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# AIR QUALITY IMPACT ANALYSIS

## SAN DIMAS CANYON RESIDENTIAL AND RETAIL DEVELOPMENT

## CITY OF SAN DIMAS

LSA

March 2009

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## SAN DIMAS CANYON RESIDENTIAL AND RETAIL DEVELOPMENT

## CITY OF SAN DIMAS

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LSA Project No. VSD0901

LSA

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# EXECUTIVE SUMMARY

LSA Associates, Inc. (LSA) was retained to prepare an air quality study for the proposed San Dimas Canyon Residential and Retail Development project located in the City of San Dimas (City), California.

The air quality study provides a discussion of the proposed project, the physical setting of the project area, and the regulatory framework for air quality. The report provides data on existing air quality, evaluates potential air quality impacts associated with the proposed project, and identifies mitigation measures recommended for potentially significant impacts. Modeled air quality levels are based on vehicle data and project trip generation prepared for this project.

The proposed project is consistent with the Mixed-Use designation for the project site in the City's General Plan and therefore is consistent with the Southern California Association of Governments (SCAG) Regional Comprehensive Plan (RCP) and the South Coast Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP).

Historical air quality data show that existing carbon monoxide (CO) levels for the project area and the general vicinity do not exceed either the State or federal ambient air quality standards. The CO hot-spot analysis was conducted with the CALINE4 model and peak-hour intersection vehicle turn volumes for the existing and cumulative year (2010) without and with project scenarios. The results showed that project-related traffic would not significantly affect local CO levels under the existing and future scenarios and the CO levels would all be below the State and federal standards. Compliance with the SCAQMD Rules and Regulations during construction will reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. Total construction emissions during peak construction days would be below the SCAQMD daily emissions thresholds for the criteria pollutants. Pollutant emissions from project operation, calculated with the URBEMIS 2007 model, would not exceed the SCAQMD criteria pollutant thresholds. No new significant impacts would occur. The localized significance analysis shows no significant impacts during construction or operations.

The evaluation was prepared in conformance with appropriate standards, utilizing procedures and methodologies in the SCAQMD California Environmental Quality Act (CEQA) Air Quality Handbook.

# PROJECT DESCRIPTION

## PROJECT LOCATION

The project site is located north of Bonita Avenue and west of San Dimas Canyon Road. Regional access to the project site is provided via State Route 57 (SR-57), located approximately 1.5 miles to the west, and Interstate 210 (I-210), less than 1 mile to the north. The project site location is shown in Figure 1.

The project site was developed with commercial uses but has been demolished. There is currently no active use on site. Surrounding land uses include existing residential uses to the north, west, south (across Bonita Avenue), and east (across San Dimas Canyon Road).

## PROJECT DESCRIPTION

The project proposes the 156 apartment dwelling units and 19,969 square feet (sf) of retail use. Figure 2 shows the site plan of the proposed project.

Access to the retail portion of the project site will be provided via a full-access driveway from San Dimas Canyon Road on the east side of the project site and a full-access driveway that allows eastbound vehicles along Bonita Avenue to make a left turn into and out of the commercial development from Bonita Avenue. Access to the residential portion of the project site will be provided via a full-access driveway (west leg) at the intersection of San Dimas Canyon Road and Dickens Lane. A residential fire lane will be provided on the west side of the project, accessing Bonita Avenue.

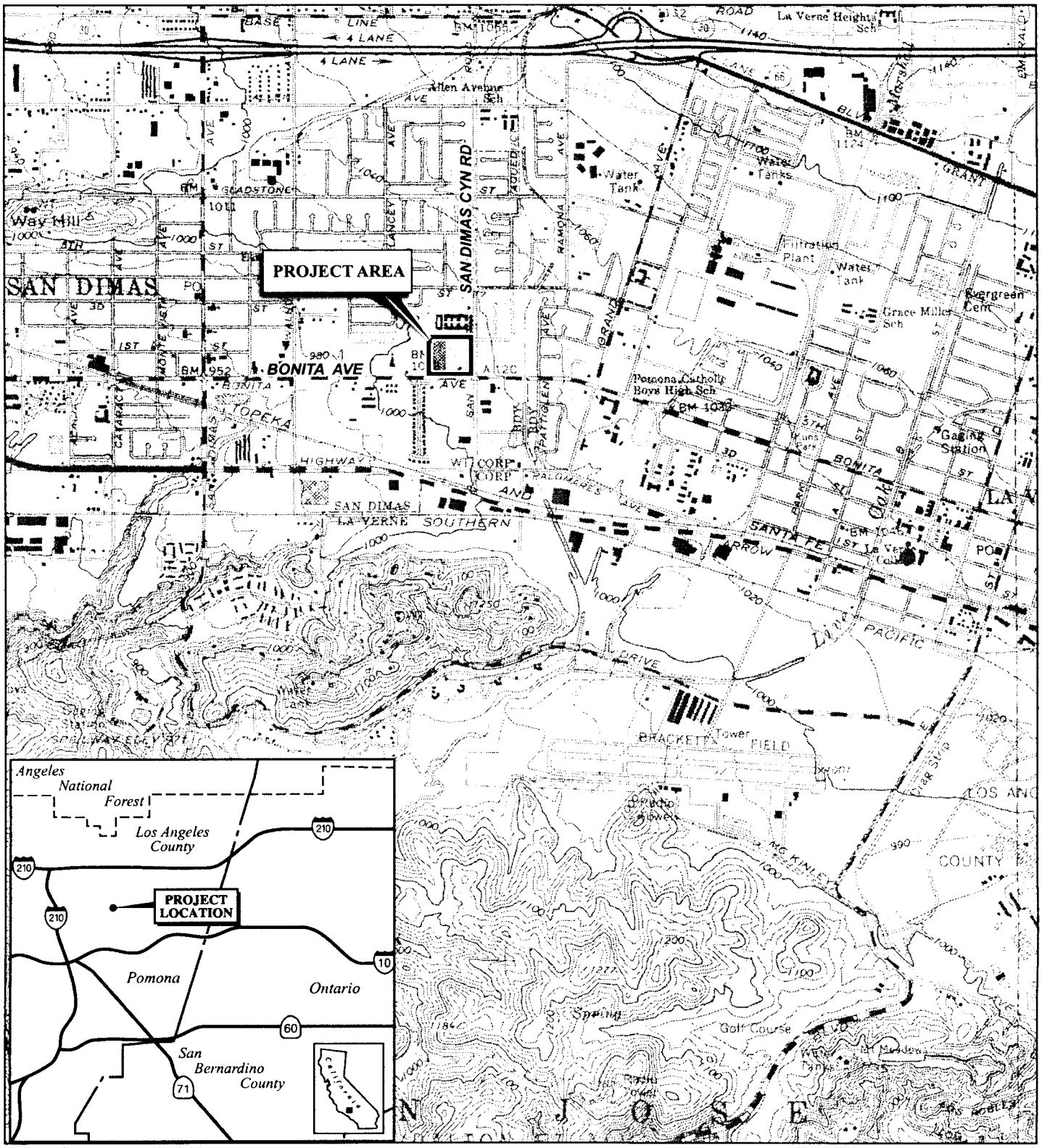


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FIGURE 1

N

0 1000 2000

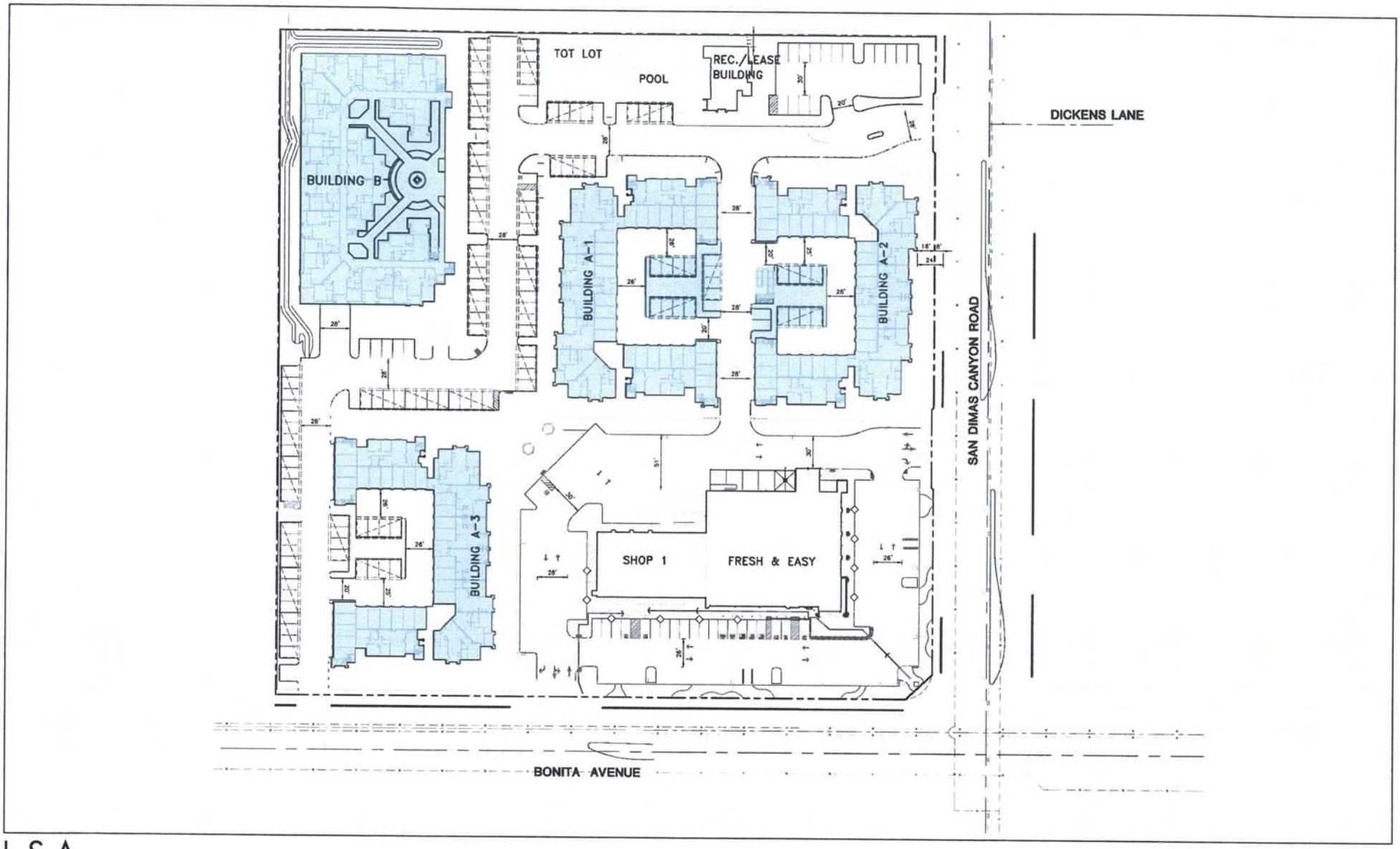
FEET

SOURCE: USGS 7.5' Quad, San Dimas, Ca.

*San Dimas Canyon Residential and Retail Development*

Project Location

I:\VSD0901\G\Location.cdr (2/6/09)

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LEGEND

Residential

N

0 60 120

FEET

SOURCE: KKE Architects

I:\VSD0901\G\Site Plan.cdr (3/23/09)

FIGURE 2

*San Dimas Canyon Residential and Retail Development*

Conceptual Site Plan

# ENVIRONMENTAL SETTING

## EXISTING ENVIRONMENTAL SETTING

The project site is located in the City of San Dimas, which is located in the South Coast Air Basin (SCAB) and includes Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties. Air quality regulation in the SCAB is administered by the SCAQMD, a regional agency created for the SCAB.

A number of air quality modeling tools are available to assess air quality impacts of projects. In addition, certain air districts such as the SCAQMD have created guidelines and requirements to conduct air quality analyses. The SCAQMD's current guidelines, contained in the CEQA Air Quality Handbook (1993), were adhered to in the assessment of air quality impacts for the proposed project.

### Regional Air Quality

Both the State and federal government have established health-based ambient air quality standards (AAQS). As shown in Table A, these pollutants include ozone ($O_3$), CO, nitrogen dioxide ($NO_2$), sulfur dioxide ($SO_2$), particulate matter with a diameter of 10 microns or less ($PM_{10}$), and lead. In July 1997, the United States Environmental Protection Agency (EPA) adopted new standards for 8-hour $O_3$ and for fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). In addition, the State has set standards for sulfates, hydrogen sulfide ($H_2S$), vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to setting out primary and secondary AAQS, the State has established a set of episode criteria for $O_3$, CO, $NO_2$, $SO_2$, and $PM_{10}$. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Health effects are progressively more severe as pollutant levels increase from Stage One to Stage Three. Table B lists the primary health risks and sources of common air pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (EPA), these health effects will not occur unless the standards are exceeded by a large margin or for a prolonged period of time. State AAQS are more stringent than federal AAQS. Among the pollutants, $O_3$ and particulate matter ($PM_{2.5}$ and $PM_{10}$) are considered regional pollutants, while the others have more localized effects.

The California Clean Air Act (CCAA) provides the SCAQMD with the authority to manage transportation activities at indirect sources. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. Examples of this are the motor vehicles at an intersection, a mall, and on highways. The SCAQMD also regulates stationary sources of pollution throughout its jurisdictional area. Direct emissions from motor vehicles are regulated by the California Air Resources Board (ARB).

## Table A: Ambient Air Quality Standards

| Pollutant | Averaging Time | California Standards[1] | | Federal Standards[2] | | |
|---|---|---|---|---|---|---|
| | | Concentration[3] | Method[4] | Primary[3,5] | Secondary[3,6] | Method[7] |
| Ozone ($O_3$) | 1-Hour | 0.09 ppm (180 µg/m$^3$) | Ultraviolet Photometry | -- | Same as Primary Standard | Ultraviolet Photometry |
| | 8-Hour | 0.07 ppm (137 µg/m$^3$) | | 0.075 ppm (147 µg/m$^3$) | | |
| Respirable Particulate Matter ($PM_{10}$) | 24-Hour | 50 µg/m$^3$ | Gravimetric or Beta Attenuation | 150 µg/m$^3$ | Same as Primary Standard | Inertial Separation and Gravimetric Analysis |
| | Annual Arithmetic Mean | 20 µg/m$^3$ | | -- | | |
| Fine Particulate Matter ($PM_{2.5}$) | 24-Hour | No Separate State Standard | | 35 µg/m$^3$ | Same as Primary Standard | Inertial Separation and Gravimetric Analysis |
| | Annual Arithmetic Mean | 12 µg/m$^3$ | Gravimetric or Beta Attenuation | 15 µg/m$^3$ | | |
| Carbon Monoxide (CO) | 8-Hour | 9.0 ppm (10 mg/m$^3$) | Non-Dispersive Infrared Photometry (NDIR) | 9 ppm (10 mg/m$^3$) | None | Non-Dispersive Infrared Photometry (NDIR) |
| | 1-Hour | 20 ppm (23 mg/m$^3$) | | 35 ppm (40 mg/m$^3$) | | |
| | 8-Hour (Lake Tahoe) | 6 ppm (7 mg/m$^3$) | | — | — | — |
| Nitrogen Dioxide ($NO_2$) | Annual Arithmetic Mean | 0.030 ppm (56 µg/m$^3$) | Gas Phase Chemiluminescence | 0.053 ppm (100 µg/m$^3$) | Same as Primary Standard | Gas Phase Chemiluminescence |
| | 1-Hour | 0.18 ppm (338 µg/m$^3$) | | — | | |
| Sulfur Dioxide ($SO_2$) | Annual Arithmetic Mean | — | Ultraviolet Fluorescence | 0.030 ppm (80 µg/m$^3$) | — | Spectrophotometry (Pararosaniline Method) |
| | 24-Hour | 0.04 ppm (105 µg/m$^3$) | | 0.14 ppm (365 µg/m$^3$) | — | |
| | 3-Hour | — | | — | 0.5 ppm (1300 µg/m$^3$) | |
| | 1-Hour | 0.25 ppm (655 µg/m$^3$) | | — | — | |
| Lead[8] | 30 Day Average | 1.5 µg/m$^3$ | Atomic Absorption | — | — | High-Volume Sampler and Atomic Absorption |
| | Calendar Quarter | — | | 1.5 µg/m$^3$ | Same as Primary Standard | |
| | Rolling 3-Month Average[9] | — | | 0.15 µg/m$^3$ | | |
| Visibility-Reducing Particles | 8-Hour | Extinction coefficient of 0.23 per kilometer - visibility of 10 miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape. | | No Federal Standards | | |
| Sulfates | 24-Hour | 25 µg/m$^3$ | Ion Chromatography | | | |
| Hydrogen Sulfide | 1-Hour | 0.03 ppm (42 µg/m$^3$) | Ultraviolet Fluorescence | | | |
| Vinyl Chloride[8] | 24-Hour | 0.01 ppm (26 µg/m$^3$) | Gas Chromatography | | | |

Source: ARB (November 17, 2008).

Footnotes:

1 California standards for ozone; carbon monoxide (except Lake Tahoe); sulfur dioxide (1- and 24-hour); nitrogen dioxide; suspended particulate matter - $PM_{10}$, $PM_{2.5}$, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2 National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth-highest 8-hour concentration in a year, averaged over three years, is equal to or less than the standard. For $PM_{10}$, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact EPA for further clarification and current federal policies.

3 Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4 Any equivalent procedure that can be shown to the satisfaction of ARB to give equivalent results at or near the level of the air quality standard may be used.

5 National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

6 National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

7 Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

8 ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

9 National lead standard, rolling 3-month average: final rule signed October 15, 2008.

$mg/m^3$ = milligrams per cubic meter
$\mu g/m^3$ = micrograms per cubic meter
ppm = parts per million

**Table B: Summary of Health Risks from Some of the Common Pollutants Found in Air**

| Pollutant | Health Risks | Examples of Sources |
|---|---|---|
| $PM_{10}$ | • Increased respiratory disease<br>• Lung damage<br>• Premature death | • Cars and trucks, especially diesels<br>• Fireplaces, wood stoves<br>• Windblown dust from roadways, agriculture, and construction |
| $O_3$ | • Breathing difficulties<br>• Lung damage | • Formed by chemical reactions of air pollutants in the presence of sunlight; common sources are motor vehicles, industries, and consumer products |
| CO | • Chest pain in heart patients<br>• Headaches, nausea<br>• Reduced mental alertness<br>• Death at very high levels | • Any source that burns fuel such as cars, trucks, construction and farming equipment, and residential heaters and stoves |
| $NO_2$ | • Lung damage | • See CO sources |
| Toxic Air Contaminants | • Cancer<br>• Chronic eye, lung, or skin irritation<br>• Neurological and reproductive disorders | • Cars and trucks, especially diesels<br>• Industrial sources such as chrome platers<br>• Neighborhood businesses such as dry cleaners and service stations<br>• Building materials and products |

Source: ARB 2005.
CO = carbon monoxide
$NO_2$ = nitrogen dioxide
$O_3$ = ozone
$PM_{10}$ = particulate matter less than 10 microns in size

## Climate/Meteorology

Air quality in the planning area is not only affected by various emission sources (mobile, industry, etc.), but is also affected by atmospheric conditions such as wind speed, wind direction, temperature, rainfall, etc. The combination of topography, low mixing height, abundant sunshine, and emissions from the second largest urban area in the United States gives the SCAB the worst air pollution problem in the nation.

Climate in the SCAB is determined by its terrain and geographical location. The SCAB is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern border, and high mountains surround the rest of the SCAB. The SCAB lies in the semipermanent high pressure zone of the eastern Pacific; the resulting climate is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted. However, periods of extremely hot weather, winter storms, or Santa Ana wind conditions do occur.

The annual average temperature, ranging from the low to middle 60s, measured in degrees Fahrenheit, varies little throughout the SCAB. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the San Dimas Fire FC95 Station. However, this station does not have sufficient temperature data recorded. Therefore, temperature data at the next closest station, the Pomona Fairplex Station,[1] are used here for reference. The monthly average maximum

[1] Western Regional Climate Center, www.wrcc.dri.edu.

temperature recorded at the Pomona Fairplex Station in the past 78 years ranged from 65.7°F in January to 90.8°F in August, with an annual average maximum of 77.4°F. The monthly average minimum temperature recorded at the Pomona Fairplex Station ranged from 38.4°F in January to 58.3°F in August, with an annual average minimum of 47.9°F. January is typically the coldest month, and August is typically the warmest month in this area of the SCAB.

The majority of annual rainfall in the SCAB occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the SCAB and along the coastal side of the mountains. The San Dimas Fire FC95 Station monitored precipitation in the project area for the past 57 years. Average monthly rainfall measured during that period varied from 4.26 inches in January to 0.49 inch or less between May and October, with an annual total of 18.09 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

Although the SCAB has a semiarid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The dominant daily wind pattern is an onshore 8 to 12 miles per hour (mph) daytime breeze and an offshore 3 to 5 mph nighttime breeze. The typical wind flow pattern fluctuates only with occasional winter storms or strong northeasterly (Santa Ana) winds from the mountains and deserts northeast of the SCAB. Summer wind flow patterns represent worst case conditions, because this is the period of higher temperatures and more sunlight, which results in $O_3$ formation.

During spring and early summer, pollution produced during any one day is typically blown out of the SCAB through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. Air contaminants can be transported 60 miles or more from the SCAB by ocean air during the afternoons. From early fall to winter, the transport is less pronounced because of slower average wind speed and the appearance of drainage winds earlier in the day. During stagnant wind conditions, offshore drainage winds may begin by late afternoon. Pollutants remaining in the SCAB are trapped and begin to accumulate during the night and the following morning. A low morning wind speed in pollutant source areas is an important indicator of air stagnation and the potential for buildup of primary air contaminants.

Temperature normally decreases with altitude, and a reversal of this atmospheric state, where temperature increases with altitude, is called an inversion. The height from the earth to the inversion base is known as the mixing height. Persistent low inversions and cool coastal air tend to create morning fog and low stratus clouds. Cloudy days are less likely in the eastern portions of the SCAB and are about 25 percent more likely along the coast. The vertical dispersion of air pollutants in the SCAB is limited by temperature inversions in the atmosphere close to the earth's surface.

Inversions are generally lower in the nighttime, when the ground is cool, than during daylight hours when the sun warms the ground and, in turn, the surface air layer. As this heating process continues, the temperature of the surface air layer approaches the temperature of the inversion base, causing heating along its lower edge. If enough warming takes place, the inversion layer becomes weak and opens up to allow the surface air layers to mix upward. This can be seen in the middle to late afternoon on a hot summer day when the smog appears to clear up suddenly. Winter inversions typically break earlier in the day, preventing excessive contaminant buildup.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problem is accumulation of CO and oxides of nitrogen ($NO_X$) due to extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and $NO_X$ to form photochemical smog.

## Global Warming

Global warming is the observed increase in the average temperature of the earth's atmosphere and oceans in recent decades. The earth's average near-surface atmospheric temperature rose 0.6 ± 0.2°Celsius (C) (1.1 ± 0.4°Fahrenheit [F]) in the 20th Century. The prevailing scientific opinion on climate change is that "most of the warming observed over the last 50 years is attributable to human activities."[1] The increased amounts of carbon dioxide ($CO_2$) and other greenhouse gases (GHGs) are the primary causes of the human-induced component of warming. They are released by the burning of fossil fuels, land clearing, and agriculture, etc., and lead to an increase in the GHG effect.

GHGs are present in the atmosphere naturally, released by natural sources, or formed from secondary reactions taking place in the atmosphere. They include $CO_2$, methane, $N_2O$, and $O_3$. In the last 200 years, substantial quantities of GHGs have been released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, enhancing the natural greenhouse effect, which is believed to be causing global warming. While man-made GHGs include carbon dioxide, methane, and $N_2O$, some (like chlorofluorocarbons [CFCs]) are completely new to the atmosphere.

Natural sources of carbon dioxide include the respiration (breathing) of animals and plants and evaporation from the oceans. Together, these natural sources release about 150 billion tons of carbon dioxide each year, far outweighing the 7 billion tons of man-made emissions from fossil fuel burning, waste incineration, deforestation, and cement manufacture. Nevertheless, natural removal processes such as photosynthesis by land and ocean-dwelling plant species cannot keep pace with this extra input of man-made carbon dioxide, and consequently the gas is building up in the atmosphere.

Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Man-made sources include the mining and burning of fossil fuels, digestive processes in ruminant animals such as cattle, rice paddies, and the burying of waste in landfills. Total annual emissions of methane are about 500 million tons, with man-made emissions accounting for the majority. As for carbon dioxide, the major removal process of atmospheric methane—chemical breakdown in the atmosphere—cannot keep pace with source emissions, and methane concentrations in the atmosphere are increasing.

[1] Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2001: The Scientific Basis*, http://www.grida.no/climate/ipcc_tar/wg1/index.htm.

California is the second largest emitter of GHG in the United States, surpassed only by Texas, and the tenth largest GHG emitter in the world (California Energy Commission [CEC] 2006). However, because of more stringent air emission regulations, in 2001 California ranked fourth lowest in carbon emissions per capita and fifth lowest among states in $CO_2$ emissions from fossil fuel consumption per unit of Gross State Product (total economic output of goods and services). In 2002, California produced 493 million metric tons of $CO_2$-equivalent GHG emissions, of which 81 percent were $CO_2$ emissions from fossil fuels combustion, 2.3 percent were from other sources of $CO_2$, 6.4 percent were from methane, and 6.8 percent were from $N_2O$. The remaining 3.5 percent of GHG emissions were from High Global Warming Potential gases (CEC 2006).

GHG emissions from anthropogenic (human) activities represent 84 percent of the total GHG emissions. California's transportation sector is the single largest source of GHG emissions, producing 41.2 percent of the State's total emissions. Industry is California's second largest source of GHG emissions, producing 22.8 percent of State's total emissions. Electricity generation is the third largest source of California's GHG emissions, composing 19.6 percent. Though electricity generated out-of-state for use in California composes only one-fifth to one-third of the total electricity supply, it contributes 50 percent of the GHG emissions associated with electricity consumption in California. Other major sources of GHG emissions include mineral production, waste combustion and land use, and forestry changes. Agriculture, forestry, commercial, and residential activities compose the balance of California's GHGs (CEC 2006).

### Air Pollution Constituents and Attainment Status

The following describes the six criteria air pollutants and their attainment status in the Basin based on ARB's area designations (activities and maps) (http://www.arb.ca.gov/desig/desig.htm). ARB provided the EPA with California's recommendations for 8-hour $O_3$ area designations on July 15, 2003. The recommendations and supporting data were an update to a report submitted to EPA in July 2000. On December 3, 2003, EPA published its proposed designations. The EPA's proposal differs from the State's recommendations primarily on the appropriate boundaries for several nonattainment areas. ARB responded to EPA's proposal on February 4, 2004. The EPA finalized the 8-hour $O_3$ designations in April 2004. Table C summarizes the attainment status in the Basin for the major criteria pollutants.

**Ozone.** $O_3$ (smog) is formed by photochemical reactions between $NO_X$ and reactive organic gases (ROG) rather than being directly emitted. $O_3$ is a pungent, colorless gas typical of Southern California smog. Elevated $O_3$ concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. $O_3$ levels peak during the summer and early fall. Effective June 15, 2005, the EPA revoked in full the federal 1-hour $O_3$ ambient air quality standard, including associated designations and classifications, in all areas except 14 early action compacts, all outside California. The entire SCAB is designated as a nonattainment area for the State 1-hour $O_3$ standard. The EPA has designated the status in the SCAB for the 8-hour $O_3$ standard as "Severe 17," which means the SCAB has until 2021 to attain the federal 8-hour $O_3$ standard.

**Table C: Attainment Status of Criteria Pollutants in the South Coast Air Basin**

| Pollutant | State | Federal |
|---|---|---|
| $O_3$: 1-hour | Nonattainment | N/A |
| $O_3$: 8-hour | Nonattainment | Severe-17 Nonattainment |
| $PM_{10}$ | Nonattainment | Serious Nonattainment |
| $PM_{2.5}$ | Nonattainment | Nonattainment |
| CO | Attainment | Attainment/Maintenance |
| $NO_2$ | Attainment | Attainment/Maintenance |
| $SO_2$ | Attainment | Attainment |
| Sulfates | Attainment | N/A |
| Lead | Attainment | N/A |
| $H_2S$ | Unclassified | N/A |
| Visibility-Reducing Particles | Unclassified | N/A |

Source: California Air Resources Board (ARB), 2008, http:\\www.arb.ca.gov/desig/desig.htm.

CO = carbon monoxide
$H_2S$ = hydrogen sulfide
N/A = no federal status
$NO_2$ = nitrogen dioxide
$O_3$ = ozone
$PM_{10}$ = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
$SO_2$ = sulfur dioxide

**Carbon Monoxide.** CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. The entire Basin is designated an attainment/maintenance area for federal CO standards and attainment for State CO standards.

**Nitrogen Oxides.** $NO_2$, a reddish brown gas, and nitric oxide, a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as $NO_X$. $NO_X$ is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of $PM_{2.5}$, poor visibility, and acid deposition (i.e., acid rain). $NO_2$ may decrease lung function and may reduce resistance to infection. The entire Basin is designated an attainment/maintenance area for federal $NO_2$ standards and an attainment area for State $NO_2$ standards.

**Sulfur Dioxide.** $SO_2$ is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous $SO_2$ levels. $SO_2$ may irritate the respiratory tract, can injure lung tissue when combined with $PM_{2.5}$, and reduces visibility and the level of sunlight. The entire Basin is in attainment with both federal and State $SO_2$ standards.

**Sulfates.** Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to $SO_2$ during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of $SO_2$ to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The entire SCAB is in attainment for the State standard for sulfates.

**Lead.** Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the bloodstream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. The entire Basin is in attainment for federal and State lead standards.

**Particulate Matter.** Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles, $PM_{10}$, derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and resultant exhaust from power plants and diesel buses and trucks are primarily responsible for $PM_{2.5}$ levels. $PM_{2.5}$ can also be formed in the atmosphere through chemical reactions. $PM_{10}$ can accumulate in the respiratory system and aggravate health problems such as asthma. The EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than $PM_{10}$ to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by current $PM_{10}$ standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms. The entire Basin is a nonattainment area for federal and State $PM_{10}$ and $PM_{2.5}$ standards.

**Hydrogen Sulfide.** $H_2S$ is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. In 1984, an ARB committee concluded that the ambient standard for $H_2S$ is adequate to protect public health and to significantly reduce odor annoyance. The entire SCAB is unclassified for the State standard for $H_2S$.

**Visibility-Reducing Particles.** Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials, such as metals, soot, soil, dust, and salt. The State standard is intended to limit the frequency and severity of visibility impairment due to regional haze. The entire SCAB is unclassified for the State standard for visibility-reducing particles.

### Local Air Quality

The SCAQMD, together with the ARB, maintain ambient air quality monitoring stations in the SCAB. The air quality monitoring station closest to the site is the Azusa Station. The pollutants monitored at this station are $O_3$, $NO_2$, CO, and suspended particulate matter ($PM_{10}$ and $PM_{2.5}$).[1] The air quality monitoring station closest to the site monitoring levels of $SO_2$ is the Burbank-W Palm Station, and the air quality trends from these stations are representative of the ambient air quality in the project area.

[1] Air quality data, 2005–2007; EPA and ARB Web sites.

The ambient air quality data in Table D show that CO, $NO_2$, and $SO_2$ levels are below the relevant State and federal standards in the project vicinity, while $O_3$, $PM_{10}$, and $PM_{2.5}$ frequently exceed State or federal standards.

**Table D: Ambient Air Quality in the Project Vicinity**

| Pollutant | | Standard | 2005 | 2006 | 2007 |
|---|---|---|---|---|---|
| **Carbon Monoxide**[1] | | | | | |
| Max. 1-hr concentration (ppm) | | | 2.5 | 2.2 | 2.6 |
| No. days exceeded: | State | > 20 ppm/1-hr | 0 | 0 | 0 |
| | Federal | > 35 ppm/1-hr | 0 | 0 | 0 |
| Max. 8-hr concentration (ppm) | | | 1.7 | 1.7 | 1.8 |
| No. days exceeded: | State | > 9.0 ppm/8-hr | 0 | 0 | 0 |
| | Federal | > 9 ppm/8-hr | 0 | 0 | 0 |
| **Ozone**[1] | | | | | |
| Max. 1-hr concentration (ppm) | | | 0.145 | 0.165 | 0.158 |
| No. days exceeded: | State | > 0.09 ppm/1-hr | 20 | 23 | 22 |
| Max. 8-hr concentration (ppm) | | | 0.122 | 0.120 | 0.113 |
| No. days exceeded: | State | > 0.07 ppm/1-hr | 22 | 24 | 28 |
| No. days exceeded: | Federal | > 0.08 ppm/8-hr | 14 | 17 | 20 |
| **Particulates ($PM_{10}$)**[1] | | | | | |
| Max. 24-hr concentration ($\mu g/m^3$) | | | 76 | 81 | 165 |
| No. days exceeded: | State | > 50 $\mu g/m^3$/24-hr | 10 | 7 | 11 |
| | Federal | > 150 $\mu g/m^3$/24-hr | 0 | 0 | 1 |
| Annual Arithmetic Average ($\mu g/m^3$) | | | 34.8 | 32.6 | 37.7 |
| Exceeded: | State | > 20 $\mu g/m^3$ ann. arth. avg. | Yes | Yes | Yes |
| | Federal | > 50 $\mu g/m^3$ ann. arth. avg. | No | No | No |
| **Particulates ($PM_{2.5}$)**[1] | | | | | |
| Max. 24-hr concentration ($\mu g/m^3$) | | | 132.6 | 52.7 | 63.8 |
| No. days exceeded: | Federal | > 65 $\mu g/m^3$/24-hr | 18 | 8 | 19 |
| Annual Arithmetic Average ($\mu g/m^3$) | | | 17.0 | 15.4 | 15.7 |
| Exceeded: | State | > 12 $\mu g/m^3$ ann. arth. avg. | Yes | Yes | Yes |
| | Federal | > 15 $\mu g/m^3$ ann. arth. avg. | Yes | Yes | Yes |
| **Nitrogen Dioxide**[1] | | | | | |
| Max. 1-hr concentration (ppm) | | | 0.093 | 0.108 | 0.102 |
| No. days exceeded: | State | > 0.25 ppm/1-hr | 0 | 0 | 0 |
| Annual arithmetic average concentration (ppm) | | | 0.025 | 0.026 | 0.025 |
| Exceeded: | Federal | > 0.053 ppm ann. arth. avg. | No | No | No |
| **Sulfur Dioxide**[2] | | | | | |
| Max. 24-hr concentration (ppm) | | | 0.006 | 0.004 | 0.003 |
| No. days exceeded: | State | > 0.04 ppm/24-hr | 0 | 0 | 0 |
| | Federal | > 0.14 ppm/24-hr | 0 | 0 | 0 |
| Annual arithmetic average concentration (ppm) | | | 0.002 | 0.001 | 0.001 |
| Exceeded: | Federal | > 0.030 ppm ann. arth. avg. | No | No | No |

Source: EPA and ARB, 2005 to 2007.
[1] Monitored at the Azusa Monitoring Station, 803 N. Loren Ave.
[2] Monitored at the Burbank-W Palm Monitoring Station
ppm = parts per million
$\mu g/m^3$ = microgram of pollutant per cubic meter of air
NA = Monitoring data not available.

# REGULATORY SETTINGS

## Federal Regulations/Standards

Pursuant to the federal Clean Air Act (CAA) of 1970, the EPA established national ambient air quality standards (NAAQS). The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health.

Data collected at permanent monitoring stations are used by the EPA to classify regions as "attainment" or "nonattainment," depending on whether the regions met the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA.

The EPA has designated SCAG as the Metropolitan Planning Organization (MPO) responsible for ensuring compliance with the requirements of the CAA for the SCAB.

The EPA established new national air quality standards for ground-level $O_3$ and $PM_{2.5}$ in 1997. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the CAA, as applied in setting the new public health standards for $O_3$ and particulate matter, was unconstitutional as an improper delegation of legislative authority to the EPA. On February 27, 2001, the U.S. Supreme Court upheld the way the government sets air quality standards under the CAA. The court unanimously rejected industry arguments that the EPA must consider financial cost as well as health benefits in writing standards. The justices also rejected arguments that the EPA took too much lawmaking power from Congress when it set tougher standards for $O_3$ and particulate matter in 1997. Nevertheless, the court threw out the EPA's policy for implementing new $O_3$ rules, saying that the agency ignored a section of the law that restricts its authority to enforce such rules.

In April 2003, the EPA was cleared by the White House Office of Management and Budget (OMB) to implement the 8-hour ground-level $O_3$ standard. The EPA issued the proposed rule implementing the 8-hour $O_3$ standard in April 2003. The EPA issued the final 8-hour $O_3$ nonattainment designations/boundaries on April 15, 2004. The EPA revoked the 1-hour $O_3$ standard on June 15, 2005.

The EPA issued the final $PM_{2.5}$ implementation rule in fall 2004. The EPA issued final designations for $PM_{2.5}$ attainment status on December 14, 2004. The EPA decreased the 24-hour $PM_{2.5}$ standard from 65 micrograms per cubic meter ($\mu g/m^3$) to 35 $\mu g/m^3$ in November 2006 and revoked the annual average $PM_{10}$ standard in December 2006.

Currently, there are no adopted regulations to combat global climate change on a national level. However, recent statutory authority has been granted to the EPA that may change the voluntary approach taken under our current administration to address this issue. On April 2, 2007, the United States Supreme Court ruled that the EPA has the authority to regulate $CO_2$ emissions under the federal CAA. Consequently, the regulation of GHG emissions on a national level by the EPA is forthcoming.

## State Regulations/Standards

The State of California began to set California ambient air quality standards (CAAQS) in 1969 under the mandate of the Mulford-Carrell Act. The CAAQS are generally more stringent than the NAAQS. In addition to the six criteria pollutants covered by the NAAQS, there are CAAQS for sulfates, $H_2S$, vinyl chloride, and visibility reducing particles. These standards are also listed in Table A.

Originally, there were no attainment deadlines for CAAQS. However, the CCAA of 1988 provided a time frame and a planning structure to promote their attainment. The CCAA required nonattainment areas in the State to prepare attainment plans and proposed to classify each such area on the basis of the submitted plan, as follows: moderate, if CAAQS attainment could not occur before December 31, 1994; serious, if CAAQS attainment could not occur before December 31, 1997; and severe, if CAAQS attainment could not be conclusively demonstrated at all.

The attainment plans are required to achieve a minimum 5 percent annual reduction in the emissions of nonattainment pollutants unless all feasible measures have been implemented. The SCAB is currently classified as a nonattainment area for three criteria pollutants: $O_3$, $PM_{10}$ and $PM_{2.5}$.

Assembly Bill 32 (AB 32), the "Global Warming Solutions Act," was passed by the California State legislature on August 31, 2006. AB 32 requires the State's global warming emissions to be reduced to 1990 levels by 2020. On or before January 1, 2011, the State board is required to adopt GHG limits and emission reduction measures by regulation. This is to achieve the maximum technologically feasible and cost-effective reductions in GHGs in furtherance of achieving the statewide GHG limit to become operative beginning on January 1, 2012. In June 2007, ARB published 37 early actions for reducing GHG emissions, as directed by AB32. ARB approved the Scoping Plan demonstrating how the 2020 deadline can be met by January 1, 2009, or earlier. However, as immediate progress in reducing GHG can and should be made, AB 32 directed ARB and the newly created Climate Action Team (CAT) to identify a list of "discrete early action GHG reduction measures" that can be adopted and made enforceable by January 1, 2010. CAT is a consortium of representatives from State agencies who have been charged with coordinating and implementing GHG emission reduction programs that fall outside of ARB's jurisdiction.

In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The Executive Order established the following goals: GHG emissions should be reduced to 2000 levels by 2010; to 1990 levels by 2020; and to 80 percent below 1990 levels by 2050. On January 18, 2007, California further solidified its dedication to reducing GHGs by setting a new Low Carbon Fuel Standard for transportation fuels sold within the State. Executive Order S-1-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent ($CO_2e$) grams per unit of fuel energy sold in California. The target of the Low Carbon Fuel Standard is to reduce the carbon intensity of California passenger vehicle fuels by at least 10 percent by 2020.

To address GHG emission and global climate change in General Plans and CEQA documents, Senate Bill 97 (Chapter 185, 2007) (SB 97) requires the Governor's Office of Planning and Research (OPR) to develop CEQA guidelines on how to address global warming emissions and mitigate project-specific GHGs. OPR is required to prepare, develop, and transmit these guidelines on or before July 1, 2009. Until such a plan has been adopted, direction for evaluation of, and potential mitigation for, incremental project impacts to global warming is not available.

SB 375, which was signed into law on October 1, 2008, provides emissions reduction goals around which regions can plan, integrating disjointed planning activities, and provides incentives for local governments and developers to follow new conscientiously planned growth patterns.

SB 375 enhances ARB's ability to reach AB 32 goals by directing ARB to develop regional GHG emissions reduction targets to be achieved within the automobile and light truck sectors for 2020 and 2035. ARB will also work with California's 18 MPO's to align their regional transportation, housing, and land use plans, and prepare a "sustainable communities strategy" to reduce the number of vehicle miles traveled in their respective regions and demonstrate the regions' ability to attain their GHG reduction targets.

Additionally, SB 375 provides incentives for creating attractive, walkable, and sustainable communities and revitalizing existing communities. The bill allows homebuilders to get relief from certain environmental reviews under CEQA if they build projects consistent with the new sustainable community strategies. It will also encourage the development of more alternative transportation options, which will promote healthy lifestyles and reduce traffic congestion.

As noted above, AB 32 requires ARB to prepare a Scoping Plan containing the main strategies California will use to reduce the GHGs that cause climate change. On December 11, 2008, ARB approved the Scoping Plan demonstrating how the 2020 deadline can be met on December 11, 2008. The Scoping Plan, even after Board approval, remains a recommendation. The measures in the Scoping Plan will not be binding until after they are adopted through the normal rulemaking process, with the necessary public input.

## REGIONAL AIR QUALITY PLANNING FRAMEWORK

The 1976 Lewis Air Quality Management Act established the SCAQMD and other air districts throughout the State. The federal CAA Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the federal standards in nonattainment areas of the state.

The ARB coordinates and oversees both State and federal air pollution control programs in California. The ARB oversees activities of local air quality management agencies and is responsible for incorporating air quality management plans for local air basins into a State Implementation Plan (SIP) for EPA approval. The ARB maintains air quality monitoring stations throughout the State in conjunction with local air districts. Data collected at these stations are used by the ARB to classify air basins as "attainment" or "nonattainment" with respect to each pollutant and to monitor progress in attaining air quality standards. The ARB has divided the State into 15 air basins. Significant authority for air quality control within them has been given to local air districts that regulate stationary source emissions and develop local nonattainment plans.

### Regional Air Quality Management Plan (AQMP)

The SCAQMD and the SCAG are responsible for formulating and implementing the AQMP for the SCAB. Every three years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The SCAQMD adopted the 2003 AQMP in August 2003 and forwarded it

to ARB for review and approval. The ARB approved a modified version of the 2003 AQMP and forwarded it to the EPA in October 2003 for review and approval.

The 2003 AQMP updates the attainment demonstration for the federal standards for $O_3$ and $PM_{10}$; replaces the 1997 attainment demonstration for the federal CO standard and provides a basis for a maintenance plan for CO for the future; and updates the maintenance plan for the federal $NO_2$ standard that the SCAB has met since 1992. The 2003 AQMP proposes policies and measures to achieve federal and State standards for healthful air quality in the SCAB.

This AQMP also addresses several State and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. This AQMP is consistent with and builds upon the approaches taken in the 1997 AQMP and the 1999 Amendments to the $O_3$ SIP for the SCAB for the attainment of the federal $O_3$ air quality standard. However, this revision points to the urgent need for additional emission reductions (beyond those incorporated in the 1997/1999 Plan) to offset increased emission estimates from mobile sources and meet all federal criteria pollutant standards within the time frames allowed under the federal Clean Air Act.

The SCAQMD has adopted the 2007 AQMP, which it describes as a regional and multiagency effort (SCAQMD Governing Board, ARB, SCAG, and the EPA). State and federal planning requirements will include developing control strategies, attainment demonstration, reasonable further progress, and maintenance plans. The 2007 AQMP also incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The ARB adopted the State strategy for the 2007 State Implementation Plan and the 2007 AQMP for the South Coast region on September 27, 2007. The SCAQMD has forwarded the 2007 AQMP to EPA for its review and approval.

# METHODOLOGY

A number of modeling tools are available to assess air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analysis. SCAQMD's current guidelines, CEQA Air Quality Handbook (April 1993) were adhered to in the assessment of air quality impacts for the proposed project. The air quality models identified in the Handbook (including an older version of the URBEMIS model) are outdated; therefore, the current version of the URBEMIS model, URBEMIS2007, was used to estimate project related mobile and stationary sources emissions in this air quality assessment.

The air quality assessment includes estimating emissions associated with short-term construction and long-term operation of the proposed project. Criteria pollutants with regional impacts would be emitted by project-related vehicular trips, as well as by emissions associated with stationary sources used on site. Localized air quality impacts (i.e., higher CO concentrations [CO hot spots]) near intersections or roadway segments in the project vicinity), would be small and less than significant due to the generally low ambient CO concentrations in the project area. A local CO hot-spot analysis was conducted. Project specific information was used in the modeling. Default values representative of the proposed project were used when project-specific data were not available.

The net increase in pollutant emissions determine the significance and impact on regional air quality as a result of the proposed project. The results also allow the local government to determine whether the proposed project will deter the region from achieving the goal of reducing pollutants in accordance with the AQMP in order to comply with federal and State AAQS.

SCAQMD has developed localized significance threshold (LST) methodology that can be used to determine whether a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or State AAQS and are developed based on the ambient concentrations of that pollutant for each source receptor area. SCAQMD's current guidelines, *Final Localized Significance Threshold Methodology* (June 2003), were adhered to in the assessment of air quality impacts for the proposed project.

The LST mass rate look-up tables are used to determine whether the daily emissions for the proposed construction and operational activities could result in significant localized air quality impacts. The emissions of concern from construction activities are $NO_X$ and CO combustion emissions from construction equipment and fugitive $PM_{10}$ dust from construction site preparation activities. The primary emissions from operational activities include but are not limited to $NO_X$ and CO combustion emissions from stationary sources and/or on-site mobile equipment. Off-site mobile emissions from the project are not included in the emissions compared to the LSTs.

## THRESHOLD OF SIGNIFICANCE

Based on Guidelines for the Implementation of California Environmental Quality Act, Appendix G, Public Resource Code Sections 15000–15387, a project would normally be considered to have a significant effect on air quality if the project would violate any ambient air quality standards, contribute substantially to an existing air quality violation, expose sensitive receptors to substantial pollutants concentrations, or conflict with adopted environmental plans and goals of the community in which it is located.

In addition to the federal and State AAQS, there are daily and quarterly emissions thresholds for construction and operation of a proposed project in the SCAB. The SCAB is administered by the SCAQMD, and guidelines and emissions thresholds established by the SCAQMD in its CEQA Air Quality Handbook (April 1993) are used in this analysis. It should be noted that the emission thresholds were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (EPA), these emission thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

### Thresholds for Construction Emissions

The following CEQA significance thresholds for construction emissions have been established for the SCAB:

- 75 pounds per day (lbs/day) of ROC
- 100 lbs/day of $NO_X$
- 550 lbs/day of CO
- 150 lbs/day of $PM_{10}$
- 150 lbs/day of sulfur oxides ($SO_X$)

Projects in the SCAB with construction related emissions that exceed any of the emission thresholds should be considered to be significant under CEQA.

### Thresholds for Operational Emissions

The daily operational emissions "significance" thresholds for the SCAB are as follows.

**Emission Thresholds for Pollutants with Regional Effects.** Projects with operations-related emissions that exceed any of the emission thresholds listed below are considered significant under CEQA.

- 55 lbs/day of ROC
- 55 lbs/day of $NO_X$
- 550 lbs/day of CO

- 150 lbs/day of $PM_{10}$
- 150 lbs/day of $SO_X$

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

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

### Thresholds for Localized Significance

For this project, the appropriate Source Receptor Area (SRA) for the LST is the Pomona/Walnut Valley Area (Area 10), according to the SRA/City Table on the SCAQMD LST Web site.[1] The project site is approximately 8.53 ac; however, it is expected that construction activities will be confined to 5 ac or less at any one time, so the 5 ac thresholds were used. The closest existing residential area is to the north or west at a distance of approximately 45 feet (ft) (14 meters [m]) from the closest construction area. The SCAQMD guidelines state that, for receptors within 25 m of the project boundary, the thresholds for 25 m should be used. Thus, LST values for 25 m were used. The following thresholds apply for this project:

Construction thresholds at 25 m for a 5 ac site:

- 270 lbs/day of $NO_X$
- 1,475 lbs/day of CO
- 12 lbs/day of $PM_{10}$
- 7 lbs/day of $PM_{2.5}$

Operational thresholds at 25 m for a 5 ac site:

- 270 lbs/day of $NO_X$
- 1,475 lbs/day of CO
- 3 lbs/day of $PM_{10}$
- 2 lbs/day of $PM_{2.5}$

[1] www.aqmd.gov/ceqa/handbook/LST/LST.html.

## Global Warming

Global warming and GHGs are an emerging environmental concern being raised on statewide, national, and global levels. Regional, State, and federal agencies are developing strategies to control pollutant emissions that contribute to global warming. However, neither CEQA nor the CEQA Guidelines mention or provide any methodology for analysis of GHGs, including $CO_2$, nor do they provide any significance thresholds. This air quality analysis follows all procedures and requirements of the State CEQA and the SCAQMD CEQA Handbook. Evaluation of any potential global warming effects resulting from the project, including modeling and gauging the impacts associated with an increase of trips or generation of new trips, and the effect on the greenhouse effect or global warming would be entirely speculative since no modeling protocol or significance criteria have been established.

# IMPACTS

Air pollutant emissions associated with the project would occur over the short term from construction activities, such as fugitive dust from site preparation and grading, and emissions from equipment exhaust. There would be long-term regional emissions associated with project related vehicular trips and stationary source emissions such as natural gas used for heating. Long-term local CO emissions at intersections in the project vicinity would also occur from project-related traffic.

## CONSTRUCTION IMPACTS

Construction activities produce combustion emissions from various sources such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from construction activities envisioned on site would vary daily as construction activity levels change. The use of construction equipment on site would result in localized exhaust emissions.

### Equipment Exhaust and Related Construction Activities

It is estimated that total project construction would take approximately 5–6 months. Construction equipment assumed includes scrapers, dozers, motor graders, tracked loader, water trucks, and haul trucks. This equipment would be used in different combinations during the different construction phases. The resulting emissions estimates for various construction phases are summarized in Table E, with details of these emissions determinations included in Appendix A. This table shows that construction equipment/vehicle emissions during any of the construction phases would not exceed any of the SCAQMD established daily emissions thresholds.

### Fugitive Dust

Fugitive dust emissions are generally associated with land clearing, exposure, and cut-and-fill operations. Dust generated daily during construction would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Nearby sensitive receptors and on-site workers may be exposed to blowing dust, depending on prevailing wind conditions. Fugitive dust would also be generated as construction equipment or trucks travel on unpaved roads on the construction site. Table E includes expected fugitive dust emissions.

Fugitive dust emissions from grading operations during a peak construction day are estimated by the URBEMIS2007 model.

**Table E: Construction Emissions for Each Phase (Assumes no Phase Overlap)**

| Construction Phase | Pollutant Emissions, lbs/day | | | | | | |
|---|---|---|---|---|---|---|---|
| | CO | ROC | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ | $CO_2$ |
| Mass Grading | 14 | 3.2 | 27 | 0.0013 | 10 | 3.1 | 2,400 |
| Fine Grading | 14 | 3.2 | 27 | 0.0013 | 10 | 3.1 | 2,400 |
| Trenching | 9.4 | 2.2 | 19 | 0.0013 | 0.94 | 0.86 | 1,800 |
| Paving | 9.5 | 2.5 | 14 | 0.0036 | 1.2 | 1.1 | 1,300 |
| Building | 23 | 2.1 | 15 | 0.024 | 0.97 | 0.83 | 3,200 |
| Coating | 0.83 | 22 | 0.049 | 0.001 | 0.0073 | 0.0039 | 98 |
| **SCAQMD Thresholds** | **550** | **75** | **100** | **150** | **150** | **55** | **No Threshold** |
| **Significant Emissions?** | **No** | **No** | **No** | **No** | **No** | **No** | |
| **LST Thresholds** | **1,475** | **No Threshold** | **270** | **No Threshold** | **12** | **7** | **No Threshold** |
| **Significant Emissions?** | **No** | | **No** | | **No** | **No** | |

Source: LSA Associates, Inc., February 2009.
CO = carbon monoxide
$CO_2$ = carbon dioxide
lbs/day = pounds per day
LST = localized significance threshold
$NO_X$ = oxides of nitrogen
$PM_{2.5}$ = fine particulate matter less than 2.5 microns in size
$PM_{10}$ = particulate matter less than 10 microns in size
ROC = reactive organic compounds
SCAQMD= South Coast Air Quality Management District
$SO_2$ = sulfur dioxides

Building construction uses different types of equipment on site. Similarities do exist in terms of equipment exhaust emissions and fugitive dust emissions. However, it is anticipated that emissions during building construction would be below peak grading day emissions. Therefore, mitigation implemented for peak grading day emissions would be adequate to reduce emissions during the building construction period.

### Architectural Coatings

Architectural coatings contain volatile organic compounds (VOC) that are similar to ROC and are part of the $O_3$ precursors. At this stage of project planning, no detailed architectural coatings information is available. Compliance with SCAQMD Rule 1113 on the use of architectural coatings should be considered sufficient. Table E lists the potential emissions associated with architectural coating. These emissions would occur after grading activities, near the end of the construction phase. Short-term impacts to air quality from architectural coating application would therefore not exceed the SCAQMD emissions threshold of 75 lbs/day.

### Odors

Some objectionable odors may emanate from the operation of diesel-powered construction equipment during construction of the project. These odors, however, would be limited to the short-term

construction period of the project and are not considered significant. Therefore, impacts related to objectionable odors are considered less than significant, and no mitigation is required.

## LONG-TERM PROJECT-RELATED EMISSIONS IMPACTS

The proposed project would result in area source emissions from natural gas usage and consumer products. The emissions associated with area sources would be small when compared to mobile source emissions. The proposed project is estimated to generate 1,333 net vehicular trips per day (LSA, February 2009). Using the default emissions factors included in URBEMIS 2007, emissions associated with project-related vehicular trips were calculated and are included in Table A.

Table F shows that total project-related net emissions for all criteria pollutants would be less than the SCAQMD daily emissions thresholds. Therefore, there would be no significant regional air quality impact with implementation of the proposed project.

**Table F: Project Net Emissions**

| Source Category | Emission Rates[1] (lbs/day) | | | | | |
|---|---|---|---|---|---|---|
| | CO | ROC | $NO_X$ | $SO_2$ | $PM_{10}$ | $PM_{2.5}$ |
| Proposed Project | 334 | 38 | 48 | 0.35 | 56 | 11 |
| **SCAQMD Threshold** | **550** | **55** | **55** | **150** | **150** | **55** |
| **Exceeds Threshold?** | **No** | **No** | **No** | **No** | **No** | **No** |
| **Significant Impact?** | **No** | **No** | **No** | **No** | **No** | **No** |

Source: LSA Associates, Inc., February 2009.
[1] The higher of the summer and winter rates are listed.
CO = carbon monoxide
lbs/day = pounds per day
$NO_X$ = oxides of nitrogen
$PM_{2.5}$ = fine particulate matter less than 2.5 microns in size
$PM_{10}$ = particulate matter less than 10 microns in size
ROC = reactive organic compounds
SCAQMD= South Coast Air Quality Management District
$SO_2$ = sulfur dioxides

**Long-Term Microscale (CO Hot Spot) Analysis.** The intersection vehicle turn volumes included in the traffic study report (LSA, February 2009) were used in the Caltrans CALINE4 model to evaluate the local CO concentrations at intersections most affected by project traffic. As stated previously, traffic trips associated with existing commercial uses were included in the traffic counts conducted for the proposed project and, therefore, are included in the calculation of existing CO concentrations in the project vicinity. Intersections were selected from those analyzed in the traffic study based on the worst level of service deterioration, the highest project-related vehicle turning movements, and proximity to the project site. The intersections analyzed are: San Dimas Avenue and Bonita Avenue, Walnut Avenue and Bonita Avenue, San Dimas Canyon Road and Gladstone Street, San Dimas Canyon Road and Dickens Lane, San Dimas Canyon Road and Bonita Avenue, and San Dimas Canyon Road and Arrow Highway. Table G lists the CO concentrations for the six intersections in the project vicinity under the existing conditions. Table H lists the cumulative year (2010) CO concentrations. It should be pointed out that, due to technology improvements, emission factors (for vehicle exhaust) for future years would decrease. In addition, background concentrations in future years are anticipated to continue to decrease as the concerted effort to improve regional air quality progresses. Therefore, CO concentrations in the future years would generally be lower than existing conditions.

## Table G: CO Concentrations[1] under Existing and Existing with Project Conditions

| Intersection | Receptor Distance to Road Centerline (Meters) | Project Related Increase 1-hr/8-hr (ppm) | Without/With Project 1-Hour CO Concentration (ppm) | Without/With Project 8-Hour CO Concentration (ppm) | Exceeds State Standards[2] | |
|---|---|---|---|---|---|---|
| | | | | | 1-Hr | 8-Hr |
| San Dimas Avenue and Bonita Avenue | 12 / 12 | -0.1 / -0.1 | 4.4 / 4.3 | 3.1 / 3.0 | No | No |
| | 14 / 14 | -0.1 / 0.0 | 4.3 / 4.2 | 3.0 / 3.0 | No | No |
| | 12 / 14 | 0.0 / 0.0 | 4.2 / 4.2 | 3.0 / 3.0 | No | No |
| | 12 / 12 | -0.1 / -0.1 | 4.2 / 4.1 | 3.0 / 2.9 | No | No |
| Walnut Avenue and Bonita Avenue | 12 / 12 | 0.1 / 0.0 | 3.9 / 4.0 | 2.8 / 2.8 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| San Dimas Canyon Road and Gladstone Street | 14 / 14 | 0.0 / 0.0 | 3.8 / 3.8 | 2.7 / 2.7 | No | No |
| | 14 / 8 | 0.0 / 0.0 | 3.8 / 3.8 | 2.7 / 2.7 | No | No |
| | 8 / 14 | 0.1 / 0.1 | 3.7 / 3.8 | 2.6 / 2.7 | No | No |
| | 8 / 8 | 0.0 / 0.0 | 3.7 / 3.7 | 2.6 / 2.6 | No | No |
| San Dimas Canyon Road and Dickens Lane | 14 / 8 | 0.0 / 0.0 | 3.7 / 3.7 | 2.6 / 2.6 | No | No |
| | 14 / 8 | 0.0 / 0.0 | 3.7 / 3.7 | 2.6 / 2.6 | No | No |
| | 8 / 14 | 0.1 / 0.0 | 3.6 / 3.7 | 2.6 / 2.6 | No | No |
| | 8 / 14 | 0.1 / 0.0 | 3.6 / 3.7 | 2.6 / 2.6 | No | No |
| San Dimas Canyon Road and Bonita Avenue | 14 / 14 | 0.0 / 0.0 | 4.0 / 4.0 | 2.8 / 2.8 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| San Dimas Canyon Road and Arrow Highway | 17 / 17 | 0.0 / 0.0 | 4.7 / 4.7 | 3.3 / 3.3 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 4.6 / 4.6 | 3.3 / 3.3 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 4.5 / 4.5 | 3.2 / 3.2 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 4.5 / 4.5 | 3.2 / 3.2 | No | No |

Source: LSA Associates, Inc., February 2009.

1 Includes the ambient 1-hour concentration of 3.1 ppm and ambient 8-hour concentration of 2.2 ppm. Measured at the 924 N. Garey Avenue, Pomona, CA AQ Station in Los Angeles County.

2 The State 1-hour standard is 20 ppm and the 8-hour standard is 9 ppm.

CO = carbon monoxide

ppm = parts per million

**Table H: CO Concentrations[1] in 2010 Without and With Project Scenarios**

| Intersection | Receptor Distance to Road Centerline (Meters) | Project Related Increase 1-hr/8-hr (ppm) | Without/With Project 1-hour CO Concentration (ppm) | Without/With Project 8-hour CO Concentration (ppm) | Exceeds State Standards[2] | |
|---|---|---|---|---|---|---|
| | | | | | 1-Hr | 8-Hr |
| San Dimas Avenue and Bonita Avenue | 12 / 12 | 0.0 / 0.0 | 4.4 / 4.4 | 3.1 / 3.1 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 4.3 / 4.3 | 3.0 / 3.0 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 4.3 / 4.3 | 3.0 / 3.0 | No | No |
| | 12 / 12 | 0.1 / 0.0 | 4.2 / 4.3 | 3.0 / 3.0 | No | No |
| Walnut Avenue and Bonita Avenue | 12 / 12 | 0.1 / 0.0 | 3.9 / 4.0 | 2.8 / 2.8 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| San Dimas Canyon Road and Gladstone Street | 14 / 14 | 0.0 / 0.0 | 3.8 / 3.8 | 2.7 / 2.7 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 3.8 / 3.8 | 2.7 / 2.7 | No | No |
| | 8 / 8 | 0.0 / 0.0 | 3.7 / 3.7 | 2.6 / 2.6 | No | No |
| | 8 / 8 | 0.0 / 0.0 | 3.7 / 3.7 | 2.6 / 2.6 | No | No |
| San Dimas Canyon Road and Dickens Lane | 14 / 14 | 0.0 / 0.0 | 3.7 / 3.7 | 2.6 / 2.6 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 3.7 / 3.7 | 2.6 / 2.6 | No | No |
| | 8 / 8 | 0.0 / 0.0 | 3.6 / 3.6 | 2.6 / 2.6 | No | No |
| | 8 / 8 | 0.0 / 0.0 | 3.6 / 3.6 | 2.6 / 2.6 | No | No |
| San Dimas Canyon Road and Bonita Avenue | 14 / 14 | -0.1 / 0.0 | 4.0 / 3.9 | 2.8 / 2.8 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 3.9 / 3.9 | 2.8 / 2.8 | No | No |
| San Dimas Canyon Road and Arrow Highway | 17 / 17 | 0.0 / 0.0 | 4.7 / 4.7 | 3.3 / 3.3 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 4.6 / 4.6 | 3.3 / 3.3 | No | No |
| | 14 / 14 | 0.0 / 0.0 | 4.5 / 4.5 | 3.2 / 3.2 | No | No |
| | 12 / 12 | 0.0 / 0.0 | 4.5 / 4.5 | 3.2 / 3.2 | No | No |

Source: LSA Associates, Inc., February 2009.

1 Includes ambient 1-hour concentration of 3.1 ppm and ambient 8-hour concentration of 2.2 ppm. Measured at the 924 N. Garey Avenue, Pomona, CA AQ Station in Los Angeles County.

2 The State 1-hour standard is 20 ppm and the 8-hour standard is 9 ppm.

CO = carbon monoxide

ppm = parts per million

The proposed project would contribute to increased CO concentrations at intersections in the project vicinity. As shown in Table H, none of the six intersections analyzed would have a 1-hour CO concentration exceeding State standards of 20 ppm under existing and 2009 with and without project conditions. The 8-hour CO concentration at these intersections would also be below the State standard of 9.0 ppm.

The project-related increase in CO concentrations at all six intersections would be 0.1 ppm or less for the 1-hour and the 8-hour period. Since no federal or State standards would be exceeded, no CO hot

spot would occur. Therefore, no air pollution control measures are necessary or recommended for CO emissions.

### Localized Significance Threshold Analysis

The following analysis was performed per SCAQMD Final Localized Significance Threshold Methodology (June 2003). Existing sensitive land uses within the project area consist of residences to the north and west at a distance of approximately 45 ft (14 m) from the closest construction area.

Table E shows the construction-related emissions of $NO_X$, CO, $PM_{10}$, and $PM_{2.5}$ and compares then to the LSTs for the Pomona/Walnut Valley SRA at distances of 25 m. The $PM_{2.5}$ emissions were calculated from the $PM_{10}$ emissions using methodology described in the SCAQMD Final Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds (October 2006), as detailed in Appendix D.

Table E shows that the calculated emissions rates for the proposed construction activities are below the localized significance thresholds for CO, $NO_X$, $PM_{10}$, and $PM_{2.5}$ for all sensitive receptors. Therefore, the proposed construction activities would not cause any short-term, localized, significant air quality impacts.

Following the SCAQMD LST methodology, this analysis only includes emissions produced on the project site, whereas the analysis above in Long-Term Project-Related Emissions Impacts section includes both on-site and off-site emissions. The same model, URBEMIS2007, was used for this analysis; however, this model does not provide a way to single out the on-site emissions. It is not known what percentage of these mobile emissions will be on site, so a conservative estimate of 5 percent of the total mobile emissions was assumed.

Table I shows that all operational emissions rates are below the LST thresholds at 25 m. Therefore, the proposed operational activity will not cause any localized significant air quality impacts.

### Table I: Summary of Localized Significance of Operation Emissions

| | **Emissions Rates (lbs/day)** | | | |
|---|---|---|---|---|
| | **CO** | **$NO_X$** | **$PM_{10}$** | **$PM_{2.5}$** |
| Total On-Site Emissions | 20 | 4.9 | 2.9 | 0.62 |
| **Localized Significance Threshold** | **1,475** | **270** | **3** | **2** |
| **Exceed Significance?** | **No** | **No** | **No** | **No** |

Source: LSA Associates, Inc., February 2009.
CO = carbon monoxide
lbs/day = pounds per day
$NO_X$ = oxides of nitrogen
$PM_{2.5}$ = fine particulate matter less than 2.5 microns in size
$PM_{10}$ = particulate matter less than 10 microns in size

**Odors.** Though offensive odors from stationary sources rarely cause any physical harm, they still remain unpleasant and can lead to public distress, generating citizen complaints to local governments.

The occurrence and severity of odor impacts depends on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors. Impacts to sensitive receptors are considered for any proposed new odor source located near existing receptors, as well as any new sensitive receptors located near existing odor sources. It is not expected that any component of the proposed project will generate any odors that would impact nearby residences or sensitive receptors. Thus, the impact from odors would be considered to be less than significant. No additional mitigation measures are required.

### Greenhouse Gas Emissions

The project will generate emissions of GHGs, primarily in the form of vehicle exhaust and in the consumption of electricity and natural gas for heating. The emissions from vehicle exhaust are controlled by the State and federal governments and are outside the control of this project. Emissions from building heating systems will be minimized by compliance with State Title 24 regulations for building energy efficiency. Emissions from electricity production will occur at nearby power plants.

Evaluation of any potential global warming effects resulting from the project, including modeling and gauging the impacts associated with an increase of trips or generation of new trips and the effect on GHG emissions or global warming, would be entirely speculative since no modeling protocol or significance criteria have been established. Table J shows that the proposed land uses generate up to 6,600 tons per year of $CO_2e$. Appendix C contains the worksheet for project-related GHG emissions.

### Table J: Project Greenhouse Gas Emissions

| Emission Source | Emissions (tons per year) | | | |
|---|---|---|---|---|
| | $CO_2$ | $CH_4$ | $N_2O$ | $CO_2e$ |
| Vehicles | 5,500 | 0.27 | 0.45 | 5,600 |
| Electricity Production | 470 | 0.0052 | 0.0029 | 470 |
| Natural Gas Combustion | 360 | 0.0052 | 0.0050 | 360 |
| Solid Waste | -- | -- | -- | 23 |
| Other Area Sources | 183 | -- | -- | 183 |
| Total Annual Emissions | 6,400 | 0.28 | 0.46 | 6,600 |

Source: LSA Associates, Inc., February 2009.
Note: Numbers in the table may appear to not add up correctly due to the rounding of all numbers to two significant digits.
(1) $CO_2$ emissions for vehicles and natural gas from URBEMIS 2007 outputs.
(2) Includes $CO_2$ emissions for hearth combustion and landscaping equipment from URBEMIS 2007 outputs.
$CH_4$ = methane
$CO_2$ = carbon dioxide
$CO_2e$ = carbon dioxide equivalent
$N_2O$ = nitrous oxide

Due to the global nature of this phenomenon and the scale of the emissions, total emissions are expressed in units of teragrams (a trillion [$10^{12}$] grams, or 1 million metric tons [tonnes]) per year (Tg/year). This is the standard metric unit used worldwide. The total emissions of 6,600 tons/year of $CO_2e$ equate to approximately 0.000924 Tg/year of $CO_2e$. As a comparison, the existing emissions of

$CO_2e$ are estimated to be approximately 176.79 Tg/year for the entire SCAG region and approximately 496.95 Tg/year for the entire State.

As described above, project-related GHG emissions are not confined to a particular air basin, but are dispersed worldwide. Consequently, it is unclear how project-related GHG emissions would contribute to global climate change and how global climate change may impact California. Therefore, project-related GHG emissions are not project-specific impacts to global warming, but are instead the project's contribution to this cumulative impact. As stated previously, project-related $CO_2e$ emissions and their contribution to global climate change impacts in the State of California are less than significant and less than cumulatively considerable because: (1) the project's impacts alone would not cause or significantly contribute to global climate change, and (2) the net increase in air pollutant emissions would not exceed the SCAQMD thresholds for criteria pollutants.

Based on the project's location, it is not anticipated that the proposed project would be significantly affected by any impacts resulting from the global climate change, such as flooding from the sea level rising.

**Air Quality Management Plan Consistency.** In order to accurately assess the environmental impacts as a result of new or renovated developments, environmental pollution and population growth are projected for future scenarios in the general plans of local jurisdictions and incorporated into the regional AQMPs. The project pollutants' emissions would not contribute to new exceedances of the SCAQMD's established daily emissions thresholds. The project will be consistent with the City's General Plan after the amendments to the City's General Plan are approved. Therefore, the project will be consistent with the General Plan and the AQMP.

**Naturally Occurring Asbestos (NOA).** The project is located in Los Angeles County, which is among the counties listed as containing serpentine and ultramafic rock; however, no serpentine and ultramafic rock has been identified in the project area. Therefore, the NOA impact during project construction would be minimal to none.

## Cumulative Impacts

The traffic study included vehicular trips from all present and future projects in the project vicinity. Therefore, CO hot spot concentrations calculated at these intersections include the cumulative traffic effect. Based on Table H, no significant cumulative CO impacts would occur.

Construction of the project would contribute cumulatively to the local and regional air pollutants, together with other projects under construction. Table F shows that the long-term operation of the project would not exceed any of the criteria pollutant standards and thus would not contribute significantly to long-term regional air pollutants. Therefore, implementation of the proposed project is not expected to contribute to significant cumulative air quality impacts.

# CONCLUSION

The proposed project would not result in criteria pollutants exceeding the SCAQMD daily emissions thresholds during construction.

CO concentrations would remain below both State and federal CO standards. The proposed project would not result in any exceedances of daily emissions thresholds established by the SCAQMD for criteria pollutants from project operations. Thus, no significant cumulative air quality impacts would occur as a result of the proposed project.

Despite great progress in air quality improvement, approximately 146 million people nationwide lived in counties with pollution levels above the NAAQS in 2002. Out of the 230 nonattainment areas identified during the 1990 CAA Amendment designation process, 124 areas remain as nonattainment today. In these nonattainment areas, however, the severity of air pollution episodes has decreased. Air quality in the SCAB in the past 20 years has improved steadily and dramatically, even with the tremendous increase in population and vehicles and other sources.

As shown in Table D, long-term exposure to elevated levels of criteria pollutants could result in potential health effects. However, as stated in the Thresholds of Significance, emission thresholds established by the air district are used to manage total regional emissions within an air basin, based on the air basin attainment status for criteria pollutants. These emissions thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations that may affect or delay the projected attainment target year for certain criteria pollutants.

Due to the conservative nature of the thresholds and the basin wide context of an individual project's emissions, there is no direct correlation of a single project to localized health effects. One individual project having emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as the $O_3$ precursors $NO_x$ and ROC.

Based on the above discussion, the potential for an individual project to significantly deteriorate regional air quality or contribute to significant health risk is small, especially if the emissions thresholds are not exceeded by the project. Due to the overall improvement trend on air quality in the air basin, it is unlikely the regional air quality or health risk would worsen from the current condition due to emissions from an individual project.

# STANDARD CONDITIONS

## CONSTRUCTION IMPACTS

The project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source.

Applicable Rule 403 Measures:

a. A person shall not cause or allow the emissions of fugitive dust from any transport, handling, construction or storage activity so that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source. (Does not apply to emissions emanating from unpaved roadways open to public travel or farm roads. This exclusion shall not apply to industrial or commercial facilities).

b. A person shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, clearing of land and solid waste disposal operations.

c. A person shall not cause or allow particulate matter to exceed 100 micrograms per cubic meter when determined as the difference between upwind and downwind samples collected on high volume samplers at the property line for a minimum of five hours.

d. A person shall take every reasonable precaution to prevent visible particulate matter from being deposited upon public roadways as a direct result of their operations. Reasonable precautions shall include, but are not limited to, the removal of any matter from equipment prior to movement on paved streets or the prompt removal of any material from paved streets onto which such material has been deposited.

e. Subsections a) and c) shall not be applicable when the wind speed instantaneously exceeds 40 kilometers (25 miles) per hour, or when the average wind speed is greater that 24 kilometers (15 miles) per hour. The average wind speed determination shall be on a 15 minute average at the nearest official air-monitoring station or by wind instrument located at the site being checked.

f. The provisions of this rule shall not apply to agricultural operations.

g. The project is required to comply with SCAQMD Rule 1113, which limits the quantity of VOC in architectural coatings

## PROJECT OPERATIONS

The proposed project will be required to comply with Title 24 of the California Code of Regulations established by the Energy Commission regarding energy conservation standards. The project applicant shall incorporate the following in building plans:

- Double-paned glass or window treatment for energy conservation shall be used in all exterior windows

# REFERENCES

California Air Resources Board Web site: www.arb.ca.gov.

California Air Resources Board Web site: www.arb.ca.gov/toxics/harp/metfiles.htm, accessed May 30, 2007.

California Department of Transportation, Air Quality Technical Analysis Notes, 1988.

California Department of Transportation, Traffic Data Web site, www.dot.ca.gov/hq/traffops/saferesr/trafdata/, accessed March 27, 2007

California Department of Transportation, Transportation Project-Level Carbon Monoxide Protocol, 1997.

LSA Associates, Inc., Traffic Impact Analysis, February 2009.

South Coast Air Quality Management District, Air Quality Management Plan, 2003.

South Coast Air Quality Management District, *CEQA Air Quality Handbook,* 1993.

Western Regional Climatic Center, www.wrcc.dri.edu.

# APPENDIX A

# URBEMIS 2007 MODEL OUTPUTS

**2/4/2009 02:59:22 PM**

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\VSD0901\Modeling\Existing.urb924

Project Name: Loma Bonita Mixed Use - Existing

Project Location: South Coast AQMD

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

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 0.29 | 0.10 | 3.14 | 0.00 | 0.01 | 0.01 | 73.32 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 14.82 | 22.30 | 196.09 | 0.21 | 33.32 | 6.49 | 19,818.80 |

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 15.11 | 22.40 | 199.23 | 0.21 | 33.33 | 6.50 | 19,892.12 |

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

| Source | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| Natural Gas | 0.00 | 0.06 | 0.05 | 0.00 | 0.00 | 0.00 | 67.70 |
| Hearth - No Summer Emissions | | | | | | | |
| Landscape | 0.25 | 0.04 | 3.09 | 0.00 | 0.01 | 0.01 | 5.62 |
| Consumer Products | 0.00 | | | | | | |
| Architectural Coatings | 0.04 | | | | | | |
| TOTALS (lbs/day, unmitigated) | 0.29 | 0.10 | 3.14 | 0.00 | 0.01 | 0.01 | 73.32 |

**2/4/2009 02:59:22 PM**

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Fast food rest. w/ drive thru | 7.78 | 11.72 | 103.20 | 0.11 | 17.52 | 3.41 | 10,422.91 |
| Retail | 7.04 | 10.58 | 92.89 | 0.10 | 15.80 | 3.08 | 9,395.89 |
| **TOTALS (lbs/day, unmitigated)** | **14.82** | **22.30** | **196.09** | **0.21** | **33.32** | **6.49** | **19,818.80** |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Fast food rest. w/ drive thru | | 496.12 | 1000 sq ft | 2.25 | 1,116.27 | 10,138.52 |
| Retail | | 195.96 | 1000 sq ft | 5.20 | 1,018.99 | 9,143.41 |
| | | | | | 2,135.26 | 19,281.93 |

**2/4/2009 02:59:22 PM**

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 51.7 | 1.2 | 98.6 | 0.2 |
| Light Truck < 3750 lbs | 7.3 | 2.7 | 94.6 | 2.7 |
| Light Truck 3751-5750 lbs | 22.9 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.6 | 0.9 | 99.1 | 0.0 |
| Lite-Heavy Truck 8501-10,000 lbs | 1.6 | 0.0 | 81.2 | 18.8 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.5 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.8 | 67.9 | 32.1 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.9 | 0.0 | 88.9 | 11.1 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |
| % of Trips - Commercial (by land use) | | | | | | |
| Fast food rest. w/ drive thru | | | | 5.0 | 2.5 | 92.5 |
| Retail | | | | 2.0 | 1.0 | 97.0 |

**2/4/2009 02:59:14 PM**

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: P:\VSD0901\Modeling\Existing.urb924

Project Name: Loma Bonita Mixed Use - Existing

Project Location: South Coast AQMD

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

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 0.04 | 0.06 | 0.05 | 0.00 | 0.00 | 0.00 | 67.70 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 17.02 | 26.86 | 189.28 | 0.17 | 33.32 | 6.49 | 17,946.58 |

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 17.06 | 26.92 | 189.33 | 0.17 | 33.32 | 6.49 | 18,014.28 |

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

| Source | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| Natural Gas | 0.00 | 0.06 | 0.05 | 0.00 | 0.00 | 0.00 | 67.70 |
| 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 | 0.04 | | | | | | |
| **TOTALS (lbs/day, unmitigated)** | **0.04** | **0.06** | **0.05** | **0.00** | **0.00** | **0.00** | **67.70** |

**2/4/2009 02:59:14 PM**

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Fast food rest. w/ drive thru | 8.95 | 14.12 | 99.57 | 0.09 | 17.52 | 3.41 | 9,438.49 |
| Retail | 8.07 | 12.74 | 89.71 | 0.08 | 15.80 | 3.08 | 8,508.09 |
| **TOTALS (lbs/day, unmitigated)** | **17.02** | **26.86** | **189.28** | **0.17** | **33.32** | **6.49** | **17,946.58** |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Fast food rest. w/ drive thru | | 496.12 | 1000 sq ft | 2.25 | 1,116.27 | 10,138.52 |
| Retail | | 195.96 | 1000 sq ft | 5.20 | 1,018.99 | 9,143.41 |
| | | | | | 2,135.26 | 19,281.93 |

**2/4/2009 02:59:14 PM**

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 51.7 | 1.2 | 98.6 | 0.2 |
| Light Truck < 3750 lbs | 7.3 | 2.7 | 94.6 | 2.7 |
| Light Truck 3751-5750 lbs | 22.9 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.6 | 0.9 | 99.1 | 0.0 |
| Lite-Heavy Truck 8501-10,000 lbs | 1.6 | 0.0 | 81.2 | 18.8 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.5 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.8 | 67.9 | 32.1 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.9 | 0.0 | 88.9 | 11.1 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |
| % of Trips - Commercial (by land use) | | | | | | |
| Fast food rest. w/ drive thru | | | | 5.0 | 2.5 | 92.5 |
| Retail | | | | 2.0 | 1.0 | 97.0 |

**2/4/2009 12:07:33 PM**

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\VSD0901\Modeling\Project-2010.urb924

Project Name: Loma Bonita Mixed Use

Project Location: South Coast AQMD

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

| | ROG | NOx | CO | SO2 | PM10 Dust | PM10 Exhaust | PM10 | PM2.5 Dust | PM2.5 Exhaust | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2009 TOTALS (lbs/day unmitigated) | 3.22 | 26.52 | 22.53 | 0.02 | 17.21 | 1.34 | 18.54 | 3.59 | 1.23 | 4.83 | 3,224.37 |
| 2009 TOTALS (lbs/day mitigated) | 3.22 | 26.52 | 22.53 | 0.02 | 8.92 | 1.34 | 10.26 | 1.86 | 1.23 | 3.09 | 3,224.37 |
| 2010 TOTALS (lbs/day unmitigated) | 22.28 | 14.13 | 21.17 | 0.02 | 0.10 | 0.79 | 0.89 | 0.04 | 0.73 | 0.76 | 3,223.94 |
| 2010 TOTALS (lbs/day mitigated) | 22.28 | 14.13 | 21.17 | 0.02 | 0.10 | 0.79 | 0.89 | 0.04 | 0.73 | 0.76 | 3,223.94 |

AREA SOURCE EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 8.76 | 1.76 | 3.90 | 0.00 | 0.01 | 0.01 | 2,189.75 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 26.24 | 37.34 | 332.70 | 0.34 | 55.82 | 10.87 | 33,285.64 |

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 35.00 | 39.10 | 336.60 | 0.34 | 55.83 | 10.88 | 35,475.39 |

**2/4/2009 12:07:33 PM**

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

| | ROG | NOx | CO | SO2 | PM10 Dust | PM10 Exhaust | PM10 | PM2.5 Dust | PM2.5 Exhaust | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Time Slice 3/3/2009-3/20/2009 Active Days: 14 | 1.84 | 15.82 | 8.83 | 0.01 | 6.76 | 0.96 | 7.72 | 1.41 | 0.88 | 2.29 | 1,766.60 |
| Demolition 03/03/2009-03/21/2009 | 1.84 | 15.82 | 8.83 | 0.01 | 6.76 | 0.96 | 7.72 | 1.41 | 0.88 | 2.29 | 1,766.60 |
| Fugitive Dust | 0.00 | 0.00 | 0.00 | 0.00 | 6.72 | 0.00 | 6.72 | 1.40 | 0.00 | 1.40 | 0.00 |
| Demo Off Road Diesel | 1.23 | 8.15 | 4.78 | 0.00 | 0.00 | 0.64 | 0.64 | 0.00 | 0.59 | 0.59 | 700.30 |
| Demo On Road Diesel | 0.57 | 7.60 | 2.92 | 0.01 | 0.03 | 0.32 | 0.35 | 0.01 | 0.29 | 0.30 | 941.87 |
| Demo Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 3/24/2009-6/19/2009 Active Days: 64 | 3.22 | **26.52** | 14.10 | 0.00 | 17.21 | 1.34 | 18.54 | 3.59 | 1.23 | 4.83 | 2,371.75 |
| Mass Grading 03/24/2009-06/20/2009 | 3.22 | 26.52 | 14.10 | 0.00 | 17.21 | 1.34 | 18.54 | 3.59 | 1.23 | 4.83 | 2,371.75 |
| Mass Grading Dust | 0.00 | 0.00 | 0.00 | 0.00 | 17.20 | 0.00 | 17.20 | 3.59 | 0.00 | 3.59 | 0.00 |
| Mass Grading Off Road Diesel | 3.18 | 26.46 | 12.98 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 2,247.32 |
| 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 | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 6/23/2009-7/31/2009 Active Days: 29 | 3.22 | **26.52** | 14.10 | 0.00 | 17.21 | 1.34 | 18.54 | 3.59 | 1.23 | 4.83 | 2,371.75 |
| Fine Grading 06/23/2009-08/01/2009 | 3.22 | 26.52 | 14.10 | 0.00 | 17.21 | 1.34 | 18.54 | 3.59 | 1.23 | 4.83 | 2,371.75 |
| Fine Grading Dust | 0.00 | 0.00 | 0.00 | 0.00 | 17.20 | 0.00 | 17.20 | 3.59 | 0.00 | 3.59 | 0.00 |
| Fine Grading Off Road Diesel | 3.18 | 26.46 | 12.98 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 2,247.32 |
| Fine 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 |
| Fine Grading Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 8/4/2009-8/14/2009 Active Days: 9 | 2.22 | 18.96 | 9.45 | 0.00 | 0.01 | 0.93 | 0.94 | 0.00 | 0.86 | 0.86 | 1,839.07 |
| Trenching 08/04/2009-08/15/2009 | 2.22 | 18.96 | 9.45 | 0.00 | 0.01 | 0.93 | 0.94 | 0.00 | 0.86 | 0.86 | 1,839.07 |
| Trenching Off Road Diesel | 2.18 | 18.90 | 8.32 | 0.00 | 0.00 | 0.93 | 0.93 | 0.00 | 0.86 | 0.86 | 1,714.64 |
| Trenching Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 8/18/2009-8/28/2009 Active Days: 9 | 2.48 | 13.84 | 9.47 | 0.00 | 0.02 | 1.14 | 1.16 | 0.01 | 1.05 | 1.06 | 1,342.36 |
| Asphalt 08/18/2009-08/29/2009 | 2.48 | 13.84 | 9.47 | 0.00 | 0.02 | 1.14 | 1.16 | 0.01 | 1.05 | 1.06 | 1,342.36 |
| Paving Off-Gas | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Paving Off Road Diesel | 2.08 | 12.55 | 7.05 | 0.00 | 0.00 | 1.09 | 1.09 | 0.00 | 1.00 | 1.00 | 979.23 |
| Paving On Road Diesel | 0.09 | 1.17 | 0.45 | 0.00 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.05 | 145.38 |
| Paving Worker Trips | 0.06 | 0.12 | 1.97 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 | 217.75 |
| Time Slice 9/1/2009-12/31/2009 Active Days: 88 | 2.14 | 15.23 | 22.53 | **0.02** | 0.10 | 0.87 | 0.97 | 0.04 | 0.80 | 0.83 | 3,224.37 |

**2/4/2009 12:07:33 PM**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Building 09/01/2009-04/24/2010 | 2.14 | 15.23 | 22.53 | 0.02 | 0.10 | 0.87 | 0.97 | 0.04 | 0.80 | 0.83 | 3,224.37 |
| Building Off Road Diesel | 1.30 | 9.79 | 4.94 | 0.00 | 0.00 | 0.63 | 0.63 | 0.00 | 0.58 | 0.58 | 893.39 |
| Building Vendor Trips | 0.39 | 4.59 | 3.49 | 0.01 | 0.03 | 0.19 | 0.22 | 0.01 | 0.18 | 0.19 | 774.35 |
| Building Worker Trips | 0.45 | 0.85 | 14.10 | 0.02 | 0.07 | 0.04 | 0.12 | 0.03 | 0.04 | 0.06 | 1,556.64 |
| Time Slice 1/1/2010-4/23/2010 Active Days: 81 | 1.98 | 14.13 | 21.17 | **0.02** | 0.10 | 0.79 | 0.89 | 0.04 | 0.73 | 0.76 | 3,223.94 |
| Building 09/01/2009-04/24/2010 | 1.98 | 14.13 | 21.17 | 0.02 | 0.10 | 0.79 | 0.89 | 0.04 | 0.73 | 0.76 | 3,223.94 |
| Building Off Road Diesel | 1.21 | 9.16 | 4.81 | 0.00 | 0.00 | 0.58 | 0.58 | 0.00 | 0.53 | 0.53 | 893.39 |
| Building Vendor Trips | 0.36 | 4.19 | 3.24 | 0.01 | 0.03 | 0.17 | 0.20 | 0.01 | 0.16 | 0.17 | 774.37 |
| Building Worker Trips | 0.41 | 0.77 | 13.11 | 0.02 | 0.07 | 0.04 | 0.12 | 0.03 | 0.04 | 0.06 | 1,556.19 |
| Time Slice 4/27/2010-7/22/2010 Active Days: 63 | **22.28** | 0.05 | 0.83 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 98.22 |
| Coating 04/27/2010-07/22/2010 | 22.28 | 0.05 | 0.83 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 98.22 |
| Architectural Coating | 22.25 | 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 | 0.05 | 0.83 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 98.22 |

## Phase Assumptions

Phase: Demolition 3/3/2009 - 3/21/2009 - Default Demolition Description

Building Volume Total (cubic feet): 1600000

Building Volume Daily (cubic feet): 16000

On Road Truck Travel (VMT): 222.22

Off-Road Equipment:

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

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 6/23/2009 - 8/1/2009 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 3.44

Maximum Daily Acreage Disturbed: 0.86

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

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

**2/4/2009 12:07:33 PM**

Phase: Mass Grading 3/24/2009 - 6/20/2009 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 3.44

Maximum Daily Acreage Disturbed: 0.86

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

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

Phase: Trenching 8/4/2009 - 8/15/2009 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 8/18/2009 - 8/29/2009 - Default Paving Description

Acres to be Paved: 0.86

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 9/1/2009 - 4/24/2010 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 4/27/2010 - 7/22/2010 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

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

**2/4/2009 12:07:33 PM**

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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Time Slice 3/3/2009-3/20/2009 Active Days: 14 | 1.84 | 15.82 | 8.83 | 0.01 | 6.76 | 0.96 | 7.72 | 1.41 | 0.88 | 2.29 | 1,766.60 |
| Demolition 03/03/2009-03/21/2009 | 1.84 | 15.82 | 8.83 | 0.01 | 6.76 | 0.96 | 7.72 | 1.41 | 0.88 | 2.29 | 1,766.60 |
| Fugitive Dust | 0.00 | 0.00 | 0.00 | 0.00 | 6.72 | 0.00 | 6.72 | 1.40 | 0.00 | 1.40 | 0.00 |
| Demo Off Road Diesel | 1.23 | 8.15 | 4.78 | 0.00 | 0.00 | 0.64 | 0.64 | 0.00 | 0.59 | 0.59 | 700.30 |
| Demo On Road Diesel | 0.57 | 7.60 | 2.92 | 0.01 | 0.03 | 0.32 | 0.35 | 0.01 | 0.29 | 0.30 | 941.87 |
| Demo Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 3/24/2009-6/19/2009 Active Days: 64 | 3.22 | 26.52 | 14.10 | 0.00 | 8.92 | 1.34 | 10.26 | 1.86 | 1.23 | 3.09 | 2,371.75 |
| Mass Grading 03/24/2009-06/20/2009 | 3.22 | 26.52 | 14.10 | 0.00 | 8.92 | 1.34 | 10.26 | 1.86 | 1.23 | 3.09 | 2,371.75 |
| Mass Grading Dust | 0.00 | 0.00 | 0.00 | 0.00 | 8.91 | 0.00 | 8.91 | 1.86 | 0.00 | 1.86 | 0.00 |
| Mass Grading Off Road Diesel | 3.18 | 26.46 | 12.98 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 2,247.32 |
| 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 | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 6/23/2009-7/31/2009 Active Days: 29 | 3.22 | 26.52 | 14.10 | 0.00 | 8.92 | 1.34 | 10.26 | 1.86 | 1.23 | 3.09 | 2,371.75 |
| Fine Grading 06/23/2009-08/01/2009 | 3.22 | 26.52 | 14.10 | 0.00 | 8.92 | 1.34 | 10.26 | 1.86 | 1.23 | 3.09 | 2,371.75 |
| Fine Grading Dust | 0.00 | 0.00 | 0.00 | 0.00 | 8.91 | 0.00 | 8.91 | 1.86 | 0.00 | 1.86 | 0.00 |
| Fine Grading Off Road Diesel | 3.18 | 26.46 | 12.98 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 2,247.32 |
| Fine 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 |
| Fine Grading Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 8/4/2009-8/14/2009 Active Days: 9 | 2.22 | 18.96 | 9.45 | 0.00 | 0.01 | 0.93 | 0.94 | 0.00 | 0.86 | 0.86 | 1,839.07 |
| Trenching 08/04/2009-08/15/2009 | 2.22 | 18.96 | 9.45 | 0.00 | 0.01 | 0.93 | 0.94 | 0.00 | 0.86 | 0.86 | 1,839.07 |
| Trenching Off Road Diesel | 2.18 | 18.90 | 8.32 | 0.00 | 0.00 | 0.93 | 0.93 | 0.00 | 0.86 | 0.86 | 1,714.64 |
| Trenching Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 8/18/2009-8/28/2009 Active Days: 9 | 2.48 | 13.84 | 9.47 | 0.00 | 0.02 | 1.14 | 1.16 | 0.01 | 1.05 | 1.06 | 1,342.36 |
| Asphalt 08/18/2009-08/29/2009 | 2.48 | 13.84 | 9.47 | 0.00 | 0.02 | 1.14 | 1.16 | 0.01 | 1.05 | 1.06 | 1,342.36 |
| Paving Off-Gas | 0.25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Paving Off Road Diesel | 2.08 | 12.55 | 7.05 | 0.00 | 0.00 | 1.09 | 1.09 | 0.00 | 1.00 | 1.00 | 979.23 |
| Paving On Road Diesel | 0.09 | 1.17 | 0.45 | 0.00 | 0.00 | 0.05 | 0.05 | 0.00 | 0.05 | 0.05 | 145.38 |
| Paving Worker Trips | 0.06 | 0.12 | 1.97 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 | 217.75 |
| Time Slice 9/1/2009-12/31/2009 Active Days: 88 | 2.14 | 15.23 | 22.53 | 0.02 | 0.10 | 0.87 | 0.97 | 0.04 | 0.80 | 0.83 | 3,224.37 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Building 09/01/2009-04/24/2010 | 2.14 | 15.23 | 22.53 | 0.02 | 0.10 | 0.87 | 0.97 | 0.04 | 0.80 | 0.83 | 3,224.37 |
| Building Off Road Diesel | 1.30 | 9.79 | 4.94 | 0.00 | 0.00 | 0.63 | 0.63 | 0.00 | 0.58 | 0.58 | 893.39 |
| Building Vendor Trips | 0.39 | 4.59 | 3.49 | 0.01 | 0.03 | 0.19 | 0.22 | 0.01 | 0.18 | 0.19 | 774.35 |
| Building Worker Trips | 0.45 | 0.85 | 14.10 | 0.02 | 0.07 | 0.04 | 0.12 | 0.03 | 0.04 | 0.06 | 1,556.64 |
| Time Slice 1/1/2010-4/23/2010 Active Days: 81 | 1.98 | 14.13 | 21.17 | **0.02** | 0.10 | 0.79 | 0.89 | 0.04 | 0.73 | 0.76 | 3,223.94 |
| Building 09/01/2009-04/24/2010 | 1.98 | 14.13 | 21.17 | 0.02 | 0.10 | 0.79 | 0.89 | 0.04 | 0.73 | 0.76 | 3,223.94 |
| Building Off Road Diesel | 1.21 | 9.16 | 4.81 | 0.00 | 0.00 | 0.58 | 0.58 | 0.00 | 0.53 | 0.53 | 893.39 |
| Building Vendor Trips | 0.36 | 4.19 | 3.24 | 0.01 | 0.03 | 0.17 | 0.20 | 0.01 | 0.16 | 0.17 | 774.37 |
| Building Worker Trips | 0.41 | 0.77 | 13.11 | 0.02 | 0.07 | 0.04 | 0.12 | 0.03 | 0.04 | 0.06 | 1,556.19 |
| Time Slice 4/27/2010-7/22/2010 Active Days: 63 | **22.28** | 0.05 | 0.83 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 98.22 |
| Coating 04/27/2010-07/22/2010 | 22.28 | 0.05 | 0.83 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 98.22 |
| Architectural Coating | 22.25 | 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 | 0.05 | 0.83 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 98.22 |

## Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/23/2009 - 8/1/2009 - Default Fine Site Grading/Excavation Description

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

PM10: 61% PM25: 61%

The following mitigation measures apply to Phase: Mass Grading 3/24/2009 - 6/20/2009 - Default Mass Site Grading/Excavation Description

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

PM10: 61% PM25: 61%

**2/4/2009 12:07:33 PM**

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

| Source | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| Natural Gas | 0.13 | 1.72 | 0.81 | 0.00 | 0.00 | 0.00 | 2,184.13 |
| Hearth - No Summer Emissions | | | | | | | |
| Landscape | 0.25 | 0.04 | 3.09 | 0.00 | 0.01 | 0.01 | 5.62 |
| Consumer Products | 8.00 | | | | | | |
| Architectural Coatings | 0.38 | | | | | | |
| **TOTALS (lbs/day, unmitigated)** | **8.76** | **1.76** | **3.90** | **0.00** | **0.01** | **0.01** | **2,189.75** |

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Apartments high rise | 9.48 | 12.22 | 112.18 | 0.11 | 18.31 | 3.57 | 10,980.91 |
| Regnl shop. center | 16.76 | 25.12 | 220.52 | 0.23 | 37.51 | 7.30 | 22,304.73 |
| **TOTALS (lbs/day, unmitigated)** | **26.24** | **37.34** | **332.70** | **0.34** | **55.82** | **10.87** | **33,285.64** |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Apartments high rise | 2.52 | 6.72 | dwelling units | 156.00 | 1,048.32 | 10,590.97 |
| Regnl shop. center | | 121.13 | 1000 sq ft | 19.97 | 2,418.97 | 21,705.38 |
| | | | | | 3,467.29 | 32,296.35 |

**2/4/2009 12:07:33 PM**

Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 51.7 | 1.2 | 98.6 | 0.2 |
| Light Truck < 3750 lbs | 7.3 | 2.7 | 94.6 | 2.7 |
| Light Truck 3751-5750 lbs | 22.9 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.6 | 0.9 | 99.1 | 0.0 |
| Lite-Heavy Truck 8501-10,000 lbs | 1.6 | 0.0 | 81.2 | 18.8 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.5 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.8 | 67.9 | 32.1 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.9 | 0.0 | 88.9 | 11.1 |

Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |
| % of Trips - Commercial (by land use) | | | | | | |
| Regnl shop. center | | | | 2.0 | 1.0 | 97.0 |

Operational Changes to Defaults

**2/4/2009 12:07:43 PM**

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: P:\VSD0901\Modeling\Project-2010.urb924

Project Name: Loma Bonita Mixed Use

Project Location: South Coast AQMD

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

| | ROG | NOx | CO | SO2 | PM10 Dust | PM10 Exhaust | PM10 | PM2.5 Dust | PM2.5 Exhaust | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2009 TOTALS (lbs/day unmitigated) | 3.22 | 26.52 | 22.53 | 0.02 | 17.21 | 1.34 | 18.54 | 3.59 | 1.23 | 4.83 | 3,224.37 |
| 2009 TOTALS (lbs/day mitigated) | 3.22 | 26.52 | 22.53 | 0.02 | 8.92 | 1.34 | 10.26 | 1.86 | 1.23 | 3.09 | 3,224.37 |
| 2010 TOTALS (lbs/day unmitigated) | 22.28 | 14.13 | 21.17 | 0.02 | 0.10 | 0.79 | 0.89 | 0.04 | 0.73 | 0.76 | 3,223.94 |
| 2010 TOTALS (lbs/day mitigated) | 22.28 | 14.13 | 21.17 | 0.02 | 0.10 | 0.79 | 0.89 | 0.04 | 0.73 | 0.76 | 3,223.94 |

AREA SOURCE EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 8.56 | 2.58 | 1.18 | 0.01 | 0.07 | 0.07 | 3,285.31 |

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 29.25 | 44.99 | 320.44 | 0.28 | 55.82 | 10.87 | 30,149.75 |

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

| | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| TOTALS (lbs/day, unmitigated) | 37.81 | 47.57 | 321.62 | 0.29 | 55.89 | 10.94 | 33,435.06 |

**2/4/2009 12:07:43 PM**

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

| Source | ROG | NOx | CO | SO2 | PM10 | PM2.5 | CO2 |
|---|---|---|---|---|---|---|---|
| Natural Gas | 0.13 | 1.72 | 0.81 | 0.00 | 0.00 | 0.00 | 2,184.13 |
| Hearth | 0.05 | 0.86 | 0.37 | 0.01 | 0.07 | 0.07 | 1,101.18 |
| Landscaping - No Winter Emissions | | | | | | | |
| Consumer Products | 8.00 | | | | | | |
| Architectural Coatings | 0.38 | | | | | | |
| TOTALS (lbs/day, unmitigated) | 8.56 | 2.58 | 1.18 | 0.01 | 0.07 | 0.07 | 3,285.31 |

Area Source Changes to Defaults

Percentage of residences with wood stoves changed from 10% to 0%

Percentage of residences with wood fireplaces changed from 5% to 0%

Percentage of residences with natural gas fireplaces changed from 85% to 100%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

| Source | ROG | NOX | CO | SO2 | PM10 | PM25 | CO2 |
|---|---|---|---|---|---|---|---|
| Apartments high rise | 10.06 | 14.74 | 107.47 | 0.09 | 18.31 | 3.57 | 9,952.56 |
| Regnl shop. center | 19.19 | 30.25 | 212.97 | 0.19 | 37.51 | 7.30 | 20,197.19 |
| TOTALS (lbs/day, unmitigated) | 29.25 | 44.99 | 320.44 | 0.28 | 55.82 | 10.87 | 30,149.75 |

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

| Land Use Type | Acreage | Trip Rate | Unit Type | No. Units | Total Trips | Total VMT |
|---|---|---|---|---|---|---|
| Apartments high rise | 2.52 | 6.72 | dwelling units | 156.00 | 1,048.32 | 10,590.97 |
| Regnl shop. center | | 121.13 | 1000 sq ft | 19.97 | 2,418.97 | 21,705.38 |
| | | | | | 3,467.29 | 32,296.35 |

**2/4/2009 12:07:43 PM**

## Vehicle Fleet Mix

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|---|---|---|---|---|
| Light Auto | 51.7 | 1.2 | 98.6 | 0.2 |
| Light Truck < 3750 lbs | 7.3 | 2.7 | 94.6 | 2.7 |
| Light Truck 3751-5750 lbs | 22.9 | 0.4 | 99.6 | 0.0 |
| Med Truck 5751-8500 lbs | 10.6 | 0.9 | 99.1 | 0.0 |
| Lite-Heavy Truck 8501-10,000 lbs | 1.6 | 0.0 | 81.2 | 18.8 |
| Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 0.0 | 60.0 | 40.0 |
| Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 0.0 | 22.2 | 77.8 |
| Heavy-Heavy Truck 33,001-60,000 lbs | 0.5 | 0.0 | 0.0 | 100.0 |
| Other Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Urban Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motorcycle | 2.8 | 67.9 | 32.1 | 0.0 |
| School Bus | 0.1 | 0.0 | 0.0 | 100.0 |
| Motor Home | 0.9 | 0.0 | 88.9 | 11.1 |

## Travel Conditions

| | Residential | | | Commercial | | |
|---|---|---|---|---|---|---|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 12.7 | 7.0 | 9.5 | 13.3 | 7.4 | 8.9 |
| Rural Trip Length (miles) | 17.6 | 12.1 | 14.9 | 15.4 | 9.6 | 12.6 |
| Trip speeds (mph) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |
| % of Trips - Commercial (by land use) | | | | | | |
| Regnl shop. center | | | | 2.0 | 1.0 | 97.0 |

## Operational Changes to Defaults

# APPENDIX B

# CALINE4 MODEL OUTPUTS

# SAN DIMAS CANYON RESIDENTIAL AND RETAIL DEVELOPMENT

# AIR QUALITY CO HOT SPOT ANALYSIS

# CALINE4 MODEL PRINTOUTS

# EXISTING BASELINE CONDITIONS

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 511 | 6.4 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 706 | 5.0 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 144 | 7.1 | .0 | 10.0 |
| D. San Dima SBA | -5 | 150 | -5 | 0 | AG | 390 | 5.8 | .0 | 10.0 |
| E. San Dima SBD | -5 | 0 | -5 | -150 | AG | 539 | 4.0 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 74 | 7.1 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 478 | 6.0 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 364 | 3.8 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 155 | 7.1 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 5 | 0 | 5 | AG | 506 | 6.4 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 5 | -150 | 5 | AG | 712 | 5.0 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 63 | 7.1 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 655 | 3.5 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 706 | 3.5 | .0 | 10.0 |
| O. San Dim SBAX | -5 | 750 | -5 | 150 | AG | 464 | 3.5 | .0 | 10.0 |
| P. San Dim SBDX | -5 | -150 | -5 | -750 | AG | 539 | 3.5 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 633 | 3.5 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 364 | 3.5 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 5 | 150 | 5 | AG | 569 | 3.5 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 5 | -750 | 5 | AG | 712 | 3.5 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -12 | 12 | 1.8 |
| 3. SW | -12 | -14 | 1.8 |
| 4. NE | 14 | 12 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 12 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 12 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -12 | 150 | 1.8 |
| 11. SW mdblk | -12 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 12 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 12 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -12 | 600 | 1.8 |
| 19. SW blk | -12 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-01 (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. SE | 278. | 1.2 | .2 | .0 | .0 | .0 | .0 | .0 | .4 | .0 |
| 2. NW | 171. | 1.1 | .2 | .0 | .1 | .0 | .3 | .0 | .1 | .0 |
| 3. SW | 8. | 1.1 | .0 | .2 | .0 | .3 | .0 | .0 | .2 | .0 |
| 4. NE | 262. | 1.3 | .0 | .2 | .0 | .0 | .0 | .0 | .1 | .0 |
| 5. ES mdblk | 276. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. WN mdblk | 98. | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 |
| 7. WS mdblk | 81. | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .0 |
| 8. EN mdblk | 263. | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 352. | 1.0 | .5 | .0 | .1 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .9 | .0 | .1 | .0 | .3 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | 7. | .8 | .1 | .0 | .0 | .0 | .3 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | 1.0 | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-01 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .1 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .1 | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .1 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .1 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .4 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .0 | .0 | .2 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .3 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .4 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .2 | .3 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .4 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. Walnut A NBA | 5 | -150 | 5 | 0 | AG | 199 | 6.4 | .0 | 10.0 |
| B. Walnut A NBD | 5 | 0 | 5 | 150 | AG | 207 | 4.2 | .0 | 10.0 |
| C. Walnut A NBL | 5 | -150 | 0 | 0 | AG | 85 | 7.1 | .0 | 10.0 |
| D. Walnut A SBA | -5 | 150 | -5 | 0 | AG | 183 | 6.4 | .0 | 10.0 |
| E. Walnut A SBD | -5 | 0 | -5 | -150 | AG | 240 | 4.2 | .0 | 10.0 |
| F. Walnut A SBL | -5 | 150 | 0 | 0 | AG | 100 | 7.1 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 400 | 5.1 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 541 | 3.7 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 73 | 7.1 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 7 | 0 | 7 | AG | 501 | 5.2 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 7 | -150 | 7 | AG | 644 | 3.7 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 91 | 7.1 | .0 | 10.0 |
| M. Walnut NBAX | 5 | -750 | 5 | -150 | AG | 284 | 3.5 | .0 | 10.0 |
| N. Walnut NBDX | 5 | 150 | 5 | 750 | AG | 207 | 3.5 | .0 | 10.0 |
| O. Walnut SBAX | -5 | 750 | -5 | 150 | AG | 283 | 3.5 | .0 | 10.0 |
| P. Walnut SBDX | -5 | -150 | -5 | -750 | AG | 240 | 3.5 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 473 | 3.5 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 541 | 3.5 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 7 | 150 | 7 | AG | 592 | 3.5 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 7 | -750 | 7 | AG | 644 | 3.5 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 12 | -14 | 1.8 |
| 2. NW | -12 | 14 | 1.8 |
| 3. SW | -12 | -14 | 1.8 |
| 4. NE | 12 | 14 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 14 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 14 | 1.8 |
| 9. SE mdblk | 12 | -150 | 1.8 |
| 10. NW mdblk | -12 | 150 | 1.8 |
| 11. SW mdblk | -12 | -150 | 1.8 |
| 12. NE mdblk | 12 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 14 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 14 | 1.8 |
| 17. SE blk | 12 | -600 | 1.8 |
| 18. NW blk | -12 | 600 | 1.8 |
| 19. SW blk | -12 | -600 | 1.8 |
| 20. NE blk | 12 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-02 (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. SE | 278. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 2. NW | 98. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | 82. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 4. NE | 262. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | 277. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 6. WN mdblk | 97. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 83. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 8. EN mdblk | 263. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .6 | .2 | .0 | .1 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .2 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 186. | .5 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 175. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-02 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .4 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .4 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 347 | 5.1 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 440 | 3.7 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 53 | 7.1 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 320 | 5.1 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 418 | 3.7 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 30 | 7.1 | .0 | 10.0 |
| G. Gladston EBA | -150 | -7 | 0 | -7 | AG | 306 | 7.2 | .0 | 10.0 |
| H. Gladston EBD | 0 | -7 | 150 | -7 | AG | 250 | 4.5 | .0 | 10.0 |
| I. Gladston EBL | -150 | -5 | 0 | 0 | AG | 94 | 7.1 | .0 | 10.0 |
| J. Gladston WBA | 150 | 2 | 0 | 2 | AG | 72 | 6.6 | .0 | 10.0 |
| K. Gladston WBD | 0 | 2 | -150 | 2 | AG | 134 | 4.3 | .0 | 10.0 |
| L. Gladston WBL | 150 | 2 | 0 | 0 | AG | 20 | 7.1 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 400 | 3.5 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 440 | 3.5 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 350 | 3.5 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 418 | 3.5 | .0 | 10.0 |
| Q. Gladsto EBAX | -750 | -7 | -150 | -7 | AG | 400 | 3.8 | .0 | 10.0 |
| R. Gladsto EBDX | 150 | -7 | 750 | -7 | AG | 250 | 3.8 | .0 | 10.0 |
| S. Gladsto WBAX | 750 | 2 | 150 | 2 | AG | 92 | 3.8 | .0 | 10.0 |
| T. Gladsto WBDX | -150 | 2 | -750 | 2 | AG | 134 | 3.8 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -14 | 8 | 1.8 |
| 3. SW | -14 | -14 | 1.8 |
| 4. NE | 14 | 8 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 8 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 8 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 8 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 8 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-03 (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. SE | 277. | .7 | .1 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 2. NW | 172. | .6 | .0 | .0 | .0 | .0 | .2 | .0 | .1 | .0 |
| 3. SW | 7. | .7 | .0 | .0 | .0 | .2 | .0 | .0 | .1 | .0 |
| 4. NE | 262. | .6 | .0 | .1 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. ES mdblk | 275. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. WN mdblk | 98. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 |
| 7. WS mdblk | 82. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .0 |
| 8. EN mdblk | 265. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 352. | .6 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .5 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 275. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 85. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 265. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-03 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-04 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 414 | 5.2 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 418 | 3.7 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 23 | 7.1 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 404 | 5.2 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 407 | 3.7 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 24 | 7.1 | .0 | 10.0 |
| G. Dickens EBA | -150 | -2 | 0 | -2 | AG | 6 | 6.6 | .0 | 10.0 |
| H. Dickens EBD | 0 | -2 | 150 | -2 | AG | 34 | 4.3 | .0 | 10.0 |
| I. Dickens EBL | -150 | -2 | 0 | 0 | AG | 8 | 7.1 | .0 | 10.0 |
| J. Dickens WBA | 150 | 2 | 0 | 2 | AG | 5 | 6.6 | .0 | 10.0 |
| K. Dickens WBD | 0 | 2 | -150 | 2 | AG | 34 | 4.3 | .0 | 10.0 |
| L. Dickens WBL | 150 | 2 | 0 | 0 | AG | 9 | 7.1 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 437 | 3.5 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 418 | 3.5 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 428 | 3.5 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 407 | 3.5 | .0 | 10.0 |
| Q. Dickens EBAX | -750 | -2 | -150 | -2 | AG | 14 | 3.8 | .0 | 10.0 |
| R. Dickens EBDX | 150 | -2 | 750 | -2 | AG | 34 | 3.8 | .0 | 10.0 |
| S. Dickens WBAX | 750 | 2 | 150 | 2 | AG | 14 | 3.8 | .0 | 10.0 |
| T. Dickens WBDX | -150 | 2 | -750 | 2 | AG | 34 | 3.8 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-04 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -8 | 1.8 |
| 2. NW | -14 | 8 | 1.8 |
| 3. SW | -14 | -8 | 1.8 |
| 4. NE | 14 | 8 | 1.8 |
| 5. ES mdblk | 150 | -8 | 1.8 |
| 6. WN mdblk | -150 | 8 | 1.8 |
| 7. WS mdblk | -150 | -8 | 1.8 |
| 8. EN mdblk | 150 | 8 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -8 | 1.8 |
| 14. WN blk | -600 | 8 | 1.8 |
| 15. WS blk | -600 | -8 | 1.8 |
| 16. EN blk | 600 | 8 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-04 (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. SE | 188. | .5 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | 8. | .5 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 3. SW | 7. | .5 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 4. NE | 187. | .5 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | 275. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | 95. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 85. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | 265. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .6 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .5 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 273. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 93. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 86. | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 266. | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-04 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .3 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 407 | 5.7 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 423 | 3.8 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 72 | 7.1 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 272 | 5.5 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 314 | 3.7 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 123 | 7.1 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 330 | 5.5 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 523 | 3.8 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 68 | 7.1 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 7 | 0 | 7 | AG | 460 | 5.7 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 7 | -150 | 7 | AG | 541 | 3.8 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 69 | 7.1 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 479 | 3.5 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 423 | 3.5 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 395 | 3.5 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 314 | 3.5 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 398 | 3.5 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 523 | 3.5 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 7 | 150 | 7 | AG | 529 | 3.5 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 7 | -750 | 7 | AG | 541 | 3.5 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -14 | 14 | 1.8 |
| 3. SW | -14 | -14 | 1.8 |
| 4. NE | 14 | 14 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 14 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 14 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 14 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 14 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-05 (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. SE | 351. | .8 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .1 |
| 2. NW | 98. | .9 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 3. SW | 82. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 4. NE | 187. | .8 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | 278. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 6. WN mdblk | 97. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 83. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 8. EN mdblk | 262. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .7 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 172. | .7 | .0 | .0 | .0 | .2 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .6 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-05 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .1 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .3 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .2 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 5 | -150 | 5 | 0 | AG | 54 | 6.4 | .0 | 10.0 |
| B. San Dima NBD | 5 | 0 | 5 | 150 | AG | 519 | 7.1 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 20 | 7.1 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 262 | 6.7 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 126 | 4.0 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 111 | 7.1 | .0 | 10.0 |
| G. Arrow Hi EBA | -150 | -9 | 0 | -9 | AG | 1330 | 5.4 | .0 | 13.5 |
| H. Arrow Hi EBD | 0 | -9 | 150 | -9 | AG | 1418 | 3.7 | .0 | 11.8 |
| I. Arrow Hi EBL | -150 | -5 | 0 | 0 | AG | 380 | 7.6 | .0 | 10.0 |
| J. Arrow Hi WBA | 150 | 9 | 0 | 9 | AG | 658 | 5.2 | .0 | 13.5 |
| K. Arrow Hi WBD | 0 | 9 | -150 | 9 | AG | 785 | 3.7 | .0 | 11.8 |
| L. Arrow Hi WBL | 150 | 5 | 0 | 0 | AG | 33 | 7.1 | .0 | 10.0 |
| M. San Dim NBAX | 5 | -750 | 5 | -150 | AG | 74 | 3.5 | .0 | 10.0 |
| N. San Dim NBDX | 5 | 150 | 5 | 750 | AG | 519 | 3.5 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 373 | 3.5 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 126 | 3.5 | .0 | 10.0 |
| Q. Arrow H EBAX | -750 | -9 | -150 | -9 | AG | 1710 | 3.5 | .0 | 13.5 |
| R. Arrow H EBDX | 150 | -9 | 750 | -9 | AG | 1418 | 3.5 | .0 | 11.8 |
| S. Arrow H WBAX | 750 | 9 | 150 | 9 | AG | 691 | 3.5 | .0 | 13.5 |
| T. Arrow H WBDX | -150 | 9 | -750 | 9 | AG | 785 | 3.5 | .0 | 11.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 12 | -16 | 1.8 |
| 2. NW | -14 | 16 | 1.8 |
| 3. SW | -14 | -17 | 1.8 |
| 4. NE | 12 | 17 | 1.8 |
| 5. ES mdblk | 150 | -16 | 1.8 |
| 6. WN mdblk | -150 | 16 | 1.8 |
| 7. WS mdblk | -150 | -17 | 1.8 |
| 8. EN mdblk | 150 | 17 | 1.8 |
| 9. SE mdblk | 12 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 12 | 150 | 1.8 |
| 13. ES blk | 600 | -16 | 1.8 |
| 14. WN blk | -600 | 16 | 1.8 |
| 15. WS blk | -600 | -17 | 1.8 |
| 16. EN blk | 600 | 17 | 1.8 |
| 17. SE blk | 12 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 12 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-06 (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. SE | 278. | 1.5 | .0 | .0 | .0 | .0 | .0 | .0 | .8 | .1 |
| 2. NW | 98. | 1.2 | .0 | .1 | .0 | .1 | .0 | .0 | .0 | .1 |
| 3. SW | 279. | 1.4 | .0 | .0 | .0 | .0 | .0 | .0 | .9 | .0 |
| 4. NE | 259. | 1.4 | .0 | .2 | .0 | .0 | .0 | .0 | .3 | .0 |
| 5. ES mdblk | 277. | 1.3 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .7 |
| 6. WN mdblk | 99. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .1 |
| 7. WS mdblk | 81. | 1.6 | .0 | .0 | .0 | .0 | .0 | .0 | .9 | .0 |
| 8. EN mdblk | 263. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 |
| 9. SE mdblk | 355. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 169. | .8 | .0 | .2 | .0 | .3 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 4. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | 190. | 1.0 | .0 | .6 | .0 | .1 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 97. | .9 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 83. | 1.2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 263. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 355. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 3. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: Existing-06 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 2. NW | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 3. SW | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 4. NE | .2 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .1 | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .7 | .1 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .4 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .8 | .0 | .0 | .2 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .4 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

# SAN DIMAS CANYON RESIDENTIAL AND RETAIL DEVELOPMENT

## AIR QUALITY CO HOT SPOT ANALYSIS

## CALINE4 MODEL PRINTOUTS

## EXISTING PLUS PROJECT CONDITIONS

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 111 | 5.5 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 317 | 3.8 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 144 | 7.1 | .0 | 10.0 |
| D. San Dima SBA | -5 | 150 | -5 | 0 | AG | 390 | 5.8 | .0 | 10.0 |
| E. San Dima SBD | -5 | 0 | -5 | -150 | AG | 539 | 4.0 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 88 | 7.1 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 512 | 6.4 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 412 | 3.9 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 155 | 7.1 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 5 | 0 | 5 | AG | 543 | 6.4 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 5 | -150 | 5 | AG | 738 | 5.0 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 63 | 7.1 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 255 | 3.5 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 317 | 3.5 | .0 | 10.0 |
| O. San Dim SBAX | -5 | 750 | -5 | 150 | AG | 478 | 3.5 | .0 | 10.0 |
| P. San Dim SBDX | -5 | -150 | -5 | -750 | AG | 539 | 3.5 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 667 | 3.5 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 412 | 3.5 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 5 | 150 | 5 | AG | 606 | 3.5 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 5 | -750 | 5 | AG | 738 | 3.5 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -12 | 12 | 1.8 |
| 3. SW | -12 | -14 | 1.8 |
| 4. NE | 14 | 12 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 12 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 12 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -12 | 150 | 1.8 |
| 11. SW mdblk | -12 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 12 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 12 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -12 | 600 | 1.8 |
| 19. SW blk | -12 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-01 (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. SE | 278. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .0 |
| 2. NW | 98. | 1.0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 |
| 3. SW | 7. | 1.0 | .0 | .0 | .0 | .3 | .0 | .0 | .2 | .0 |
| 4. NE | 261. | 1.2 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. ES mdblk | 277. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. WN mdblk | 98. | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 |
| 7. WS mdblk | 82. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .5 | .0 |
| 8. EN mdblk | 263. | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 352. | .6 | .1 | .0 | .1 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .8 | .0 | .0 | .0 | .3 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 6. | .7 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 |
| 12. NE mdblk | 188. | .6 | .0 | .2 | .0 | .1 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-01 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .1 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .1 | .1 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .1 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .2 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .4 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .0 | .0 | .2 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .4 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .2 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. Walnut A NBA | 5 | -150 | 5 | 0 | AG | 199 | 6.4 | .0 | 10.0 |
| B. Walnut A NBD | 5 | 0 | 5 | 150 | AG | 207 | 4.2 | .0 | 10.0 |
| C. Walnut A NBL | 5 | -150 | 0 | 0 | AG | 85 | 7.1 | .0 | 10.0 |
| D. Walnut A SBA | -5 | 150 | -5 | 0 | AG | 183 | 6.4 | .0 | 10.0 |
| E. Walnut A SBD | -5 | 0 | -5 | -150 | AG | 240 | 4.2 | .0 | 10.0 |
| F. Walnut A SBL | -5 | 150 | 0 | 0 | AG | 100 | 7.1 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 448 | 5.2 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 589 | 3.7 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 73 | 7.1 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 7 | 0 | 7 | AG | 538 | 5.2 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 7 | -150 | 7 | AG | 681 | 3.7 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 91 | 7.1 | .0 | 10.0 |
| M. Walnut NBAX | 5 | -750 | 5 | -150 | AG | 284 | 3.5 | .0 | 10.0 |
| N. Walnut NBDX | 5 | 150 | 5 | 750 | AG | 207 | 3.5 | .0 | 10.0 |
| O. Walnut SBAX | -5 | 750 | -5 | 150 | AG | 283 | 3.5 | .0 | 10.0 |
| P. Walnut SBDX | -5 | -150 | -5 | -750 | AG | 240 | 3.5 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 521 | 3.5 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 589 | 3.5 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 7 | 150 | 7 | AG | 629 | 3.5 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 7 | -750 | 7 | AG | 681 | 3.5 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 12 | -14 | 1.8 |
| 2. NW | -12 | 14 | 1.8 |
| 3. SW | -12 | -14 | 1.8 |
| 4. NE | 12 | 14 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 14 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 14 | 1.8 |
| 9. SE mdblk | 12 | -150 | 1.8 |
| 10. NW mdblk | -12 | 150 | 1.8 |
| 11. SW mdblk | -12 | -150 | 1.8 |
| 12. NE mdblk | 12 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 14 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 14 | 1.8 |
| 17. SE blk | 12 | -600 | 1.8 |
| 18. NW blk | -12 | 600 | 1.8 |
| 19. SW blk | -12 | -600 | 1.8 |
| 20. NE blk | 12 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-02 (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. SE | 278. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 2. NW | 98. | .9 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | 82. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 4. NE | 262. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 |
| 5. ES mdblk | 277. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 6. WN mdblk | 97. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 83. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .0 |
| 8. EN mdblk | 263. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .6 | .2 | .0 | .1 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .2 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 186. | .5 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 175. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-02 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | * | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | * | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | * | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | * | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | * | .0 | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | * | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 |
| 14. WN blk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .4 |
| 15. WS blk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .2 |
| 16. EN blk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .4 | .0 |
| 17. SE blk | * | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | * | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | * | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 |
| 20. NE blk | * | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 354 | 5.1 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 447 | 3.7 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 58 | 7.1 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 329 | 5.1 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 434 | 3.7 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 30 | 7.1 | .0 | 10.0 |
| G. Gladston EBA | -150 | -7 | 0 | -7 | AG | 313 | 7.2 | .0 | 10.0 |
| H. Gladston EBD | 0 | -7 | 150 | -7 | AG | 250 | 4.5 | .0 | 10.0 |
| I. Gladston EBL | -150 | -5 | 0 | 0 | AG | 94 | 7.1 | .0 | 10.0 |
| J. Gladston WBA | 150 | 2 | 0 | 2 | AG | 72 | 6.6 | .0 | 10.0 |
| K. Gladston WBD | 0 | 2 | -150 | 2 | AG | 139 | 4.3 | .0 | 10.0 |
| L. Gladston WBL | 150 | 2 | 0 | 0 | AG | 20 | 7.1 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 412 | 3.5 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 447 | 3.5 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 359 | 3.5 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 434 | 3.5 | .0 | 10.0 |
| Q. Gladsto EBAX | -750 | -7 | -150 | -7 | AG | 407 | 3.8 | .0 | 10.0 |
| R. Gladsto EBDX | 150 | -7 | 750 | -7 | AG | 250 | 3.8 | .0 | 10.0 |
| S. Gladsto WBAX | 750 | 2 | 150 | 2 | AG | 92 | 3.8 | .0 | 10.0 |
| T. Gladsto WBDX | -150 | 2 | -750 | 2 | AG | 139 | 3.8 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -14 | 8 | 1.8 |
| 3. SW | -14 | -14 | 1.8 |
| 4. NE | 14 | 8 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 8 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 8 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 8 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 8 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-03 (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. SE | 277. | .7 | .1 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 2. NW | 172. | .7 | .0 | .0 | .0 | .0 | .2 | .0 | .1 | .0 |
| 3. SW | 7. | .7 | .0 | .0 | .0 | .2 | .0 | .0 | .2 | .0 |
| 4. NE | 262. | .6 | .0 | .1 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. ES mdblk | 275. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. WN mdblk | 98. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 |
| 7. WS mdblk | 82. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .0 |
| 8. EN mdblk | 265. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 352. | .6 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .5 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 275. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 265. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-03 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-04 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 419 | 5.2 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 422 | 3.7 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 50 | 7.1 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 410 | 5.2 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 433 | 3.7 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 24 | 7.1 | .0 | 10.0 |
| G. Dickens EBA | -150 | -2 | 0 | -2 | AG | 27 | 6.6 | .0 | 10.0 |
| H. Dickens EBD | 0 | -2 | 150 | -2 | AG | 32 | 4.3 | .0 | 10.0 |
| I. Dickens EBL | -150 | -2 | 0 | 0 | AG | 7 | 7.1 | .0 | 10.0 |
| J. Dickens WBA | 150 | 2 | 0 | 2 | AG | 4 | 6.6 | .0 | 10.0 |
| K. Dickens WBD | 0 | 2 | -150 | 2 | AG | 63 | 4.3 | .0 | 10.0 |
| L. Dickens WBL | 150 | 2 | 0 | 0 | AG | 9 | 7.1 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 469 | 3.5 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 422 | 3.5 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 434 | 3.5 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 433 | 3.5 | .0 | 10.0 |
| Q. Dickens EBAX | -750 | -2 | -150 | -2 | AG | 34 | 3.8 | .0 | 10.0 |
| R. Dickens EBDX | 150 | -2 | 750 | -2 | AG | 32 | 3.8 | .0 | 10.0 |
| S. Dickens WBAX | 750 | 2 | 150 | 2 | AG | 13 | 3.8 | .0 | 10.0 |
| T. Dickens WBDX | -150 | 2 | -750 | 2 | AG | 63 | 3.8 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-04 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -8 | 1.8 |
| 2. NW | -14 | 8 | 1.8 |
| 3. SW | -14 | -8 | 1.8 |
| 4. NE | 14 | 8 | 1.8 |
| 5. ES mdblk | 150 | -8 | 1.8 |
| 6. WN mdblk | -150 | 8 | 1.8 |
| 7. WS mdblk | -150 | -8 | 1.8 |
| 8. EN mdblk | 150 | 8 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -8 | 1.8 |
| 14. WN blk | -600 | 8 | 1.8 |
| 15. WS blk | -600 | -8 | 1.8 |
| 16. EN blk | 600 | 8 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-04 (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. SE | 188. | .6 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | 172. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 3. SW | 7. | .5 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 4. NE | 187. | .6 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | 273. | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | 96. | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 84. | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | 266. | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .6 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .5 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 273. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 95. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 86. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 267. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-04 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .3 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 416 | 5.7 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 476 | 3.8 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 72 | 7.1 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 298 | 5.5 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 321 | 3.7 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 128 | 7.1 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 335 | 5.5 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 533 | 3.8 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 103 | 7.1 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 7 | 0 | 7 | AG | 472 | 5.7 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 7 | -150 | 7 | AG | 563 | 3.8 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 69 | 7.1 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 488 | 3.5 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 476 | 3.5 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 426 | 3.5 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 321 | 3.5 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 438 | 3.5 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 533 | 3.5 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 7 | 150 | 7 | AG | 541 | 3.5 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 7 | -750 | 7 | AG | 563 | 3.5 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -14 | 14 | 1.8 |
| 3. SW | -14 | -14 | 1.8 |
| 4. NE | 14 | 14 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 14 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 14 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 14 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 14 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-05 (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. SE | 351. | .8 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .1 |
| 2. NW | 98. | .9 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 3. SW | 82. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 4. NE | 262. | .8 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | 278. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 6. WN mdblk | 97. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 83. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 8. EN mdblk | 263. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .7 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 172. | .7 | .0 | .0 | .0 | .3 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 7. | .6 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .6 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-05 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .3 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .3 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .2 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 5 | -150 | 5 | 0 | AG | 54 | 6.4 | .0 | 10.0 |
| B. San Dima NBD | 5 | 0 | 5 | 150 | AG | 528 | 7.1 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 20 | 7.1 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 262 | 6.7 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 126 | 4.0 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 118 | 7.1 | .0 | 10.0 |
| G. Arrow Hi EBA | -150 | -9 | 0 | -9 | AG | 1330 | 5.4 | .0 | 13.5 |
| H. Arrow Hi EBD | 0 | -9 | 150 | -9 | AG | 1425 | 3.7 | .0 | 11.8 |
| I. Arrow Hi EBL | -150 | -5 | 0 | 0 | AG | 380 | 7.6 | .0 | 10.0 |
| J. Arrow Hi WBA | 150 | 9 | 0 | 9 | AG | 667 | 5.2 | .0 | 13.5 |
| K. Arrow Hi WBD | 0 | 9 | -150 | 9 | AG | 785 | 3.7 | .0 | 11.8 |
| L. Arrow Hi WBL | 150 | 5 | 0 | 0 | AG | 33 | 7.1 | .0 | 10.0 |
| M. San Dim NBAX | 5 | -750 | 5 | -150 | AG | 74 | 3.5 | .0 | 10.0 |
| N. San Dim NBDX | 5 | 150 | 5 | 750 | AG | 528 | 3.5 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 380 | 3.5 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 126 | 3.5 | .0 | 10.0 |
| Q. Arrow H EBAX | -750 | -9 | -150 | -9 | AG | 1710 | 3.5 | .0 | 13.5 |
| R. Arrow H EBDX | 150 | -9 | 750 | -9 | AG | 1425 | 3.5 | .0 | 11.8 |
| S. Arrow H WBAX | 750 | 9 | 150 | 9 | AG | 700 | 3.5 | .0 | 13.5 |
| T. Arrow H WBDX | -150 | 9 | -750 | 9 | AG | 785 | 3.5 | .0 | 11.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 12 | -16 | 1.8 |
| 2. NW | -14 | 16 | 1.8 |
| 3. SW | -14 | -17 | 1.8 |
| 4. NE | 12 | 17 | 1.8 |
| 5. ES mdblk | 150 | -16 | 1.8 |
| 6. WN mdblk | -150 | 16 | 1.8 |
| 7. WS mdblk | -150 | -17 | 1.8 |
| 8. EN mdblk | 150 | 17 | 1.8 |
| 9. SE mdblk | 12 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 12 | 150 | 1.8 |
| 13. ES blk | 600 | -16 | 1.8 |
| 14. WN blk | -600 | 16 | 1.8 |
| 15. WS blk | -600 | -17 | 1.8 |
| 16. EN blk | 600 | 17 | 1.8 |
| 17. SE blk | 12 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 12 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-06 (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. SE | 278. | 1.5 | .0 | .0 | .0 | .0 | .0 | .0 | .8 | .1 |
| 2. NW | 98. | 1.2 | .0 | .1 | .0 | .1 | .0 | .0 | .0 | .1 |
| 3. SW | 279. | 1.4 | .0 | .0 | .0 | .0 | .0 | .0 | .9 | .0 |
| 4. NE | 259. | 1.4 | .0 | .3 | .0 | .0 | .0 | .0 | .3 | .0 |
| 5. ES mdblk | 277. | 1.3 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .7 |
| 6. WN mdblk | 99. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .1 |
| 7. WS mdblk | 81. | 1.6 | .0 | .0 | .0 | .0 | .0 | .0 | .9 | .0 |
| 8. EN mdblk | 263. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 |
| 9. SE mdblk | 355. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 169. | .8 | .0 | .2 | .0 | .3 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 4. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | 190. | 1.0 | .0 | .6 | .0 | .1 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 97. | .9 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 83. | 1.2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 263. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 355. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 3. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: ExistwP-06 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 2. NW | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 3. SW | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 4. NE | .2 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .1 | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .7 | .1 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .4 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .8 | .0 | .0 | .2 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .4 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

# SAN DIMAS CANYON RESIDENTIAL AND RETAIL DEVELOPMENT

## AIR QUALITY CO HOT SPOT ANALYSIS

## CALINE4 MODEL PRINTOUTS

## OPENING YEAR (2010) WITHOUT PROJECT SCENARIO

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 548 | 6.1 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 748 | 4.8 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 155 | 6.7 | .0 | 10.0 |
| D. San Dima SBA | -5 | 150 | -5 | 0 | AG | 421 | 5.7 | .0 | 10.0 |
| E. San Dima SBD | -5 | 0 | -5 | -150 | AG | 591 | 3.8 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 77 | 6.7 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 507 | 6.1 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 384 | 3.7 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 162 | 6.7 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 5 | 0 | 5 | AG | 529 | 6.1 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 5 | -150 | 5 | AG | 748 | 4.8 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 72 | 6.7 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 703 | 3.4 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 748 | 3.4 | .0 | 10.0 |
| O. San Dim SBAX | -5 | 750 | -5 | 150 | AG | 498 | 3.4 | .0 | 10.0 |
| P. San Dim SBDX | -5 | -150 | -5 | -750 | AG | 591 | 3.4 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 669 | 3.4 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 384 | 3.4 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 5 | 150 | 5 | AG | 601 | 3.4 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 5 | -750 | 5 | AG | 748 | 3.4 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -12 | 12 | 1.8 |
| 3. SW | -12 | -14 | 1.8 |
| 4. NE | 14 | 12 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 12 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 12 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -12 | 150 | 1.8 |
| 11. SW mdblk | -12 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 12 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 12 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -12 | 600 | 1.8 |
| 19. SW blk | -12 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-01 (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. SE | 278. | 1.2 | .2 | .0 | .0 | .0 | .0 | .0 | .4 | .0 |
| 2. NW | 171. | 1.2 | .2 | .0 | .1 | .0 | .3 | .0 | .1 | .0 |
| 3. SW | 8. | 1.1 | .0 | .2 | .0 | .3 | .0 | .0 | .2 | .0 |
| 4. NE | 261. | 1.3 | .0 | .2 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. ES mdblk | 276. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. WN mdblk | 98. | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 |
| 7. WS mdblk | 81. | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .5 | .0 |
| 8. EN mdblk | 263. | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 352. | 1.0 | .5 | .0 | .1 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .9 | .0 | .1 | .0 | .4 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | 7. | .9 | .1 | .0 | .0 | .0 | .3 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | 1.0 | .0 | .5 | .0 | .1 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. Walnut A NBA | 5 | -150 | 5 | 0 | AG | 208 | 6.4 | .0 | 10.0 |
| B. Walnut A NBD | 5 | 0 | 5 | 150 | AG | 216 | 4.0 | .0 | 10.0 |
| C. Walnut A NBL | 5 | -150 | 0 | 0 | AG | 89 | 6.7 | .0 | 10.0 |
| D. Walnut A SBA | -5 | 150 | -5 | 0 | AG | 192 | 6.2 | .0 | 10.0 |
| E. Walnut A SBD | -5 | 0 | -5 | -150 | AG | 251 | 4.0 | .0 | 10.0 |
| F. Walnut A SBL | -5 | 150 | 0 | 0 | AG | 105 | 6.7 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 422 | 4.9 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 570 | 3.5 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 76 | 6.7 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 7 | 0 | 7 | AG | 530 | 4.9 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 7 | -150 | 7 | AG | 680 | 3.5 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 95 | 6.7 | .0 | 10.0 |
| M. Walnut NBAX | 5 | -750 | 5 | -150 | AG | 297 | 3.4 | .0 | 10.0 |
| N. Walnut NBDX | 5 | 150 | 5 | 750 | AG | 216 | 3.4 | .0 | 10.0 |
| O. Walnut SBAX | -5 | 750 | -5 | 150 | AG | 297 | 3.4 | .0 | 10.0 |
| P. Walnut SBDX | -5 | -150 | -5 | -750 | AG | 251 | 3.4 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 498 | 3.4 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 570 | 3.4 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 7 | 150 | 7 | AG | 625 | 3.4 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 7 | -750 | 7 | AG | 680 | 3.4 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 12 | -14 | 1.8 |
| 2. NW | -12 | 14 | 1.8 |
| 3. SW | -12 | -14 | 1.8 |
| 4. NE | 12 | 14 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 14 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 14 | 1.8 |
| 9. SE mdblk | 12 | -150 | 1.8 |
| 10. NW mdblk | -12 | 150 | 1.8 |
| 11. SW mdblk | -12 | -150 | 1.8 |
| 12. NE mdblk | 12 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 14 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 14 | 1.8 |
| 17. SE blk | 12 | -600 | 1.8 |
| 18. NW blk | -12 | 600 | 1.8 |
| 19. SW blk | -12 | -600 | 1.8 |
| 20. NE blk | 12 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-02 (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. SE | 278. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 2. NW | 98. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | 82. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 4. NE | 262. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | 277. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 6. WN mdblk | 97. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 83. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 8. EN mdblk | 263. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .6 | .2 | .0 | .1 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .2 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 186. | .5 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 175. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-02 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .4 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .2 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .4 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 363 | 4.8 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 460 | 3.5 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 55 | 6.7 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 334 | 4.8 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 437 | 3.5 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 31 | 6.7 | .0 | 10.0 |
| G. Gladston EBA | -150 | -7 | 0 | -7 | AG | 320 | 6.9 | .0 | 10.0 |
| H. Gladston EBD | 0 | -7 | 150 | -7 | AG | 261 | 4.3 | .0 | 10.0 |
| I. Gladston EBL | -150 | -5 | 0 | 0 | AG | 98 | 6.8 | .0 | 10.0 |
| J. Gladston WBA | 150 | 2 | 0 | 2 | AG | 75 | 6.3 | .0 | 10.0 |
| K. Gladston WBD | 0 | 2 | -150 | 2 | AG | 139 | 4.2 | .0 | 10.0 |
| L. Gladston WBL | 150 | 2 | 0 | 0 | AG | 21 | 6.8 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 418 | 3.4 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 460 | 3.4 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 365 | 3.4 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 437 | 3.4 | .0 | 10.0 |
| Q. Gladsto EBAX | -750 | -7 | -150 | -7 | AG | 418 | 3.6 | .0 | 10.0 |
| R. Gladsto EBDX | 150 | -7 | 750 | -7 | AG | 261 | 3.6 | .0 | 10.0 |
| S. Gladsto WBAX | 750 | 2 | 150 | 2 | AG | 96 | 3.6 | .0 | 10.0 |
| T. Gladsto WBDX | -150 | 2 | -750 | 2 | AG | 139 | 3.6 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -14 | 8 | 1.8 |
| 3. SW | -14 | -14 | 1.8 |
| 4. NE | 14 | 8 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 8 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 8 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 8 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 8 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-03 (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. SE | 277. | .7 | .1 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 2. NW | 172. | .6 | .0 | .0 | .0 | .0 | .2 | .0 | .1 | .0 |
| 3. SW | 7. | .7 | .0 | .0 | .0 | .2 | .0 | .0 | .1 | .0 |
| 4. NE | 262. | .6 | .0 | .1 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. ES mdblk | 275. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. WN mdblk | 98. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 |
| 7. WS mdblk | 82. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .0 |
| 8. EN mdblk | 265. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 352. | .6 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .5 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .5 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 275. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 265. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-03 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-04 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 432 | 4.9 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 436 | 3.5 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 24 | 6.7 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 422 | 4.9 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 425 | 3.5 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 25 | 6.7 | .0 | 10.0 |
| G. Dickens EBA | -150 | -2 | 0 | -2 | AG | 6 | 6.3 | .0 | 10.0 |
| H. Dickens EBD | 0 | -2 | 150 | -2 | AG | 35 | 4.2 | .0 | 10.0 |
| I. Dickens EBL | -150 | -2 | 0 | 0 | AG | 8 | 6.8 | .0 | 10.0 |
| J. Dickens WBA | 150 | 2 | 0 | 2 | AG | 5 | 6.3 | .0 | 10.0 |
| K. Dickens WBD | 0 | 2 | -150 | 2 | AG | 35 | 4.2 | .0 | 10.0 |
| L. Dickens WBL | 150 | 2 | 0 | 0 | AG | 9 | 6.8 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 456 | 3.4 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 436 | 3.4 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 447 | 3.4 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 425 | 3.4 | .0 | 10.0 |
| Q. Dickens EBAX | -750 | -2 | -150 | -2 | AG | 14 | 3.6 | .0 | 10.0 |
| R. Dickens EBDX | 150 | -2 | 750 | -2 | AG | 35 | 3.6 | .0 | 10.0 |
| S. Dickens WBAX | 750 | 2 | 150 | 2 | AG | 14 | 3.6 | .0 | 10.0 |
| T. Dickens WBDX | -150 | 2 | -750 | 2 | AG | 35 | 3.6 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-04 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -8 | 1.8 |
| 2. NW | -14 | 8 | 1.8 |
| 3. SW | -14 | -8 | 1.8 |
| 4. NE | 14 | 8 | 1.8 |
| 5. ES mdblk | 150 | -8 | 1.8 |
| 6. WN mdblk | -150 | 8 | 1.8 |
| 7. WS mdblk | -150 | -8 | 1.8 |
| 8. EN mdblk | 150 | 8 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -8 | 1.8 |
| 14. WN blk | -600 | 8 | 1.8 |
| 15. WS blk | -600 | -8 | 1.8 |
| 16. EN blk | 600 | 8 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-04 (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. SE | 187. | .5 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | 8. | .5 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 3. SW | 7. | .5 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 4. NE | 187. | .5 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | 275. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | 95. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 85. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | 265. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .6 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .5 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 273. | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 93. | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 86. | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 266. | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-04 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .3 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 425 | 5.4 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 442 | 3.6 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 75 | 6.7 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 285 | 5.3 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 328 | 3.6 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 129 | 6.7 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 353 | 5.3 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 555 | 3.6 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 71 | 6.7 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 7 | 0 | 7 | AG | 493 | 5.4 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 7 | -150 | 7 | AG | 578 | 3.6 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 72 | 6.7 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 500 | 3.4 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 442 | 3.4 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 414 | 3.4 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 328 | 3.4 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 424 | 3.4 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 555 | 3.4 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 7 | 150 | 7 | AG | 565 | 3.4 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 7 | -750 | 7 | AG | 578 | 3.4 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -14 | 14 | 1.8 |
| 3. SW | -14 | -14 | 1.8 |
| 4. NE | 14 | 14 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 14 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 14 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 14 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 14 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-05 (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. SE | 351. | .8 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .1 |
| 2. NW | 98. | .9 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 3. SW | 82. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 4. NE | 187. | .8 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | 278. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 6. WN mdblk | 97. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 83. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 8. EN mdblk | 262. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .7 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 172. | .7 | .0 | .0 | .0 | .2 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .6 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-05 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .3 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .2 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 5 | -150 | 5 | 0 | AG | 56 | 6.2 | .0 | 10.0 |
| B. San Dima NBD | 5 | 0 | 5 | 150 | AG | 542 | 6.7 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 21 | 6.7 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 274 | 6.4 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 131 | 3.9 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 116 | 6.7 | .0 | 10.0 |
| G. Arrow Hi EBA | -150 | -9 | 0 | -9 | AG | 1395 | 5.2 | .0 | 13.5 |
| H. Arrow Hi EBD | 0 | -9 | 150 | -9 | AG | 1487 | 3.6 | .0 | 11.8 |
| I. Arrow Hi EBL | -150 | -5 | 0 | 0 | AG | 397 | 7.3 | .0 | 10.0 |
| J. Arrow Hi WBA | 150 | 9 | 0 | 9 | AG | 694 | 4.9 | .0 | 13.5 |
| K. Arrow Hi WBD | 0 | 9 | -150 | 9 | AG | 827 | 3.5 | .0 | 11.8 |
| L. Arrow Hi WBL | 150 | 5 | 0 | 0 | AG | 34 | 6.7 | .0 | 10.0 |
| M. San Dim NBAX | 5 | -750 | 5 | -150 | AG | 77 | 3.4 | .0 | 10.0 |
| N. San Dim NBDX | 5 | 150 | 5 | 750 | AG | 542 | 3.4 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 390 | 3.4 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 131 | 3.4 | .0 | 10.0 |
| Q. Arrow H EBAX | -750 | -9 | -150 | -9 | AG | 1792 | 3.4 | .0 | 13.5 |
| R. Arrow H EBDX | 150 | -9 | 750 | -9 | AG | 1487 | 3.4 | .0 | 11.8 |
| S. Arrow H WBAX | 750 | 9 | 150 | 9 | AG | 728 | 3.4 | .0 | 13.5 |
| T. Arrow H WBDX | -150 | 9 | -750 | 9 | AG | 827 | 3.4 | .0 | 11.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 12 | -16 | 1.8 |
| 2. NW | -14 | 16 | 1.8 |
| 3. SW | -14 | -17 | 1.8 |
| 4. NE | 12 | 17 | 1.8 |
| 5. ES mdblk | 150 | -16 | 1.8 |
| 6. WN mdblk | -150 | 16 | 1.8 |
| 7. WS mdblk | -150 | -17 | 1.8 |
| 8. EN mdblk | 150 | 17 | 1.8 |
| 9. SE mdblk | 12 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 12 | 150 | 1.8 |
| 13. ES blk | 600 | -16 | 1.8 |
| 14. WN blk | -600 | 16 | 1.8 |
| 15. WS blk | -600 | -17 | 1.8 |
| 16. EN blk | 600 | 17 | 1.8 |
| 17. SE blk | 12 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 12 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-06 (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. SE | 278. | 1.5 | .0 | .0 | .0 | .0 | .0 | .0 | .8 | .1 |
| 2. NW | 98. | 1.2 | .0 | .1 | .0 | .1 | .0 | .0 | .0 | .1 |
| 3. SW | 279. | 1.4 | .0 | .0 | .0 | .0 | .0 | .0 | .9 | .0 |
| 4. NE | 259. | 1.4 | .0 | .2 | .0 | .0 | .0 | .0 | .3 | .0 |
| 5. ES mdblk | 277. | 1.3 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .7 |
| 6. WN mdblk | 99. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .1 |
| 7. WS mdblk | 81. | 1.6 | .0 | .0 | .0 | .0 | .0 | .0 | .9 | .0 |
| 8. EN mdblk | 263. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 |
| 9. SE mdblk | 355. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 169. | .8 | .0 | .2 | .0 | .3 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 4. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | 190. | .9 | .0 | .6 | .0 | .1 | .0 | .0 | .0 | .0 |
| 13. ES blk | 277. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 97. | .9 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 83. | 1.2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 263. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 355. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 3. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010nP-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

| RECEPTOR | I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CONC/LINK (PPM) | | | | | | | | | | | |
| 1. SE | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 2. NW | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 3. SW | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 4. NE | .2 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .1 | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .8 | .2 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .5 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .9 | .0 | .0 | .2 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .4 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

# SAN DIMAS CANYON RESIDENTIAL AND RETAIL DEVELOPMENT

## AIR QUALITY CO HOT SPOT ANALYSIS

## CALINE4 MODEL PRINTOUTS

## OPENING YEAR (2010) WITH PROJECT SCENARIO

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 548 | 6.1 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 759 | 4.8 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 155 | 6.7 | .0 | 10.0 |
| D. San Dima SBA | -5 | 150 | -5 | 0 | AG | 421 | 5.7 | .0 | 10.0 |
| E. San Dima SBD | -5 | 0 | -5 | -150 | AG | 591 | 3.8 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 91 | 6.7 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 541 | 6.1 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 432 | 3.7 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 162 | 6.7 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 5 | 0 | 5 | AG | 566 | 6.1 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 5 | -150 | 5 | AG | 774 | 4.8 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 72 | 6.7 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 703 | 3.4 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 759 | 3.4 | .0 | 10.0 |
| O. San Dim SBAX | -5 | 750 | -5 | 150 | AG | 512 | 3.4 | .0 | 10.0 |
| P. San Dim SBDX | -5 | -150 | -5 | -750 | AG | 591 | 3.4 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 703 | 3.4 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 432 | 3.4 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 5 | 150 | 5 | AG | 638 | 3.4 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 5 | -750 | 5 | AG | 774 | 3.4 | .0 | 10.0 |

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION


JOB: Loma Bonita Mixed-Use
RUN: 2010wP-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -12 | 12 | 1.8 |
| 3. SW | -12 | -14 | 1.8 |
| 4. NE | 14 | 12 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 12 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 12 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -12 | 150 | 1.8 |
| 11. SW mdblk | -12 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 12 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 12 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -12 | 600 | 1.8 |
| 19. SW blk | -12 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-01 (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. SE | 278. | 1.2 | .2 | .0 | .0 | .0 | .0 | .0 | .4 | .0 |
| 2. NW | 171. | 1.2 | .2 | .0 | .1 | .0 | .3 | .0 | .1 | .0 |
| 3. SW | 8. | 1.2 | .0 | .2 | .0 | .3 | .0 | .0 | .2 | .0 |
| 4. NE | 261. | 1.3 | .0 | .2 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. ES mdblk | 277. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. WN mdblk | 98. | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 |
| 7. WS mdblk | 82. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .5 | .0 |
| 8. EN mdblk | 263. | 1.0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 352. | 1.0 | .5 | .0 | .1 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .9 | .0 | .1 | .0 | .4 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 7. | .9 | .1 | .0 | .0 | .0 | .3 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | 1.0 | .0 | .5 | .0 | .1 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-01 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .1 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .1 | .1 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .1 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .2 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .4 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .0 | .0 | .2 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .4 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .4 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .2 | .3 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .4 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. Walnut A NBA | 5 | -150 | 5 | 0 | AG | 208 | 6.4 | .0 | 10.0 |
| B. Walnut A NBD | 5 | 0 | 5 | 150 | AG | 216 | 4.0 | .0 | 10.0 |
| C. Walnut A NBL | 5 | -150 | 0 | 0 | AG | 89 | 6.7 | .0 | 10.0 |
| D. Walnut A SBA | -5 | 150 | -5 | 0 | AG | 192 | 6.2 | .0 | 10.0 |
| E. Walnut A SBD | -5 | 0 | -5 | -150 | AG | 251 | 4.0 | .0 | 10.0 |
| F. Walnut A SBL | -5 | 150 | 0 | 0 | AG | 105 | 6.7 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 470 | 4.9 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 618 | 3.5 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 76 | 6.7 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 7 | 0 | 7 | AG | 567 | 4.9 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 7 | -150 | 7 | AG | 717 | 3.5 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 95 | 6.7 | .0 | 10.0 |
| M. Walnut NBAX | 5 | -750 | 5 | -150 | AG | 297 | 3.4 | .0 | 10.0 |
| N. Walnut NBDX | 5 | 150 | 5 | 750 | AG | 216 | 3.4 | .0 | 10.0 |
| O. Walnut SBAX | -5 | 750 | -5 | 150 | AG | 297 | 3.4 | .0 | 10.0 |
| P. Walnut SBDX | -5 | -150 | -5 | -750 | AG | 251 | 3.4 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 546 | 3.4 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 618 | 3.4 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 7 | 150 | 7 | AG | 662 | 3.4 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 7 | -750 | 7 | AG | 717 | 3.4 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 12 | -14 | 1.8 |
| 2. NW | -12 | 14 | 1.8 |
| 3. SW | -12 | -14 | 1.8 |
| 4. NE | 12 | 14 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 14 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 14 | 1.8 |
| 9. SE mdblk | 12 | -150 | 1.8 |
| 10. NW mdblk | -12 | 150 | 1.8 |
| 11. SW mdblk | -12 | -150 | 1.8 |
| 12. NE mdblk | 12 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 14 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 14 | 1.8 |
| 17. SE blk | 12 | -600 | 1.8 |
| 18. NW blk | -12 | 600 | 1.8 |
| 19. SW blk | -12 | -600 | 1.8 |
| 20. NE blk | 12 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-02 (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. SE | 278. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 2. NW | 98. | .9 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | 82. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 4. NE | 262. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 |
| 5. ES mdblk | 277. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 6. WN mdblk | 97. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 83. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 8. EN mdblk | 263. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .6 | .2 | .0 | .1 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .2 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 186. | .5 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 175. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

| RECEPTOR | I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CONC/LINK (PPM) | | | | | | | | | | | |
| 1. SE | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .1 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .4 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .2 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .4 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -14 | 8 | 1.8 |
| 3. SW | -14 | -14 | 1.8 |
| 4. NE | 14 | 8 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 8 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 8 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 8 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 8 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-03 (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. SE | 277. | .7 | .1 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 2. NW | 172. | .6 | .0 | .0 | .0 | .0 | .2 | .0 | .1 | .0 |
| 3. SW | 7. | .7 | .0 | .0 | .0 | .2 | .0 | .0 | .2 | .0 |
| 4. NE | 262. | .6 | .0 | .1 | .0 | .0 | .0 | .0 | .2 | .0 |
| 5. ES mdblk | 275. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 |
| 6. WN mdblk | 98. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 |
| 7. WS mdblk | 82. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .4 | .0 |
| 8. EN mdblk | 265. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 352. | .6 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .5 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 275. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 265. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-03 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-04 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 437 | 4.9 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 440 | 3.5 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 50 | 6.7 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 428 | 4.9 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 451 | 3.5 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 25 | 6.7 | .0 | 10.0 |
| G. Dickens EBA | -150 | -2 | 0 | -2 | AG | 27 | 6.3 | .0 | 10.0 |
| H. Dickens EBD | 0 | -2 | 150 | -2 | AG | 33 | 4.2 | .0 | 10.0 |
| I. Dickens EBL | -150 | -2 | 0 | 0 | AG | 7 | 6.8 | .0 | 10.0 |
| J. Dickens WBA | 150 | 2 | 0 | 2 | AG | 4 | 6.3 | .0 | 10.0 |
| K. Dickens WBD | 0 | 2 | -150 | 2 | AG | 63 | 4.2 | .0 | 10.0 |
| L. Dickens WBL | 150 | 2 | 0 | 0 | AG | 9 | 6.8 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 487 | 3.4 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 440 | 3.4 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 453 | 3.4 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 451 | 3.4 | .0 | 10.0 |
| Q. Dickens EBAX | -750 | -2 | -150 | -2 | AG | 34 | 3.6 | .0 | 10.0 |
| R. Dickens EBDX | 150 | -2 | 750 | -2 | AG | 33 | 3.6 | .0 | 10.0 |
| S. Dickens WBAX | 750 | 2 | 150 | 2 | AG | 13 | 3.6 | .0 | 10.0 |
| T. Dickens WBDX | -150 | 2 | -750 | 2 | AG | 63 | 3.6 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-04 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -8 | 1.8 |
| 2. NW | -14 | 8 | 1.8 |
| 3. SW | -14 | -8 | 1.8 |
| 4. NE | 14 | 8 | 1.8 |
| 5. ES mdblk | 150 | -8 | 1.8 |
| 6. WN mdblk | -150 | 8 | 1.8 |
| 7. WS mdblk | -150 | -8 | 1.8 |
| 8. EN mdblk | 150 | 8 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -8 | 1.8 |
| 14. WN blk | -600 | 8 | 1.8 |
| 15. WS blk | -600 | -8 | 1.8 |
| 16. EN blk | 600 | 8 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-04 (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. SE | 188. | .5 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | 172. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 3. SW | 7. | .5 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 4. NE | 187. | .5 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | 273. | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | 96. | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 84. | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | 266. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .6 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 173. | .6 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .5 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 273. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 95. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 86. | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 267. | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-04 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .3 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 7 | -150 | 7 | 0 | AG | 434 | 5.4 | .0 | 10.0 |
| B. San Dima NBD | 7 | 0 | 7 | 150 | AG | 451 | 3.6 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 75 | 6.7 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 285 | 5.3 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 328 | 3.6 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 129 | 6.7 | .0 | 10.0 |
| G. Bonita A EBA | -150 | -7 | 0 | -7 | AG | 345 | 5.3 | .0 | 10.0 |
| H. Bonita A EBD | 0 | -7 | 150 | -7 | AG | 547 | 3.6 | .0 | 10.0 |
| I. Bonita A EBL | -150 | -5 | 0 | 0 | AG | 71 | 6.7 | .0 | 10.0 |
| J. Bonita A WBA | 150 | 7 | 0 | 7 | AG | 481 | 5.4 | .0 | 10.0 |
| K. Bonita A WBD | 0 | 7 | -150 | 7 | AG | 566 | 3.6 | .0 | 10.0 |
| L. Bonita A WBL | 150 | 5 | 0 | 0 | AG | 72 | 6.7 | .0 | 10.0 |
| M. San Dim NBAX | 7 | -750 | 7 | -150 | AG | 509 | 3.4 | .0 | 10.0 |
| N. San Dim NBDX | 7 | 150 | 7 | 750 | AG | 451 | 3.4 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 414 | 3.4 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 328 | 3.4 | .0 | 10.0 |
| Q. Bonita EBAX | -750 | -7 | -150 | -7 | AG | 416 | 3.4 | .0 | 10.0 |
| R. Bonita EBDX | 150 | -7 | 750 | -7 | AG | 547 | 3.4 | .0 | 10.0 |
| S. Bonita WBAX | 750 | 7 | 150 | 7 | AG | 553 | 3.4 | .0 | 10.0 |
| T. Bonita WBDX | -150 | 7 | -750 | 7 | AG | 566 | 3.4 | .0 | 10.0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 14 | -14 | 1.8 |
| 2. NW | -14 | 14 | 1.8 |
| 3. SW | -14 | -14 | 1.8 |
| 4. NE | 14 | 14 | 1.8 |
| 5. ES mdblk | 150 | -14 | 1.8 |
| 6. WN mdblk | -150 | 14 | 1.8 |
| 7. WS mdblk | -150 | -14 | 1.8 |
| 8. EN mdblk | 150 | 14 | 1.8 |
| 9. SE mdblk | 14 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 14 | 150 | 1.8 |
| 13. ES blk | 600 | -14 | 1.8 |
| 14. WN blk | -600 | 14 | 1.8 |
| 15. WS blk | -600 | -14 | 1.8 |
| 16. EN blk | 600 | 14 | 1.8 |
| 17. SE blk | 14 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 14 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-05 (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. SE | 351. | .8 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .1 |
| 2. NW | 98. | .8 | .0 | .0 | .0 | .1 | .0 | .0 | .0 | .0 |
| 3. SW | 82. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 |
| 4. NE | 187. | .8 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | 278. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 |
| 6. WN mdblk | 97. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | 83. | .7 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 |
| 8. EN mdblk | 262. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | 353. | .7 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 172. | .7 | .0 | .0 | .0 | .2 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 7. | .5 | .0 | .0 | .0 | .0 | .2 | .0 | .0 | .0 |
| 12. NE mdblk | 187. | .6 | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | 276. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 96. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 84. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 264. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 354. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 6. | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010WP-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

| RECEPTOR | I | J | K | L | M | N | O | P | Q | R | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CONC/LINK (PPM) | | | | | | | | | | | |
| 1. SE | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 2. NW | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 3. SW | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 4. NE | .0 | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .3 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .1 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .3 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .2 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

## I. SITE VARIABLES

| | | | | | |
|---|---|---|---|---|---|
| U= | .5 M/S | Z0= | 100. CM | ALT= | 305. (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= | 10.0 DEGREE (C) | | |

## II. LINK VARIABLES

| LINK DESCRIPTION | LINK COORDINATES (M) X1 | Y1 | X2 | Y2 | TYPE | VPH | EF (G/MI) | H (M) | W (M) |
|---|---|---|---|---|---|---|---|---|---|
| A. San Dima NBA | 5 | -150 | 5 | 0 | AG | 56 | 6.2 | .0 | 10.0 |
| B. San Dima NBD | 5 | 0 | 5 | 150 | AG | 551 | 6.7 | .0 | 10.0 |
| C. San Dima NBL | 5 | -150 | 0 | 0 | AG | 21 | 6.7 | .0 | 10.0 |
| D. San Dima SBA | -7 | 150 | -7 | 0 | AG | 274 | 6.4 | .0 | 10.0 |
| E. San Dima SBD | -7 | 0 | -7 | -150 | AG | 131 | 3.9 | .0 | 10.0 |
| F. San Dima SBL | -5 | 150 | 0 | 0 | AG | 123 | 6.7 | .0 | 10.0 |
| G. Arrow Hi EBA | -150 | -9 | 0 | -9 | AG | 1395 | 5.2 | .0 | 13.5 |
| H. Arrow Hi EBD | 0 | -9 | 150 | -9 | AG | 1494 | 3.6 | .0 | 11.8 |
| I. Arrow Hi EBL | -150 | -5 | 0 | 0 | AG | 397 | 7.3 | .0 | 10.0 |
| J. Arrow Hi WBA | 150 | 9 | 0 | 9 | AG | 703 | 4.9 | .0 | 13.5 |
| K. Arrow Hi WBD | 0 | 9 | -150 | 9 | AG | 827 | 3.5 | .0 | 11.8 |
| L. Arrow Hi WBL | 150 | 5 | 0 | 0 | AG | 34 | 6.7 | .0 | 10.0 |
| M. San Dim NBAX | 5 | -750 | 5 | -150 | AG | 77 | 3.4 | .0 | 10.0 |
| N. San Dim NBDX | 5 | 150 | 5 | 750 | AG | 551 | 3.4 | .0 | 10.0 |
| O. San Dim SBAX | -7 | 750 | -7 | 150 | AG | 397 | 3.4 | .0 | 10.0 |
| P. San Dim SBDX | -7 | -150 | -7 | -750 | AG | 131 | 3.4 | .0 | 10.0 |
| Q. Arrow H EBAX | -750 | -9 | -150 | -9 | AG | 1792 | 3.4 | .0 | 13.5 |
| R. Arrow H EBDX | 150 | -9 | 750 | -9 | AG | 1494 | 3.4 | .0 | 11.8 |
| S. Arrow H WBAX | 750 | 9 | 150 | 9 | AG | 737 | 3.4 | .0 | 13.5 |
| T. Arrow H WBDX | -150 | 9 | -750 | 9 | AG | 827 | 3.4 | .0 | 11.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

| RECEPTOR | COORDINATES (M) X | Y | Z |
|---|---|---|---|
| 1. SE | 12 | -16 | 1.8 |
| 2. NW | -14 | 16 | 1.8 |
| 3. SW | -14 | -17 | 1.8 |
| 4. NE | 12 | 17 | 1.8 |
| 5. ES mdblk | 150 | -16 | 1.8 |
| 6. WN mdblk | -150 | 16 | 1.8 |
| 7. WS mdblk | -150 | -17 | 1.8 |
| 8. EN mdblk | 150 | 17 | 1.8 |
| 9. SE mdblk | 12 | -150 | 1.8 |
| 10. NW mdblk | -14 | 150 | 1.8 |
| 11. SW mdblk | -14 | -150 | 1.8 |
| 12. NE mdblk | 12 | 150 | 1.8 |
| 13. ES blk | 600 | -16 | 1.8 |
| 14. WN blk | -600 | 16 | 1.8 |
| 15. WS blk | -600 | -17 | 1.8 |
| 16. EN blk | 600 | 17 | 1.8 |
| 17. SE blk | 12 | -600 | 1.8 |
| 18. NW blk | -14 | 600 | 1.8 |
| 19. SW blk | -14 | -600 | 1.8 |
| 20. NE blk | 12 | 600 | 1.8 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-06 (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. SE | 278. | 1.5 | .0 | .0 | .0 | .0 | .0 | .0 | .8 | .1 |
| 2. NW | 98. | 1.2 | .0 | .1 | .0 | .1 | .0 | .0 | .0 | .1 |
| 3. SW | 279. | 1.4 | .0 | .0 | .0 | .0 | .0 | .0 | .9 | .0 |
| 4. NE | 259. | 1.4 | .0 | .2 | .0 | .0 | .0 | .0 | .3 | .0 |
| 5. ES mdblk | 277. | 1.3 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .7 |
| 6. WN mdblk | 99. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .1 |
| 7. WS mdblk | 81. | 1.6 | .0 | .0 | .0 | .0 | .0 | .0 | .9 | .0 |
| 8. EN mdblk | 263. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 |
| 9. SE mdblk | 355. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | 169. | .8 | .0 | .2 | .0 | .3 | .0 | .1 | .0 | .0 |
| 11. SW mdblk | 4. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | 190. | 1.0 | .0 | .6 | .0 | .1 | .0 | .0 | .0 | .0 |
| 13. ES blk | 277. | 1.1 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 14. WN blk | 97. | .9 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 15. WS blk | 83. | 1.2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 16. EN blk | 263. | .8 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 17. SE blk | 355. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | 174. | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | 3. | .3 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | 186. | .6 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |

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

JOB: Loma Bonita Mixed-Use
RUN: 2010wP-06 (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 | S | T |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SE | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 2. NW | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .2 | .0 | .0 |
| 3. SW | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .1 |
| 4. NE | .2 | .0 | .3 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 |
| 5. ES mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 6. WN mdblk | .1 | .0 | .4 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 7. WS mdblk | .2 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 8. EN mdblk | .0 | .5 | .0 | .0 | .0 | .0 | .0 | .0 | .1 | .0 | .0 | .0 |
| 9. SE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 10. NW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 11. SW mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 12. NE mdblk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 13. ES blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .8 | .2 | .0 |
| 14. WN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .0 | .0 | .5 |
| 15. WS blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .9 | .0 | .0 | .2 |
| 16. EN blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .3 | .4 | .0 |
| 17. SE blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 18. NW blk | .0 | .0 | .0 | .0 | .0 | .1 | .2 | .0 | .0 | .0 | .0 | .0 |
| 19. SW blk | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 | .0 |
| 20. NE blk | .0 | .0 | .0 | .0 | .0 | .3 | .1 | .0 | .0 | .0 | .0 | .0 |

# APPENDIX C

# GREENHOUSE GAS EMISSIONS WORKSHEETS

# Greenhouse Gas Emissions Worksheet

| Project Parameters | |
|---|---|
| | 2010 |
| Vehicles (trips/day) | 3,468 |
| Electricity used (MWh/year) | 1,700 |
| (mscf/year) | 5.0 |
| Solid Waste (tons/year) | 230 |

MWh = Megawatt hour
mscf = million standard cubic feet

| Emission Source | Emissions (metric tons per year) | | | | Percent of Total |
|---|---|---|---|---|---|
| | $CO_2$ | $CH_4$ | $N_2O$ | $CO_2e$ | |
| Vehicles (1) | 5,500 | 0.27 | 0.45 | 5,600 | 85% |
| Electricity Production | 470 | 0.0052 | 0.0029 | 470 | 7% |
| Natural Gas Combustion(1) | 362 | 0.0052 | 0.005 | 360 | 5% |
| Solid Waste | -- | -- | -- | 23 | 0% |
| Other Area Sources(2) | 183 | -- | -- | 183 | 3% |
| Total Annual Emissions | 6,500 | 0.28 | 0.46 | 6,600 | 101% |

Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to two significant digits.

(1) $CO_2$ emissions for Vehicles and Natural Gas from URBEMIS 2007 outputs, if available.

(2) Includes $CO_2$ emissions for hearth combustion and landscaping equipment from URBEMIS 2007 outputs.

| Emission Source | Total $CO_2e$ (Tg per year) |
|---|---|
| Vehicles | 0.0056 |
| Electricity Production | 0.00047 |
| Natural Gas Combustion | 0.00036 |
| Solid Waste | 0.000023 |
| Total ($CO_2e$) | 0.0065 |
| % of SCAG 2004 total | 0.0037% |
| % of State 2004 total | 0.0014% |

1.1025 tons/metric tonne
1,000,000 metric tonne/Tg

| Comparison Area GHG Usage | | | Year of data |
|---|---|---|---|
| SCAG | 176.79 | Tg/year | 2004 |
| State | 480 | Tg/year | 2004 |

Global warming potentials (GWPs) are used to compare the abilities of different GHGs to trap heat in the atmosphere. GWPs are based on the radiative efficiency (heat-absorbing ability) of each gas relative to that of $CO_2$, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years) relative to that of $CO_2$. The GWP provides a construct for converting emissions of various gases into a common measure, which allows climate analysts to aggregate the radiative impacts of various GHGs into a uniform measure denominated in carbon or $CO_2$ equivalents. The generally accepted authority on GWPs is the Intergovernmental Panel on Climate Change (IPCC). In 2007, the IPCC updated its estimates of GWPs for key GHGs. The table below lists the GWPs to calculate carbon dioxide equivalents ($CO_2e$)

## Global Warming Potential

| Gas | Atmospheric Lifetime (years) | Global Warming Potential (100 year time horizon) |
|---|---|---|
| Carbon Dioxide | 50-200 | 1 |
| Methane | 12 ± 3 | 25 |
| Nitrous Oxide | 120 | 298 |
| HFC-23 | 264 | 14800 |
| HFC-134a | 14.6 | 1430 |
| HFC-152a | 1.5 | 124 |
| PFC: Tetrafluoromethane ($CF_4$) | 50000 | 7390 |
| PFC: Hexafluoromethane ($C_2F_6$) | 10000 | 12200 |
| Sulfur Hexafluoride ($SF_6$) | 3200 | 22800 |

# Electricity Emissions Worksheet

**Commercial Electricity Usage (2003 data):**

| Commercial Building Type | Electricity Consumption per Building by Building Type | Electricity Consumption per Square Foot by Building Type | Project Info (either # of bldgs or total sf, not both) | | Annual Electricity Consumption |
|---|---|---|---|---|---|
| | thousand kWH | kWh | # of bldgs | total sf | MWh |
| All Buildings | 226 | **14** | | | 0 |
| Mercantile | 327 | **17.8** | | | 0 |
| Enclosed and Strip Malls | 718 | **21.1** | | 19969 | 421 |
| Retail (Other than Mall) | 139 | 14.3 | | | 0 |
| Education | 283 | **10.7** | | | 0 |
| Food Sales | 276 | 49.4 | | | 0 |
| Food Service | 213 | **31.8** | | | 0 |
| Health Care (All) | 564 | **20.1** | | | 0 |
| Inpatient Health | 6,628 | 27.5 | | | 0 |
| Outpatient Health | 168 | 16.1 | | | 0 |
| Lodging | 483 | **11.9** | | | 0 |
| Office | 256 | **14.6** | | | 0 |
| Other | 510 | 22.5 | | | 0 |
| Public Assembly | 179 | 12.5 | | | 0 |
| Public Order and Safety | 237 | 15.3 | | | 0 |
| Religious Worship | 49 | 4.9 | | | 0 |
| Service | 73 | **8** | | | 0 |
| Vacant | 42 | 2.4 | | | 0 |
| Warehouse and Storage | 154 | **5.9** | | | 0 |

Note: Health Care (All) includes both "Inpatient Health" and "Outpatient Health".

Source: Energy Information Administration, www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/detailed_tables_2003.html, Table C14A - Bold valu

**Residential Energy Usage (2001 data):**

| | Mountain | Pacific | Total US. | Project Info # of units | Annual Consumption MWh |
|---|---|---|---|---|---|
| Single Family | 9,926 | 7,622 | 10,656 | | 0 |
| Apartments (2-4 Units) | | | 7,176 | | 0 |
| Apartments (5 or more Units) | | | 6,204 | 156 | 968 |
| Mobile Home | | | 12,469 | | 0 |
| Total Residential (kWh) | | | | | 968 |

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 2001 Residential Energy Consumption Survey.

| | $CO_2$ | | | $CH_4$ | $N_2O$ |
|---|---|---|---|---|---|
| Electricity production emission factors for CA | lb/kWh<br>0.61 | short tons/MWh<br>0.303 | tons/MWh<br>0.275 | lb/MWh<br>0.0067 | lb/MWh<br>0.0037 |
| U.S. Average | 1.34 | 0.668 | 0.606 | 0.0111 | 0.0192 |

Source: Energy Information Administration, Updated State-and Regional-level Greenhouse Gas Emission Factors for Electricity (March 2002), http://www.eia.doe.gov/pub/oiaf/1605/cdrom/pdf/e-supdoc.pdf. (http://www.eia.doe.gov/oiaf/1605/ee-factors.html accessed 4/14/2008)

# Water Usage Emissions Worksheet

| | kWh/MG | |
|---|---|---|
| Select the appropriate location: | Project Location in California: ○ Northern | ◉ Southern |
| Water Supply and Conveyance | 150 | 8,900 |
| Water Treatment | 100 | 100 |
| Water Distribution | 1,200 | 1,200 |
| Wastewater Treatment | 2,500 | 2,500 |
| Totals | 3,950 | 12,700 |

From California's Water Energy Relationship, CEC 2005

3.26E+05 gallons/acre-feet

Project total usage 65.4 acre-feet/year

| | | |
|---|---|---|
| Water Supply and Conveyance | 1.90E+05 | kWh/year |
| Water Treatment | 2.13E+03 | kWh/year |
| Water Distribution | 2.56E+04 | kWh/year |
| Wastewater Treatment | 5.33E+04 | kWh/year |
| Total | 2.71E+05 | kWh/year |

## Water usage calculator

| | | | |
|---|---|---|---|
| Number of Residences | 156 | Total Gallons Per Day | 58,372 |
| Estimated people per residence(1) | 2.87 | Gallons Per Year | 21,305,780 |
| Gallons/Resident/Day(2) | 100 | Total Acre-feet Per Year | 65.38 |
| Total Gallons Per Day | 44,772 | | |
| Gallons Per Year | 16,341,780 | | |
| Acre-feet Per Year | 50 | | |

(1) United States Census. California County QuickFacts. Available at http://quickfacts.census.gov/qfd/states/06000.html. Accessed January 2009.

(2) Pacific Institute. *Waste Not, Want Not: The Potential for Urban Water Conservation in California* . November 2003. Page 5 (http://www.pacinst.org/reports/urban_usage/)

| | |
|---|---|
| Estimated Number of Employees(1) | 100 |
| Gallons/Employee/Day(2) | 136 |
| Total Gallons Per Day | 13,600 |
| Gallons Per Year | 4,964,000 |
| Acre-feet Per Year | 15 |

(1) Specific employee data was not available at the time of this analysis. Employee numbers by type (office, retail) were estimated based on percentage of building types within the project.

(2) Pacific Institute.2003. *Waste Not, Want Not: The Potential for Urban Water Conservation in California.* November.

# Solid Waste Emissions Worksheet

| | |
|---|---|
| Total Square Footage - Office | |
| Disposal Rate (dry tons/sq. ft./year)[1] | 0.0108 |
| Office Waste (Dry Tons/Year) | 0 |
| Total Square Footage - Retail | 19969 |
| Disposal Rate (dry tons/sq. ft./year)[1] | 0.0024 |
| Retail Waste (Dry Tons/Year) | 47.9256 |
| Total Residences | 156 |
| Disposal Rate (dry tons/unit/year)[3] | 1.17 |
| Residential Waste (Dry Tons/Year) | 182.52 |
| Total Waste (Dry Tons/Year) | 230.4456 |
| $CO_2e$ Metric Tons/Year | 23.22891648 |
| Metric Tons of $CO_2e$/Wet Ton of Waste[4] | 0.12 |
| Wet Tons/Dry Tons | 0.84 |

(1) California Integrated Waste Management Board, 2009. Estimated Solid Waste Generation Rates for Commercial Establishments. Available at http://www.ciwmb.ca.gov/wastechar/wastegenrates/Commercial.htm.

(2) U.S. Environmental Protection Agency. 2006. *Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks* , Exhibit 6-4. September.

(3) California Integrated Waste Management Board, 2009. Estimated Solid Waste Generation Rates for Residential Developments. Available at http://www.ciwmb.ca.gov/wastechar/wastegenrates/Residential.htm

(4) U.S. Environmental Protection Agency. 2006. *Solid Waste Management and Greenhouse Gases: A Life-Cycle Assessment of Emissions and Sinks* , Exhibit 6-6. September.

# Natural Gas Emissions Worksheet

**Commercial Natural Gas Usage (2003 data):**

| Commercial Building Type | Natural Gas Consumption per Building by Building Type | Natural Gas Consumption per Square Foot by Building Type | Project Info (enter values on Electricity worksheet) | | Annual Natural Gas Consumption |
|---|---|---|---|---|---|
| | thousand cf | cf | # of bldgs | total sf | thousand cf |
| All Buildings | 782 | **29.2** | 0 | 0 | 0 |
| Mercantile | 653 | **19.7** | 0 | 0 | 0 |
| Enclosed and Strip Malls | 1142 | 33.4 | 0 | 19969 | 667 |
| Retail (Other than Mall) | 362 | **11.4** | 0 | 0 | 0 |
| Education | 1223 | **34.8** | 0 | 0 | 0 |
| Food Sales | 383 | 50.2 | 0 | 0 | 0 |
| Food Service | 870 | 141.2 | 0 | 0 | 0 |
| Health Care (All) | 3283 | **68.7** | 0 | 0 | 0 |
| Inpatient Health | 28,222 | 109.8 | 0 | 0 | 0 |
| Outpatient Health | 574 | 50.2 | 0 | 0 | 0 |
| Lodging | 2432 | **31.5** | 0 | 0 | 0 |
| Office | 535 | **14.2** | 0 | 0 | 0 |
| Other | 1885 | 67.6 | 0 | 0 | 0 |
| Public Assembly | 678 | 36.4 | 0 | 0 | 0 |
| Public Order and Safety | 771 | 43.7 | 0 | 0 | 0 |
| Religious Worship | 362 | 30.3 | 0 | 0 | 0 |
| Service | 481 | 54.1 | 0 | 0 | 0 |
| Vacant | 557 | 23 | 0 | 0 | 0 |
| Warehouse and Storage | 687 | 23.4 | 0 | 0 | 0 |

Note: Health Care (All) includes both "Inpatient Health" and "Outpatient Health".

Source: Energy Information Administration, www.eia.doe.gov/emeu/cbecs/cbecs2003/detailed_tables_2003/detailed_tables_2003.html, Table C24A - Bold value

**Residential Energy Usage (2001 data):**

| | Mountain | Pacific | Total US. | Project Info # of units | Annual Consumption thousand cf |
|---|---|---|---|---|---|
| Single Family | 67 | 48 | 70 | 0 | 0 |
| Apartments (2-4 Units)(1) | | 48 | | 0 | 0 |
| Apartments (5 or more Units) | | | 28 | 156 | 4,368 |
| Mobile Home | | | 58 | 0 | 0 |
| Total Natural Gas Usage | | | | | 4,368 |

(1) Single family natural gas consumption was used to represent 2-4 Unit Apartments, as the total U.S. number (70 thousand cf) would exceed the Pacific region single-family home consumption rates. Single-family and 2-4 Unit Apartments have consistent total U.S. consumption rates, so it is reasonable that regional rates would be consistent as well.

Source: Table CE1-12c. Total Energy Consumption in U.S. Households by West Census Region, 2001 (http://www.eia.doe.gov/emeu/recs/recs.

| | $CO_2$ | $CH_4$ | $N_2O$ |
|---|---|---|---|
| | lb/$10^6$ scf | lb/$10^6$ scf | lb/$10^6$ scf |
| Natural gas combustion | 120,000 | 2.3 | 2.2 |

Source: EPA AP-42 Vol I Chapter 1.4, Table 1.4-2

# Vehicle Emissions Worksheet

| avg. speed= | 40 | (mph) | avg trip length= | 10 | (miles) |
|---|---|---|---|---|---|
| **2010** | | **$CO_2$** | **$CH_4$** | **$N_2O$** | **Fleet %** |
| LDA | CAT | 292.432 | 0.019 | 0.032 | 61.3% |
| LDA | DSL | 359.668 | 0.006 | 0.001 | 0.5% |
| LDT | CAT | 364.37 | 0.025 | 0.042 | 34.3% |
| LDT | DSL | 349.073 | 0.0035 | 0.002 | 0.4% |
| HDT | CAT | 468.081 | 0.0636 | 0.088 | 1.8% |
| HDT | DSL | 931.362 | 0.012 | 0.005 | 1.7% |
| Composite | | 331.704 | 0.022 | 0.036 | 100.0% |

Notes:

$CO_2$ and $CH_4$ from EMFAC2007

$N_2O$ from EPA *Update of Methane and Nitrous Oxide Emission Factors for On-Highway Vehicles*, November 2004, Table 28.

Fleet percentages from URBEMIS2007

| | **From URBEMIS2007** | | |
|---|---|---|---|
| | Vehicle Categories | Fleet % | Diesel % |
| LDA | Light Auto | 51.6 | 0.4 |
| | Light Truck < 3750 lbs | 7.4 | 4.1 |
| LDT | Light Truck 3751-5750 lbs | 22.9 | 0 |
| | Med Truck 5751-8500 lbs | 10.6 | 0 |
| HDT | Lite-Heavy Truck 8501-10,000 lbs | 1.6 | 18.8 |
| | Lite-Heavy Truck 10,001-14,000 lbs | 0.5 | 40 |
| | Med-Heavy Truck 14,001-33,000 lbs | 0.9 | 77.8 |
| | Heavy-Heavy Truck 33,001-60,000 lbs | 0.5 | 100 |
| LDT | Other Bus | 0.1 | 100 |
| | Urban Bus | 0.1 | 100 |
| LDA | Motorcycle | 2.8 | 0 |
| LDT | School Bus | 0.1 | 100 |
| | Motor Home | 0.9 | 11.1 |
| | | 100 | |