dictate additional controls to be used on individual trucks; however, the ARB is reviewing diesel emission standards and may implement state-wide requirements to further reduce emissions. No other feasible measures are available to reduce on-road private vehicle diesel emissions.

## 5.0 Global Climate Change

Recognizing public interest and concern regarding climate change and recent California legislation on this topic, this section provides information and analysis on climate change related to the proposed project. As the County of San Diego is requiring global climate change to be addressed in CEQA analyses, the analysis of global climate change has been included in this technical report. The information and analysis provided is based on relevant available data regarding climate change and a project-specific emissions inventory for greenhouse gases (GHGs).

### 5.1 Regulatory Framework

**International and Federal Legislation.** In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess “the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation” (AEP 2007).

The United States joined other countries around the world in signing the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC was entered on March 21, 1994. Under the Convention, governments: gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change (AEP 2007).

The Kyoto Protocol is a treaty made under the UNFCCC. Countries can sign the treaty to demonstrate their commitment to reduce their emissions of greenhouse gases or engage in emissions trading. More than 160 countries, 55% of global emissions, are under the protocol. United States Vice President, Al Gore, symbolically signed the Protocol in 1998. However, in order for the Protocol to be formally adopted, or ratified, it must be adopted by the U.S. Senate, which was not done by the Clinton administration. The current President, George W. Bush, has



indicated that he does not intend to submit the treaty for ratification.

The Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere--chlorofluorocarbons (CFCs), halons, carbon tetrachloride, and methyl chloroform--were to be phased out by 2000 (2005 for methyl chloroform).

In October 1993, President Clinton announced his Climate Change Action Plan, which had a goal to return greenhouse gas emissions to 1990 levels by the year 2000. This was to be accomplished through 50 initiatives that relied on innovative voluntary partnerships between the private sector and government aimed at producing cost-effective reductions in greenhouse gas emissions.

**California Legislation.** Although not originally intended to reduce greenhouse gas emissions, California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The latest amendments were made in October 2005. Energy efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in greenhouse gas emissions. Therefore, increased energy efficiency results in decreased greenhouse gas emissions.

California Assembly Bill 1493 (Pavley) enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce greenhouse gases emitted by passenger vehicles and light duty trucks. Regulations adopted by CARB will apply to 2009 and later model year vehicles. ARB estimates that the regulation will reduce climate change emissions from light duty passenger vehicle fleet by an estimated 18% in 2020 and by 27% in 2030 (AEP 2007).

California Governor Arnold Schwarzenegger announced on June 1, 2005 through Executive Order S-3-05, greenhouse gas (GHG) emission reduction targets as follows: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. Some literature equates these reductions to 11 percent by 2010 and 25 percent by 2020.

The U.S. EPA does not currently regulate greenhouse gases. Notwithstanding the lack of U.S. EPA regulation of GHG emissions, in 2006, the California State Legislature adopted Assembly Bill (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires the ARB, the State agency charged with regulating statewide air quality, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020. AB 32 establishes a multi-year timeline for the development and implementation of greenhouse gas reporting and mitigation policy. The first step is the development of so-called “early actions” measures by June 30, 2007. A draft version of these early action measures was circulated for public comment beginning on April 20, 2007. Measures included represent discrete opportunities to achieve greenhouse gas reductions that are proposed to be taking legal effect by January 1, 2010. As the policy making process continues, ARB consider a broader set of mitigation measures, including carbon sequestration projects and best management practices that are technologically feasible and cost-effective. Greenhouse gases as defined under AB 32 include: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

AB 32 required that by January 1, 2008, ARB shall determine what the statewide GHG emissions level was in 1990, and approve a statewide GHG emissions limit that is equivalent to that level, to be achieved by 2020. While the level of 1990 GHG emissions has not yet been approved, the ARB has estimated the statewide 1990 emissions level to be 427 Tg CO<sub>2</sub> Eq. (ARB 2007b). In 2004, the emissions were estimated at 480 Tg CO<sub>2</sub> Eq. (ARB 2007b).

Executive Order S-01-07 was enacted by the Governor on January 18, 2007. Essentially, the order mandates the following: 1) that a statewide goal be established to reduce the carbon

intensity of California's transportation fuels by at least 10 percent by 2020; and 2) that a Low Carbon Fuel Standard ("LCFS") for transportation fuels be established for California.

**Relationship to CEQA.** Guidance is not currently provided in CEQA regarding this topic. It is not included in the Environmental Checklist Form provided in Appendix G of the CEQA. The California Office of Planning and Research (OPR) has not yet, however, developed guidelines or significance thresholds for the evaluation of global climate change impacts to date.

CEQA does, however, provide guidance regarding topics such as climate change. Sections 15144 and 15145 of the CEQA Guidelines address forecasting and speculation. Guidelines Section 15144 notes that conducting studies for proposed projects necessarily involves some degree of forecasting. While forecasting the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonable can. Section 15145 deals with the difficulty in forecasting where a thorough investigation is unable to resolve an issue and the answer remains purely speculative. The Lead Agency is not required to engage in speculation.

With regard to the topic of climate change, it is possible to document the current state of research regarding this topic and to forecast an emissions inventory for GHGs associated with the Forrester Creek Industrial Park Project at build out. These data are provided in this section to allow for informed decision making and public participating regarding this topic.

## 5.2 Approach to Climate Change Evaluations

In this section, climate change effects of the proposed project are addressed in two contexts:

- 1) How does the project affect climate change? This is done by use of forecasting, preparing an emissions inventory for the project based on the project description and features incorporated in the project design.
- 2) How does climate change affect the project? Due to the global nature of climate change, this cannot be forecast in a project-specific manner but potential effects of global change on factors such as wildfire hazard and water supply reliability are discussed in this section.

### 5.3 Existing Conditions

**Global Climate Change – General Overview.** Global climate change alleged to be caused by GHGs is currently one of the most important and widely debated scientific, economic, and political issues in the United States. Global climate change is a change in the average weather of the earth, which can be measured by wind patterns, storms, precipitation, and temperature. Historical records have shown that temperature changes have occurred in the past, such as during previous ice ages. Some data indicates that the current temperature record differs from previous climate changes in rate and magnitude.

The United Nations Intergovernmental Panel on Climate Change constructed several emission trajectories of greenhouse gases needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of greenhouse gases at 400-450 ppm carbon dioxide-equivalent concentration is required to keep global mean warming below 2° Celsius, which is assumed to be necessary to avoid dangerous climate change (AEP 2007).

**Greenhouse Gases.** Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs). GHGs are emitted by natural processes and human activities. The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without these natural GHGs, the Earth's surface would be about 61°F cooler (CEC 2006). Emissions from human activities such as electricity production and vehicles have elevated the concentration of these gases in the atmosphere.

GHGs have varying global warming potential (GWP). The GWP is the potential of a gas or aerosol to trap heat in the atmosphere; it is the “cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas” (AEP 2007). The reference gas for GWP is carbon dioxide; carbon dioxide has a GWP of one. For example, methane has a GWP of 21, which means that it has a greater global warming effect than carbon dioxide on a molecule per molecule basis. One teragram of carbon dioxide equivalent (Tg CO<sub>2</sub> Eq.) is the emissions of the gas multiplied by the GWP. One teragram is equal to one million metric tons. The carbon dioxide equivalent is a good way to assess

emissions because it gives weight to the GWP of the gas. The atmospheric lifetime and GWP of selected greenhouse gases are summarized in Table 10. As shown in the table, GWP ranges from 1 (carbon dioxide) to 23,900 (sulfur hexafluoride).

**GHG Inventory.** In 2004, total global GHG emissions were 20,135 Tg CO<sub>2</sub> Eq., excluding emissions/removals from land use, land use change, and forestry (UNFCCC 2006). In 2004, the U.S. contributed the most GHG emissions (35% of global emissions). In 2004, GHG emissions in the U.S. were 7074.4 Tg CO<sub>2</sub> Eq., which is an increase of 15.8 percent from 1990 emissions (AEP 2007).

**Table 10**  
**Global Warming Potentials and Atmospheric Lifetimes**

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide	50 – 200	1
Methane	12 ± 3	21
Nitrous Oxide	120	310
HFC-23	264	11700
HFC-134a	14.6	1300
HFC-152a	1.5	140
PFC: Tetrafluoromethane (CF <sub>4</sub> )	50000	6500
PFC: Hexafluoroethane (C <sub>2</sub> F <sub>6</sub> )	10000	9200
Sulfur Hexafluoride (SF <sub>6</sub> )	3200	23900

Source: USEPA 2006

California is a substantial contributor of global GHGs as it is the second largest contributor in the U.S. and the sixteenth largest in the world (AEP 2007). In 2004, California produced 480 Tg net CO<sub>2</sub> Eq. (ARB 2007b), which is approximately seven percent of U.S. emissions. The major source of GHG in California is transportation, contributing 38 percent of the state's total GHG emissions (ARB 2007b). Electricity generation is the second largest source, contributing 25 percent of the state's GHG emissions. Industrial sources account for 20 percent of the state's GHG emissions, with cement plants, landfills, and petroleum refining accounting for half of the industrial source contribution.

**Existing On-site Conditions.** Natural vegetation and soils temporarily store carbon as part of the terrestrial carbon cycle. Carbon is assimilated into plants and animals as they grow and then dispersed back into the environment when they die. There are two existing sources of carbon storage at the Forrester Creek Industrial Park project site: natural vegetation and soils. The site is currently undeveloped and the surface is disturbed with little or no existing vegetation.

Living vegetation stores carbon; however, it is difficult to assess net changes in carbon storage associated with the Forrester Creek Industrial Park Project. The key issue is the balance between the loss of natural vegetation and future carbon storage associated with development. For example, the project's landscaping palette will feature shrubs and trees which may provide equal or greater carbon storage on a per acre basis. The situation is further complicated by changes in fire regime. Carbon in natural vegetation is likely to be released into the atmosphere through wildfire every 20 to 150 years. Carbon in landscaped areas will be protected from wildfire. The balance between these factors will influence the long-term carbon budget on the site.

The majority of carbon within the site is stored in the soil. Soil carbon accumulates from inputs of plant and animal matter, roots, and other living components of the soil ecosystem (e.g., bacteria, worms, etc.). Soil carbon is lost through biological respiration, erosion, and other forms of disturbance. Overall, soil carbon moves more slowly through the carbon cycle, and it offers greater potential for long-term carbon storage. Field observations suggest that urban soils can sequester relatively large amounts of carbon. Observations from across the United States suggest that cities in warmer and drier climates (such as San Diego) may have slightly higher soil organic matter levels when compared to equivalent areas before development.

#### 5.4 Guidelines for the Determination of Significance

As discussed above under Section 4.3, guidelines for determination of significance are not currently provided for climate change in CEQA and the Environmental Checklist Form in Appendix G of the CEQA Guidelines does not address this topic. At this time, AB 32 includes the following goals for reduction of GHG emissions:

2000 levels by 2010

1990 levels by 2020

80% below 1990 levels by 2050

The baseline for this guideline as identified in AB 32 is considered to be “business as usual.” For purposes of a land development project such as the Forrester Creek Industrial Park, business as usual is considered to be development according to the energy efficiency standards established in Title 24.

A consideration in the analysis is those emissions that are under the operational control of the Project Applicant. The concept of operational control is embodied in the GHG Protocol, the most widely used international accounting tool for government and business leaders to understand, quantify and manage GHG emissions. The GHG Protocol Initiative, a decade-long partnership between the World Resources Institute and the World Business Council for Sustainable Development is working with businesses, governments and environmental groups around the world to build a new generation of credible and effective programs for tackling climate change. The GHG Protocol provides the accounting framework for nearly every GHG standard and program in the world – from the International Standards Organization to the EU Emissions Trading Scheme, to the California Climate Registry, as well as hundreds of GHG inventories prepared by individual companies.

The GHG Protocol Corporate Standard provides standards and guidance for companies and other organizations preparing a GHG emissions inventory. The standard is written primarily from the perspective of a business developing a GHG inventory. The GHG Protocol states that policy makers and architects of GHG programs can also use relevant parts of the GHG Protocol Corporate Standard as a basis for their own accounting and reporting requirements.

The protocol divides GHG emissions into three scopes, ranging from GHGs produced directly by the business to more indirect sources of GHG emissions, such as employee travel and commuting. For purposes of this analysis, the direct and indirect emissions are separated into three broad scopes:

*Scope 1* - All direct GHG emissions.

*Scope 2* - Indirect GHG emissions from consumption of purchased electricity, heat or steam.

*Scope 3* - Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. transmission and distribution (T&D) losses) not covered in Scope 2, outsourced activities, waste disposal, etc.

The GHG Protocol Corporate Standard has established two approaches for corporate reporting of GHG emissions – the equity share and the control approach. Under the equity share approach, a company accounts for GHG emissions from operations according to its share of the equity of the operation. This approach is not considered to be applicable for a development project such as the Forrester Creek Industrial Park. Under the control approach, a company accounts for 100 percent of the GHG emissions over which it has control. Control can be defined in either financial or operational terms.

*Financial control* – A company is considered to have financial control over the operation if it has the ability to direct the financial and operating policies with the view of gaining economic benefits from its activities.

*Operational control* – A company has operational control over an operation if it has full authority to introduce and implement its operating policies as part of its business activities. This concept is consistent with current accounting and reporting practice of many companies that report on emissions from facilities that they operate.

The concept of operational control has been adopted as the one that most applies to applicants of a project such as the Forrester Creek Industrial Park Project. The developers/builders will have operational control over certain project factors that generate GHG emissions. These include – natural gas, purchased electricity and energy embodied in water. The developers/builders are not considered to have operational control over transportation emissions since they do not control emissions standards for vehicles, or vehicle purchase choices or driving habits of residents.



## 5.5 Greenhouse Gas Impacts

**Construction.** Greenhouse gas emissions would be associated with the construction phase of the project through use of heavy equipment and vehicle trips. Emissions of greenhouse gases would be temporary. Emissions of CO<sub>2</sub> were estimated for each year of construction using the URBEMIS model. Table 11 presents a summary of construction GHG emissions. The URBEMIS outputs showing the annual GHG emissions are presented in Appendix D, URBEMIS Model output, for each construction phase.

**Table 11**  
**Construction GHG Emissions**  
**Metric tons**

<b>Construction Phase</b>	<b>CO<sub>2</sub> Emissions, metric tons</b>
Phase 1	1,624
Phase 2	754
Phase 3	582

**Operations.** Greenhouse gas emissions associated with the Forrester Creek Industrial Park were estimated separately for two categories or sources of emissions: (1) increases in emissions due to energy use at the industrial development; and (2) vehicle use. Emissions due to energy use at the industrial park would fall under Scope 1 (direct emissions from the combustion of natural gas in industrial uses) and Scope 2 (indirect emissions from purchased electricity, heat, and steam). Emissions from vehicles would fall under Scope 3. In addition, there would be some indirect emissions associated with obtaining, use, and disposal of potable water; however, it was assumed that these emissions would be included in energy use emissions for the project.

*Energy Use.* Emissions associated with energy use would arise from the combustion of fossil fuels to provide energy for the industrial uses proposed for the proposed project. Emissions of greenhouse gases from the project were estimated based on 12.95 kilowatt hours (kWh) per square foot of industrial space (SCAQMD 1993). Natural gas usage emissions were estimated based on a natural gas usage rate of 2.0 cubic feet per square foot per month for industrial space

(SCAQMD 1993). Emissions were estimated based on emission factors from the California Climate Action Registry General Reporting Protocol (CCAP 2008).

**Vehicle Use.** Mobile source greenhouse gas emissions were estimated based on the vehicle emissions predicted by the EMFAC2007 Model.

Emissions associated with the Project are summarized in Table 12.

**Table 12**  
**Operational GHG Emissions**  
**Metric tons/year**

Emission Source	Annual Emissions (tons/year)		
	CO <sub>2</sub>	N <sub>2</sub> O	CH <sub>4</sub>
Electricity Use Emissions	2,390	0.010	0.018
Natural Gas Use Emissions	273	0.005	0.03
Vehicular Use Emissions	12,113	-	0.63
<b>Total</b>	<b>14,776</b>	<b>0.015</b>	<b>0.68</b>
Global Warming Potential Factor	1	310	21
CO <sub>2</sub> Equivalent Emissions	14,776	5	14
<b>TOTAL CO<sub>2</sub> Equivalent Emissions</b>	<b>14,790</b>		

Because specific uses and tenants are not known at this time, it is not possible to determine what reductions in GHG would be realized through energy efficiency programs and other policies or requirements that will be implemented through AB 32. Operations would ultimately be required to meet the regulatory requirements of AB 32 for reductions in GHG emissions.

## 6.0 Cumulative Impacts

In analyzing cumulative impacts from a proposed project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SDAB is listed as "non-attainment" for the State AAQS. A project that has a significant impact on air quality with regard to emissions of PM<sub>10</sub>, NO<sub>x</sub> and/or VOCs as determined by the screening criteria outlined above would have a significant cumulative effect. In the event direct impacts from a project are

less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions from the project, in combination with the emissions from other proposed, or reasonably foreseeable future projects are in excess of screening levels identified above, and the project's contribution accounts for more than an insignificant proportion of the cumulative total emissions.

As stated above, projects that propose development that is consistent with the growth anticipated by the general plans and SANDAG's growth forecasts would be consistent with the RAQS and SIP. Also, projects that are consistent with the SIP rules (i.e., the federally-approved rules and regulations adopted by the APCD) are consistent with the SIP. Thus projects would be required to conform with measures adopted in the RAQS (including use of low-VOC architectural coatings, use of low-NO<sub>x</sub> water heaters, and compliance with rules and regulations governing stationary sources) and would also be required to comply with all applicable rules and regulations adopted by the APCD.

The project's emissions during simultaneous operation and construction would be above the significance threshold for NO<sub>x</sub> in 2012. Reducing the emissions below the significance threshold would require reducing the daily hours of construction activities to approximately 4 hours per day, which would extend the construction schedule for Phase 3 to double its length. This direct impact would be cumulatively significant, but temporary in nature.

With regard to past and present projects, the background ambient air quality, as measured at the monitoring stations maintained and operated by the San Diego Air Pollution Control District, measures the concentrations of pollutants from existing sources. Past and present project impacts are therefore included in the background ambient air quality data. The planned or reasonably foreseeable projects were generally accounted for in the Traffic Impact Study, and were therefore considered in the evaluation of CO "hot spots." Based on the CO "hot spots" discussion, a cumulative impact associated with traffic emissions is not anticipated.

Implementation of the Project would result in GHG emissions as documented in Section 4.6.3. AB 32 provides statewide wide guidance for reductions below "business as usual." Projected

GHG reductions would exceed AB 32 guidelines by providing reductions below “business as usual.” The project would also comply with any state-mandated requirements resulting from AB 32 and the statewide emissions inventory as well as any County requirements resulting from the General Plan Update process. Implementation of vehicle fuel efficiency requirements as mandated by the U.S. Congress will further reduce the main source of GHG for the project. Reductions below the AB 32 guidelines and compliance with future statewide and County programs would avoid significant cumulative impacts of the project on GHG emissions.

## **7.0 Conclusions and Recommendations**

In summary, the proposed project would result in emissions of air pollutants for both the construction phase and operational phase of the project. The air quality impact analysis evaluated the potential for adverse impacts to the ambient air quality due to construction and operational emissions. Construction emissions would include emissions associated with fugitive dust, heavy construction equipment and construction workers commuting to and from the site. The emissions associated with construction are below the significance criteria for the maximum construction scenario and would therefore not pose a significant impact on the ambient air quality during construction. Measures that are incorporated into the project description to reduce impacts associated with construction include the following:

- Multiple applications of water during grading between dozer/scrapper passes
- Paving, chip sealing or chemical stabilization of internal roadways after completion of grading
- Use of sweepers or water trucks to remove “track-out” at any point of public street access
- Termination of grading if winds exceed 25 mph
- Stabilization of dirt storage piles by chemical binders, tarps, fencing or other erosion control
- Hydroseeding of graded lots
- Reduction of idling times for construction equipment

These measures constitute best management practices for dust control and feasible measures to reduce impacts from construction.

Operational emissions would be associated with traffic accessing the Forrester Creek Industrial Park, and with other sources of emissions including energy use. Emissions during construction

of Phase 3 in 2012 would exceed the daily significance threshold for NOx. Reducing NOx emissions below the significance threshold would require a reduction in daily hours of construction to approximately 4 hours per day, which would extend the construction duration for Phase 3. There are no available mitigation measures to reduce emissions from on-road traffic. This impact would be temporary.

Because specific industrial uses are not known at this time, specific emissions estimates that are attributable to the industrial uses at the site could not be made. Projects with air emissions would be required to comply with the San Diego Air Pollution Control District's Rules and Regulations and, as appropriate, would be required to obtain an Authority to Construct and Permit to Operate prior to commencing operations. Furthermore, the Rules and Regulations require a demonstration that new sources would not result in a significant impact on the ambient air quality or result in a significant incremental health risk.

The project could result in odors during construction and operation; however, based on the screening odor analysis, nearby residential development would not be adversely affected by minor odor emissions from the site.

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**Appendix A**  
**Emission Calculations**  
**Modeling Outputs**



**Appendix A**  
**Emission Calculations**  
**Modeling Outputs**





Table A-2  
 Calculation of Vehicular TAC Emissions  
 Forrester Creek

Assume 27 mph rate  
 AADT

Year	Heavy Heavy Truck Trips	Idling Emission Factors, g/idle-hour	HHD Idling Emissions, lbs/year	Diesel particulate Emission Factor, grams/mile (HHD)	Cuyumaca North	Mission Gorge	Cuyumaca Segment 1	Cuyumaca Segment 2	Bradley	Fletcher Parkway
2010	370	1.88	23.36	0.641	3.7273	1.4791	1.7749	2.0707	0.1183	0.5916
2015	370	1.12	13.91	0.355	2.0642	0.8191	0.9830	1.1468	0.0655	0.3277
2020	370	0.69	8.52	0.235	1.3665	0.5423	0.6507	0.7592	0.0434	0.2169
2025	370	0.49	6.03	0.198	1.1513	0.4569	0.5483	0.6396	0.0366	0.1828
2030	370	0.40	4.97	0.185	1.0757	0.4269	0.5123	0.5976	0.0342	0.1708
2035	370	0.37	4.54	0.179	1.0408	0.4130	0.4956	0.5782	0.0330	0.1652
2040	370	0.35	4.37	0.177	1.0292	0.4084	0.4901	0.5718	0.0327	0.1634
2045	370	0.35	4.37	0.177	1.0292	0.4084	0.4901	0.5718	0.0327	0.1634
2050	370	0.35	4.37	0.177	1.0292	0.4084	0.4901	0.5718	0.0327	0.1634
2055	370	0.35	4.37	0.177	1.0292	0.4084	0.4901	0.5718	0.0327	0.1634
2060	370	0.35	4.37	0.177	1.0292	0.4084	0.4901	0.5718	0.0327	0.1634
2065	370	0.35	4.37	0.177	1.0292	0.4084	0.4901	0.5718	0.0327	0.1634
2070	370	0.35	4.37	0.177	1.0292	0.4084	0.4901	0.5718	0.0327	0.1634
2075	370	0.35	4.37	0.177	1.0292	0.4084	0.4901	0.5718	0.0327	0.1634
2080	370	0.35	4.37	0.177	1.0292	0.4084	0.4901	0.5718	0.0327	0.1634
<b>70-yr AVERAGE:</b>			6.7090		1.3126	0.5209	0.6250	0.7292	0.0417	0.2083

## CALINE4 Outputs

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Bradley SB 67  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

### I. SITE VARIABLES

U= 1.0 M/S                      Z0= 100. CM                      ALT= 0. (M)  
 BRG= WORST CASE                VD= .0 CM/S  
 CLAS= 7 (G)                      VS= .0 CM/S  
 MIXH= 1000. M                    AMB= .0 PPM  
 SIGTH= 10. DEGREES              TEMP= 37.0 DEGREE (C)

### II. LINK VARIABLES

LINK	* LINK	COORDINATES (M)				* EF	H	W		
DESCRIPTION	* X1	Y1	X2	Y2	* TYPE	VPH	(G/MI)	(M)	(M)	
A. Brad EBRA	*	-223	-12	-65	-6	* AG	243	5.7	.0	10.0
B. Brad EBTA	*	-223	-10	-65	-2	* AG	229	5.7	.0	10.0
C. Brad EBTB	*	-65	-2	85	-2	* AG	302	5.7	.0	10.0
D. Brad WBLA	*	85	0	-65	0	* AG	192	5.7	.0	10.0
E. Brad WBTA	*	85	2	-65	2	* AG	528	5.7	.0	10.0
F. Brad WBTD	*	-65	2	-223	-6	* AG	936	5.7	.0	10.0
G. SB Ramp LA	*	-39	154	-64	0	* AG	73	5.7	.0	10.0
H. SB Ramp RA	*	-42	154	-67	0	* AG	408	5.7	.0	10.0
I. SB Ramp Dep	*	-65	0	-39	-146	* AG	435	5.7	.0	10.0

### III. RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (M)	X	Y	Z
1. Recpt 1	*	-75	12	1.8
2. Recpt 2	*	-95	11	1.8
3. Recpt 3	*	-115	10	1.8
4. Recpt 4	*	-75	-16	1.8
5. Recpt 5	*	-95	-17	1.8
6. Recpt 6	*	-115	-18	1.8
7. Recpt 7	*	-71	32	1.8
8. Recpt 8	*	-67	52	1.8
9. Recpt 9	*	-71	-32	1.8
10. Recpt 10	*	-67	-52	1.8

□

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
JUNE 1989 VERSION  
PAGE 2

JOB: Bradley SB 67  
RUN: Hour 1 (WORST CASE ANGLE)  
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

RECEPTOR	* BRG (DEG)	* PRED CONC (PPM)	* A	B	C	CONC/LINK (PPM)					H
						D	E	F	G		
1. Recpt 1	* 159.	* .5	* .0	.0	.0	.0	.0	.2	.0	.0	.0
2. Recpt 2	* 103.	* .5	* .0	.0	.0	.0	.1	.1	.0	.0	.0
3. Recpt 3	* 103.	* .5	* .0	.0	.0	.0	.0	.2	.0	.0	.0
4. Recpt 4	* 17.	* .5	* .0	.0	.0	.0	.0	.1	.0	.0	.2
5. Recpt 5	* 52.	* .4	* .0	.0	.0	.0	.0	.1	.0	.0	.0
6. Recpt 6	* 66.	* .4	* .0	.0	.0	.0	.0	.1	.0	.0	.0
7. Recpt 7	* 168.	* .4	* .0	.0	.0	.0	.0	.0	.0	.0	.1
8. Recpt 8	* 172.	* .4	* .0	.0	.0	.0	.0	.0	.0	.0	.1
9. Recpt 9	* 10.	* .4	* .0	.0	.0	.0	.0	.0	.0	.0	.1
10. Recpt 10	* 7.	* .3	* .0	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	* (PPM)	* I
1. Recpt 1	* .2	
2. Recpt 2	* .0	
3. Recpt 3	* .0	
4. Recpt 4	* .0	
5. Recpt 5	* .0	
6. Recpt 6	* .0	
7. Recpt 7	* .1	
8. Recpt 8	* .0	
9. Recpt 9	* .0	
10. Recpt 10	* .1	



CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Fanita and Grossmont College Drive pm  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S                      Z0= 100. CM                      ALT= 0. (M)  
 BRG= WORST CASE                VD= .0 CM/S  
 CLAS= 7 (G)                      VS= .0 CM/S  
 MIXH= 1000. M                    AMB= .0 PPM  
 SIGTH= 10. DEGREES              TEMP= 19.0 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	* * * * *	LINK COORDINATES (M)				* * * * *	EF (G/MI)	H (M)	W (M)
		X1	Y1	X2	Y2	TYPE	VPH		
A. Fanita SBLA1	*	-39	142	0	63	* AG	13	5.7	.0 10.0
B. Fanita SBLA2	*	0	63	0	0	* AG	13	5.7	.0 10.0
C. Fanita SBTA1	*	-45	142	-6	63	* AG	559	5.7	.0 10.0
D. Fanita SBTA2	*	-6	63	-6	0	* AG	559	5.7	.0 10.0
E. Fanita NBD1	*	6	0	6	63	* AG	543	5.7	.0 10.0
F. Fanita NBD2	*	6	63	-34	142	* AG	543	5.7	.0 10.0
G. GC EBLA1	*	-146	-34	-106	-16	* AG	540	5.7	.0 10.0
H. GC EBLA2	*	-106	-16	0	0	* AG	540	5.7	.0 10.0
I. GC EBTA1	*	-146	-37	-106	-19	* AG	50	5.7	.0 10.0
J. GC EBTA2	*	-106	-19	0	-4	* AG	50	5.7	.0 10.0
K. GC EBD	*	0	-4	150	-4	* AG	63	5.7	.0 10.0
L. GC WBRA	*	150	6	0	6	* AG	3	5.7	.0 10.0
M. GC WBTA	*	150	4	0	4	* AG	24	5.7	.0 10.0
N. GC WBD1	*	0	4	-106	-12	* AG	583	5.7	.0 10.0
O. GC WBD2	*	-106	-12	-146	-30	* AG	583	5.7	.0 10.0

□

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
JUNE 1989 VERSION  
PAGE 2

JOB: Fanita and Grossmont College Drive pm  
RUN: Hour 1 (WORST CASE ANGLE)  
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
-----*				
1. Recpt 1	*	-60	-22	1.8
2. Recpt 2	*	-40	-20	1.8
3. Recpt 3	*	-20	-18	1.8
4. Recpt 4	*	0	-16	1.8
5. Recpt 5	*	20	-16	1.8
6. Recpt 6	*	40	-16	1.8
7. Recpt 7	*	60	-16	1.8
8. Recpt 8	*	-16	12	1.8
9. Recpt 9	*	-36	10	1.8
10. Recpt 10	*	-56	8	1.8
11. Recpt 11	*	-16	32	1.8
12. Recpt 12	*	-16	52	1.8
13. Recpt 13	*	16	16	1.8
14. Recpt 14	*	36	16	1.8
15. Recpt 15	*	56	16	1.8
16. Recpt 16	*	16	36	1.8
17. Recpt 17	*	16	56	1.8

□

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 3

JOB: Fanita and Grossmont College Drive pm  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

RECEPTOR	* * BRG * (DEG)	* PRED * CONC * (PPM)	CONC/LINK (PPM)									
			A	B	C	D	E	F	G	H		
1. Recpt 1	* 52.	* .4	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .1
2. Recpt 2	* 42.	* .4	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .1
3. Recpt 3	* 20.	* .4	* .0	* .0	* .0	* .1	* .0	* .0	* .0	* .0	* .0	* .0
4. Recpt 4	* 352.	* .5	* .0	* .0	* .0	* .2	* .0	* .0	* .0	* .0	* .0	* .0
5. Recpt 5	* 340.	* .3	* .0	* .0	* .0	* .0	* .1	* .0	* .0	* .0	* .0	* .0
6. Recpt 6	* 278.	* .2	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0
7. Recpt 7	* 278.	* .2	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0
8. Recpt 8	* 247.	* .4	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .1
9. Recpt 9	* 244.	* .3	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .1
10. Recpt 10	* 241.	* .3	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0
11. Recpt 11	* 153.	* .2	* .0	* .0	* .0	* .1	* .0	* .0	* .0	* .0	* .0	* .0
12. Recpt 12	* 152.	* .3	* .0	* .0	* .0	* .2	* .0	* .0	* .0	* .0	* .0	* .0
13. Recpt 13	* 250.	* .5	* .0	* .0	* .0	* .0	* .1	* .0	* .0	* .0	* .0	* .1
14. Recpt 14	* 255.	* .4	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .1
15. Recpt 15	* 259.	* .3	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0	* .0
16. Recpt 16	* 240.	* .4	* .0	* .0	* .0	* .0	* .1	* .0	* .0	* .0	* .0	* .0
17. Recpt 17	* 216.	* .4	* .0	* .0	* .0	* .0	* .1	* .0	* .0	* .0	* .0	* .0

□

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
JUNE 1989 VERSION  
PAGE 4

JOB: Fanita and Grossmont College Drive pm  
RUN: Hour 1 (WORST CASE ANGLE)  
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM)						
		I	J	K	L	M	N	O
1. Recpt 1	*	.0	.0	.0	.0	.0	.1	.0
2. Recpt 2	*	.0	.0	.0	.0	.0	.1	.0
3. Recpt 3	*	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	*	.0	.0	.0	.0	.0	.0	.0
5. Recpt 5	*	.0	.0	.0	.0	.0	.0	.0
6. Recpt 6	*	.0	.0	.0	.0	.0	.0	.0
7. Recpt 7	*	.0	.0	.0	.0	.0	.0	.0
8. Recpt 8	*	.0	.0	.0	.0	.0	.2	.0
9. Recpt 9	*	.0	.0	.0	.0	.0	.2	.0
10. Recpt 10	*	.0	.0	.0	.0	.0	.1	.0
11. Recpt 11	*	.0	.0	.0	.0	.0	.0	.0
12. Recpt 12	*	.0	.0	.0	.0	.0	.0	.0
13. Recpt 13	*	.0	.0	.0	.0	.0	.2	.0
14. Recpt 14	*	.0	.0	.0	.0	.0	.1	.0
15. Recpt 15	*	.0	.0	.0	.0	.0	.0	.0
16. Recpt 16	*	.0	.0	.0	.0	.0	.0	.0
17. Recpt 17	*	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Weld and Gillespie pm  
 RUN: Hour 1 (WORST CASE ANGLE)  
 POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S                      Z0= 100. CM                      ALT= 0. (M)  
 BRG= WORST CASE                VD= .0 CM/S  
 CLAS= 7 (G)                      VS= .0 CM/S  
 MIXH= 1000. M                    AMB= .0 PPM  
 SIGTH= 10. DEGREES              TEMP= 19.0 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	* X1	* Y1	* X2	* Y2	* TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Weld EBLA	* -146	* -20	* 0	* 0	* AG	13	5.7	.0	10.0
B. Weld EBTA	* -146	* -24	* 0	* -4	* AG	280	5.7	.0	10.0
C. Weld EBRA	* -146	* -26	* 0	* -6	* AG	21	5.7	.0	10.0
D. Weld EBD1	* 0	* -4	* 55	* 12	* AG	700	5.7	.0	10.0
E. Weld EBD2	* 55	* 12	* 150	* 12	* AG	700	5.7	.0	10.0
F. Weld WBLA1	* 150	* 16	* 55	* 16	* AG	11	5.7	.0	10.0
G. Weld WBLA2	* 55	* 16	* 0	* 0	* AG	11	5.7	.0	10.0
H. Weld WBTA1	* 150	* 17	* 55	* 17	* AG	390	5.7	.0	10.0
I. Weld WBTA2	* 55	* 17	* 0	* 4	* AG	390	5.7	.0	10.0
J. Weld WBD	* 0	* 4	* -146	* -20	* AG	535	5.7	.0	10.0
K. G NBLA	* 0	* -150	* 0	* 0	* AG	92	5.7	.0	10.0
L. G NBTA	* 4	* -150	* 4	* 0	* AG	5	5.7	.0	10.0
M. G NBRA	* 6	* -150	* 6	* 0	* AG	119	5.7	.0	10.0
N. G NBD	* 4	* 0	* 4	* 100	* AG	93	5.7	.0	10.0
O. G SBLA	* 0	* 100	* 0	* 0	* AG	301	5.7	.0	10.0
P. G SBTA	* -4	* 100	* -4	* 0	* AG	19	5.7	.0	10.0
Q. G SBRA	* -6	* 100	* -6	* 0	* AG	53	5.7	.0	10.0
R. G SBD	* -4	* 0	* -4	* -150	* AG	51	5.7	.0	10.0

□

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
JUNE 1989 VERSION  
PAGE 2

JOB: Weld and Gillespie pm  
RUN: Hour 1 (WORST CASE ANGLE)  
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
-----*				
1. Recpt 1	*	-56	5	1.8
2. Recpt 2	*	-36	8	1.8
3. Recpt 3	*	-16	11	1.8
4. Recpt 4	*	16	19	1.8
5. Recpt 5	*	36	24	1.8
6. Recpt 6	*	56	29	1.8
7. Recpt 7	*	-14	-18	1.8
8. Recpt 8	*	-34	-21	1.8
9. Recpt 9	*	-54	-24	1.8
10. Recpt 10	*	-14	-38	1.8
11. Recpt 11	*	-14	-58	1.8
12. Recpt 12	*	14	-10	1.8
13. Recpt 13	*	34	-5	1.8
14. Recpt 14	*	54	0	1.8
15. Recpt 15	*	14	-30	1.8
16. Recpt 16	*	14	-50	1.8
17. Recpt 17	*	16	39	1.8
18. Recpt 18	*	16	59	1.8
19. Recpt 19	*	-16	31	1.8
20. Recpt 20	*	-16	51	1.8

□

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
JUNE 1989 VERSION  
PAGE 3

JOB: Weld and Gillespie pm  
RUN: Hour 1 (WORST CASE ANGLE)  
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE )

RECEPTOR	* * BRG * (DEG)	* PRED * CONC * (PPM)	* * *	A	B	C	CONC/LINK (PPM)				H
							D	E	F	G	
1. Recpt 1	* 92.	* .3	* .0	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	* 92.	* .4	* .0	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	* 92.	* .4	* .0	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	* 97.	* .4	* .0	.0	.0	.0	.0	.1	.0	.0	.0
5. Recpt 5	* 103.	* .3	* .0	.0	.0	.0	.0	.2	.0	.0	.1
6. Recpt 6	* 233.	* .3	* .0	.0	.0	.0	.1	.0	.0	.0	.0
7. Recpt 7	* 60.	* .3	* .0	.0	.0	.0	.2	.0	.0	.0	.0
8. Recpt 8	* 66.	* .3	* .0	.0	.0	.0	.1	.0	.0	.0	.0
9. Recpt 9	* 67.	* .3	* .0	.0	.0	.0	.0	.0	.0	.0	.0
10. Recpt 10	* 13.	* .2	* .0	.0	.0	.0	.0	.0	.0	.0	.0
11. Recpt 11	* 12.	* .2	* .0	.0	.0	.0	.0	.0	.0	.0	.0
12. Recpt 12	* 342.	* .3	* .0	.0	.0	.0	.1	.0	.0	.0	.0
13. Recpt 13	* 275.	* .4	* .0	.0	.0	.0	.1	.0	.0	.0	.0
14. Recpt 14	* 272.	* .4	* .0	.0	.0	.0	.2	.0	.0	.0	.0
15. Recpt 15	* 346.	* .3	* .0	.0	.0	.0	.0	.0	.0	.0	.0
16. Recpt 16	* 348.	* .2	* .0	.0	.0	.0	.0	.0	.0	.0	.0
17. Recpt 17	* 236.	* .2	* .0	.0	.0	.0	.0	.0	.0	.0	.0
18. Recpt 18	* 194.	* .2	* .0	.0	.0	.0	.0	.0	.0	.0	.0
19. Recpt 19	* 103.	* .3	* .0	.0	.0	.0	.0	.0	.0	.0	.0
20. Recpt 20	* 113.	* .2	* .0	.0	.0	.0	.0	.0	.0	.0	.0

□

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
JUNE 1989 VERSION  
PAGE 4

JOB: Weld and Gillespie pm  
RUN: Hour 1 (WORST CASE ANGLE)  
POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	*	CONC/LINK (PPM)									
		I	J	K	L	M	N	O	P	Q	R
1. Recpt 1	*	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. Recpt 5	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. Recpt 6	*	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. Recpt 7	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. Recpt 8	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
9. Recpt 9	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
10. Recpt 10	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
11. Recpt 11	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. Recpt 12	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. Recpt 13	*	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
14. Recpt 14	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
15. Recpt 15	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
16. Recpt 16	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17. Recpt 17	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. Recpt 18	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
19. Recpt 19	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
20. Recpt 20	*	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0



# SCREEN3 Output

07/23/08

18:05:56

\*\*\* SCREEN3 MODEL RUN \*\*\*  
 \*\*\* VERSION DATED 96043 \*\*\*

Forrester Creek Industrial Park

SIMPLE TERRAIN INPUTS:

```

SOURCE TYPE           =          VOLUME
EMISSION RATE (G/S)  =          1.00000
SOURCE HEIGHT (M)    =          3.0000
INIT. LATERAL DIMEN (M) =        1.0000
INIT. VERTICAL DIMEN (M) =        1.0000
RECEPTOR HEIGHT (M) =          1.8000
URBAN/RURAL OPTION   =          URBAN
  
```

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.  
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = .000 M\*\*4/S\*\*3; MOM. FLUX = .000 M\*\*4/S\*\*2.

\*\*\* FULL METEOROLOGY \*\*\*

\*\*\*\*\*  
 \*\*\* SCREEN DISCRETE DISTANCES \*\*\*  
 \*\*\*\*\*

\*\*\* TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES \*\*\*

	DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	SIGMA Y (M)	SIGMA Z (M)
DWASH									
NO	5.	.5115E+05	5	1.0	1.0	10000.0	3.00	1.55	1.39
NO	10.	.3515E+05	5	1.0	1.0	10000.0	3.00	2.09	1.78
NO	15.	.2627E+05	5	1.0	1.0	10000.0	3.00	2.64	2.17
NO	20.	.2089E+05	5	1.0	1.0	10000.0	3.00	3.18	2.55
NO	25.	.1722E+05	5	1.0	1.0	10000.0	3.00	3.73	2.93
NO	30.	.1449E+05	5	1.0	1.0	10000.0	3.00	4.27	3.31
NO	35.	.1237E+05	5	1.0	1.0	10000.0	3.00	4.81	3.68

NO	40.	.1067E+05	5	1.0	1.0	10000.0	3.00	5.35	4.05
NO	45.	9282.	5	1.0	1.0	10000.0	3.00	5.89	4.42
NO	50.	8141.	5	1.0	1.0	10000.0	3.00	6.43	4.79
NO	55.	7190.	5	1.0	1.0	10000.0	3.00	6.96	5.15
NO	60.	6392.	5	1.0	1.0	10000.0	3.00	7.50	5.52
NO	65.	5717.	5	1.0	1.0	10000.0	3.00	8.03	5.88
NO	70.	5141.	5	1.0	1.0	10000.0	3.00	8.57	6.23
NO	75.	4646.	5	1.0	1.0	10000.0	3.00	9.10	6.59
NO	80.	4219.	5	1.0	1.0	10000.0	3.00	9.63	6.94
NO	85.	3848.	5	1.0	1.0	10000.0	3.00	10.16	7.29
NO	90.	3523.	5	1.0	1.0	10000.0	3.00	10.69	7.64
NO	95.	3238.	5	1.0	1.0	10000.0	3.00	11.22	7.99
NO	100.	2986.	5	1.0	1.0	10000.0	3.00	11.75	8.33

DWASH= MEANS NO CALC MADE (CONC = 0.0)  
 DWASH=NO MEANS NO BUILDING DOWNWASH USED  
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED  
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED  
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3\*LB

\*\*\*\*\*  
 \* SUMMARY OF TERRAIN HEIGHTS ENTERED FOR \*  
 \* SIMPLE ELEVATED TERRAIN PROCEDURE \*  
 \*\*\*\*\*

TERRAIN HT (M)	DISTANCE RANGE (M)	
	MINIMUM	MAXIMUM
0.	5.	--
0.	10.	--
0.	15.	--
0.	20.	--
0.	25.	--
0.	30.	--
0.	35.	--
0.	40.	--
0.	45.	--
0.	50.	--
0.	55.	--
0.	60.	--
0.	65.	--
0.	70.	--
0.	75.	--
0.	80.	--

0.	85.	--
0.	90.	--
0.	95.	--
0.	100.	--

\*\*\*\*\*  
 \*\*\* SUMMARY OF SCREEN MODEL RESULTS \*\*\*  
 \*\*\*\*\*

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
-----	-----	-----	-----
SIMPLE TERRAIN	.5115E+05	5.	0.

\*\*\*\*\*  
 \*\* REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS \*\*  
 \*\*\*\*\*

## HARP Model Outputs

### Residential Excess Cancer Risk

This file: C:\HARP\projects\demo\Rep\_Can\_70yr\_Inh\_AllRec\_AllSrc\_AllCh\_ByRec\_Site.txt

Created by HARP Version 1.4 Build 23.06.09  
Uses ISC Version 99155  
Uses BPIP (Dated: 04112)  
Creation date: 2/4/2009 5:16:43 PM

#### EXCEPTION REPORT

(there have been no changes or exceptions)

#### INPUT FILES:

Source-Receptor file: C:\HARPOnRampSamples\ForresterCreek\FORRESTERCREEK.SRC  
Averaging period adjustment factors file: not applicable  
Emission rates file: FORRESTERCREEK.EMS  
Site parameters file: C:\HARP\PROJECTS\DEMO\Residential.sit

Coordinate system: UTM NAD83

Screening mode is OFF

Exposure duration: 70 year (adult resident)  
Analysis method: 80th Percentile Point Estimate (inhalation pathway only)  
Health effect: Cancer Risk  
Receptor(s): All  
Sources(s): All  
Chemicals(s): All

#### SITE PARAMETERS

Inhalation only. Site parameters not applicable.

#### CHEMICAL CROSS-REFERENCE TABLE AND BACKGROUND CONCENTRATIONS

CHEM	CAS	ABBREVIATION	POLLUTANT NAME	BACKGROUND (ug/m <sup>3</sup> )
0001	9901	DieselExhPM	Diesel engine exhaust, particulate matter (Diesel PM)	0.000E+00

#### CHEMICAL HEALTH VALUES

CHEM	CAS	ABBREVIATION	CancerPF(Inh) (mg/kg-d) <sup>-1</sup>	CancerPF(Oral) (mg/kg-d) <sup>-1</sup>	ChronicREL(Inh) ug/m <sup>3</sup>	ChronicREL(Oral) mg/kg-d	AcuteREL ug/m <sup>3</sup>
0001	9901	DieselExhPM	1.10E+00	*	5.00E+00	*	*

EMISSIONS DATA SOURCE: Emission rates loaded from file: C:\HARPOnRampSamples\ForresterCreek\FORRESTERCREEK.EMS  
 CHEMICALS ADDED OR DELETED: none

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=1 NAME=VOLUME EMS (lbs/yr)  
 SOURCE MULTIPLIER=1  
 CAS ABBREV MULTIPLIER BG (ug/m^3) AVRG (lbs/yr) MAX (lbs/hr)  
 9901 DieselExhPM 1 0 6.709E+00 1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=2 NAME=CU1 EMS (lbs/yr)  
 SOURCE MULTIPLIER=1  
 CAS ABBREV MULTIPLIER BG (ug/m^3) AVRG (lbs/yr) MAX (lbs/hr)  
 9901 DieselExhPM 1 0 6.250E-01 1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=3 NAME=CU2 EMS (lbs/yr)  
 SOURCE MULTIPLIER=1  
 CAS ABBREV MULTIPLIER BG (ug/m^3) AVRG (lbs/yr) MAX (lbs/hr)  
 9901 DieselExhPM 1 0 6.250E-01 1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=4 NAME=CU3 EMS (lbs/yr)  
 SOURCE MULTIPLIER=1  
 CAS ABBREV MULTIPLIER BG (ug/m^3) AVRG (lbs/yr) MAX (lbs/hr)  
 9901 DieselExhPM 1 0 6.250E-01 1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=5 NAME=CU4 EMS (lbs/yr)  
 SOURCE MULTIPLIER=1  
 CAS ABBREV MULTIPLIER BG (ug/m^3) AVRG (lbs/yr) MAX (lbs/hr)  
 9901 DieselExhPM 1 0 6.250E-01 1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=6 NAME=CU5 EMS (lbs/yr)  
 SOURCE MULTIPLIER=1  
 CAS ABBREV MULTIPLIER BG (ug/m^3) AVRG (lbs/yr) MAX (lbs/hr)  
 9901 DieselExhPM 1 0 6.250E-01 1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=7 NAME=CU6 EMS (lbs/yr)  
 SOURCE MULTIPLIER=1  
 CAS ABBREV MULTIPLIER BG (ug/m^3) AVRG (lbs/yr) MAX (lbs/hr)  
 9901 DieselExhPM 1 0 6.250E-01 1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=8 NAME=CU7 EMS (lbs/yr)  
 SOURCE MULTIPLIER=1  
 CAS ABBREV MULTIPLIER BG (ug/m^3) AVRG (lbs/yr) MAX (lbs/hr)  
 9901 DieselExhPM 1 0 6.250E-01 1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=9 NAME=CU8 EMS (lbs/yr)  
 SOURCE MULTIPLIER=1  
 CAS ABBREV MULTIPLIER BG (ug/m^3) AVRG (lbs/yr) MAX (lbs/hr)  
 9901 DieselExhPM 1 0 6.250E-01 1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=10 NAME=CU9 EMS (lbs/yr)  
 SOURCE MULTIPLIER=1  
 CAS ABBREV MULTIPLIER BG (ug/m^3) AVRG (lbs/yr) MAX (lbs/hr)

9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00

EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	

EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=31 NAME=CU30	EMS (lbs/yr)			
SOURCE MULTIPLIER=1					
CAS ABBREV	MULTIPLIER BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)		
9901 DieselExhPM	1 0	6.250E-01	1.00E+00		
EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=32 NAME=CU31	EMS (lbs/yr)			
SOURCE MULTIPLIER=1					
CAS ABBREV	MULTIPLIER BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)		
9901 DieselExhPM	1 0	6.250E-01	1.00E+00		
EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=33 NAME=CU32	EMS (lbs/yr)			
SOURCE MULTIPLIER=1					
CAS ABBREV	MULTIPLIER BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)		
9901 DieselExhPM	1 0	6.250E-01	1.00E+00		
EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=34 NAME=CU33	EMS (lbs/yr)			
SOURCE MULTIPLIER=1					
CAS ABBREV	MULTIPLIER BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)		
9901 DieselExhPM	1 0	6.250E-01	1.00E+00		
EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=35 NAME=CU34	EMS (lbs/yr)			
SOURCE MULTIPLIER=1					
CAS ABBREV	MULTIPLIER BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)		
9901 DieselExhPM	1 0	6.250E-01	1.00E+00		
EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=36 NAME=CU35	EMS (lbs/yr)			
SOURCE MULTIPLIER=1					
CAS ABBREV	MULTIPLIER BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)		
9901 DieselExhPM	1 0	7.292E-01	1.00E+00		
EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=37 NAME=CU36	EMS (lbs/yr)			
SOURCE MULTIPLIER=1					
CAS ABBREV	MULTIPLIER BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)		
9901 DieselExhPM	1 0	7.292E-01	1.00E+00		
EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=38 NAME=CU37	EMS (lbs/yr)			
SOURCE MULTIPLIER=1					
CAS ABBREV	MULTIPLIER BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)		
9901 DieselExhPM	1 0	7.292E-01	1.00E+00		
EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=39 NAME=CU38	EMS (lbs/yr)			
SOURCE MULTIPLIER=1					
CAS ABBREV	MULTIPLIER BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)		
9901 DieselExhPM	1 0	7.292E-01	1.00E+00		
EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=40 NAME=CU39	EMS (lbs/yr)			
SOURCE MULTIPLIER=1					
CAS ABBREV	MULTIPLIER BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)		
9901 DieselExhPM	1 0	7.292E-01	1.00E+00		
EMISSIONS FOR FACILITY FAC=1	DEV=* PRO=* STK=41 NAME=CU40	EMS (lbs/yr)			



SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=42 NAME=CU41 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=43 NAME=CU42 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=44 NAME=CU43 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=45 NAME=CU44 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=46 NAME=CU45 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=47 NAME=CU46 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=48 NAME=CU47 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=49 NAME=CU48 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=50 NAME=CUN1 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=51 NAME=CUN2 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=52 NAME=CUN3 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=53 NAME=CUN4 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=54 NAME=CUN5 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=55 NAME=CUN6 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=56 NAME=MG1 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=57 NAME=MG2 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=58 NAME=MG3 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=59 NAME=MG4 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=60 NAME=MG5 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=61 NAME=MG6 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)

9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00

EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	



SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=93 NAME=FLETCH2 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=94 NAME=FLETCH3 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=95 NAME=FLETCH4 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=96 NAME=FLETCH5 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=97 NAME=FLETCH6 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=98 NAME=FLETCH7 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=99 NAME=BRADLEY1 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	4.17E-02	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=100 NAME=BRADLEY2 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	4.17E-02	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=101 NAME=BRADLEY3 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	4.17E-02	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=102 NAME=BRADLEY4 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	4.17E-02	1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=103 NAME=BRADLEY5 EMS (lbs/yr)  
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	4.17E-02	1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=104 NAME=BRADLEY6 EMS (lbs/yr)  
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	4.17E-02	1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=105 NAME=BRADLEY7 EMS (lbs/yr)  
SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	4.17E-02	1.00E+00

CANCER RISK REPORT

REC	INHAL	DERM	SOIL	MOTHER	FISH	WATER	VEG	DAIRY	BEEF	CHICK	PIG	EGG	MEAT	ORAL	TOTAL
0001	1.45E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-08
0002	1.66E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-08
0003	2.01E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-08
0004	1.91E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E-08
0005	1.93E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E-08
0006	2.04E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-08
0007	2.23E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E-08
0008	2.59E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-08
0009	2.88E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E-08
0010	2.86E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.86E-08
0011	3.15E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.15E-08
0012	3.45E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E-08
0013	3.83E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.83E-08
0014	4.53E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.53E-08
0015	1.48E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.48E-08
0016	1.70E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.70E-08
0017	2.21E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E-08
0018	2.29E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E-08
0019	2.07E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.07E-08
0020	2.10E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-08
0021	2.44E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.44E-08
0022	2.99E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.99E-08
0023	2.93E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.93E-08
0024	3.13E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.13E-08
0025	3.41E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E-08
0026	3.73E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.73E-08
0027	4.19E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.19E-08
0028	5.06E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.06E-08
0029	1.57E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E-08
0030	1.73E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-08
0031	2.31E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E-08















0338	6.18E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.18E-07
0339	7.23E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.23E-07
0340	7.81E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.81E-07
0341	8.09E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.09E-07
0342	8.14E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.14E-07
0343	8.39E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.39E-07
0344	8.62E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.62E-07
0345	8.78E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E-07
0346	8.88E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.88E-07
0347	6.44E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.44E-07
0348	5.55E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.55E-07
0349	8.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.66E-07
0350	9.84E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.84E-07

## Residential Chronic Hazard

This file: C:\HARP\projects\demo\Rep\_Chr\_Res\_DerOEH\_AllRec\_AllSrc\_AllCh\_ByRec\_Site.txt

Created by HARP Version 1.4 Build 23.06.09  
Uses ISC Version 99155  
Uses BPIP (Dated: 04112)  
Creation date: 2/4/2009 5:16:51 PM

### EXCEPTION REPORT

(there have been no changes or exceptions)

### INPUT FILES:

Source-Receptor file: C:\HARPOnRampSamples\ForresterCreek\FORRESTERCREEK.SRC  
Averaging period adjustment factors file: not applicable  
Emission rates file: FORRESTERCREEK.EMS  
Site parameters file: C:\HARP\PROJECTS\DEMO\Residential.sit

Coordinate system: UTM NAD83

Screening mode is OFF

Exposure duration: resident  
Analysis method: Derived (OEHHA) Method  
Health effect: Chronic HI  
Receptor(s): All  
Sources(s): All  
Chemicals(s): All

### SITE PARAMETERS

#### DEPOSITION

Deposition rate (m/s) 0.02

#### DRINKING WATER

\*\*\* Pathway disabled \*\*\*

#### FISH

\*\*\* Pathway disabled \*\*\*

#### PASTURE

\*\*\* Pathway disabled \*\*\*

#### HOME GROWN PRODUCE

HUMAN INGESTION

Fraction of ingested leafy vegetable  
 from home grown source 0.052  
 Fraction of ingested exposed vegetable  
 from home grown source 0.052  
 Fraction of ingested protected vegetable  
 from home grown source 0.052  
 Fraction of ingested root vegetable  
 from home grown source 0.052

PIGS, CHICKENS AND EGGS

\*\*\* Pathway disabled \*\*\*

DERMAL ABSORPTION

\*\*\* Pathway enabled \*\*\*

SOIL INGESTION

\*\*\* Pathway enabled \*\*\*

MOTHER'S MILK

\*\*\* Pathway enabled \*\*\*

CHEMICAL CROSS-REFERENCE TABLE AND BACKGROUND CONCENTRATIONS

CHEM	CAS	ABBREVIATION	POLLUTANT NAME	BACKGROUND (ug/m <sup>3</sup> )
0001	9901	DieselExhPM	Diesel engine exhaust, particulate matter (Diesel PM)	0.000E+00

CHEMICAL HEALTH VALUES

CHEM	CAS	ABBREVIATION	CancerPF(Inh) (mg/kg-d) <sup>-1</sup>	CancerPF(Oral) (mg/kg-d) <sup>-1</sup>	ChronicREL(Inh) ug/m <sup>3</sup>	ChronicREL(Oral) mg/kg-d	AcuteREL ug/m <sup>3</sup>
0001	9901	DieselExhPM	1.10E+00	*	5.00E+00	*	*

EMISSIONS DATA SOURCE: Emission rates loaded from file: C:\HARPOnRampSamples\ForresterCreek\FORRESTERCREEK.EMS  
 CHEMICALS ADDED OR DELETED: none

CAS	ABBREV	MULTIPLIER	BG (ug/m <sup>3</sup> )	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.709E+00	1.00E+00

CAS	ABBREV	MULTIPLIER	BG (ug/m <sup>3</sup> )	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00

EMISSIONS FOR FACILITY FAC=1 DEV=\* PRO=\* STK=3 NAME=CU2 EMS (lbs/yr)



SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=4 NAME=CU3 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=5 NAME=CU4 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=6 NAME=CU5 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=7 NAME=CU6 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=8 NAME=CU7 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=9 NAME=CU8 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=10 NAME=CU9 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=11 NAME=CU10 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=12 NAME=CU11 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=13 NAME=CU12 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=14 NAME=CU13 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=15 NAME=CU14 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=16 NAME=CU15 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=17 NAME=CU16 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=18 NAME=CU17 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=19 NAME=CU18 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=20 NAME=CU19 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=21 NAME=CU20 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=22 NAME=CU21 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=23 NAME=CU22 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)

9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	6.250E-01	1.00E+00

EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	6.250E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	

EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	7.292E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00	

SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=55 NAME=CUN6 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	1.3126E+00	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=56 NAME=MG1 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=57 NAME=MG2 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=58 NAME=MG3 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=59 NAME=MG4 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=60 NAME=MG5 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=61 NAME=MG6 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=62 NAME=MG8 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=63 NAME=MG9 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=64 NAME=MG10 EMS (lbs/yr)						
SOURCE MULTIPLIER=1						

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=65 NAME=MG11 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=66 NAME=MG12 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=67 NAME=MG13 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=68 NAME=MG14 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=69 NAME=MG15 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=70 NAME=MG16 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=71 NAME=MG17 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=72 NAME=MG18 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=73 NAME=MG19 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1 DEV=* PRO=* STK=74 NAME=MG20 EMS (lbs/yr)					
SOURCE MULTIPLIER=1					
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)

9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV		MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM		1	0	5.209E-01	1.00E+00



EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	5.209E-01	1.00E+00	

EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	2.083E-01	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	4.17E-02	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	4.17E-02	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	4.17E-02	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	4.17E-02	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	4.17E-02	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	4.17E-02	1.00E+00	
EMISSIONS FOR FACILITY FAC=1						
SOURCE MULTIPLIER=1						
CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)	
9901	DieselExhPM	1	0	4.17E-02	1.00E+00	

SOURCE MULTIPLIER=1

CAS	ABBREV	MULTIPLIER	BG (ug/m^3)	AVRG (lbs/yr)	MAX (lbs/hr)
9901	DieselExhPM	1	0	4.17E-02	1.00E+00

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REC	CV	CNS	BONE	DEVEL	ENDO	EYE	GILV	IMMUN	KIDN	REPRO	RESP	SKIN	BLOOD	MAX
0001	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.09E-06	0.00E+00	0.00E+00	9.09E-06
0002	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E-05	0.00E+00	0.00E+00	1.04E-05
0003	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.26E-05	0.00E+00	0.00E+00	1.26E-05
0004	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-05	0.00E+00	0.00E+00	1.20E-05
0005	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.21E-05	0.00E+00	0.00E+00	1.21E-05
0006	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.28E-05	0.00E+00	0.00E+00	1.28E-05
0007	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-05	0.00E+00	0.00E+00	1.40E-05
0008	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.63E-05	0.00E+00	0.00E+00	1.63E-05
0009	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.81E-05	0.00E+00	0.00E+00	1.81E-05
0010	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-05	0.00E+00	0.00E+00	1.79E-05
0011	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-05	0.00E+00	0.00E+00	1.98E-05
0012	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-05	0.00E+00	0.00E+00	2.17E-05
0013	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.41E-05	0.00E+00	0.00E+00	2.41E-05
0014	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-05	0.00E+00	0.00E+00	2.84E-05
0015	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.31E-06	0.00E+00	0.00E+00	9.31E-06
0016	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-05	0.00E+00	0.00E+00	1.07E-05
0017	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E-05	0.00E+00	0.00E+00	1.39E-05
0018	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-05	0.00E+00	0.00E+00	1.44E-05
0019	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-05	0.00E+00	0.00E+00	1.30E-05
0020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	0.00E+00	0.00E+00	1.32E-05
0021	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E-05	0.00E+00	0.00E+00	1.54E-05
0022	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-05	0.00E+00	0.00E+00	1.88E-05
0023	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E-05	0.00E+00	0.00E+00	1.84E-05
0024	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.97E-05	0.00E+00	0.00E+00	1.97E-05
0025	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-05	0.00E+00	0.00E+00	2.14E-05
0026	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-05	0.00E+00	0.00E+00	2.34E-05
0027	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E-05	0.00E+00	0.00E+00	2.63E-05
0028	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E-05	0.00E+00	0.00E+00	3.18E-05
0029	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.89E-06	0.00E+00	0.00E+00	9.89E-06
0030	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-05	0.00E+00	0.00E+00	1.08E-05
0031	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.45E-05	0.00E+00	0.00E+00	1.45E-05
0032	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.49E-05	0.00E+00	0.00E+00	1.49E-05
0033	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	0.00E+00	0.00E+00	1.32E-05
0034	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.44E-05	0.00E+00	0.00E+00	1.44E-05
0035	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E-05	0.00E+00	0.00E+00	1.73E-05
0036	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.04E-05	0.00E+00	0.00E+00	2.04E-05
0037	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-05	0.00E+00	0.00E+00	2.01E-05
0038	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E-05	0.00E+00	0.00E+00	2.17E-05
0039	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-05	0.00E+00	0.00E+00	2.24E-05
0040	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.49E-05	0.00E+00	0.00E+00	2.49E-05
0041	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E-05	0.00E+00	0.00E+00	2.79E-05
0042	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-05	0.00E+00	0.00E+00	3.21E-05
0043	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.20E-05	0.00E+00	0.00E+00	1.20E-05
0044	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.32E-05	0.00E+00	0.00E+00	1.32E-05
0045	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.78E-05	0.00E+00	0.00E+00	1.78E-05















Table A-3  
Summary of Operational Greenhouse Emissions  
Forrester Creek Industrial Park

Emission Source	CO <sub>2</sub> E <sup>f</sup> (Metric Tons)
<b>Project</b>	
Mobile Sources <sup>a</sup>	12,126
Electricity <sup>b</sup>	2,393
Natural gas <sup>c</sup>	274
<b>Total</b>	<b>14,793</b>
Total	14793
2004 Statewide Total <sup>e</sup>	480,000,000
<b>Net Increase as Percentage of 2004 Statewide Inventory</b>	<b>0.00308%</b>
<p><sup>a</sup> Mobile source values were obtained from EMFAC2007 Model outputs.</p> <p><sup>b</sup> Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.</p> <p><sup>c</sup> Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.</p> <p><sup>d</sup> Water Usage Rates based on project information.</p> <p><sup>e</sup> Statewide totals from California Energy Commission, CEC-600-2006-013.</p> <p><sup>f</sup> All CO<sub>2</sub>E factors were derived using the California Climate Action Registry General Reporting Protocol; Version 2.2, March 2007</p>	

Table A-4  
Electricity Greenhouse Gases  
Forrester Creek Industrial Park

**Electricity - Phase II**

Land Use	1,000 Sqft	Usage Rate <sup>a</sup>			
		(kWh/sq.ft/yr)	(KWh/year)	MWh/year	
<b>Project</b>				0	0.00
Office/Industrial Busi	463.0	12.95	5,995,267	5995.27	
Retail		13.55	0	0.00	
Hotel/Motel		9.95	0	0.00	
Restaurant		47.45	0	0.00	
Food Store		53.30	0	0.00	
Warehouse		4.35	0	0.00	
Cinema		11.55	0	0.00	
High School	0.0	10.50	0	0.00	
Elementary School		5.90	0	0.00	
Hospital		21.70	0	0.00	
Library		10.50	0	0.00	
Residential (DU)	0.0	5,914	0	0.00	
<b>Total Project</b>			<b>5,995,267</b>	<b>5995.27</b>	

<sup>a</sup> Electricity Usage Rates from Table A9-11-A, CEQA Air Quality Handbook, SCAQMD, 1993.

GHG	lbs/MWh <sup>b</sup>	lbs	metric tons	CO <sub>2</sub> E
<b>Project</b>				
<b>CO<sub>2</sub></b>	878.71	5268101.285	2389.568598	2389.568598
<b>CH<sub>4</sub></b>	0.0067	40.16829058	0.018220015	0.38262032
<b>N<sub>2</sub>O</b>	0.0037	22.18248883	0.010061799	3.119157836
				<b>2393.07</b>

<sup>b</sup> Emission factors for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O were derived from the California Climate Action Registry General Reporting Protocol; Version 3, April 2008

Table A-5  
Natural Gas Greenhouse Gas Emissions  
Forrester Creek Industrial Park

**Natural Gas**

<u>Land Use</u>	<u>1,000 Sqft</u>	<u>Usage Rate<sup>c</sup> (cu.ft/sq.ft/mo)</u>	<u>Total Natural Gas Usage (cu.ft/mo)</u>	<u>Total Natural Gas Usage (cu.ft/year)</u>	<u>Total Natural Gas Usage (MMBTU/year)</u>
<b>Project</b>					
Office/Industrial Busi	463.0	2.0	925,910	11,110,920	11,333
Retail	0.0	2.9	-	-	-
Hotel/Motel	0.0	4.8	-	-	-
Restaurant	0.0	4.8	-	-	-
Food Store	0.0	2.9	-	-	-
Warehouse	0.0	2.0	-	-	-
Cinema	0.0	4.8	-	-	-
High School	0.0	2.9	-	-	-
Elementary School	0.0	2.0	-	-	-
Hospital	0.0	4.8	-	-	-
Library	0.0	2.9	-	-	-
Residential (DU)	0.0	4,012	-	-	-
<b>Total Project</b>			<b>925,910</b>	<b>11,110,920</b>	<b>11,333</b>

<sup>a</sup> Natural Gas Usage Rates from Table A9-12-A, CEQA Air Quality Handbook, SCAQMD, 1993.

<b>GHG</b>	<b>Kg/MMBtu<sup>b</sup></b>	<b>Kg</b>	<b>metric tons</b>	<b>CO<sub>2</sub>E (Metric Tons)</b>
<b>Project</b>				
<b>CO<sub>2</sub></b>	53.06	601,336.32	272.76	272.76
<b>CH<sub>4</sub></b>	0.0059	66.87	0.03	0.64
<b>N<sub>2</sub>O</b>	0.0001	1.13	0.0005	0.16
				<b>273.56</b>

<sup>b</sup> Emission factors for CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O were derived from the California Climate Action Registry General Reporting Protocol; Version 3, April 2008

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Urbemis\Urbemis 9.2.2\Projects\Forrester Creek Phase 1 Construction.urb924

Project Name: Forrester Creek Construction Phase 1

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2010 TOTALS (lbs/day unmitigated)	18.01	140.25	94.62	0.04	45.79	7.35	53.14	9.59	6.75	16.34	15,895.08
2010 TOTALS (lbs/day mitigated)	18.01	140.25	94.62	0.04	3.27	7.35	10.61	0.71	6.75	7.46	15,895.08
2011 TOTALS (lbs/day unmitigated)	111.12	77.89	66.36	0.05	0.20	5.70	5.90	0.07	5.24	5.30	10,423.20
2011 TOTALS (lbs/day mitigated)	71.57	77.89	66.36	0.05	0.20	5.70	5.90	0.07	5.24	5.30	10,423.20

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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6/23/2008 9:57:12 AM

Time Slice 3/1/2010-7/30/2010 Active Days: 110	9.58	84.28	42.80	0.00	45.61	3.70	49.31	9.53	3.41	12.93	7,760.39
Mass Grading 03/01/2010-11/01/2010	9.58	84.28	42.80	0.00	45.61	3.70	49.31	9.53	3.41	12.93	7,760.39
Mass Grading Dust	0.00	0.00	0.00	0.00	45.60	0.00	45.60	9.52	0.00	9.52	0.00
Mass Grading Off Road Diesel	9.51	84.17	40.88	0.00	0.00	3.70	3.70	0.00	3.40	3.40	7,581.61
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.06	0.11	1.92	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.78
Time Slice 8/2/2010-11/1/2010 Active Days: 66	<u>18.01</u>	<u>140.25</u>	<u>94.62</u>	<u>0.04</u>	<u>45.79</u>	<u>7.35</u>	<u>53.14</u>	<u>9.59</u>	<u>6.75</u>	<u>16.34</u>	<u>15,895.08</u>
Building 08/01/2010-07/31/2011	8.43	55.98	51.82	0.04	0.18	3.64	3.82	0.06	3.34	3.41	8,134.69
Building Off Road Diesel	6.71	39.88	22.91	0.00	0.00	3.01	3.01	0.00	2.77	2.77	3,717.13
Building Vendor Trips	1.13	15.09	10.60	0.03	0.10	0.58	0.68	0.03	0.53	0.57	2,714.33
Building Worker Trips	0.59	1.00	18.32	0.02	0.08	0.05	0.13	0.03	0.04	0.07	1,703.24
Mass Grading 03/01/2010-11/01/2010	9.58	84.28	42.80	0.00	45.61	3.70	49.31	9.53	3.41	12.93	7,760.39
Mass Grading Dust	0.00	0.00	0.00	0.00	45.60	0.00	45.60	9.52	0.00	9.52	0.00
Mass Grading Off Road Diesel	9.51	84.17	40.88	0.00	0.00	3.70	3.70	0.00	3.40	3.40	7,581.61
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.06	0.11	1.92	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.78
Time Slice 11/2/2010-12/31/2010 Active Days: 44	8.43	55.98	51.82	0.04	0.18	3.64	3.82	0.06	3.34	3.41	8,134.69
Building 08/01/2010-07/31/2011	8.43	55.98	51.82	0.04	0.18	3.64	3.82	0.06	3.34	3.41	8,134.69
Building Off Road Diesel	6.71	39.88	22.91	0.00	0.00	3.01	3.01	0.00	2.77	2.77	3,717.13
Building Vendor Trips	1.13	15.09	10.60	0.03	0.10	0.58	0.68	0.03	0.53	0.57	2,714.33
Building Worker Trips	0.59	1.00	18.32	0.02	0.08	0.05	0.13	0.03	0.04	0.07	1,703.24

**6/23/2008 9:57:12 AM**

Time Slice 1/3/2011-5/31/2011 Active Days: 107	7.82	52.16	49.25	0.04	0.18	3.44	3.62	0.06	3.16	3.22	8,135.31
Building 08/01/2010-07/31/2011	7.82	52.16	49.25	0.04	0.18	3.44	3.62	0.06	3.16	3.22	8,135.31
Building Off Road Diesel	6.23	37.63	22.38	0.00	0.00	2.87	2.87	0.00	2.64	2.64	3,717.13
Building Vendor Trips	1.05	13.61	9.87	0.03	0.10	0.52	0.62	0.03	0.48	0.51	2,714.40
Building Worker Trips	0.54	0.92	17.00	0.02	0.08	0.05	0.13	0.03	0.04	0.07	1,703.78
Time Slice 6/1/2011-7/29/2011 Active Days: 43	<b><u>111.12</u></b>	<b><u>77.89</u></b>	<b><u>66.36</u></b>	<b><u>0.05</u></b>	<b><u>0.20</u></b>	<b><u>5.70</u></b>	<b><u>5.90</u></b>	<b><u>0.07</u></b>	<b><u>5.24</u></b>	<b><u>5.30</u></b>	<b><u>10,423.20</u></b>
Asphalt 06/01/2011-07/31/2011	4.39	25.66	15.93	0.00	0.01	2.26	2.27	0.00	2.07	2.08	2,169.97
Paving Off-Gas	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	4.17	25.17	14.26	0.00	0.00	2.24	2.24	0.00	2.06	2.06	1,953.40
Paving On Road Diesel	0.03	0.41	0.14	0.00	0.00	0.02	0.02	0.00	0.01	0.02	63.28
Paving Worker Trips	0.05	0.08	1.53	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.29
Building 08/01/2010-07/31/2011	7.82	52.16	49.25	0.04	0.18	3.44	3.62	0.06	3.16	3.22	8,135.31
Building Off Road Diesel	6.23	37.63	22.38	0.00	0.00	2.87	2.87	0.00	2.64	2.64	3,717.13
Building Vendor Trips	1.05	13.61	9.87	0.03	0.10	0.52	0.62	0.03	0.48	0.51	2,714.40
Building Worker Trips	0.54	0.92	17.00	0.02	0.08	0.05	0.13	0.03	0.04	0.07	1,703.78
Coating 06/01/2011-07/31/2011	98.92	0.06	1.18	0.00	0.01	0.00	0.01	0.00	0.00	0.00	117.93
Architectural Coating	98.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.04	0.06	1.18	0.00	0.01	0.00	0.01	0.00	0.00	0.00	117.93

Phase Assumptions

Phase: Mass Grading 3/1/2010 - 11/1/2010 - Site Grading and Preparation

Total Acres Disturbed: 9.11

Maximum Daily Acreage Disturbed: 2.28

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

Page: 4

**6/23/2008 9:57:12 AM**

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 2 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
- 2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
- 2 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 6/1/2011 - 7/31/2011 - Paving Phase I

Acres to be Paved: 2.28

Off-Road Equipment:

- 2 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
- 2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
- 2 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Phase: Building Construction 8/1/2010 - 7/31/2011 - Building Phase I

Off-Road Equipment:

- 6 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
- 2 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
- 6 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day
- 3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 6/1/2011 - 7/31/2011 - Architectural Coatings Phase I

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:



6/23/2008 9:57:12 AM

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 3/1/2010-7/30/2010 Active Days: 110	9.58	84.28	42.80	0.00	3.08	3.70	6.79	0.65	3.41	4.05	7,760.39
Mass Grading 03/01/2010-11/01/2010	9.58	84.28	42.80	0.00	3.08	3.70	6.79	0.65	3.41	4.05	7,760.39
Mass Grading Dust	0.00	0.00	0.00	0.00	3.08	0.00	3.08	0.64	0.00	0.64	0.00
Mass Grading Off Road Diesel	9.51	84.17	40.88	0.00	0.00	3.70	3.70	0.00	3.40	3.40	7,581.61
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.06	0.11	1.92	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.78
Time Slice 8/2/2010-11/1/2010 Active Days: 66	<u>18.01</u>	<u>140.25</u>	<u>94.62</u>	<u>0.04</u>	<u>3.27</u>	<u>7.35</u>	<u>10.61</u>	<u>0.71</u>	<u>6.75</u>	<u>7.46</u>	<u>15,895.08</u>
Building 08/01/2010-07/31/2011	8.43	55.98	51.82	0.04	0.18	3.64	3.82	0.06	3.34	3.41	8,134.69
Building Off Road Diesel	6.71	39.88	22.91	0.00	0.00	3.01	3.01	0.00	2.77	2.77	3,717.13
Building Vendor Trips	1.13	15.09	10.60	0.03	0.10	0.58	0.68	0.03	0.53	0.57	2,714.33
Building Worker Trips	0.59	1.00	18.32	0.02	0.08	0.05	0.13	0.03	0.04	0.07	1,703.24
Mass Grading 03/01/2010-11/01/2010	9.58	84.28	42.80	0.00	3.08	3.70	6.79	0.65	3.41	4.05	7,760.39
Mass Grading Dust	0.00	0.00	0.00	0.00	3.08	0.00	3.08	0.64	0.00	0.64	0.00
Mass Grading Off Road Diesel	9.51	84.17	40.88	0.00	0.00	3.70	3.70	0.00	3.40	3.40	7,581.61
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.06	0.11	1.92	0.00	0.01	0.00	0.01	0.00	0.00	0.01	178.78

6/23/2008 9:57:12 AM

Time Slice 11/2/2010-12/31/2010 Active Days: 44	8.43	55.98	51.82	0.04	0.18	3.64	3.82	0.06	3.34	3.41	8,134.69
Building 08/01/2010-07/31/2011	8.43	55.98	51.82	0.04	0.18	3.64	3.82	0.06	3.34	3.41	8,134.69
Building Off Road Diesel	6.71	39.88	22.91	0.00	0.00	3.01	3.01	0.00	2.77	2.77	3,717.13
Building Vendor Trips	1.13	15.09	10.60	0.03	0.10	0.58	0.68	0.03	0.53	0.57	2,714.33
Building Worker Trips	0.59	1.00	18.32	0.02	0.08	0.05	0.13	0.03	0.04	0.07	1,703.24
Time Slice 1/3/2011-5/31/2011 Active Days: 107	7.82	52.16	49.25	0.04	0.18	3.44	3.62	0.06	3.16	3.22	8,135.31
Building 08/01/2010-07/31/2011	7.82	52.16	49.25	0.04	0.18	3.44	3.62	0.06	3.16	3.22	8,135.31
Building Off Road Diesel	6.23	37.63	22.38	0.00	0.00	2.87	2.87	0.00	2.64	2.64	3,717.13
Building Vendor Trips	1.05	13.61	9.87	0.03	0.10	0.52	0.62	0.03	0.48	0.51	2,714.40
Building Worker Trips	0.54	0.92	17.00	0.02	0.08	0.05	0.13	0.03	0.04	0.07	1,703.78
Time Slice 6/1/2011-7/29/2011 Active Days: 43	<u>71.57</u>	<u>77.89</u>	<u>66.36</u>	<u>0.05</u>	<u>0.20</u>	<u>5.70</u>	<u>5.90</u>	<u>0.07</u>	<u>5.24</u>	<u>5.30</u>	<u>10,423.20</u>
Asphalt 06/01/2011-07/31/2011	4.39	25.66	15.93	0.00	0.01	2.26	2.27	0.00	2.07	2.08	2,169.97
Paving Off-Gas	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	4.17	25.17	14.26	0.00	0.00	2.24	2.24	0.00	2.06	2.06	1,953.40
Paving On Road Diesel	0.03	0.41	0.14	0.00	0.00	0.02	0.02	0.00	0.01	0.02	63.28
Paving Worker Trips	0.05	0.08	1.53	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.29
Building 08/01/2010-07/31/2011	7.82	52.16	49.25	0.04	0.18	3.44	3.62	0.06	3.16	3.22	8,135.31
Building Off Road Diesel	6.23	37.63	22.38	0.00	0.00	2.87	2.87	0.00	2.64	2.64	3,717.13
Building Vendor Trips	1.05	13.61	9.87	0.03	0.10	0.52	0.62	0.03	0.48	0.51	2,714.40
Building Worker Trips	0.54	0.92	17.00	0.02	0.08	0.05	0.13	0.03	0.04	0.07	1,703.78
Coating 06/01/2011-07/31/2011	59.36	0.06	1.18	0.00	0.01	0.00	0.01	0.00	0.00	0.00	117.93
Architectural Coating	59.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.04	0.06	1.18	0.00	0.01	0.00	0.01	0.00	0.00	0.00	117.93

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 3/1/2010 - 11/1/2010 - Site Grading and Preparation

For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stabilizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stabilizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 6/1/2011 - 7/31/2011 - Architectural Coatings Phase I

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Urbemis\Urbemis 9.2.2\Projects\Forrester Creek Phase 1 Construction.urb924

Project Name: Forrester Creek Construction Phase 1

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2010 TOTALS (tons/year unmitigated)	1.31	10.49	6.62	0.00	4.02	0.53	4.55	0.84	0.48	1.33	1,130.32
2010 TOTALS (tons/year mitigated)	1.31	10.49	6.62	0.00	0.28	0.53	0.81	0.06	0.48	0.54	1,130.32
Percent Reduction	0.00	0.00	0.00	0.00	93.01	0.00	82.25	92.84	0.00	58.96	0.00
2011 TOTALS (tons/year unmitigated)	2.81	4.47	4.06	0.00	0.01	0.31	0.32	0.00	0.28	0.29	659.34
2011 TOTALS (tons/year mitigated)	1.96	4.47	4.06	0.00	0.01	0.31	0.32	0.00	0.28	0.29	659.34
Percent Reduction	30.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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Phase Assumptions

Phase: Mass Grading 3/1/2010 - 11/1/2010 - Site Grading and Preparation

Total Acres Disturbed: 9.11

Maximum Daily Acreage Disturbed: 2.28

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

2 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

2 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

2 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 6/1/2011 - 7/31/2011 - Paving Phase I

Acres to be Paved: 2.28

Off-Road Equipment:

2 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Phase: Building Construction 8/1/2010 - 7/31/2011 - Building Phase I

Off-Road Equipment:

6 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

6 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 6/1/2011 - 7/31/2011 - Architectural Coatings Phase I

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

6/23/2008 9:58:39 AM

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2010	1.31	10.49	6.62	0.00	0.28	0.53	0.81	0.06	0.48	0.54	1,130.32
Mass Grading 03/01/2010-11/01/2010	0.84	7.42	3.77	0.00	0.27	0.33	0.60	0.06	0.30	0.36	682.91
Mass Grading Dust	0.00	0.00	0.00	0.00	0.27	0.00	0.27	0.06	0.00	0.06	0.00
Mass Grading Off Road Diesel	0.84	7.41	3.60	0.00	0.00	0.33	0.33	0.00	0.30	0.30	667.18
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.01	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.73
Building 08/01/2010-07/31/2011	0.46	3.08	2.85	0.00	0.01	0.20	0.21	0.00	0.18	0.19	447.41
Building Off Road Diesel	0.37	2.19	1.26	0.00	0.00	0.17	0.17	0.00	0.15	0.15	204.44
Building Vendor Trips	0.06	0.83	0.58	0.00	0.01	0.03	0.04	0.00	0.03	0.03	149.29
Building Worker Trips	0.03	0.06	1.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	93.68

6/23/2008 9:58:39 AM

2011	1.96	4.47	4.06	0.00	0.01	0.31	0.32	0.00	0.28	0.29	659.34
Building 08/01/2010-07/31/2011	0.59	3.91	3.69	0.00	0.01	0.26	0.27	0.00	0.24	0.24	610.15
Building Off Road Diesel	0.47	2.82	1.68	0.00	0.00	0.22	0.22	0.00	0.20	0.20	278.78
Building Vendor Trips	0.08	1.02	0.74	0.00	0.01	0.04	0.05	0.00	0.04	0.04	203.58
Building Worker Trips	0.04	0.07	1.27	0.00	0.01	0.00	0.01	0.00	0.00	0.01	127.78
Asphalt 06/01/2011-07/31/2011	0.09	0.55	0.34	0.00	0.00	0.05	0.05	0.00	0.04	0.04	46.65
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.09	0.54	0.31	0.00	0.00	0.05	0.05	0.00	0.04	0.04	42.00
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.36
Paving Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30
Coating 06/01/2011-07/31/2011	1.28	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.54
Architectural Coating	1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.54

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 3/1/2010 - 11/1/2010 - Site Grading and Preparation

For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stabilizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stabilizing Measures, the Water exposed surfaces 3x daily watering mitigation reduces emissions by:

PM10: 61% PM25: 61%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%



Page: 6

**6/23/2008 9:58:40 AM**

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 6/1/2011 - 7/31/2011 - Architectural Coatings Phase I

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Urbemis\Urbemis 9.2.2\Projects\Forrester Creek Phase 2 Construction.urb924

Project Name: Forrester Creek Construction Phase 2

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2011 TOTALS (lbs/day unmitigated)	7.76	51.65	48.31	0.04	0.18	3.42	3.60	0.06	3.14	3.20	7,979.26
2011 TOTALS (lbs/day mitigated)	7.76	51.65	48.31	0.04	0.18	3.42	3.60	0.06	3.14	3.20	7,979.26
2012 TOTALS (lbs/day unmitigated)	106.84	72.30	62.64	0.04	0.19	5.25	5.44	0.07	4.82	4.89	10,261.50
2012 TOTALS (lbs/day mitigated)	68.69	72.30	62.64	0.04	0.19	5.25	5.44	0.07	4.82	4.89	10,261.50

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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Time Slice 7/1/2011-12/30/2011	<u>7.76</u>	<u>51.65</u>	<u>48.31</u>	<u>0.04</u>	<u>0.18</u>	<u>3.42</u>	<u>3.60</u>	<u>0.06</u>	<u>3.14</u>	<u>3.20</u>	<u>7,979.26</u>
Active Days: 131											
Building 07/01/2011-04/01/2012	7.76	51.65	48.31	0.04	0.18	3.42	3.60	0.06	3.14	3.20	7,979.26
Building Off Road Diesel	6.23	37.63	22.38	0.00	0.00	2.87	2.87	0.00	2.64	2.64	3,717.13
Building Vendor Trips	1.01	13.13	9.53	0.02	0.10	0.51	0.60	0.03	0.46	0.50	2,618.53
Building Worker Trips	0.52	0.89	16.40	0.02	0.08	0.04	0.12	0.03	0.04	0.06	1,643.61
Time Slice 1/2/2012-1/31/2012	7.27	47.91	45.94	0.04	0.18	3.11	3.29	0.06	2.86	2.92	7,979.90
Active Days: 22											
Building 07/01/2011-04/01/2012	7.27	47.91	45.94	0.04	0.18	3.11	3.29	0.06	2.86	2.92	7,979.90
Building Off Road Diesel	5.86	35.37	21.90	0.00	0.00	2.62	2.62	0.00	2.41	2.41	3,717.13
Building Vendor Trips	0.93	11.74	8.85	0.02	0.10	0.45	0.55	0.03	0.41	0.45	2,618.63
Building Worker Trips	0.48	0.81	15.19	0.02	0.08	0.04	0.12	0.03	0.04	0.06	1,644.14
Time Slice 2/1/2012-3/30/2012	<b><u>106.84</u></b>	<b><u>72.30</u></b>	<b><u>62.64</u></b>	<b><u>0.04</u></b>	<b><u>0.19</u></b>	<b><u>5.25</u></b>	<b><u>5.44</u></b>	<b><u>0.07</u></b>	<b><u>4.82</u></b>	<b><u>4.89</u></b>	<b><u>10,261.50</u></b>
Active Days: 43											
Asphalt 02/01/2012-04/01/2012	4.15	24.33	15.66	0.00	0.01	2.13	2.14	0.00	1.96	1.97	2,167.80
Paving Off-Gas	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.95	23.90	14.12	0.00	0.00	2.12	2.12	0.00	1.95	1.95	1,953.40
Paving On Road Diesel	0.02	0.35	0.12	0.00	0.00	0.01	0.02	0.00	0.01	0.01	61.06
Paving Worker Trips	0.04	0.08	1.42	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.34
Building 07/01/2011-04/01/2012	7.27	47.91	45.94	0.04	0.18	3.11	3.29	0.06	2.86	2.92	7,979.90
Building Off Road Diesel	5.86	35.37	21.90	0.00	0.00	2.62	2.62	0.00	2.41	2.41	3,717.13
Building Vendor Trips	0.93	11.74	8.85	0.02	0.10	0.45	0.55	0.03	0.41	0.45	2,618.63
Building Worker Trips	0.48	0.81	15.19	0.02	0.08	0.04	0.12	0.03	0.04	0.06	1,644.14
Coating 02/01/2012-04/01/2012	95.42	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	113.80
Architectural Coating	95.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	113.80

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Phase Assumptions

Phase: Paving 2/1/2012 - 4/1/2012 - Paving Phase 2

Acres to be Paved: 2.2

Off-Road Equipment:

2 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Phase: Building Construction 7/1/2011 - 4/1/2012 - Building Phase 2

Off-Road Equipment:

6 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

6 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 2/1/2012 - 4/1/2012 - Architectural Coatings Phase 2

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

ROG

NOx

CO

SO2

PM10 Dust

PM10 Exhaust

PM10

PM2.5 Dust

PM2.5 Exhaust

PM2.5

CO2

6/23/2008 10:01:10 AM

Time Slice 7/1/2011-12/30/2011	<u>7.76</u>	<u>51.65</u>	<u>48.31</u>	<u>0.04</u>	<u>0.18</u>	<u>3.42</u>	<u>3.60</u>	<u>0.06</u>	<u>3.14</u>	<u>3.20</u>	<u>7,979.26</u>
Active Days: 131											
Building 07/01/2011-04/01/2012	7.76	51.65	48.31	0.04	0.18	3.42	3.60	0.06	3.14	3.20	7,979.26
Building Off Road Diesel	6.23	37.63	22.38	0.00	0.00	2.87	2.87	0.00	2.64	2.64	3,717.13
Building Vendor Trips	1.01	13.13	9.53	0.02	0.10	0.51	0.60	0.03	0.46	0.50	2,618.53
Building Worker Trips	0.52	0.89	16.40	0.02	0.08	0.04	0.12	0.03	0.04	0.06	1,643.61
Time Slice 1/2/2012-1/31/2012	<u>7.27</u>	<u>47.91</u>	<u>45.94</u>	<u>0.04</u>	<u>0.18</u>	<u>3.11</u>	<u>3.29</u>	<u>0.06</u>	<u>2.86</u>	<u>2.92</u>	<u>7,979.90</u>
Active Days: 22											
Building 07/01/2011-04/01/2012	7.27	47.91	45.94	0.04	0.18	3.11	3.29	0.06	2.86	2.92	7,979.90
Building Off Road Diesel	5.86	35.37	21.90	0.00	0.00	2.62	2.62	0.00	2.41	2.41	3,717.13
Building Vendor Trips	0.93	11.74	8.85	0.02	0.10	0.45	0.55	0.03	0.41	0.45	2,618.63
Building Worker Trips	0.48	0.81	15.19	0.02	0.08	0.04	0.12	0.03	0.04	0.06	1,644.14
Time Slice 2/1/2012-3/30/2012	<u>68.69</u>	<u>72.30</u>	<u>62.64</u>	<u>0.04</u>	<u>0.19</u>	<u>5.25</u>	<u>5.44</u>	<u>0.07</u>	<u>4.82</u>	<u>4.89</u>	<u>10,261.50</u>
Active Days: 43											
Asphalt 02/01/2012-04/01/2012	4.15	24.33	15.66	0.00	0.01	2.13	2.14	0.00	1.96	1.97	2,167.80
Paving Off-Gas	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.95	23.90	14.12	0.00	0.00	2.12	2.12	0.00	1.95	1.95	1,953.40
Paving On Road Diesel	0.02	0.35	0.12	0.00	0.00	0.01	0.02	0.00	0.01	0.01	61.06
Paving Worker Trips	0.04	0.08	1.42	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.34
Building 07/01/2011-04/01/2012	7.27	47.91	45.94	0.04	0.18	3.11	3.29	0.06	2.86	2.92	7,979.90
Building Off Road Diesel	5.86	35.37	21.90	0.00	0.00	2.62	2.62	0.00	2.41	2.41	3,717.13
Building Vendor Trips	0.93	11.74	8.85	0.02	0.10	0.45	0.55	0.03	0.41	0.45	2,618.63
Building Worker Trips	0.48	0.81	15.19	0.02	0.08	0.04	0.12	0.03	0.04	0.06	1,644.14
Coating 02/01/2012-04/01/2012	57.26	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	113.80
Architectural Coating	57.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.03	0.06	1.05	0.00	0.01	0.00	0.01	0.00	0.00	0.00	113.80

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Architectural Coating 2/1/2012 - 4/1/2012 - Architectural Coatings Phase 2

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Urbemis\Urbemis 9.2.2\Projects\Forrester Creek Phase 2 Construction.urb924

Project Name: Forrester Creek Construction Phase 2

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2011 TOTALS (tons/year unmitigated)	0.51	3.38	3.16	0.00	0.01	0.22	0.24	0.00	0.21	0.21	522.64
2011 TOTALS (tons/year mitigated)	0.51	3.38	3.16	0.00	0.01	0.22	0.24	0.00	0.21	0.21	522.64
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012 TOTALS (tons/year unmitigated)	2.38	2.08	1.85	0.00	0.01	0.15	0.15	0.00	0.14	0.14	308.40
2012 TOTALS (tons/year mitigated)	1.56	2.08	1.85	0.00	0.01	0.15	0.15	0.00	0.14	0.14	308.40
Percent Reduction	34.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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2011	0.51	3.38	3.16	0.00	0.01	0.22	0.24	0.00	0.21	0.21	522.64
Building 07/01/2011-04/01/2012	0.51	3.38	3.16	0.00	0.01	0.22	0.24	0.00	0.21	0.21	522.64
Building Off Road Diesel	0.41	2.46	1.47	0.00	0.00	0.19	0.19	0.00	0.17	0.17	243.47
Building Vendor Trips	0.07	0.86	0.62	0.00	0.01	0.03	0.04	0.00	0.03	0.03	171.51
Building Worker Trips	0.03	0.06	1.07	0.00	0.01	0.00	0.01	0.00	0.00	0.00	107.66
2012	2.38	2.08	1.85	0.00	0.01	0.15	0.15	0.00	0.14	0.14	308.40
Building 07/01/2011-04/01/2012	0.24	1.56	1.49	0.00	0.01	0.10	0.11	0.00	0.09	0.09	259.35
Building Off Road Diesel	0.19	1.15	0.71	0.00	0.00	0.09	0.09	0.00	0.08	0.08	120.81
Building Vendor Trips	0.03	0.38	0.29	0.00	0.00	0.01	0.02	0.00	0.01	0.01	85.11
Building Worker Trips	0.02	0.03	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.43
Asphalt 02/01/2012-04/01/2012	0.09	0.52	0.34	0.00	0.00	0.05	0.05	0.00	0.04	0.04	46.61
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.08	0.51	0.30	0.00	0.00	0.05	0.05	0.00	0.04	0.04	42.00
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31
Paving Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30
Coating 02/01/2012-04/01/2012	2.05	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45
Architectural Coating	2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45

Phase Assumptions

Phase: Paving 2/1/2012 - 4/1/2012 - Paving Phase 2

Acres to be Paved: 2.2

Off-Road Equipment:

2 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day



6/23/2008 10:01:47 AM

2 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Phase: Building Construction 7/1/2011 - 4/1/2012 - Building Phase 2

Off-Road Equipment:

6 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

6 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 2/1/2012 - 4/1/2012 - Architectural Coatings Phase 2

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2011	0.51	3.38	3.16	0.00	0.01	0.22	0.24	0.00	0.21	0.21	522.64
Building 07/01/2011-04/01/2012	0.51	3.38	3.16	0.00	0.01	0.22	0.24	0.00	0.21	0.21	522.64
Building Off Road Diesel	0.41	2.46	1.47	0.00	0.00	0.19	0.19	0.00	0.17	0.17	243.47
Building Vendor Trips	0.07	0.86	0.62	0.00	0.01	0.03	0.04	0.00	0.03	0.03	171.51
Building Worker Trips	0.03	0.06	1.07	0.00	0.01	0.00	0.01	0.00	0.00	0.00	107.66

6/23/2008 10:01:47 AM

2012	1.56	2.08	1.85	0.00	0.01	0.15	0.15	0.00	0.14	0.14	308.40
Building 07/01/2011-04/01/2012	0.24	1.56	1.49	0.00	0.01	0.10	0.11	0.00	0.09	0.09	259.35
Building Off Road Diesel	0.19	1.15	0.71	0.00	0.00	0.09	0.09	0.00	0.08	0.08	120.81
Building Vendor Trips	0.03	0.38	0.29	0.00	0.00	0.01	0.02	0.00	0.01	0.01	85.11
Building Worker Trips	0.02	0.03	0.49	0.00	0.00	0.00	0.00	0.00	0.00	0.00	53.43
Asphalt 02/01/2012-04/01/2012	0.09	0.52	0.34	0.00	0.00	0.05	0.05	0.00	0.04	0.04	46.61
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.08	0.51	0.30	0.00	0.00	0.05	0.05	0.00	0.04	0.04	42.00
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31
Paving Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.30
Coating 02/01/2012-04/01/2012	1.23	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45
Architectural Coating	1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.45

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Architectural Coating 2/1/2012 - 4/1/2012 - Architectural Coatings Phase 2

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 40%



Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Urbemis\Urbemis 9.2.2\Projects\Forrester Creek Phase 3 Construction.urb924

Project Name: Forrester Creek Construction Phase 3

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2012 TOTALS (lbs/day unmitigated)	45.40	64.41	47.28	0.02	0.08	4.94	5.02	0.03	4.54	4.57	7,557.60
2012 TOTALS (lbs/day mitigated)	27.18	64.41	47.28	0.02	0.08	4.94	5.02	0.03	4.54	4.57	7,557.60
2013 TOTALS (lbs/day unmitigated)	44.67	60.48	45.80	0.02	0.08	4.53	4.60	0.03	4.16	4.19	7,557.94
2013 TOTALS (lbs/day mitigated)	27.97	60.48	45.80	0.02	0.08	4.53	4.60	0.03	4.16	4.19	7,557.94

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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Time Slice 1/1/2013-2/1/2013 Active Days: 24	<u>44.67</u>	<u>60.48</u>	<u>45.80</u>	<u>0.02</u>	<u>0.08</u>	<u>4.53</u>	<u>4.60</u>	<u>0.03</u>	<u>4.16</u>	<u>4.19</u>	<u>7,557.94</u>
Asphalt 12/01/2012-02/01/2013	3.81	22.88	15.35	0.00	0.01	1.98	1.99	0.00	1.82	1.83	2,129.10
Paving Off-Gas	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.71	22.70	14.00	0.00	0.00	1.97	1.97	0.00	1.82	1.82	1,953.40
Paving On Road Diesel	0.01	0.11	0.04	0.00	0.00	0.00	0.01	0.00	0.00	0.00	22.31
Paving Worker Trips	0.04	0.07	1.31	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.39
Building 04/01/2012-02/01/2013	5.93	37.58	30.10	0.02	0.07	2.54	2.61	0.02	2.34	2.36	5,387.16
Building Off Road Diesel	5.42	33.22	21.39	0.00	0.00	2.37	2.37	0.00	2.18	2.18	3,717.13
Building Vendor Trips	0.33	4.07	3.21	0.01	0.04	0.16	0.19	0.01	0.14	0.16	1,025.79
Building Worker Trips	0.17	0.29	5.50	0.01	0.03	0.02	0.05	0.01	0.01	0.03	644.23
Coating 12/01/2012-02/01/2013	34.94	0.02	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.68
Architectural Coating	34.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.68

Phase Assumptions

Phase: Paving 12/1/2012 - 2/1/2013 - Paving Phase 3

Acres to be Paved: 0.86

Off-Road Equipment:

- 2 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
- 2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day
- 2 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Phase: Building Construction 4/1/2012 - 2/1/2013 - Building Phase 3

Off-Road Equipment:

- 6 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
- 2 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

6/23/2008 10:18:13 AM

6 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 12/1/2012 - 2/1/2013 - Architectural Coatings Phase 3

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 4/2/2012-11/30/2012 Active Days: 175	6.41	40.28	31.31	0.02	0.07	2.81	2.88	0.02	2.58	2.61	5,386.88
Building 04/01/2012-02/01/2013	6.41	40.28	31.31	0.02	0.07	2.81	2.88	0.02	2.58	2.61	5,386.88
Building Off Road Diesel	5.86	35.37	21.90	0.00	0.00	2.62	2.62	0.00	2.41	2.41	3,717.13
Building Vendor Trips	0.37	4.60	3.47	0.01	0.04	0.18	0.21	0.01	0.16	0.17	1,025.73
Building Worker Trips	0.19	0.32	5.95	0.01	0.03	0.02	0.05	0.01	0.01	0.03	644.02





6/23/2008 10:18:13 AM

Time Slice 1/1/2013-2/1/2013 Active Days: 24	<u>27.97</u>	<u>60.48</u>	<u>45.80</u>	<u>0.02</u>	<u>0.08</u>	<u>4.53</u>	<u>4.60</u>	<u>0.03</u>	<u>4.16</u>	<u>4.19</u>	<u>7,557.94</u>
Asphalt 12/01/2012-02/01/2013	3.81	22.88	15.35	0.00	0.01	1.98	1.99	0.00	1.82	1.83	2,129.10
Paving Off-Gas	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.71	22.70	14.00	0.00	0.00	1.97	1.97	0.00	1.82	1.82	1,953.40
Paving On Road Diesel	0.01	0.11	0.04	0.00	0.00	0.00	0.01	0.00	0.00	0.00	22.31
Paving Worker Trips	0.04	0.07	1.31	0.00	0.01	0.00	0.01	0.00	0.00	0.01	153.39
Building 04/01/2012-02/01/2013	5.93	37.58	30.10	0.02	0.07	2.54	2.61	0.02	2.34	2.36	5,387.16
Building Off Road Diesel	5.42	33.22	21.39	0.00	0.00	2.37	2.37	0.00	2.18	2.18	3,717.13
Building Vendor Trips	0.33	4.07	3.21	0.01	0.04	0.16	0.19	0.01	0.14	0.16	1,025.79
Building Worker Trips	0.17	0.29	5.50	0.01	0.03	0.02	0.05	0.01	0.01	0.03	644.23
Coating 12/01/2012-02/01/2013	18.23	0.02	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.68
Architectural Coating	18.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	41.68

Construction Related Mitigation Measures

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Urbemis\Urbemis 9.2.2\Projects\Forrester Creek Phase 3 Construction.urb924

Project Name: Forrester Creek Construction Phase 3

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2012 TOTALS (tons/year unmitigated)	1.04	4.20	3.24	0.00	0.01	0.30	0.30	0.00	0.27	0.28	550.71
2012 TOTALS (tons/year mitigated)	0.85	4.20	3.24	0.00	0.01	0.30	0.30	0.00	0.27	0.28	550.71
Percent Reduction	18.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013 TOTALS (tons/year unmitigated)	0.54	0.73	0.55	0.00	0.00	0.05	0.06	0.00	0.05	0.05	90.70
2013 TOTALS (tons/year mitigated)	0.34	0.73	0.55	0.00	0.00	0.05	0.06	0.00	0.05	0.05	90.70
Percent Reduction	37.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
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2013	0.54	0.73	0.55	0.00	0.00	0.05	0.06	0.00	0.05	0.05	90.70
Asphalt 12/01/2012-02/01/2013	0.05	0.27	0.18	0.00	0.00	0.02	0.02	0.00	0.02	0.02	25.55
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.04	0.27	0.17	0.00	0.00	0.02	0.02	0.00	0.02	0.02	23.44
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
Paving Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84
Building 04/01/2012-02/01/2013	0.07	0.45	0.36	0.00	0.00	0.03	0.03	0.00	0.03	0.03	64.65
Building Off Road Diesel	0.07	0.40	0.26	0.00	0.00	0.03	0.03	0.00	0.03	0.03	44.61
Building Vendor Trips	0.00	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.31
Building Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.73
Coating 12/01/2012-02/01/2013	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
Architectural Coating	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50

Phase Assumptions

Phase: Paving 12/1/2012 - 2/1/2013 - Paving Phase 3

Acres to be Paved: 0.86

Off-Road Equipment:

2 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

2 Rollers (95 hp) operating at a 0.56 load factor for 8 hours per day

Phase: Building Construction 4/1/2012 - 2/1/2013 - Building Phase 3

Off-Road Equipment:

6 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

2 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

6/23/2008 10:19:16 AM

6 Rough Terrain Forklifts (93 hp) operating at a 0.6 load factor for 8 hours per day  
3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 12/1/2012 - 2/1/2013 - Architectural Coatings Phase 3  
Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250  
Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250  
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250  
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

ROG      NOx      CO      SO2      PM10 Dust      PM10 Exhaust      PM10      PM2.5 Dust      PM2.5 Exhaust      PM2.5      CO2



6/23/2008 10:19:16 AM

2013	0.34	0.73	0.55	0.00	0.00	0.05	0.06	0.00	0.05	0.05	90.70
Asphalt 12/01/2012-02/01/2013	0.05	0.27	0.18	0.00	0.00	0.02	0.02	0.00	0.02	0.02	25.55
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.04	0.27	0.17	0.00	0.00	0.02	0.02	0.00	0.02	0.02	23.44
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.27
Paving Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.84
Building 04/01/2012-02/01/2013	0.07	0.45	0.36	0.00	0.00	0.03	0.03	0.00	0.03	0.03	64.65
Building Off Road Diesel	0.07	0.40	0.26	0.00	0.00	0.03	0.03	0.00	0.03	0.03	44.61
Building Vendor Trips	0.00	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.31
Building Worker Trips	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.73
Coating 12/01/2012-02/01/2013	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50
Architectural Coating	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.50

Construction Related Mitigation Measures

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name:  
Project Name: Forrester Creek Area Sources  
Project Location: California State-wide  
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006  
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	2.90	0.83	2.28	0.00	0.00	0.00	969.19

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	2.90	0.83	2.28	0.00	0.00	0.00	969.19



Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.06	0.81	0.68	0.00	0.00	0.00	966.44
Hearth - No Summer Emissions							
Landscape	0.13	0.02	1.60	0.00	0.00	0.00	2.75
Consumer Products	0.00						
Architectural Coatings	2.71						
TOTALS (lbs/day, unmitigated)	2.90	0.83	2.28	0.00	0.00	0.00	969.19

Area Source Changes to Defaults

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name:  
Project Name: Forrester Creek Area Sources  
Project Location: California State-wide  
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006  
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	2.77	0.81	0.68	0.00	0.00	0.00	966.44

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	2.77	0.81	0.68	0.00	0.00	0.00	966.44

6/19/2008 4:53:45 PM

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.06	0.81	0.68	0.00	0.00	0.00	966.44
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings	2.71						
TOTALS (lbs/day, unmitigated)	2.77	0.81	0.68	0.00	0.00	0.00	966.44

Area Source Changes to Defaults

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name:  
Project Name: Forrester Creek Area Sources  
Project Location: California State-wide  
On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006  
Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

AREA SOURCE EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.51	0.15	0.26	0.00	0.00	0.00	176.63

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.51	0.15	0.26	0.00	0.00	0.00	176.63

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.01	0.15	0.12	0.00	0.00	0.00	176.38
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	0.49						
TOTALS (tons/year, unmitigated)	0.51	0.15	0.26	0.00	0.00	0.00	176.63

Area Source Changes to Defaults

