AIR QUALITY ANALYSIS

GENERAL PLAN UPDATE

RANCHO PALOS VERDES, CALIFORNIA

LSA

February 2011

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RANCHO PALOS VERDES, CALIFORNIA

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1.0 EXECUTIVE SUMMARY

LSA Associates, Inc. (LSA) was retained by the City of Rancho Palos Verdes (City) to prepare an air quality study associated with the proposed General Plan Update project. The City is located in Los Angeles County, California.

The air quality study provides a discussion of the proposed General Plan Update, the physical setting of the City, and the regulatory framework for air quality. The report provides data on existing air quality, evaluates potential air quality impacts associated with the proposed General Plan Update, and identifies mitigation measures recommended for potentially significant impacts. Modeled air quality levels are based on vehicle data and project trip generation prepared for the General Plan Update (Willdan Engineering, July 19, 2010). The study focuses on the 28 Traffic Impact Analysis Zones (Table 6) and the Related Projects List (Table 5) identified in the City's Land Use Element and listed in the Traffic Impact Analysis prepared for the General Plan Circulation Element Update (Willdan Engineering, July 19, 2010), hereafter referred to as the vacant zones.

Emissions during construction of individual development on the vacant zones could potentially exceed the criteria pollutant thresholds established by the South Coast Air Quality Management District (SCAQMD) if two or more individual developments are under construction at the same time with similar schedules. However, given that this is a General Plan covering a 30 year planning period and the individual projects could be constructed any time during that period, the likelihood of concurrent construction is low. Additionally, compliance with SCAQMD rules and regulations during construction will minimize construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. Standard dust suppression measures have been identified for short-term construction to reduce emissions from construction activity with a goal to meet the SCAQMD emissions thresholds. Depending on the location of these vacant zones and the proximity of adjacent sensitive uses, each proposed General Plan Update project alone could potentially exceed the localized significance thresholds (LSTs) during construction. Construction emissions associated with development at the vacant zones identified in the General Plan Update would thus be potentially significant.

Pollutant emissions from operation of the General Plan Update project components, calculated with the URBEMIS 2007 model, would exceed many of the criteria pollutant thresholds established by the SCAQMD when these future potential developments are completed. However, the majority of these potential future developments are residential in nature and the SCAQMD LSTs for operations would not be exceeded by long-term emissions from operation of these future developments in their respective vicinity. The aggregate or combined operational emissions from development at these vacant zones within the City, as identified in the Land Use Element and listed in the Traffic Impact Analysis (Willdan Engineering, July 19, 2010), would exceed the SCAQMD daily emissions thresholds for many criteria pollutants. Historical air quality data show that existing carbon monoxide (CO) levels in the South Coat Air Basin in general and in the vicinity of the City at the North Long Beach monitoring station do not exceed either State or federal ambient air quality standards (AAQS). The CO hot-spot analysis was conducted with the CALINE4 model and peak-hour intersection vehicle turn volumes for the existing conditions and General Plan build out scenarios at the intersections throughout the City and evaluated in the Traffic Impact Analysis. The results showed that buildout of the General Plan with projected development on the vacant zones identified would not significantly affect local CO levels and the CO concentrations would all remain below the State and federal standards. No significant impact on local CO levels would occur.

The proposed project is located in Los Angeles County, which is among the counties that are found to have serpentine and ultramafic rock in their soils. However, the City is not within the areas that have known serpentine and ultramafic rock in their soils. Therefore, the potential risk for encountering naturally occurring asbestos (NOA) during construction of the individual developments on the vacant zones identified is small and less than significant.

The project is proposed to update and amend the City's General Plan and Zoning Designations, which will then not be consistent with the Southern California Association of Governments (SCAG) Regional Comprehensive Plan (RCP) Guidelines and the SCAQMD Air Quality Management Plan (AQMP) that incorporate the previous City General Plan and Zoning Designations. Until the City approves the new General Plan and the SCAG and SCAQMD review, approve and incorporate it into their regional plans, the proposed General Plan Update project is not consistent with the regional RCP and AQMP. This is a potentially significant impact.

The potential of the General Plan Update to affect global climate change is also included. Short-term construction and long-term operational emissions of the principal greenhouse gases (GHGs), including carbon dioxide (CO_2) and methane (CH_4), are quantified, and their significance relative to Assembly Bill (AB) 32 is discussed.

The evaluation was prepared in conformance with appropriate standards, utilizing procedures and methodologies in the SCAQMD *California Environmental Quality Act (CEQA) Air Quality Handbook* (CEQA Handbook; SCAQMD 1993). Air quality data posted on the California Air Resources Board (ARB) and United States Environmental Protection Agency (EPA) websites are included to document the local air quality environment.

2.0 PROJECT DESCRIPTION

2.1 LOCATION

The City of Rancho Palos Verdes is bounded by the Pacific Ocean to the west and south and adjacent to the almost built-out jurisdictions of Palos Verdes Estates to the north, Rolling Hills Estates to the northeast, and Rolling Hills to the east. Figure 1 illustrates the City and its sphere of influence. The City is almost built out, and substantial areas of the City cannot be built on due to topographic constraints that restrict development. The City does not have any immediate access to a freeway; the closest freeway is Interstate 110 (I-110), which is located east of the City.

2.2 PROJECT DESCRIPTION

Based on the Land Use Element and the Traffic Impact Analysis (TIA) for the General Plan Circulation Element Update (Willdan Engineering, July 19, 2010), it is anticipated that there would be potential future development on vacant zones throughout the City after the General Plan build out is complete. These zones are identified as the 28 Traffic Impact Analysis Zones (Table 6) and the Related Projects List (Table 5) in the City's Land Use Element.

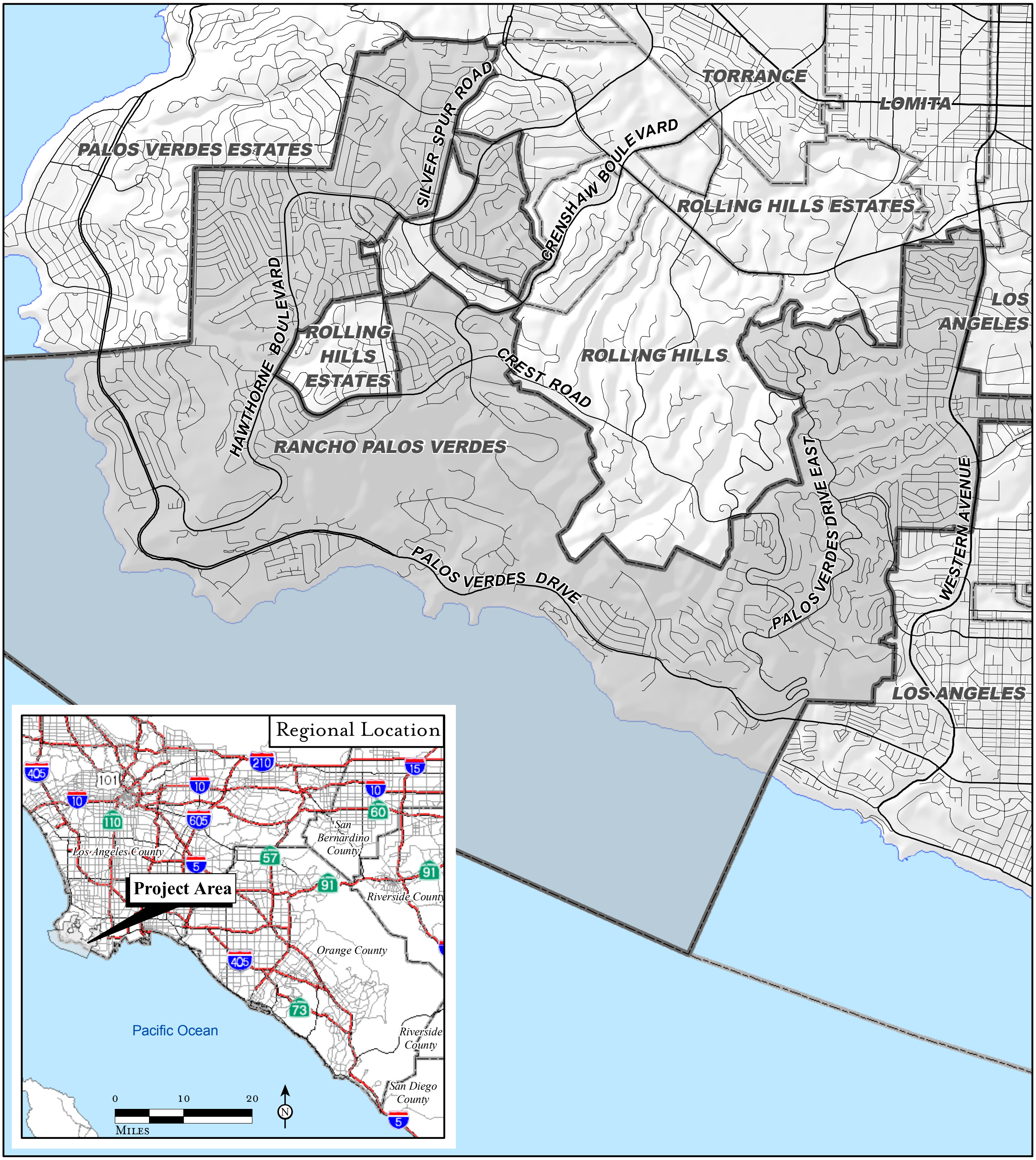

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FIGURE 1

CITY OF RANCHO PALOS VERDES

OTHER CITIES

N

0 2,500 5,000

Feet

SOURCE: Thomas Bros., 2006, County of Los Angeles, 2006.

Rancho Palos Verdes General Plan Update
Air Quality Analysis

Regional and Project Location

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3.0 SETTING

3.1 REGIONAL AIR QUALITY

The project site is located in the nondesert portion of Los Angeles County, California, which is part of the South Coast Air Basin (Basin) and is under the jurisdiction of the SCAQMD. The air quality assessment for the proposed project includes estimating emissions associated with short-term construction of the proposed project components.

A number of air quality modeling tools are available to assess the 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, included in its CEQA Handbook (April 1993), were adhered to in the assessment of air quality impacts for the proposed project.

3.1.1 Regional Air Quality

Both the State of California (State) and the federal government have established health-based AAQS for seven air pollutants. As shown in Table A, these pollutants include ozone (O_3), CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in diameter (PM_{10}), particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, 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. An alert level is that concentration of pollutants at which initial stage control actions are to begin. For this project area, SCAQMD Rule 701 applies. An alert will be declared when any one of the pollutant alert levels is reached at any monitoring site and meteorological conditions are such that the pollutant concentrations can be expected to remain at these levels for 12 or more hours or to increase; or, in the case of oxidants, the situation is likely to recur within the next 24 hours unless control actions are taken.

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	0.070 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	15.0 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 (57 μg/m^3)	Gas Phase Chemiluminescence	53 ppb (100 μg/m^3) (see footnote 8)	Same as Primary Standard	Gas Phase Chemiluminescence
	1-Hour	0.18 ppm (339 μg/m^3)		100 ppb (188 μg/m^3) (see footnote 8)	None	
Sulfur Dioxide (SO_2)	24-Hour	0.04 ppm (105 μg/m^3)	Ultraviolet Fluorescence	—	—	Spectrophotometry (Pararosaniline Method)
	3-Hour	—		—	0.5 ppm (1300 μg/m^3) (see footnote 9)	
	1-Hour	0.25 ppm (655 μg/m^3)		75 ppb (196 μg/m^3) (see footnote 9)	—	
Lead[10]	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[11]	—		0.15 μg/m^3		
Visibility-Reducing Particles	8-Hour	Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. 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[10]	24-Hour	0.01 ppm (26 μg/m^3)	Gas Chromatography			

Source: California Air Resources Board, September 8, 2010.

Table footnotes are provided on the following page.

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 eight-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 the 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 which 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 To attain this standard, the 3-year average of the 98^{th} percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that the EPA standards are in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards, the units can be converted from ppb to ppm. In this case, the national standards of 53 ppb and 100 ppb are identical to 0.053 ppm and 0.100 ppm, respectively.

9 On June 2, 2010, the EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The EPA also proposed a new automated Federal Reference Method (FRM) using ultraviolet technology, but will retain the older pararosaniline methods until the new FRM has adequately permeated State monitoring networks. The EPA also revoked both the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.030 ppm, effective August 23, 2010. The secondary SO_2 standard was not revised at this time; however, the secondary standard is undergoing a separate review by the EPA. Note that the new standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the new primary national standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

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

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

°C = degrees Celsius
EPA = United States Environmental Protection Agency
$\mu g/m^3$ = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
ppm = parts per million
ppb = parts per billion

Pollutant alert levels are as follows:[1]

- **O_3:** 392 micrograms per cubic meter ($\mu g/m^3$) (0.20 parts per million [ppm]), 1-hour average
- **CO:** 17 milligrams per cubic meter (mg/m^3) (15 ppm), 8-hour average
- **NO_2:** 1,130 $\mu g/m^3$ (0.6 ppm) 1-hour average; 282 $\mu g/m^3$ (0.15 ppm) 24-hour average
- **SO_2:** 525 $\mu g/m^3$ (0.2 ppm), 24-hour average
- **Particulates, measured as PM_{10}:** 350 $\mu g/m^3$, 24-hour average

Table B lists the primary health effects 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.

Table B: Summary of Health Effects of the Major Criteria Air Pollutants

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

Source: ARB 2009 (http://www.arb.ca.gov/research/health/fs/fs1/fs1.htm).

The California Clean Air Act (CCAA) provides the SCAQMD and other air districts 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 would be the motor vehicles at an intersection, a mall, and on highways. The SCAQMD also

[1] SCAQMD Rule 701, Attachment 2.

regulates stationary sources of pollution throughout its jurisdictional area. Direct emissions from motor vehicles are regulated by ARB.

Climate/Meteorology. Air quality in the planning area is not only affected by various emission sources (mobile, industry, etc.), but also 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 Basin the worst air pollution problem in the nation.

Climate in the Basin is determined by its terrain and geographical location. The Basin 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 Basin. The Basin lies in the semi-permanent 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, and Santa Ana wind conditions do occur.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). 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 with sufficient temperature data is the San Pedro Station.[1] The monthly average maximum temperature recorded at this station in the past ranged from 62.9°F in January to 74.4°F in September, with an annual average maximum of 68.7°F. The monthly average minimum temperature recorded at this station ranged from 47.2°F in January to 61.8°F in August, with an annual average minimum of 54.4°F. January is typically the coldest month, and August and September are typically the warmest months in this area of the Basin.

The majority of annual rainfall in the Basin 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 Basin and along the coastal side of the mountains. The Palos Verdes Estates Station is the closest station that monitors precipitation. Average monthly rainfall measured during that period varied from 2.97 inches in January to 0.34 inch or less between May and October, with an annual total of 12.23 inches. The San Pedro Station also monitors precipitation. Average monthly rainfall measured during that period varied from 2.37 inches in February to 0.29 inch or less between May and October, with an annual total of 10.09 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in midafternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

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

Winds in the vicinity of the project area blow predominantly from the west and southwest, with relatively low velocities. Wind speeds in the project area average about 4 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

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 the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and oxides of nitrogen (NO_X) because of 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.

Description of Global Climate Change and its Sources. Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (such as precipitation or wind) that last for an extended period of time. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures.

Climate change refers to any change in measures of weather (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from natural factors, such as changes in the sun's intensity; natural processes within the climate system, such as changes in ocean circulation; or human activities, such as the burning of fossil fuels, land clearing, or agriculture. The primary observed effect of global climate change has been a rise in the average global tropospheric[1] temperature of 0.36°F per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling shows that further warming could occur, which would induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of California could include higher sea levels, drier or wetter weather, changes in ocean salinity, changes in wind patterns or more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold and increased intensity of tropical cyclones. Specific effects in California might include a decline in the Sierra Nevada snowpack, erosion of California's coastline, and seawater intrusion in the Delta.

Global surface temperatures have risen by 1.33°F ± 0.32°F over the last 100 years (1906 to 2005). The rate of warming over the last 50 years is almost double that over the last 100 years.[2] The latest projections, based on state-of-the art climate models, indicate that temperatures in California are

[1] The troposphere is the zone of the atmosphere characterized by water vapor, weather, winds, and decreasing temperature with increasing altitude.

[2] Intergovernmental Panel on Climate Change (IPCC), 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.*

expected to rise 3–10.5°F by the end of the century.[1] The prevailing scientific opinion on climate change is that "most of the warming observed over the last 50 years is attributable to human activities."[2] Increased amounts of CO_2 and other GHGs are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as the greenhouse effect.[3]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced global climate change are:[4]

- CO_2
- CH_4
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur Hexafluoride (SF_6)

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming. While GHGs produced by human activities include naturally-occurring GHGs such as CO_2, CH_4, and N_2O, some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere. Certain other gases, such as water vapor, are short-lived in the atmosphere as compared to these GHGs that remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is generally excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this Environmental Impact Report (EIR), the term "GHGs" will refer collectively to the six gases identified in the bulleted list provided above.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere ("atmospheric lifetime"). The GWP of each gas is measured relative to CO_2, the most abundant GHG. The definition

1 California Climate Change Center, 2006. *Our Changing Climate. Assessing the Risks to California.* July.

2 Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: The Physical Science Basis*, http://www.ipcc.ch.

3 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduce the amount of heat that escapes, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

4 The greenhouse gases listed are consistent with the definition in Assembly Bill (AB) 32 (Government Code 38505), as discussed later in this section.

of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO_2 over a specified time period. GHG emissions are typically measured in terms of pounds or tons of "CO_2 equivalents" (CO_2e). Table C shows the GWPs for each type of GHG. For example, sulfur hexafluoride is 22,800 times more potent at contributing to global warming than carbon dioxide.

Table C: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12	25
Nitrous Oxide (NO_x)	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoromethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: IPCC, 2007. *Climate Change 2007: The Physical Science Basis.* Contribution of Working Group I to the Fourth Assessment Report of the IPCC.
HFC = Hydrofluorocarbons
IPCC = Intergovernmental Panel on Climate Change
PFC = Perfluorocarbons

The following discussion summarizes the characteristics of the six primary GHGs.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form, as CO_2. Natural sources of CO_2 include the respiration (breathing) of humans, animals and plants, volcanic outgassing, decomposition of organic matter, and evaporation from the oceans. Human-caused sources of CO_2 include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. The Earth maintains a natural carbon balance, and when concentrations of CO_2 are upset, the system gradually returns to its natural state through natural processes. Natural changes to the carbon cycle work slowly, especially compared to the rapid rate at which humans are adding CO_2 to the atmosphere. Natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of humanmade CO_2, and consequently the gas is building up in the atmosphere. The concentration of CO_2 in the atmosphere has risen approximately 30 percent since the late 1800s.[1]

In 2002, CO_2 emissions from fossil fuel combustion accounted for approximately 98 percent of humanmade CO_2 emissions and approximately 84 percent of California's overall GHG emissions

[1] California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.

(CO_2e). The transportation sector accounted for California's largest portion of CO_2 emissions, with gasoline consumption making up the greatest portion of these emissions. Electricity generation was California's second-largest category of GHG emissions.

Methane. CH_4 is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Anthropogenic sources include rice cultivation, livestock, landfills and waste treatment, biomass burning, and fossil fuel combustion (burning of coal, oil, natural gas, etc.). Decomposition occurring in landfills accounts for the majority of human-generated CH_4 emissions in California, followed by enteric fermentation (emissions from the digestive processes of livestock).[1] Agricultural processes such as manure management and rice cultivation are also significant sources of humanmade CH_4 in California. CH_4 accounted for approximately 6 percent of gross climate change emissions (CO_2e) in California in 2002.[2] It is estimated that over 60 percent of global methane emissions are related to human-related activities.[3] As with CO_2, the major removal process of atmospheric CH_4—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and CH_4 concentrations in the atmosphere are increasing.

Nitrous Oxide. N_2O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N_2O is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N_2O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N_2O emissions in California. N_2O emissions accounted for nearly 7 percent of humanmade GHG emissions (CO_2e) in California in 2002.

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.[4] PFCs and SF_6 are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry, which is active in California, leads to greater use of PFCs. HFCs, PFCs, and SF_6 accounted for about 3.5 percent of humanmade GHG emissions (CO_2e) in California in 2002.[5]

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1 California Air Resources Board, Greenhouse Gas Inventory Data - 1990 to 2004. http://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed November 2008.

2 Ibid.

3 IPCC, 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC.

4 The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

5 California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.

Emissions Sources and Inventories. An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, National, California, and local GHG emission inventories. However, because GHGs persist for a long time in the atmosphere (see Table C), accumulate over time, and are generally well-mixed, their impact on the atmosphere and climate cannot be tied to a specific point of emission.

Global Emissions. Worldwide emissions of GHGs in 2004 were 27 billion metric tons of CO_2e per year.[1] Global estimates are based on country inventories developed as part of programs of the United Nations Framework Convention on Climate Change (UNFCCC).

United States Emissions. In 2004, the United States emitted approximately 7.3 billion metric tons of CO_2e or approximately 25 tons per year per person. Of the four major sectors nationwide—residential, commercial, industrial and transportation—transportation accounts for the highest amount of GHG emissions (approximately 35 to 40 percent); these emissions are entirely generated from direct fossil fuel combustion. Between 1990 and 2006, total United States GHG emissions rose approximately 14.7 percent.[2]

State of California Emissions. According to California ARB emission inventory estimates, California emitted approximately 480 million metric tons[3] of CO_2e emissions in 2004.[4] This large number is due primarily to the sheer size of California compared to other states. By contrast, California has the fourth-lowest per-capita CO_2 emission rate from fossil fuel combustion in the country, due to the success of its energy efficiency and renewable energy programs and commitments that have lowered the State's GHG emissions rate of growth by more than half of what it would have been otherwise.[5]

The Cal/EPA Climate Action Team stated in its March 2006 report that the composition of gross climate change pollutant emissions in California in 2002 (expressed in terms of CO_2e) was as follows:

- CO_2 accounted for 83.3 percent
- CH_4 accounted for 6.4 percent

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1 Combined total of Annex I and Non-Annex I Country CO_2eq emissions. United Nations Framework Convention on Climate Change (UNFCCC), 2007. *Greenhouse Gas Inventory Data.* Information available at http://unfccc.int/ghg_data/ghg_data_unfccc/time_series_annex_i/items/3814.php and http://maindb.unfccc.int/library/view_pdf.pl?url=http://unfccc.int/resource/docs/2005/sbi/eng/18a02.pdf.

2 U.S. Environmental Protection Agency (EPA). 2008. The U.S. Greenhouse Gas Emissions and Sinks: Fast Facts. http://www.epa.gov/climatechange/emissions/downloads/2008_GHG_Fast_Facts.pdf.

3 A metric ton is equivalent to approximately 1.1 tons.

4 California Air Resources Board, Greenhouse Gas Inventory Data - 1990 to 2004. http://www.arb.ca.gov/cc/inventory/data/data.htm. Accessed November 2008.

5 California Energy Commission (CEC), 2007. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 - Final Staff Report, publication # CEC-600-2006-013-SF, Sacramento, CA, December 22, 2006; and January 23, 2007 update to that report.

- N_2O accounted for 6.8 percent
- HFCs, PFC, and SF_6 accounted for 3.5 percent[1]

The California ARB estimates that transportation is the source of approximately 38 percent of the State's GHG emissions in 2004, followed by electricity generation (both in-State and out-of-State) at 23 percent, and industrial sources at 20 percent. The remaining sources of GHG emissions are residential and commercial activities at 9 percent, agriculture at 6 percent, high global warming potential gases at 3 percent, and recycling and waste at 1 percent.[2]

The California ARB is responsible for developing the California Greenhouse Gas Emission Inventory. This inventory estimates the amount of GHGs emitted to and removed from the atmosphere by human activities within the State of California and supports the AB 32 Climate Change Program. The California ARB's current GHG emission inventory covers the years 1990–2004 and is based on fuel use, equipment activity, industrial processes, and other relevant data (e.g., housing, landfill activity, agricultural lands). The emission inventory estimates are based on the actual amount of all fuels combusted in the State, which accounts for over 85 percent of the GHG emissions within California.

The California ARB staff has projected statewide unregulated GHG emissions for 2020, which represent the emissions that would be expected to occur in the absence of any GHG reduction actions, will be 596 million metric tons (MMT) of CO_2e. GHG emissions from the transportation and electricity sectors as a whole are expected to increase, but remain at approximately 38 percent and 23 percent of total CO_2e emissions, respectively. The industrial sector consists of large stationary sources of GHG emissions, and the percentage of the total 2020 emissions is projected to be 17 percent of total CO_2e emissions. The remaining sources of GHG emissions in 2020 are high global warming potential gases at 8 percent, residential and commercial activities at 8 percent, agriculture at 5 percent, and recycling and waste at 1 percent.[3]

Air Pollution Constituents and Attainment Status. 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 maintains air quality monitoring stations throughout the State in conjunction with the EPA and local air districts. The ARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by ARB and EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent 3 calendar years compared with the AAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards. Table D lists the attainment status for the criteria pollutants in the Basin.

[1] California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.
[2] California Air Resources Board (ARB), 2008. http://www.climatechange.ca.gov/inventory/index.html. September.
[3] Ibid.

Table D: 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	Nonattainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Nonattainment (Los Angeles County only)	Attainment
All others	Attainment/Unclassified	Attainment/Unclassified

Source: ARB 2010 (http://www.arb.ca.gov/desig/desig.htm).
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in diameter
$PM_{2.5}$ = particulate matte less than 2.5 microns in diameter
SO_2 = sulfur dioxide

Ozone. O_3 (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases (ROGs) 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 summer and early fall. The entire Basin is designated as a nonattainment area for the State 1-hour and 8-hour O_3 standards. The EPA has officially designated the status for most of the Basin regarding the 8-hour O_3 standard as "Severe 17," which means the Basin has until 2021 to attain the federal 8-hour O_3 standard. The SCAQMD has requested that the Basin's federal designation be changed from severe to extreme nonattainment. This change would extend the attainment deadline to 2023.

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 in attainment for the State standards for CO. The Basin is designated as a "Severe Maintenance" area under the federal CO standards.

Nitrogen Oxides. NO_2, a reddish brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or 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 fine particulate matter, poor visibility, and acid deposition (i.e., acid rain). NO_2 decreases lung function and may reduce resistance to infection. The entire Basin has not exceeded the federal standards for NO_2 in the past five years with published monitoring data. It is designated as a maintenance area under the federal standards and a nonattainment area under the State 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 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight. The entire Basin is in attainment with both federal and State SO_2 standards.

Lead. Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the blood stream, 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 the federal standards for lead. The Los Angeles County portion of the Basin has been re-designated to be in nonattainment status for the State standards for lead.

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 fine particulate matter ($PM_{2.5}$) levels. Fine particles 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 penetrate deeply into the lungs, are more likely than coarse particles 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 the 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. Most of the Basin is designated nonattainment for the federal and State PM_{10} and $PM_{2.5}$ standards.

Reactive Organic Compounds. ROCs (also known as ROGs and volatile organic compounds [VOCs]) are formed from the combustion of fuels and the evaporation of organic solvents. ROCs are not defined as criteria pollutants, but are a prime component of the photochemical smog reaction. Consequently, ROC accumulates in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower.

3.1.2 Local Air Quality

SCAQMD, together with ARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the site is the North Long Beach Station. This station monitors all criteria pollutants. This station characterizes the air quality representative of the ambient air quality in the project area.[1] The ambient air quality data in Table E show that CO, NO_2, and SO_2 levels are consistently below the relevant State and federal standards in the project vicinity. O_3, PM_{10}, and $PM_{2.5}$ levels all exceed State and federal standards regularly.

1 Air quality data, 2006–2008; EPA and ARB websites.

Table E: Ambient Air Quality Monitored at North Long Beach Station

Pollutant	Standard	2007	2008	2009
Carbon Monoxide (CO)				
Maximum 1-hr concentration (ppm)		3.3	3.3	3.1
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hr concentration (ppm)		2.6	2.5	2.2
Number of days exceeded:	State: ≥ 9.0 ppm	0	0	0
	Federal: ≥ 9 ppm	0	0	0
Ozone (O_3)				
Maximum 1-hr concentration (ppm)		0.099	0.093	0.089
Number of days exceeded:	State: > 0.09 ppm	1	0	0
Maximum 8-hr concentration (ppm)		0.073	0.074	0.067
Number of days exceeded:	State: > 0.07 ppm	1	1	0
	Federal: > 0.075 ppm	0	0	0
Coarse Particulates (PM_{10})				
Maximum 24-hr concentration ($\mu g/m^3$)		232	62	62
Number of days exceeded:	State: > 50 $\mu g/m^3$	6	1	3
	Federal: > 150 $\mu g/m^3$	1	0	0
Annual arithmetic average concentration ($\mu g/m^3$)		33.5	29.1	ND[1]
Exceeded for the year:	State: > 20 $\mu g/m^3$	Yes	Yes	ND
Fine Particulates ($PM_{2.5}$)				
Maximum 24-hr concentration ($\mu g/m^3$)		82.8	57.2	63.0
Number of days exceeded:	Federal: > 35 $\mu g/m^3$	12[2]	8	6
Annual arithmetic average concentration ($\mu g/m^3$)		14.6	ND	ND
Exceeded for the year:	State: > 12 $\mu g/m^3$	Yes	ND	ND
	Federal: > 15 $\mu g/m^3$	No	ND	ND
Nitrogen Dioxide (NO_2)				
Maximum 1-hr concentration (ppm)		0.107	0.125	0.111
Number of days exceeded:	State: > 0.18 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.020	0.021	0.021
Exceeded for the year:	State: > 0.030 ppm	No	No	No
	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO_2)				
Maximum 24-hr concentration (ppm)		0.010	0.012	0.005
Number of days exceeded:	State: > 0.04 ppm	0	0	0
	Federal: > 0.14 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.003	0.002	ND
Exceeded for the year:	Federal: > 0.030 ppm	No	No	ND

Sources: EPA and ARB websites: www.epa.gov/air/data/index.html and www.arb.ca.gov/adam/welcome.html.

[1] ND = No data available.

[2] The exceedances of the federal 24-hour $PM_{2.5}$ standard are based on the old 65 $\mu g/m^3$ standard. In 2006, the EPA revised the standard to 35 $\mu g/m^3$.

$\mu g/m^3$ = micrograms per cubic meter
ARB = California Air Resources Board
EPA = United States Environmental Protection Agency
ppm = parts per million

3.1.3 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 the SCAG as the Metropolitan Planning Organization (MPO) responsible for ensuring compliance with the requirements of the CAA for the Basin.

The EPA established new national air quality standards for ground-level O_3 and fine particulate matter 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 soot 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 completed final 8-hour nonattainment status on April 15, 2004. The EPA revoked the 1-hour O_3 standard on June 15, 2005, and lowered the 8-hour O_3 standard from 0.08 ppm to 0.075 ppm on April 1, 2008.

The EPA issued the final $PM_{2.5}$ implementation rule in fall 2004. The EPA lowered the 24-hour $PM_{2.5}$ standard from 65 to 35 $\mu g/m^3$ and revoked the annual PM_{10} standard on December 17, 2006. The EPA issued final designations for the 2006 24-hour $PM_{2.5}$ standard on December 12, 2008.

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 the 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 FCAA. Consequently, the regulation of GHG emissions on a national level by the EPA is possible.

State Regulations/Standards. In 1967, the California Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus, the Bureau of Air Sanitation and the Motor

Vehicle Pollution Control Board, to establish ARB. Since its formation, ARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems.

In a response to the transportation sector's significant contribution to California's CO_2 emissions, AB 1493 (Pavley) was enacted on July 22, 2002. AB 1493 requires ARB to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. In setting these standards, ARB considered cost effectiveness, technological feasibility, and economic impacts. ARB adopted the standards in September 2004. When fully phased-in, the near-term (2009 to 2012) standards would result in a reduction in GHG emissions of approximately 22 percent compared to the emissions from the 2002 fleet, while the midterm (2013 to 2016) standards would result in a reduction of approximately 30 percent. To set its own GHG emissions limits on motor vehicles, California must receive a waiver from the EPA. However, in December 2007, the EPA denied the request from California for the waiver. In January 2008, the California Attorney General filed a petition for review of the EPA's decision in the Ninth Circuit Court of Appeals; however, no decision on that petition has been published as of January 2009. On January 26, 2009, the President issued an Executive Memorandum directing the EPA to reassess its decision to deny the waiver and to initiate any appropriate action.[1] On May 18, 2009, the President announced the enactment of a 35.5 miles-per-gallon (mpg) fuel economy standard for automobiles and light duty trucks which will begin to take effect in 2012. This standard is approximately the same standard that was proposed by California, and so the California waiver request has been shelved as a result.

The ARB identified particulate emissions from diesel-fueled engines (DPM) as toxic air contaminants (TACs) in August 1998. Following the identification process, ARB was required by law to determine if there is a need for further control. In September 2000, ARB adopted the Diesel Risk Reduction Plan (Diesel RRP), which recommends many control measures to reduce the risks associated with DPM and achieve a goal of 75 percent DPM reduction by 2010 and 85 percent by 2020.

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 for the State of California: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

California's major initiative for reducing GHG emissions is outlined in AB 32, the "Global Warming Solutions Act," passed by the California State legislature on August 31, 2006. AB 32 will require ARB to:

- Establish a statewide GHG emissions cap for 2020, based on 1990 emissions, by January 1, 2008;
- Adopt mandatory reporting rules for significant sources of GHG emissions by January 1, 2008;
- Adopt an emissions reduction plan by January 1, 2009, indicating how emissions reductions will be achieved via regulations, market mechanisms, and other actions; and

[1] Obama, President Barack. 2009. Memorandum for the Administrator of the Environmental Protection Agency. State of California Request for Waiver Under 42 U.S.C. 7543(b), the Clean Air Act. January 26.

- Adopt regulations to achieve the maximum technologically feasible and cost-effective reductions of GHGs by January 1, 2011.

The ARB has established the level of GHG emissions in 1990 at 427 $MMTCO_2e$. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires ARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by ARB on December 11, 2008, and includes measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among other measures.[1] Emission reductions that are projected to result from the recommended measures in the Scoping Plan are expected to total 174 $MMTCO_2e$, which would allow California to attain the emissions goal of 427 $MMTCO_2e$ by 2020. The Scoping Plan includes a range of GHG reduction actions that may include direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. 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. The ARB rule-making process includes preparation and release of each of the draft measures, public input through workshops and a public comment period, followed by an ARB Board hearing and rule adoption.

In addition to reducing GHG emissions to 1990 levels by 2020, AB 32 directed ARB and the newly created Climate Action Team (CAT)[2] to identify a list of "discrete early action GHG reduction measures" that can be adopted and made enforceable by January 1, 2010. On January 18, 2007, Governor Schwarzenegger signed Executive Order S-1-07, further solidifying California's dedication to reducing GHGs by setting a new Low Carbon Fuel Standard. The Executive Order sets a target to reduce the carbon intensity of California transportation fuels by at least 10 percent by 2020 and directs ARB to consider the Low Carbon Fuel Standard as a discrete early action measure.

In June 2007, ARB approved a list of 37 early action measures, including three discrete early action measures (Low Carbon Fuel Standard, Restrictions on High Global Warming Potential Refrigerants, and Landfill Methane Capture).[3] Discrete early action measures are measures that are required to be adopted as regulations and made effective no later than January 1, 2010, the date established by Health and Safety Code (HSC) Section 38560.5. The ARB adopted additional early action measures in October 2007 that tripled the number of discrete early action measures. These measures relate to truck efficiency, port electrification, reduction of perfluorocarbons from the semiconductor industry, reduction of propellants in consumer products, proper tire inflation, and sulfur hexafluoride (SF_6) reductions from the nonelectricity sector. The combination of early action measures is estimated to reduce State-wide GHG emissions by nearly 16 MMT.[4]

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1. ARB. 2008. *Climate Change Proposed Scoping Plan: a Framework for Change*. October.
2. 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.
3. California Air Resources Board. 2007. *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*. October.
4. California Air Resources Board. 2007. "ARB approves tripling of early action measures required under AB 32". News Release 07-46. http://www.arb.ca.gov/newsrel/nr102507.htm. October 25.

To assist public agencies in the mitigation of GHG emissions or analyzing the effects of GHGs under CEQA, including the effects associated with transportation and energy consumption, Senate Bill (SB) 97 (Chapter 185, 2007) requires the Governor's Office of Planning and Research (OPR) to develop CEQA guidelines on how to minimize and mitigate a project's GHG emissions. OPR is required to prepare, develop, and transmit these guidelines on or before July 1, 2009 and the Resources Agency is required to certify and adopt them by January 1, 2010. Preliminary guidance released by OPR in June 2008 suggests that global climate change analyses in CEQA documents should be conducted for all projects that release GHGs, and that mitigation measures to reduce emissions should be incorporated into projects, to the extent feasible. On January 8, 2009, OPR released preliminary draft CEQA guideline amendments, which may be refined through a public process currently underway at the time this document was drafted. The preliminary amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations.

SB 375, signed into law on October 1, 2008, is intended to enhance 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 work with California's 18 metropolitan planning organizations 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 region's ability to attain its greenhouse gas reduction targets.

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

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 is responsible for incorporating AQMPs for local air basins into a State Implementation Plan (SIP) for EPA approval. 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. The SCAQMD and the SCAG are responsible for formulating and implementing the AQMP for the Basin. Every 3 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 Basin has met since 1992.

The 2003 AQMP proposes policies and measures to achieve federal and state standards for healthful air quality in the Basin and those portions of the Salton Sea Air Basin (formerly named the Southeast Desert Air Basin) that are under SCAQMD jurisdiction (namely, Coachella Valley). The Coachella Valley PM_{10} Plan was revised in June 2002 and forwarded to ARB and EPA for approval. The EPA approved the 2002 Coachella Valley SIP on April 18, 2003.

This revision to the 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 South Coast Air Basin 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 1997/99 Plan) to offset increased emission estimates from mobile sources and meet all federal criteria pollutant standards within the time frames allowed under the federal CAA.

The SCAQMD adopted the 2007 AQMP on June 1, 2007, which it describes as a regional and multiagency effort (the SCAQMD Governing Board, ARB, SCAG, and 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 emission inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The ARB has adopted the SCAQMD 2007 AQMP as part of the 2007 SIP and forwarded it to the EPA for review and approval. The SCAQMD is awaiting EPA's review and approval on its 2007 AQMP as part of the 2007 SIP.

4.0 THRESHOLDS AND 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 Handbook (April 1993), were adhered to in the assessment of air quality impacts for the proposed project. The air quality models identified in the document (including an older version of the URBEMIS model) are outdated; therefore, the current version of the URBEMIS model, URBEMIS2007 Version 9.2.4, was used to estimate project-related mobile and stationary sources emissions in this Air Quality Analysis.

The Air Quality Analysis includes estimated emissions associated with long-term operations after the General Plan build-out. Criteria pollutants with regional impacts would be emitted by General Plan build-out growth-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 key affected intersections throughout the City, would be small and less than significant due to the generally low ambient CO concentrations in the region where the City is located. A local CO hot-spot analysis was conducted. Area-specific information was used in the modeling. Default values representative of the region were used when area-specific data were not available.

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

SCAQMD has developed LST methodology that can be used to determine whether or not 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 (SRA). SCAQMD's current guidelines, *Final Localized Significance Threshold Methodology* (June 2003, revised July 2008), and *Final –Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds* (October 2006) were adhered to in the assessment of air quality impacts for the proposed project.

The LST analysis is used to determine whether the daily emissions for the proposed construction activities could result in significant localized air quality impacts. The emissions of concern from construction activities are NO_X, CO, PM_{10}, and $PM_{2.5}$ 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. Because of the nature of the General Plan Update project, no specific construction activity on any local individual sites has been scheduled or identified. Therefore, this aspect of the localized air quality impact analysis is not included here.

4.1 THRESHOLDS 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 AAQS, 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 emissions thresholds for construction and operation of a proposed project in the Basin. The Basin is administered by the SCAQMD, and guidelines and emissions thresholds established by the SCAQMD in its CEQA 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.

4.1.1 Regional Thresholds for Construction Emissions

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

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

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

4.1.2 Regional Thresholds for Operational Emissions

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

- 55 lbs/day of ROC
- 55 lbs/day of NO_X
- 550 lbs/day of CO
- 150 lbs/day of PM_{10}

- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of SO_2

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

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

4.1.3 Thresholds for Localized Significance

LST screening analysis for construction is applicable to all projects of 5 acres (ac) or less. If emissions exceed the LST for a site 5 ac or less, dispersion modeling must be conducted. For sites larger than 5 ac, dispersion modeling needs to be conducted. The AAQS are used to determine the significance of LSTs, except for particulate matter, then the pollutant concentrations thresholds presented in SCAQMD Rules 403 and 1301 are used. The Rule 403 threshold of 10.4 $\mu g/m^3$ applies to construction emissions. The Rule 1301 threshold of 2.5 $\mu g/m^3$ applies to nonaggregate handling operational activities.

However, for the proposed General Plan Update, many of the vacant zones within the City, as identified in the Land Use Element and listed in the Traffic Impact Analysis (Willdan Engineering, July 19, 2010) have a site area smaller than 5 ac, and the SCAQMD screening thresholds can used without the detailed dispersion modeling. Rancho Palos Verdes is located within SRA 3, Southwest Coastal Los Angeles County.[1] As a worst case scenario, it is assumed that the nearest existing sensitive receptor is less than 25 meters (m) (100 feet [ft]) away from the property line at each of the vacant zones identified. The SCAQMD recommends that all receptors at or within 25 m of a specific project site should utilize the LST values for receptors at 25 m (82 ft) from the project site. The following lists the screening emission thresholds for these vacant zones that are 5 acres or smaller in size.

Construction thresholds for a 1 ac site:

- 91 lbs/day of NO_X at 25 m
- 674 lbs/day of CO at 25 m
- 5 lbs/day of PM_{10} at 25 m
- 3 lbs/day of $PM_{2.5}$ at 25 m

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

Operational thresholds for a 1 ac site:

- 91 lbs/day of NO_X at 25 m
- 674 lbs/day of CO at 25 m
- 1 lb/day of PM_{10} at 25 m
- 1 lb/day of $PM_{2.5}$ at 25 m

Construction thresholds for a 2 ac site:

- 131 lbs/day of NO_X at 25 m
- 982 lbs/day of CO at 25 m
- 8 lbs/day of PM_{10} at 25 m
- 5 lbs/day of $PM_{2.5}$ at 25 m

Operational thresholds for a 2 ac site:

- 131 lbs/day of NO_X at 25 m
- 982 lbs/day of CO at 25 m
- 2 lbs/day of PM_{10} at 25 m
- 1 lb/day of $PM_{2.5}$ at 25 m

Construction thresholds for a 5 ac site:

- 197 lbs/day of NO_X at 25 m
- 1,823 lbs/day of CO at 25 m
- 15 lbs/day of PM_{10} at 25 m
- 8 lbs/day of $PM_{2.5}$ at 25 m

Operational thresholds for a 5 ac site:

- 197 lbs/day of NO_X at 25 m
- 1,823 lbs/day of CO at 25 m
- 4 lbs/day of PM_{10} at 25 m
- 2 lbs/day of $PM_{2.5}$ at 25 m

4.1.4 Global Climate Change

As the SCAQMD has recognized, the analysis of GHGs is a much different analysis than the analysis of criteria pollutants for the following reasons. For criteria pollutants, significance thresholds are based on daily emissions because attainment or nonattainment is based on daily exceedances of applicable AAQS. Further, several ambient AAQS are based on relatively short-term exposure effects on human health (e.g., 1-hour and 8-hour). Since the half-life of CO_2 is approximately 100 years, for example, the effects of GHGs are longer-term, affecting global climate over a relatively long time frame. As a result, the SCAQMD's current position is to evaluate GHG effects over a longer time frame than a single day.

The recommended approach for GHG analysis included in OPR's June 2008 release is to: (1) identify and quantify GHG emissions, (2) assess the significance of the impact on climate change, and (3) if significant, identify alternatives and/or mitigation measures to reduce the impact below a level of significance.[1] The June 2008 OPR guidance provides some additional direction regarding planning documents as follows: "CEQA can be a more effective tool for GHG emissions analysis and mitigation if it is supported and supplemented by sound development policies and practices that will reduce GHG emissions on a broad planning scale and that can provide the basis for a programmatic approach to project-specific CEQA analysis and mitigation. For local government lead agencies, adoption of general plan policies and certification of general plan EIRs that analyze broad jurisdiction-wide impacts of GHG emissions can be part of an effective strategy for addressing cumulative impacts and for streamlining later project-specific CEQA reviews."

Pursuant to Senate Bill 97 (SB 97), OPR submitted to the Secretary for Natural Resources its proposed amendments to the State CEQA Guidelines for GHG emissions on April 13, 2009. These proposed CEQA Guideline amendments would provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The Natural Resources Agency will conduct formal rulemaking in 2009, prior to certifying and adopting the amendments, as required by SB 97. The Natural Resources Agency must certify and adopt the guidelines on or before January 1, 2010.

On December 30, 2009, the California Natural Resources Agency adopted CEQA Guidelines Amendments related to Climate Change. The amendments became effective on March 18, 2010, and state:

> (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the Lead Agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
>
> > (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; or

[1] State of California, 2008. Governor's Office of Planning and Research. *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review*. June 19.

(2) Rely on a qualitative analysis or performance based standards.

(b) A lead agency may consider the following when assessing the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

CEQA Guidelines Section 15064(b) provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data," and further, states that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

Individual projects incrementally contribute toward the potential for global climate change on a cumulative basis in concert with all other past, present, and probable future projects. While individual projects are unlikely to measurably affect global climate change, each project incrementally contributes toward the potential for global climate change on a cumulative basis, in concert with all other past, present, and probable future projects.

Revisions to Appendix G of the *CEQA Guidelines* suggest that the project be evaluated for the following impacts:

- Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

However, despite this, currently neither the CEQA statutes, OPR guidelines, nor the draft proposed changes to the CEQA Guidelines prescribe thresholds of significance or a particular methodology for performing an impact analysis; as with most environmental topics, significance criteria are left to the judgment and discretion of the Lead Agency.

In this vacuum, on December 5, 2008, the SCAQMD adopted an interim GHG threshold of significance for projects where it is the Lead Agency using a tiered approach for determining significance.[1] The objective of the SCAQMD's interim GHG threshold of significance proposal is to achieve a GHG emission capture rate of 90 percent of all new or modified stationary source projects. SCAQMD asserts that a GHG threshold of significance based on a 90 percent emission capture rate is considered be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. SCAQMD further asserts that a 90 percent GHG emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. The following bullet points describe the basic structure of SCAQMD's tiered interim GHG significance threshold for stationary sources:

- **Tier 1** consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA. For example, SB 97 specifically exempts a limited number of projects until it expires in 2010. If the project qualifies for an exemption, no further action is required. If the project does not qualify for an exemption, then it would move to the next tier.
- **Tier 2** consists of determining whether or not the project is consistent with a GHG reduction plan that may be part of a local general plan, for example. The concept embodied in this tier is equivalent to the existing consistency determination requirements in CEQA Guidelines Sections 15064(h)(3), 15125(d), or 15152(a). The GHG reduction plan must, at a minimum, comply with AB 32 GHG reduction goals, include an emissions inventory agreed upon by either ARB or the SCAQMD, have been analyzed under CEQA and have a certified Final CEQA document, and have monitoring and enforcement components. If the proposed project is consistent with the qualifying local GHG reduction plan, it is not significant for GHG emissions. If the project is not consistent with a local GHG reduction plan, there is no approved plan, or the GHG reduction plan does not include all of the components described above, the project would move to Tier 3.
- **Tier 3** establishes a screening significance threshold level to determine significance using a 90 percent GHG emission capture rate. The 90 percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the following methodology. Using the SCAQMD's Annual Emission Reporting (AER) Program, the reported annual natural gas consumption for 1,297 permitted facilities for 2006 through 2007 was compiled and the facilities were rank-ordered to estimate the 90th percentile of the cumulative natural gas usage for all permitted facilities. Approximately 10 percent of facilities evaluated comprise more than 90 percent of the total natural gas consumption, which corresponds to 10,000 metric tons of CO_2 equivalent emissions per year ($MTCO_2e$/yr) (the majority of combustion emissions comprise CO_2). At the November 5, 2009 Board meeting Staff recommended the following GHG screening thresholds: Residential: 3500 tpy CO_2e, Commercial: 1400 tpy CO_2e, Mixed use: 3000 tpy CO_2e. If a project's GHG emissions exceed the GHG screening threshold, the project would move to Tier 4.
- **Tier 4** establishes a decision tree approach that includes compliance options for projects that have incorporated design features into the project and/or implement GHG mitigation measures.

[1] SCAQMD Draft Guidance Document – *Interim CEQA Greenhouse Gas Significance Threshold*. October 2008.

- Option No. 1: Reduction Target (percentage)
  - Max percentage reduction (land use sector reduction-23.9 percent, Scoping Plan overall reduction-28 percent)
  - Target updated as AB 32 Scoping Plan revised
  - Residual emissions not to exceed 25,000 mty CO_2e
  - Base case scenario to be defined
- Option No. 2: Efficiency Target
  - 4.6 mt CO_2e per SP* for project level threshold (land use emissions only) and total residual emissions not to exceed 25,000 mty CO2e
  - 6.6 mt CO_2e per SP for plan level threshold (all sectors)

If a project fails to meet any of these emissions reduction targets and efficiency targets, the project would move to Tier 5.

- **Tier 5** would require projects that implement off-site GHG mitigation that includes purchasing offsets to reduce GHG emission impacts to purchase sufficient offsets for the life of the project (30 years) to reduce GHG emissions to less than the applicable GHG screening threshold level.

The interim GHG significance threshold that was adopted by the SCAQMD Governing Board only applies to stationary source/industrial projects where the SCAQMD is the Lead Agency under CEQA. The types of projects that the significance threshold applies to include: SCAQMD rules, rule amendments, and plans (e.g., AQMPs). In addition, the SCAQMD may be the Lead Agency under CEQA for projects that require discretionary approval (i.e., projects that require air quality permits from the SCAQMD and that allow the SCAQMD to exercise discretion with regard to imposing permit conditions). However, because the project is an institutional use, the SCAQMD interim GHG significance threshold does not apply.

This air quality analysis analyzes whether the project's GHG emissions should be considered cumulatively significant based on the following:

- Hinder attainment of the State's goals of reducing GHG emissions to 1990 levels by 2020, as stated in the Global Warming Solutions Act of 2006. A project may be considered to help attainment of the State's goals by being consistent with an adopted Statewide 2020 GHG emissions limit or the plans, programs, and regulations adopted to implement the Global Warming Solutions Act of 2006.
- Fail to achieve increased energy efficiency or reduce overall GHG emissions from an existing facility.
- Significantly increase the consumption of fuels or other energy resources, especially fossil fuels that contribute to GHG emissions when consumed.

The analysis uses compliance with AB 32, considered a "previously approved mitigation program," as set forth in the CEQA Guidelines Section 15064(h)(3) to determine if the project's incremental contribution of GHGs is a cumulatively considerable contribution to global climate change. OPR's proposed draft amendment to Section 15064.7 of the CEQA Guidelines reinforces the use of this approach. CEQA Guideline Section 15064(h)(3) states three main conditions that a plan must meet to be sufficient for use as a basis for determining significance of GHG emissions. The plan must:

1) Be “a previously approved plan or mitigation program”

2) Provide “specific requirements that will avoid or substantially lessen the cumulative problem”

3) “Be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency.”

AB 32 meets conditions one and three provided above. Accordingly, in addition to determining whether the project’s GHG emissions exceed the SCAQMD’s interim industrial section stationary source threshold, In order to determine the significance of the project GHG emission impact on climate change, consistency or inconsistency with the reduction targets in AB 32 is also evaluated. To do so, project features that implement specific reduction measures identified in the rules and regulations that implement AB 32 were evaluated.

5.0 IMPACTS AND MITIGATION

Because of the nature of the proposed General Plan Update project, no specific construction activity is scheduled or identified for the vacant zones throughout the City. Although air pollutant emissions associated with construction of the individual project on the vacant zones would result in potential short term air quality impacts, such as fugitive dust from site preparation and grading, and emissions from equipment exhaust, no specific construction emissions are calculated due to the unknown nature of these future potential developments. There would be long-term regional emissions associated with growth-related vehicular trips from the development of these vacant zones. Long-term local CO emissions at intersections throughout the City that may be affected by these future developments within the City would not be significantly affected by the growth-related traffic. Long-term stationary source emissions would occur due to energy consumption such as electricity usage by the proposed land uses on these vacant zones.

5.1 CONSTRUCTION IMPACTS

5.1.1 Equipment Exhausts and Related Construction Activities

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

The ARB URBEMIS2007 model can be used to calculate the construction emissions, with a representative set of emissions sources that represent a peak day during the most intense of the construction phases. Construction emissions associated with these future potential development projects could exceed the daily emission threshold established by the SCAQMD.

5.1.2 Fugitive Dust

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, and cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction. If soil will not be balanced on any of the individual development site, the need for import or export of soil during project construction would occur.

Construction emissions can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. Each individual proposed project will be required to comply with SCAQMD Rules 402 and 403 to control fugitive dust. There are a number of feasible control measures that can be reasonably implemented to significantly reduce PM_{10} emissions from construction.

5.1.3 Architectural Coatings

Architectural coatings contain VOCs that are similar to ROCs and are part of the O_3 precursors. No detailed architectural coatings information is available at this time for any of the individual future development project on the vacant zones. Compliance with SCAQMD Rule 1113 on the use of architectural coatings will minimize emissions.

5.1.4 Localized Significance Analysis - Construction

Because of the nature of the proposed General Plan Update project, no specific construction activity is scheduled or identified for any of the vacant zones throughout the City. During the environmental review process for these future potential development projects, one of the following localized significance analyses will need to be preformed: the SCAQMD's LST Screening Analysis for projects with land size of 5 acres of smaller, and the dispersion modeling for projects with land size larger than 5 acres.

5.1.5 Odors

Heavy-duty equipment during construction would emit odors. However, the construction activity would be short term and would cease to occur after construction on each of the future development site is completed.

SCAQMD Rule 402 regarding nuisances states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property." The proposed uses on each of the future development on the vacant zones throughout the City are not anticipated to emit any objectionable odors. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the proposed General Plan Update project.

5.1.6 Naturally Occurring Asbestos

The proposed project is located in Los Angeles County, which is among the counties that are found to have serpentine and ultramafic rock in their soils. However, the City is not within the areas that have known serpentine and ultramafic rock in their soils. Therefore, the potential risk for encountering NOA during construction of the individual project on these vacant zones is small and less than significant.

5.2 LONG-TERM REGIONAL AIR QUALITY IMPACTS

5.2.1 Long-Term Project Operational Emissions

Long-term air emission impacts are those associated with stationary sources and mobile sources involving any growth-related changes from the proposed General Plan Update project. The individual projects on the vacant zones identified in the Land Use Element and listed in the Traffic Impact Analysis (Willdan Engineering, July 19, 2010) within the General Plan Update would result in both stationary and mobile source emissions. The stationary source emissions would come from natural gas consumption, landscape maintenance, and off-site electric power generation. The ARB URBEMIS2007 model was used to calculate the operational emissions, as shown in Table F, which shows potential emissions of mobile sources for each of the land use category identified in the Traffic Impact Analysis projected on these vacant zones. The URBEMIS2007 model does not break out the stationary source emissions from each individual component and therefore Table F shows the aggregate emissions from stationary sources for all vacant zones. Table F shows that the aggregate emissions would result in daily emissions above the SCAQMD daily emission thresholds for CO, ROG, and NOx. Therefore, long-term air quality impacts associated with the proposed General Plan Update project would be significant.

Table F: General Plan Buildout Regional Operational Emissions

Source	Pollutant Emissions, lbs/day					
	CO	**ROG**	**NO_X**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Stationary Sources	98	170	61	0.12	1.6	1.5
Mobile Sources						
Single family housing	440	38	57	0.48	77	15
Condo/townhouse general	16	1.4	2.1	0.02	2.9	0.55
Retirement community	31	2.9	4.0	0.03	5.5	1.1
Day-care center	19	1.6	2.6	0.02	3.5	0.68
Junior college (2 yrs)	160	14	22	0.18	30	5.9
Library	51	4.5	6.9	0.06	9.4	1.8
Place of worship	40	3.6	5.5	0.04	7.4	1.4
General office building	7.8	0.68	1.0	0.01	1.4	0.27
Animal Hospital	25	2.2	3.4	0.03	4.6	0.89
Mausoleum	11	1.0	1.5	0.01	2.0	0.39
Senior Center	20	1.7	2.7	0.02	3.6	0.7
Total Mobile Sources	820	72	110	0.9	150	29
Total Project Emissions	**866**	**115**	**126**	**0.93**	**150**	**29**
SCAQMD Thresholds	**550**	**55**	**55**	**150**	**150**	**55**
Significant?	**Yes**	**Yes**	**Yes**	**No**	**No**	**No**

Source: LSA Associates, Inc., February 2011

CO = carbon monoxide
lbs/day = pounds per day
NO_X = oxides of nitrogen
$PM_{2.5}$ = particulate matter less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter
ROCs = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SO_X = sulfur oxide

5.2.2 Localized Significance Analysis - Operations

Because of the nature of the proposed General Plan Update project, no specific project operations for any of the vacant zones have been identified. Therefore, no site-specific LST analysis is conducted in this analysis. However, during the environmental review process for these future potential development projects, it is anticipated that the SCAQMD's LST Screening Analysis will be sufficient for the evaluation of operational LST and determine if any significant localized impacts would occur.

5.2.3 Greenhouse Gas Emissions

This section is not intended to provide an emissions inventory for the entire City on GHGs; rather, it evaluates potential impacts to global climate change that could result from implementation of the proposed General Plan Update project, which includes potential future development on vacant zones throughout the City, as identified in the Land Use Element and listed in the Traffic Impact Analysis (Willdan Engineering, July 19, 2010). Because it is not possible to tie specific GHG emissions to actual changes in climate, this evaluation focuses on the emission of GHGs by these future individual projects identified in the General Plan Update. Mitigation measures are identified as appropriate.

Emissions estimates for the proposed General Plan Update project are discussed below. GHG emissions estimates are provided herein for informational purposes only, as there is no established quantified GHG emissions threshold. Bearing in mind that CEQA does not require "perfection" but instead "adequacy, completeness, and a good faith effort at full disclosure," the analysis below is based on methodologies and information available to the City at the time this analysis was prepared. Estimation of GHG emissions in the future does not account for all changes in technology that may reduce such emissions; therefore, the estimates are based on past performance and represent a scenario that is worse than that which is likely to be encountered (after energy-efficient technologies have been implemented). While information is presented below to assist the public and the City's decision makers in understanding the project's potential contribution to global climate change impacts, the information available to the City is not sufficiently detailed to allow a direct comparison between particular project characteristics and particular climate change impacts, nor between any particular proposed mitigation measure and any reduction in climate change impacts.

Construction and operation of these individual projects would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during the operation of these projects (as opposed to during their construction). Typically, more than 80 percent of the total energy consumption takes place during the use of buildings, and less than 20 percent is consumed during construction.[1] As of yet, there is no study that quantitatively assesses all the GHG emissions associated with each phase of the construction and use of an individual development.

Overall, the following activities associated with the proposed project could directly or indirectly contribute to the generation of GHG emissions:

1 United Nations Environment Programme (UNEP), 2007. *Buildings and Climate Change: Status, Challenges and Opportunities*, Paris, France.

- **Removal of Vegetation:** The net removal of vegetation for construction results in a loss of the carbon sequestration in plants. However, planting of additional vegetation would result in additional carbon sequestration and would lower the carbon footprint of the project.
- **Construction Activities:** During construction of the individual project on the vacant zones, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O.
- **Gas, Electricity and Water Use:** Natural gas use results in the emissions of two GHGs: CH_4 (the major component of natural gas) and CO_2 (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy-intensive. Preliminary estimates indicate that the total energy used to pump and treat this water exceeds 6.5 percent of the total electricity used in the State per year.[1]
- **Solid Waste Disposal:** Solid waste generated by the future development projects on the vacant zones could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and they produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH_4 from the anaerobic decomposition of organic materials. CH_4 is 25 times more potent a GHG than CO_2. However, landfill CH_4 can also be a source of energy. In addition, many materials in landfills do not decompose fully, and the carbon that remains is sequestered in the landfill and not released into the atmosphere.
- **Motor Vehicle Use:** Transportation associated with the projected growth in the proposed General Plan Update project would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips.

GHG emissions associated with the individual projects projected in the General Plan Update would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. There would also be long-term regional emissions associated with growth-related vehicular trips and stationary source emissions, such as natural gas used for heating. Preliminary guidance from OPR and recent letters from the Attorney General critical of CEQA documents that have taken different approaches indicate that lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, and construction activities. The calculation presented below includes construction emissions in terms of CO_2 and annual CO_2e GHG emissions from increased energy consumption, water usage, solid waste disposal, and estimated GHG emissions from vehicular traffic that would result from implementation of the project.

GHG emissions generated by future development on the vacant zones in the proposed General Plan Update project would predominantly consist of CO_2. In comparison to criteria air pollutants such as O_3 and PM_{10}, CO_2 emissions persist in the atmosphere for a substantially longer period of time. While emissions of other GHGs, such as CH_4, are important with respect to global climate change, emission

[1] California Energy Commission (CEC), 2004. *Water Energy Use in California* (online information sheet) Sacramento, CA, August 24. Website: energy.ca.gov/pier/iaw/industry/water.html. Accessed July 24, 2007.

levels of other GHGs are less dependent on the land use and circulation patterns associated with the proposed land use development project than are levels of CO_2.

Construction activities for potential development on each of the vacant zones produce combustion emissions from various sources such as site grading, utility engines, heavy-duty construction vehicles, equipment hauling materials to and from these individual sites, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from construction activities on each individual development site would vary daily as construction activity levels change.

The actual details of the future construction schedule for each of these vacant zones are not known. The only GHG with well-studied emissions characteristics and published emissions factors for construction equipment is CO_2. Each of the individual development projects located in the vacant zones would be required to implement the construction exhaust control measures listed in Section 5.6, including minimization of construction equipment idling and implementation of proper engine tuning and exhaust controls. Both of these measures would reduce GHG emissions during the construction period (but other measures may be required to further reduce GHG emissions).

Architectural coatings used in construction of these future individual project may contain VOCs that are similar to ROGs and are part of O_3 precursors. However, there are no significant emissions of GHGs from architectural coatings.

Long-term operations of future developments on the vacant zones in the proposed General Plan Update project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would include General Plan Update project-generated vehicle trips associated with proposed uses and/or visitors/deliveries to the individual project site. Area-source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, natural gas for heating, and other sources. Increases in stationary source emissions would also occur at off-site utility providers as a result of demand for electricity, natural gas, and water by the proposed uses.

Table G shows the GHG emissions associated with the aggregate level of development envisioned on these vacant zones at build out of the General Plan Update project. Appendix D includes the worksheets for the GHG emissions.

Due to the global nature of this climate change phenomenon and the scale of the emissions, total emissions are expressed in units of teragrams (a trillion [10^{12}] grams or one million metric tons) per year (Tg/year). This is the standard metric unit used worldwide. As shown in Table G, the individual developments envisioned on the vacant zones combined will produce 22,000 metric tons per year of CO_2e, which is approximately 0.0022 Tg/year of CO_2e. As a comparison, the existing emissions from the entire SCAG region are estimated to be approximately 176.79 Tg/year of CO_2e and approximately 496.95 Tg/year of CO_2e 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 speculative to determine how project-related GHG emissions would contribute to global climate change and how global climate change may impact the State. Therefore, project-related GHG emissions are not project-specific impacts to global warming but are instead the project’s contribution to this cumulative impact.

Energy and Natural Gas Use. Buildings represent 39 percent of the United States' primary energy usage and 70 percent of electricity consumption.[1] The proposed General Plan Update project would increase the demand for electricity and natural gas due to the increased residential and commercial building area and the number of residents and employees. The project as a whole would indirectly result in increased GHG emissions from off-site electricity generation at power plants (a portion of 2,200 metric tons of CO_2e/year).

Table G: General Plan Buildout Greenhouse Gas Emissions

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	CO_2e
Vehicles[1]	15,000	0.59	1.2	15,000
Electricity Production	2,200	0.024	0.013	2,200
Natural Gas Combustion[1]	2,300	0.037	0.035	2,300
Solid Waste	1,200	--	--	1,200
Other Area Sources[2]	1,000	--	--	1,000
Total Annual Emissions	22,000	0.65	1.2	22,000

Source: LSA Associates, Inc., February 2011.
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 output.
[2] Includes CO_2 emissions for hearth combustion and landscaping equipment from URBEMIS 2007 output.
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide

Water Use. Water-related energy use consumes 19 percent of the State's electricity every year.[2] Energy use and related GHG emissions are based on electricity used for water supply and conveyance, water treatment, water distribution, and wastewater treatment. The General Plan Update project would indirectly result in increased GHG emissions from the off-site electricity generation at power plants (the remainder of the 2,200 metric tons of CO_2e/year).

Solid Waste Disposal. The proposed General Plan Update project would also generate solid waste during the operation phase of the project after project build-out. Average waste generation rates from a variety of sources are available from the California Integrated Waste Management Board.[3] The future development on the vacant zones in General Plan Update project would collectively and indirectly result in increased GHG emissions from solid waste treatment at treatment plants (approximately 1,200 metric tons of CO_2e/year).

[1] United States Department of Energy. 2003. *Buildings Energy Data Book.*
[2] California, State of, 2005. California Energy Commission. California's Water-Energy Relationship. November.
[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.

Mobile Sources. Mobile sources (vehicle trips and associated miles traveled) are one of the largest sources of GHG emissions in California and represent approximately 69 percent of annual CO_2 emissions generated in the State. Like most land use development projects, vehicle miles traveled (VMT) is the most direct indicator of CO_2 emissions from the proposed General Plan Update project, and associated CO_2 emissions function as the best indicator of total GHG emissions.

Summary. The proposed project would generate up to 22,000 metric tons of CO_2e per year of new emissions, as shown in Table G. The emissions from solid waste disposal would comprise approximately 6.0 percent of the project's total CO_2e emissions. The emissions from vehicle exhaust would comprise approximately 69 percent of the project's total CO_2e emissions. The emissions from vehicle exhaust are controlled by the State and federal governments and are outside the control of the City.

The remaining CO_2e emissions are primarily associated with building heating systems and increased regional power plant electricity generation due to electrical demands. Specific development projects proposed under the General Plan Update project would comply with existing State and federal regulations regarding the energy efficiency of buildings, appliances, and lighting, which would reduce the General Plan Update project's electricity demand. The new buildings constructed in accordance with current energy efficiency standards would be more energy efficient than older buildings. However, in the absence of supplementary mitigation measures, the project would obstruct the implementation of GHG reduction goals under AB 32.

At present, there is a federal ban on CFCs; therefore, it is assumed the project would not generate emissions of CFCs. The project may emit a small amount of hydrofluorocarbon (HFC) emissions from leakage and service of refrigeration and air conditioning equipment and from disposal at the end of the life of the equipment. However, the details regarding refrigerants to be used in the project site are unknown at this time. Perfluorinated carbons (PFCs) and sulfur hexafluoride are typically used in industrial applications, none of which would be used on the project site. Therefore, it is not anticipated that the project would contribute significant emissions of these additional GHGs.

Implementation of the General Plan Update project could result in GHG emission levels that would substantially conflict with implementation of the GHG reduction goals under AB 32 or other State regulations. The California Environmental Protection Agency CAT and ARB have developed several reports to achieve the Governor's GHG targets that rely on voluntary actions of California businesses, local government and community groups, and State incentive and regulatory programs. These include the CAT's 2006 "*Report to Governor Schwarzenegger and the Legislature*," ARB's 2007 "*Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California*," and ARB's "*Climate Change Proposed Scoping Plan: a Framework for Change.*"

The reports identify strategies to reduce California's emissions to the levels proposed in Executive Order S-3-05 and AB 32 that are applicable to proposed project. The Proposed Scoping Plan is the most recent document, and the strategies included in the Scoping Plan that apply to the project are contained in Table H, which also summarizes the extent to which the General Plan Update project

Table H: Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy	Project Compliance
Energy Efficiency Measures	
Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities). **Renewables Portfolio Standard.** Achieve a 33 percent renewable energy mix statewide. **Green Building Strategy.** Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Compliant with Mitigation Incorporated.** The proposed individual projects on the vacant zones would be required to comply with the updated Title 24 standards for building construction. In addition, the projects would be required to comply with the requirements of Minimization Measure GCC-1, identified below, including measures to incorporate energy-efficient building design features.
Water Conservation and Efficiency Measures	
Water Use Efficiency. Continue efficiency programs and use cleaner energy sources to move and treat water. Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions.	**Compliant with Mitigation Incorporated.** The proposed individual projects on the vacant zones would be required to comply with the requirements of Minimization Measure GCC-1, identified below, including measures to increase water use efficiency.
Solid Waste Reduction Measures	
Increase Waste Diversion, Composting, and Commercial Recycling, and Move Toward Zero-Waste. Increase waste diversion from landfills beyond the 50 percent mandate to provide for additional recovery of recyclable materials. Composting and commercial recycling could have substantial GHG reduction benefits. In the long term, zero-waste policies that would require manufacturers to design products to be fully recyclable may be necessary.	**Compliant with Mitigation Incorporated.** Data available from the CIWMB indicates that the City of Rancho Palos Verdes has not achieved the 50 percent diversion rate. The proposed General Plan Update project would be required to comply with Minimization Measure GCC-1, identified below, including measures to increase solid waste diversion, composting, and recycling.
Transportation and Motor Vehicle Measures	
Vehicle Climate Change Standards. AB 1493 (Pavley) required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles and light duty trucks. Regulations were adopted by ARB in September 2004. **Light-Duty Vehicle Efficiency Measures.** Implement additional measures that could reduce light-duty GHG emissions. For example, measures to ensure that tires are properly inflated can both reduce GHG emissions and improve fuel efficiency. **Adopt Heavy- and Medium-Duty Fuel and Engine Efficiency Measures.** Regulations to require retrofits to improve the fuel efficiency of heavy-duty trucks that could include devices that reduce aerodynamic drag and rolling resistance. This measure could also include hybridization of and increased engine efficiency of vehicles.	**Compliant.** The proposed General Plan Update project does not involve the manufacture, sale, or purchase of vehicles. However, vehicles that operate within the City on the individual project development sites would comply with any vehicle and fuel standards ARB adopts.

Table H: Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy	Project Compliance
Low Carbon Fuel Standard. ARB identified this measure as a Discrete Early Action Measure. This measure would reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.	
Regional Transportation-Related Greenhouse Gas Targets. Develop regional GHG emissions reduction targets for passenger vehicles. Local governments will play a significant role in the regional planning process to reach passenger vehicle GHG emissions reduction targets. Local governments have the ability to directly influence both the siting and design of new residential and commercial developments in a way that reduces GHGs associated with vehicle travel.	**Compliant.** Specific regional emissions targets for transportation emissions do not directly apply to this General Plan Update project; regional GHG reduction target development is outside the scope of this project. The General Plan Update project will comply with any plans developed by the Los Angeles County or SCAG.
Measures to Reduce High Global Warming Potential (GWP) Gases. ARB has identified Discrete Early Action measures to reduce GHG emissions from the refrigerants used in car air conditioners, semiconductor manufacturing, and consumer products. ARB has also identified potential reduction opportunities for future commercial and industrial refrigeration, changing the refrigerants used in auto air conditioning systems, and ensuring that existing car air conditioning systems do not leak.	**Compliant.** New products used or serviced on the project sites (after implementation of the reduction of GHGs) would comply with future ARB rules and regulations.

Source: LSA Associates, Inc., August 2010.
ARB = California Air Resources Board
CIWMB = California Integrated Waste Management Board
GHG = greenhouse gas
SCAG = Southern California Association of Governments

would comply with the strategies to help California reach the emission reduction targets. Table G shows this General Plan Update project is expected to produce approximately 22,000 metric tons of CO_2e per year, or 0.0022 $MMTCO_2E$ per year; thus, none of Measure 11 applies to this project.

The strategies listed in Table H are either part of the General Plan Update project, required mitigation measures, or requirements under local or State ordinances. With implementation of these strategies/measures, the project's contribution to cumulative GHG emissions would be reduced.

In order to ensure that the proposed General Plan Update project complies with and would not conflict with or impede the implementation of reduction goals identified in AB 32, the Governor's Executive Order S-3-05, and other strategies to help reduce GHGs to the level proposed by the Governor, Minimization Measure GCC-1 shall be implemented. Many of the individual elements of this measure are already included as part of the proposed General Plan Update project or are required as part of project-specific mitigation measures.

5.3 LONG-TERM MICROSCALE (CO HOT-SPOT) ANALYSIS

Vehicular trips associated with the proposed individual projects on the vacant zones throughout the City would contribute to congestion at intersections and along roadway segments in the vicinity of these vacant zones. Localized air quality impacts would occur when emissions from vehicular traffic increase in local areas as a result of the future individual projects. The primary mobile source pollutant of local concern is CO, which is a direct function of vehicle idling time and, thus, traffic flow conditions. CO transport is extremely limited; it disperses rapidly with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations proximate to a congested roadway or intersection may reach unhealthful levels affecting local sensitive receptors (residents, school children, the elderly, hospital patients, etc).

Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the North Long Beach Station, the closest station with monitored CO data, showed a highest recorded 1-hour concentration of 4.2 ppm (State standard is 20 ppm) and a highest 8-hour concentration of 3.4 ppm (State standard is 9 ppm) during the past 3 years (see Table E).

The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis. Based on the same TIA used for the long-term regional analysis above, and since no separate peak-hour intersection turn volumes were analyzed for the four individual projects, CO hot-spot analyses were conducted for existing and General Plan build out with and without project conditions. The impact on local CO levels was assessed with ARB approved CALINE4 air quality model, which allows microscale CO concentrations to be estimated along roadway corridors or near intersections. This model is designed to identify localized concentrations of CO, often termed "hot spots." A brief discussion of input to the CALINE4 model follows. The analysis was performed for the worst-case wind angle and wind speed condition and is based upon the following assumptions:

- Selected modeling locations represent the intersections closest to the project site, with the highest project-related vehicle turning movements and the worst level of service deterioration.
- Twenty receptor locations with the possibility of extended outdoor exposure from 7 to 17 m (approximately 23 to 56 ft) of the roadway centerline near intersections were modeled to determine CO concentrations, following Caltrans CO modeling protocol.
- The calculations assume a meteorological condition of almost no wind (0.5 m/second), a suburban topographical condition between the source and receptor, and a mixing height of 1,000 m, representing a worst-case scenario for CO concentrations.
- CO concentrations are calculated for the 1-hour averaging period and then compared to the 1-hour standards. CO 8-hour averages are extrapolated using techniques outlined in the SCAQMD

CEQA Handbook (updated April 1993) and compared to the 8-hour standards; a persistence factor of 0.7 was used to predict the 8-hour concentration.

- Concentrations are given in parts per million at each of the receptor locations.
- The “at-grade” link option with speed adjusted based on average cruise speed and number of vehicles per lane per hour was used rather than the “intersection” link selection in the CALINE4 model (Caltrans has suggested that the “intersection” link should not be used due to an inappropriate algorithm based on outdated vehicle distribution.) Emission factors from the EMFAC2007 model were used for the vehicle fleet.
- The highest levels of the second highest 1-hour and 8-hour CO concentrations monitored at the North Long Beach Station in the past 3 years were used as background concentrations (4.0 ppm for the 1-hour CO and 3.3 ppm for the 8-hour CO), as specified in Appendix B of the Caltrans CO Protocol. The “background” concentrations are then added to the model results for future with and without the proposed project conditions.

Table I lists the CO concentrations at 22 existing signalized intersections analyzed in the Traffic Impact Analysis (Willdan Engineering, July 19, 2010) for the existing and General Plan Buildout scenarios. As shown in Table I, under the existing conditions, the intersections analyzed for the daily peak hour would experience 1-hour and 8-hour CO concentrations below the federal and State standards. The existing CO concentrations are from current traffic in the vicinity of these intersections. Table I also shows that the CO concentrations under the General Plan build out scenario would result in at most a 1 ppm increase to the 1-hour and 8-hour CO concentrations, respectively, and all CO concentrations would be below the corresponding State and federal CO standards. Because no CO hot spots would occur, the proposed General Plan Update project would not have a significant impact on local air quality for CO, and no mitigation measures would be required.

Table I: Existing vs General Plan Buildout CO Concentrations from Traffic

Intersection	Distance from Road Centerline to Maximum CO Concentration Existing/Buildout (Meters)	Existing/Buildout One-Hour CO Concentration (ppm)	Project Related One-Hour CO Concentration Increase (ppm)	Existing/Buildout Eight-Hour CO Concentration (ppm)	Project Related Eight-Hour CO Concentration Increase (ppm)	Exceeds State Standards	
						1-Hr (20 ppm)	8-Hr (9 ppm)
Palos Verdes Drive West and Hawthorne Boulevard	8 / 8	4.9 / 5.9	1.0	3.9 / 4.6	0.7	No	No
	8 / 14	4.8 / 5.6	0.8	3.9 / 4.4	0.5	No	No
	14 / 8	4.8 / 5.5	0.7	3.9 / 4.4	0.5	No	No
	14 / 14	4.8 / 5.5	0.7	3.9 / 4.4	0.5	No	No
Palos Verdes Drive West and Lower Point Vicente Park Entrance	7 / 7	4.7 / 5.3	0.6	3.8 / 4.2	0.4	No	No
	7 / 14	4.6 / 5.2	0.6	3.7 / 4.1	0.4	No	No
	7 / 7	4.6 / 5.1	0.5	3.7 / 4.1	0.4	No	No
	7 / 14	4.6 / 5.1	0.5	3.7 / 4.1	0.4	No	No
Via Rivera and Hawthorne Boulevard	8 / 8	4.7 / 5.2	0.5	3.8 / 4.1	0.3	No	No
	8 / 17	4.6 / 5.2	0.6	3.7 / 4.1	0.4	No	No
	8 / 8	4.6 / 5.1	0.5	3.7 / 4.1	0.4	No	No
	17 / 8	4.6 / 5.0	0.4	3.7 / 4.0	0.3	No	No
Hawthorne Boulevard and Eddinghill Drive – Seamount	8 / 14	5.0 / 4.9	-0.1	4.0 / 3.9	-0.1	No	No
	14 / 8	5.0 / 4.8	-0.2	4.0 / 3.9	-0.1	No	No
	8 / 8	4.9 / 4.8	-0.1	3.9 / 3.9	0.0	No	No
	14 / 8	4.8 / 4.8	0.0	3.9 / 3.9	0.0	No	No
Hawthorne Boulevard and Crest Rd.	14 / 14	4.8 / 5.4	0.6	3.9 / 4.3	0.4	No	No
	14 / 14	4.8 / 5.3	0.5	3.9 / 4.2	0.3	No	No
	17 / 14	4.8 / 5.2	0.4	3.9 / 4.1	0.2	No	No
	14 / 15	4.7 / 5.2	0.5	3.8 / 4.1	0.3	No	No
Hawthorne Boulevard and Dupre Drive – R. E. Ryan Park Driveway	8 / 14	4.7 / 5.4	0.7	3.8 / 4.3	0.5	No	No
	10 / 8	4.7 / 5.3	0.6	3.8 / 4.2	0.4	No	No
	14 / 10	4.7 / 5.3	0.6	3.8 / 4.2	0.4	No	No
	10 / 8	4.6 / 5.1	0.5	3.7 / 4.1	0.4	No	No
Hawthorne Boulevard and Vallon Drive	10 / 10	4.7 / 5.3	0.6	3.8 / 4.2	0.4	No	No
	17 / 17	4.7 / 5.3	0.6	3.8 / 4.2	0.4	No	No
	10 / 8	4.6 / 5.2	0.6	3.7 / 4.1	0.4	No	No
	8 / 17	4.6 / 5.1	0.5	3.7 / 4.1	0.4	No	No

Crestmont Lane – Terranea Way and Palos Verdes Drive	12 / 12	4.6 / 5.3	0.7	3.7 / 4.2	0.5	No	No
	8 / 17	4.6 / 5.2	0.6	3.7 / 4.1	0.4	No	No
	15 / 8	4.6 / 5.1	0.5	3.7 / 4.1	0.4	No	No
	17 / 14	4.6 / 5.1	0.5	3.7 / 4.1	0.4	No	No
Gravania Altamira – Ridgegate Drive and Hawthorne Boulevard	14 / 14	5.5 / 6.6	1.1	4.4 / 5.1	0.7	No	No
	17 / 17	5.3 / 6.6	1.3	4.2 / 5.1	0.9	No	No
	10 / 14	5.2 / 6.5	1.3	4.1 / 5.1	1.0	No	No
	10 / 10	5.2 / 6.4	1.2	4.1 / 5.0	0.9	No	No
Grayslake Road – Highridge Road and Hawthorne Boulevard	14 / 14	5.8 / 5.8	0.0	4.6 / 4.6	0.0	No	No
	17 / 17	5.8 / 5.8	0.0	4.6 / 4.6	0.0	No	No
	14 / 14	5.7 / 5.7	0.0	4.5 / 4.5	0.0	No	No
	14 / 14	5.6 / 5.6	0.0	4.4 / 4.4	0.0	No	No
Highridge Road and Crest Rd.	12 / 12	4.5 / 4.9	0.4	3.7 / 3.9	0.2	No	No
	12 / 14	4.5 / 4.9	0.4	3.7 / 3.9	0.2	No	No
	14 / 12	4.5 / 4.8	0.3	3.7 / 3.9	0.2	No	No
	14 / 14	4.5 / 4.8	0.3	3.7 / 3.9	0.2	No	No
Silver Spur Road and Basswood Avenue	12 / 12	4.6 / 4.7	0.1	3.7 / 3.8	0.1	No	No
	12 / 12	4.6 / 4.7	0.1	3.7 / 3.8	0.1	No	No
	12 / 12	4.6 / 4.7	0.1	3.7 / 3.8	0.1	No	No
	12 / 12	4.5 / 4.6	0.1	3.7 / 3.7	0.0	No	No
Hawthorne Boulevard and Blackhorse Road	14 / 14	5.3 / 5.9	0.6	4.2 / 4.6	0.4	No	No
	7 / 7	5.2 / 5.8	0.6	4.1 / 4.6	0.5	No	No
	7 / 7	5.2 / 5.7	0.5	4.1 / 4.5	0.4	No	No
	7 / 7	5.1 / 5.6	0.5	4.1 / 4.4	0.3	No	No
Crenshaw Boulevard and Indian Peak Road	12 / 12	5.3 / 6.0	0.7	4.2 / 4.7	0.5	No	No
	14 / 14	5.2 / 5.7	0.5	4.1 / 4.5	0.4	No	No
	7 / 7	5.0 / 5.6	0.6	4.0 / 4.4	0.4	No	No
	14 / 14	5.0 / 5.5	0.5	4.0 / 4.4	0.4	No	No
Crenshaw Boulevard and Crestridge Road	12 / 12	5.3 / 5.7	0.4	4.2 / 4.5	0.3	No	No
	10 / 10	5.1 / 5.7	0.6	4.1 / 4.5	0.4	No	No
	17 / 12	5.1 / 5.4	0.3	4.1 / 4.3	0.2	No	No
	10 / 12	4.9 / 5.3	0.4	3.9 / 4.2	0.3	No	No
Crenshaw Boulevard and Crest Road	10 / 10	5.0 / 5.8	0.8	4.0 / 4.6	0.6	No	No
	14 / 14	4.9 / 5.6	0.7	3.9 / 4.4	0.5	No	No
	10 / 10	4.8 / 5.5	0.7	3.9 / 4.4	0.5	No	No

	10 / 10	4.8 / 5.4	0.6	3.9 / 4.3	0.4	No	No
Forrestal Drive – Ocean Trails Drive and Palos Verdes Drive South	12 / 14	4.8 / 5.6	0.8	3.9 / 4.4	0.5	No	No
	14 / 12	4.8 / 5.5	0.7	3.9 / 4.4	0.5	No	No
	14 / 14	4.8 / 5.5	0.7	3.9 / 4.4	0.5	No	No
	12 / 14	4.7 / 5.5	0.8	3.8 / 4.4	0.6	No	No
Palos Verdes Drive East and Miraleste Drive	7 / 7	5.3 / 5.7	0.4	4.2 / 4.5	0.3	No	No
	12 / 7	5.3 / 5.6	0.3	4.2 / 4.4	0.2	No	No
	7 / 12	5.3 / 5.6	0.3	4.2 / 4.4	0.2	No	No
	7 / 7	5.1 / 5.4	0.3	4.1 / 4.3	0.2	No	No
Palos Verdes Drive East and Crest Road – Marymount College Driveway	10 / 8	4.4 / 4.6	0.2	3.6 / 3.7	0.1	No	No
	8 / 10	4.4 / 4.6	0.2	3.6 / 3.7	0.1	No	No
	17 / 10	4.4 / 4.5	0.1	3.6 / 3.7	0.1	No	No
	10 / 8	4.3 / 4.5	0.2	3.5 / 3.7	0.2	No	No
Palos Verdes Drive East and Palos Verdes Drive South	7 / 12	4.8 / 5.6	0.8	3.9 / 4.4	0.5	No	No
	12 / 7	4.8 / 5.5	0.7	3.9 / 4.4	0.5	No	No
	7 / 7	4.8 / 5.4	0.6	3.9 / 4.3	0.4	No	No
	12 / 10	4.8 / 5.4	0.6	3.9 / 4.3	0.4	No	No
Miraleste Drive and 1st Street	7 / 7	4.7 / 5.0	0.3	3.8 / 4.0	0.2	No	No
	12 / 12	4.7 / 4.9	0.2	3.8 / 3.9	0.1	No	No
	12 / 12	4.6 / 4.9	0.3	3.7 / 3.9	0.2	No	No
	7 / 7	4.6 / 4.8	0.2	3.7 / 3.9	0.2	No	No
Western Avenue and Toscanini Drive	14 / 14	5.7 / 6.0	0.3	4.5 / 4.7	0.2	No	No
	10 / 10	5.6 / 5.9	0.3	4.4 / 4.6	0.2	No	No
	17 / 10	5.6 / 5.9	0.3	4.4 / 4.6	0.2	No	No
	10 / 14	5.5 / 5.4	-0.1	4.4 / 4.3	-0.1	No	No

Source: LSA Associates, Inc., August 2010.
Includes ambient one-hour concentration of 4.0 ppm and ambient eight-hour concentration of 3.3 ppm. Measured at the 3648 N. Long Beach Blvd., Long Beach, CA AQ Station in Los Angeles County.
CO = carbon monoxide Hr = hour ppm = parts per million

5.4 AIR QUALITY MANAGEMENT PLAN CONSISTENCY

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. It fulfills the CEQA goal of fully informing local agency decision makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

The project is proposed to update and amend the City's General Plan and Zoning Designations, which will then not be consistent with the SCAG RCP Guidelines and the SCAQMD AQMP that incorporate the previous City General Plan and Zoning Designations. Until the City approves the new General Plan and the SCAG and SCAQMD review, approve and incorporate it into their regional plans, the proposed project is not consistent with the General Plan and the regional RCP and AQMP. This is a potentially significant impact.

5.5 STANDARD CONDITIONS

5.5.1 Construction Impacts

Each of the proposed individual projects on the vacant zones identified in the Land Use Element and listed in the Traffic Impact Analysis (Willdan Engineering, July 19, 2010) is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on sensitive receptors in the vicinity of these individual projects.

The applicable Rule 403 measures are as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least twice daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 m (2 ft) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code (CVC) section 23114.
- Pave construction access roads at least 30 m (100 ft) onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.

5.5.2 Project Operations

The General Plan Update project would result in total (vehicular and stationary) daily emissions that exceed the daily emissions thresholds established by the SCAQMD. The emissions from vehicle exhaust are controlled by the State and federal governments and are outside the control of the City. The proposed General Plan Update project is required to comply with Title 24 of the California Code of Regulations established by the Energy Commission regarding energy conservation standards. The following shall be incorporated in building plans for the future development on the vacant zones:

- Low-emission water heaters shall be used. Solar water heaters are encouraged.
- Exterior windows shall utilize window treatments for efficient energy conservation

5.6 MITIGATION MEASURES

5.6.1 Construction Impacts

The following measures shall be incorporated in the environmental review process for future developments on the vacant zones throughout the City, identified in the Land Use Element and listed in the Traffic Impact Analysis:

A. The following dust suppression measures in the SCAQMD's CEQA Handbook are included as part of the construction mitigation:

- Revegetate disturbed areas as quickly as possible.
- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph.
- Sweep all streets once per day if visible soil materials are carried to adjacent streets (recommend water sweepers with reclaimed water).
- Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash trucks and any equipment leaving the site.
- Pave, water, or chemically stabilize all on-site roads as soon as feasible.
- Minimize at all time the area disturbed by clearing, grading, earthmoving, or excavation operations.

B. The Construction Contractor shall select the construction equipment used based on low-emission factors and high energy efficiency. The Construction Contractor shall ensure that construction grading plans include a statement that all construction equipment will be tuned and maintained in accordance with the manufacturer's specifications. In addition, all trucks shall not idle continuously for more than 5 minutes at any one time.

C. The Construction Contractor shall utilize electric or alternative-fuel-powered equipment in lieu of gasoline- or diesel-powered engines where feasible.

D. The Construction Contractor shall ensure that construction grading plans include a statement that work crews will shut off equipment not in use. During smog season (May through October), the overall length of the construction period will be extended, thereby decreasing the size of the area prepared each day, to minimize vehicles and equipment operating at the same time.

E. The Construction Contractor shall time the construction activities so as to not interfere with peak-hour traffic and minimize obstruction of through traffic lanes adjacent to the site; if necessary, a flagperson shall be retained to maintain safety adjacent to existing roadways.

F. The Construction Contractor shall support and encourage ridesharing and transit incentives for the construction crew.

5.6.2 Global Climate Change Impacts

Minimization Measure GCC-1. To the extent feasible and to the satisfaction of the City, the following measures shall be incorporated into the design and construction of the individual future development projects (including specific building projects) on the vacant zones:

Construction and Building Materials.

- Use locally produced and/or manufactured building materials for at least 10 percent of the construction materials used for the project;
- Recycle/reuse at least 50 percent of the demolished construction material (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard); and
- Use “Green Building Materials,” such as those materials that are resource efficient, and recycled and manufactured in an environmentally friendly way for at least 10 percent of the project.

Energy Efficiency Measures.

- Design all project buildings to exceed California Building Code’s Title 24 energy standard, including, but not limited to any combination of the following:
  - Increase insulation such that heat transfer and thermal bridging is minimized;
  - Limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption; and
  - Incorporate ENERGY STAR or better rated windows, space heating and cooling equipment, light fixtures, appliances or other applicable electrical equipment.
- Provide a landscape and development plan for the project that takes advantage of shade, prevailing winds, and landscaping;
- Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings;
- Install light colored “cool” roofs and cool pavements;
- Install energy efficient heating and cooling systems, appliances and equipment, and control systems; and
- Install solar or light-emitting diodes (LEDs) for outdoor lighting.

Water Conservation and Efficiency Measures.

- Devise a comprehensive water conservation strategy appropriate for the project and location. The strategy may include the following, plus other innovative measures that might be appropriate:
  - Create water-efficient landscapes within the development;
  - Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls;
  - Use reclaimed water for landscape irrigation within the project. Install the infrastructure to deliver and use reclaimed water;
  - Design buildings to be water-efficient. Install water-efficient fixtures and appliances, including low-flow faucets, dual-flush toilets and waterless urinals; and
  - Restrict watering methods (e.g., prohibit systems that apply water to nonvegetated surfaces) and control runoff.

Solid Waste Measures.

- Provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas; and
- Provide employee education about reducing waste and available recycling services.

In addition, the project would also be subject to all applicable regulatory requirements, which would also reduce the GHG emissions of the project. After implementation of Minimization Measure GCC-1 and application of regulatory requirements, the project would implement appropriate GHG reduction strategies and would not conflict with or impede implementation of reduction goals identified in AB 32, the Governor's Executive Order S-3-05, and other strategies to help reduce GHGs to the level proposed by the Governor. Therefore, the contribution of the General Plan Update to cumulative GHG emissions would be reduced to a less than significant level.

5.7 CUMULATIVE IMPACTS

The individual projects included in the General Plan Update would contribute criteria pollutants to the area during temporary project construction. Emissions during construction of individual development on the vacant zones could potentially exceed the criteria pollutant thresholds established by the SCAQMD if two or more individual developments are under construction at the same time with similar schedules. However, given that this is a General Plan covering a 30 year planning period and the individual projects could be constructed any time during that period, the likelihood of concurrent construction is low. Additionally, compliance with SCAQMD rules and regulations during construction will minimize construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. Depending on the location of these vacant zones and the proximity of adjacent sensitive uses, each proposed General Plan Update project alone could potentially exceed the localized significance thresholds (LSTs) during construction. Construction emissions associated with development at the vacant zones identified in the General Plan Update could thus be potentially significant.

The aggregate long-term operational emissions from future development on the vacant zones would result in daily emissions above the SCAQMD daily emission thresholds for CO, ROG, and NOx. Therefore, long-term air quality impacts associated with the proposed General Plan Update project would be significant.

5.8 IMPACTS TO THE PROPOSED PROJECT FROM GLOBAL CLIMATE CHANGE

Local temperatures could increase in time as a result of global climate change, with or without development as envisioned by the General Plan Update project. This increase in temperature could lead to other climate effects including, but not limited to, increased flooding due to increased precipitation and runoff. At present, the extent of climate change impacts is uncertain, and more extensive monitoring of runoff is necessary for greater understanding of changes in hydrologic patterns. Studies indicate that increased temperatures could result in a greater portion of peak streamflows occurring earlier in the spring, with decreases in late spring and early summer. These changes could have implications for water supply, flood management, and ecosystem health. In addition, there is a potential for sea level rising due to global warming. Based on the location of the City, the proposed General Plan Update project may be significantly affected by global climate change for its coastal areas.

6.0 REFERENCES

California Air Resources Board website: http://www.arb.ca.gov.

California Air Resources Board. *Climate Change Scoping Plan*, December 2008.

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

South Coast Air Quality Management District. *Final Localized Significance Threshold Methodology*. June 2003, Revised July 2008.

South Coast Air Quality Management District. *Final – Methodology to Calculate Particulate Matter* $(PM)_{2.5}$ *and* $PM_{2.5}$ *Significance Thresholds*. October 2006.

South Coast Air Quality Management District. *Rule 701*. June 13, 1997.

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APPENDIX A

URBEMIS2007 MODEL PRINTOUTS

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: P:\PVE0701\Modeling\GPBO-Rev.urb924

Project Name: Rancho Palos Verdes General Plan Buildout

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)	42.93	11.61	45.60	0.00	0.14	0.14	14,132.56
TOTALS (lbs/day, mitigated)	42.93	11.61	45.60	0.00	0.14	0.14	14,132.56
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	66.17	90.54	821.64	0.90	147.74	28.77	88,274.34
TOTALS (lbs/day, mitigated)	66.17	90.54	821.64	0.90	147.74	28.77	88,274.34
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	109.10	102.15	867.24	0.90	147.88	28.91	102,406.90
TOTALS (lbs/day, mitigated)	109.10	102.15	867.24	0.90	147.88	28.91	102,406.90
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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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	0.85	11.13	5.51	0.00	0.02	0.02	14,064.91
Hearth - No Summer Emissions							
Landscape	5.68	0.48	40.09	0.00	0.12	0.12	67.65
Consumer Products	29.70						
Architectural Coatings	6.70						
TOTALS (lbs/day, unmitigated)	42.93	11.61	45.60	0.00	0.14	0.14	14,132.56

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.85	11.13	5.51	0.00	0.02	0.02	14,064.91
Hearth - No Summer Emissions							
Landscape	5.68	0.48	40.09	0.00	0.12	0.12	67.65
Consumer Products	29.70						
Architectural Coatings	6.70						
TOTALS (lbs/day, mitigated)	42.93	11.61	45.60	0.00	0.14	0.14	14,132.56

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
Single family housing	35.27	47.31	436.83	0.48	77.28	15.06	46,328.14
Condo/townhouse general	1.37	1.74	16.10	0.02	2.85	0.55	1,707.02
Retirement community	2.89	3.35	30.91	0.03	5.47	1.07	3,278.38
Day-care center	1.44	2.16	19.11	0.02	3.52	0.68	2,092.93
Junior college (2 yrs)	12.76	18.60	164.57	0.18	30.30	5.90	18,020.39
Library	4.01	5.74	50.78	0.06	9.35	1.82	5,560.50
Place of worship	3.40	4.53	40.00	0.04	7.38	1.44	4,384.52

General office building	0.62	0.86	7.76	0.01	1.41	0.27	839.21
Animal Hospital	1.89	2.80	25.15	0.03	4.58	0.89	2,729.14
Mausoleum	1.00	1.24	10.92	0.01	2.01	0.39	1,197.38
Senior Center	1.52	2.21	19.51	0.02	3.59	0.70	2,136.73
TOTALS (lbs/day, unmitigated)	66.17	90.54	821.64	0.90	147.74	28.77	88,274.34

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	35.27	47.31	436.83	0.48	77.28	15.06	46,328.14
Condo/townhouse general	1.37	1.74	16.10	0.02	2.85	0.55	1,707.02
Retirement community	2.89	3.35	30.91	0.03	5.47	1.07	3,278.38
Day-care center	1.44	2.16	19.11	0.02	3.52	0.68	2,092.93
Junior college (2 yrs)	12.76	18.60	164.57	0.18	30.30	5.90	18,020.39
Library	4.01	5.74	50.78	0.06	9.35	1.82	5,560.50
Place of worship	3.40	4.53	40.00	0.04	7.38	1.44	4,384.52
General office building	0.62	0.86	7.76	0.01	1.41	0.27	839.21
Animal Hospital	1.89	2.80	25.15	0.03	4.58	0.89	2,729.14
Mausoleum	1.00	1.24	10.92	0.01	2.01	0.39	1,197.38
Senior Center	1.52	2.21	19.51	0.02	3.59	0.70	2,136.73
TOTALS (lbs/day, mitigated)	66.17	90.54	821.64	0.90	147.74	28.77	88,274.34

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	154.00	9.58	dwelling units	462.00	4,425.96	44,714.59
Condo/townhouse general	1.69	6.04	dwelling units	27.00	163.08	1,647.56
Retirement community	18.00	3.48	dwelling units	90.00	313.20	3,164.20
Day-care center		79.26	1000 sq ft	2.83	224.31	2,037.26
Junior college (2 yrs)		24.92	1000 sq ft	77.50	1,931.30	17,541.03
Library		16.93	1000 sq ft	35.20	595.94	5,412.59
Place of worship		7.59	1000 sq ft	62.43	473.84	4,269.09
General office building		11.06	1000 sq ft	7.23	79.96	813.83
Animal Hospital		46.88	1000 sq ft	5.76	270.03	2,649.66
Mausoleum		4.76	acres	27.30	129.95	1,166.02
Senior Center		22.90	1000 sq ft	10.00	229.00	2,079.89
					8,836.57	85,495.72

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.6	0.8	99.0	0.2
Light Truck < 3750 lbs	7.3	2.7	94.6	2.7
Light Truck 3751-5750 lbs	23.0	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	64.3	35.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

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<u>Travel Conditions</u>

	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)						
Day-care center				5.0	2.5	92.5
Junior college (2 yrs)				5.0	2.5	92.5
Library				5.0	2.5	92.5
Place of worship				3.0	1.5	95.5
General office building				35.0	17.5	47.5
Animal Hospital				25.0	12.5	62.5
Mausoleum				2.0	1.0	97.0
Senior Center				5.0	2.5	92.5

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: P:\PVE0701\Modeling\GPBO-Rev.urb924

Project Name: Rancho Palos Verdes General Plan Buildout

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)	37.53	15.86	7.52	0.03	0.40	0.40	20,100.20
TOTALS (lbs/day, mitigated)	37.53	15.86	7.52	0.03	0.40	0.40	20,100.20
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	72.03	109.04	787.60	0.76	147.74	28.77	79,949.77
TOTALS (lbs/day, mitigated)	72.03	109.04	787.60	0.76	147.74	28.77	79,949.77
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	109.56	124.90	795.12	0.79	148.14	29.17	100,049.97
TOTALS (lbs/day, mitigated)	109.56	124.90	795.12	0.79	148.14	29.17	100,049.97
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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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	0.85	11.13	5.51	0.00	0.02	0.02	14,064.91
Hearth	0.28	4.73	2.01	0.03	0.38	0.38	6,035.29
Landscaping - No Winter Emissions							
Consumer Products	29.70						
Architectural Coatings	6.70						
TOTALS (lbs/day, unmitigated)	37.53	15.86	7.52	0.03	0.40	0.40	20,100.20

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.85	11.13	5.51	0.00	0.02	0.02	14,064.91
Hearth	0.28	4.73	2.01	0.03	0.38	0.38	6,035.29
Landscaping - No Winter Emissions							
Consumer Products	29.70						
Architectural Coatings	6.70						
TOTALS (lbs/day, mitigated)	37.53	15.86	7.52	0.03	0.40	0.40	20,100.20

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
Single family housing	38.13	57.01	417.60	0.40	77.28	15.06	41,974.35
Condo/townhouse general	1.44	2.10	15.39	0.01	2.85	0.55	1,546.60
Retirement community	2.88	4.03	29.55	0.03	5.47	1.07	2,970.29
Day-care center	1.64	2.60	18.40	0.02	3.52	0.68	1,894.57
Junior college (2 yrs)	14.32	22.39	158.44	0.15	30.30	5.90	16,312.45
Library	4.45	6.91	48.89	0.05	9.35	1.82	5,033.49
Place of worship	3.62	5.45	38.54	0.04	7.38	1.44	3,968.84

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General office building	0.68	1.03	7.41	0.01	1.41	0.27	759.97
Animal Hospital	2.15	3.37	24.07	0.02	4.58	0.89	2,471.15
Mausoleum	1.02	1.49	10.52	0.01	2.01	0.39	1,083.84
Senior Center	1.70	2.66	18.79	0.02	3.59	0.70	1,934.22
TOTALS (lbs/day, unmitigated)	72.03	109.04	787.60	0.76	147.74	28.77	79,949.77

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	38.13	57.01	417.60	0.40	77.28	15.06	41,974.35
Condo/townhouse general	1.44	2.10	15.39	0.01	2.85	0.55	1,546.60
Retirement community	2.88	4.03	29.55	0.03	5.47	1.07	2,970.29
Day-care center	1.64	2.60	18.40	0.02	3.52	0.68	1,894.57
Junior college (2 yrs)	14.32	22.39	158.44	0.15	30.30	5.90	16,312.45
Library	4.45	6.91	48.89	0.05	9.35	1.82	5,033.49
Place of worship	3.62	5.45	38.54	0.04	7.38	1.44	3,968.84
General office building	0.68	1.03	7.41	0.01	1.41	0.27	759.97
Animal Hospital	2.15	3.37	24.07	0.02	4.58	0.89	2,471.15
Mausoleum	1.02	1.49	10.52	0.01	2.01	0.39	1,083.84
Senior Center	1.70	2.66	18.79	0.02	3.59	0.70	1,934.22
TOTALS (lbs/day, mitigated)	72.03	109.04	787.60	0.76	147.74	28.77	79,949.77

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	154.00	9.58	dwelling units	462.00	4,425.96	44,714.59
Condo/townhouse general	1.69	6.04	dwelling units	27.00	163.08	1,647.56
Retirement community	18.00	3.48	dwelling units	90.00	313.20	3,164.20
Day-care center		79.26	1000 sq ft	2.83	224.31	2,037.26
Junior college (2 yrs)		24.92	1000 sq ft	77.50	1,931.30	17,541.03
Library		16.93	1000 sq ft	35.20	595.94	5,412.59
Place of worship		7.59	1000 sq ft	62.43	473.84	4,269.09
General office building		11.06	1000 sq ft	7.23	79.96	813.83
Animal Hospital		46.88	1000 sq ft	5.76	270.03	2,649.66
Mausoleum		4.76	acres	27.30	129.95	1,166.02
Senior Center		22.90	1000 sq ft	10.00	229.00	2,079.89
					8,836.57	85,495.72

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.6	0.8	99.0	0.2
Light Truck < 3750 lbs	7.3	2.7	94.6	2.7
Light Truck 3751-5750 lbs	23.0	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	64.3	35.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

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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)						
Day-care center				5.0	2.5	92.5
Junior college (2 yrs)				5.0	2.5	92.5
Library				5.0	2.5	92.5
Place of worship				3.0	1.5	95.5
General office building				35.0	17.5	47.5
Animal Hospital				25.0	12.5	62.5
Mausoleum				2.0	1.0	97.0
Senior Center				5.0	2.5	92.5

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: P:\PVE0701\Modeling\GPBO-Rev.urb924

Project Name: Rancho Palos Verdes General Plan Buildout

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 (tons/year, unmitigated)	7.84	2.12	8.33	0.00	0.02	0.02	2,582.22
TOTALS (tons/year, mitigated)	7.84	2.12	8.33	0.00	0.02	0.02	2,582.22
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	12.43	17.65	147.87	0.14	26.98	5.24	15,603.64
TOTALS (tons/year, mitigated)	12.43	17.65	147.87	0.14	26.98	5.24	15,603.64
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	20.27	19.77	156.20	0.14	27.00	5.26	18,185.86
TOTALS (tons/year, mitigated)	20.27	19.77	156.20	0.14	27.00	5.26	18,185.86
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.16	2.03	1.01	0.00	0.00	0.00	2,566.85
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	3.02
Landscape	1.04	0.09	7.32	0.00	0.02	0.02	12.35
Consumer Products	5.42						
Architectural Coatings	1.22						
TOTALS (tons/year, unmitigated)	7.84	2.12	8.33	0.00	0.02	0.02	2,582.22

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.16	2.03	1.01	0.00	0.00	0.00	2,566.85
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	3.02
Landscape	1.04	0.09	7.32	0.00	0.02	0.02	12.35
Consumer Products	5.42						
Architectural Coatings	1.22						
TOTALS (tons/year, mitigated)	7.84	2.12	8.33	0.00	0.02	0.02	2,582.22

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 Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	6.61	9.22	78.55	0.08	14.10	2.75	8,190.03
Condo/townhouse general	0.25	0.34	2.89	0.00	0.52	0.10	301.77
Retirement community	0.53	0.65	5.56	0.01	1.00	0.19	579.56
Day-care center	0.28	0.42	3.44	0.00	0.64	0.12	369.89
Junior college (2 yrs)	2.42	3.63	29.66	0.03	5.53	1.08	3,184.82
Library	0.76	1.12	9.15	0.01	1.71	0.33	982.73
Place of worship	0.63	0.88	7.21	0.01	1.35	0.26	774.89

General office building	0.12	0.17	1.40	0.00	0.26	0.05	148.34
Animal Hospital	0.36	0.55	4.52	0.00	0.84	0.16	482.37
Mausoleum	0.18	0.24	1.97	0.00	0.37	0.07	211.61
Senior Center	0.29	0.43	3.52	0.00	0.66	0.13	377.63
TOTALS (tons/year, unmitigated)	12.43	17.65	147.87	0.14	26.98	5.24	15,603.64

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	6.61	9.22	78.55	0.08	14.10	2.75	8,190.03
Condo/townhouse general	0.25	0.34	2.89	0.00	0.52	0.10	301.77
Retirement community	0.53	0.65	5.56	0.01	1.00	0.19	579.56
Day-care center	0.28	0.42	3.44	0.00	0.64	0.12	369.89
Junior college (2 yrs)	2.42	3.63	29.66	0.03	5.53	1.08	3,184.82
Library	0.76	1.12	9.15	0.01	1.71	0.33	982.73
Place of worship	0.63	0.88	7.21	0.01	1.35	0.26	774.89
General office building	0.12	0.17	1.40	0.00	0.26	0.05	148.34
Animal Hospital	0.36	0.55	4.52	0.00	0.84	0.16	482.37
Mausoleum	0.18	0.24	1.97	0.00	0.37	0.07	211.61
Senior Center	0.29	0.43	3.52	0.00	0.66	0.13	377.63
TOTALS (tons/year, mitigated)	12.43	17.65	147.87	0.14	26.98	5.24	15,603.64

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	154.00	9.58	dwelling units	462.00	4,425.96	44,714.59
Condo/townhouse general	1.69	6.04	dwelling units	27.00	163.08	1,647.56
Retirement community	18.00	3.48	dwelling units	90.00	313.20	3,164.20
Day-care center		79.26	1000 sq ft	2.83	224.31	2,037.26
Junior college (2 yrs)		24.92	1000 sq ft	77.50	1,931.30	17,541.03
Library		16.93	1000 sq ft	35.20	595.94	5,412.59
Place of worship		7.59	1000 sq ft	62.43	473.84	4,269.09
General office building		11.06	1000 sq ft	7.23	79.96	813.83
Animal Hospital		46.88	1000 sq ft	5.76	270.03	2,649.66
Mausoleum		4.76	acres	27.30	129.95	1,166.02
Senior Center		22.90	1000 sq ft	10.00	229.00	2,079.89
					8,836.57	85,495.72

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	51.6	0.8	99.0	0.2
Light Truck < 3750 lbs	7.3	2.7	94.6	2.7
Light Truck 3751-5750 lbs	23.0	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	64.3	35.7	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.9	0.0	88.9	11.1

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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)						
Day-care center				5.0	2.5	92.5
Junior college (2 yrs)				5.0	2.5	92.5
Library				5.0	2.5	92.5
Place of worship				3.0	1.5	95.5
General office building				35.0	17.5	47.5
Animal Hospital				25.0	12.5	62.5
Mausoleum				2.0	1.0	97.0
Senior Center				5.0	2.5	92.5

APPENDIX B

CALINE4 MODEL PRINTOUTS

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Palos Ve NBA	9	-150	9	0	AG	490	4.9	.0	13.5
B. Palos Ve NBD	9	0	9	150	AG	451	3.5	.0	10.0
C. Palos Ve NBL	5	-150	0	0	AG	7	6.7	.0	10.0
D. Palos Ve SBA	-7	150	-7	0	AG	328	4.8	.0	10.0
E. Palos Ve SBD	-7	0	-7	-150	AG	620	3.5	.0	10.0
F. Palos Ve SBL	-5	150	0	0	AG	217	7.2	.0	10.0
G. Hawthorn EBA	-150	-2	0	-2	AG	40	6.2	.0	10.0
H. Hawthorn EBD	0	-2	150	-2	AG	465	4.0	.0	10.0
I. Hawthorn EBL	-150	-2	0	0	AG	5	6.7	.0	10.0
J. Hawthorn WBA	150	7	0	7	AG	208	6.4	.0	10.0
K. Hawthorn WBD	0	7	-150	7	AG	50	3.9	.0	10.0
L. Hawthorn WBL	150	5	0	0	AG	291	6.7	.0	10.0
M. Palos V NBAX	9	-750	9	-150	AG	497	3.4	.0	13.5
N. Palos V NBDX	9	150	9	750	AG	451	3.4	.0	10.0
O. Palos V SBAX	-7	750	-7	150	AG	545	3.4	.0	10.0
P. Palos V SBDX	-7	-150	-7	-750	AG	620	3.4	.0	10.0
Q. Hawthor EBAX	-750	-2	-150	-2	AG	45	3.4	.0	10.0
R. Hawthor EBDX	150	-2	750	-2	AG	465	3.4	.0	10.0
S. Hawthor WBAX	750	7	150	7	AG	499	3.4	.0	10.0
T. Hawthor WBDX	-150	7	-750	7	AG	50	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

JOB: Rancho Palos Verdes General Plan
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	350.	.8	.0	.2	.0	.0	.0	.1	.0	.1
2. NW	97.	.8	.0	.0	.0	.1	.0	.0	.0	.1
3. SW	83.	.9	.0	.0	.0	.0	.1	.0	.0	.2
4. NE	187.	.8	.3	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	280.	.7	.0	.0	.0	.0	.0	.0	.0	.3
6. WN mdblk	93.	.4	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	87.	.4	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	259.	.7	.0	.0	.0	.0	.0	.0	.0	.1
9. SE mdblk	353.	.6	.3	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	172.	.7	.0	.0	.0	.3	.0	.2	.0	.0
11. SW mdblk	8.	.6	.0	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	186.	.6	.0	.2	.0	.0	.0	.0	.0	.0
13. ES blk	276.	.5	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	93.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	87.	.2	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.5	.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	7.	.6	.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

JOB: Rancho Palos Verdes General Plan
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	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
2. NW	.0	.2	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.2	.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	.1	.0	.2	.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	.2	.0	.3	.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	.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	.1	.3	.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	.4	.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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Palos Ve NBA	7	-150	7	0	AG	486	4.9	.0	10.0
B. Palos Ve NBD	7	0	7	150	AG	502	3.5	.0	10.0
C. Palos Ve NBL	5	-150	0	0	AG	4	6.7	.0	10.0
D. Palos Ve SBA	-5	150	-5	0	AG	583	4.9	.0	13.5
E. Palos Ve SBD	-5	0	-5	-150	AG	593	3.5	.0	10.0
F. Palos Ve SBL	-2	150	0	0	AG	0	3.4	.0	10.0
G. Lower Po EBA	-150	0	0	0	AG	10	6.2	.0	10.0
H. Lower Po EBD	0	0	150	0	AG	0	3.4	.0	10.0
I. Lower Po EBL	-150	-2	0	0	AG	16	6.7	.0	10.0
J. Lower Po WBA	150	0	0	0	AG	0	3.4	.0	10.0
K. Lower Po WBD	0	0	-150	0	AG	4	3.9	.0	10.0
L. Lower Po WBL	150	2	0	0	AG	0	3.4	.0	10.0
M. Palos V NBAX	7	-750	7	-150	AG	490	3.4	.0	10.0
N. Palos V NBDX	7	150	7	750	AG	502	3.4	.0	10.0
O. Palos V SBAX	-5	750	-5	150	AG	583	3.4	.0	13.5
P. Palos V SBDX	-5	-150	-5	-750	AG	593	3.4	.0	10.0
Q. Lower P EBAX	-750	0	-150	0	AG	26	3.4	.0	10.0
R. Lower P EBDX	150	0	750	0	AG	0	3.4	.0	10.0
S. Lower P WBAX	750	0	150	0	AG	0	3.4	.0	10.0
T. Lower P WBDX	-150	0	-750	0	AG	4	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. SE	14	-7	1.8
2. NW	-14	7	1.8
3. SW	-12	-7	1.8
4. NE	14	7	1.8
5. ES mdblk	150	-7	1.8
6. WN mdblk	-150	7	1.8
7. WS mdblk	-150	-7	1.8
8. EN mdblk	150	7	1.8
9. SE mdblk	14	-150	1.8
10. NW mdblk	-14	150	1.8
11. SW mdblk	-12	-150	1.8
12. NE mdblk	14	150	1.8
13. ES blk	600	-7	1.8
14. WN blk	-600	7	1.8
15. WS blk	-600	-7	1.8
16. EN blk	600	7	1.8
17. SE blk	14	-600	1.8
18. NW blk	-14	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: Rancho Palos Verdes General Plan
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	187.	.6	.4	.0	.0	.0	.0	.0	.0	.0
2. NW	8.	.6	.0	.0	.0	.4	.0	.0	.0	.0
3. SW	6.	.7	.0	.0	.0	.4	.0	.0	.0	.0
4. NE	187.	.6	.3	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	338.	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	98.	.1	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	83.	.1	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	201.	.0	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	353.	.6	.4	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	173.	.6	.0	.0	.0	.4	.0	.0	.0	.0
11. SW mdblk	7.	.6	.0	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	187.	.6	.0	.3	.0	.1	.0	.0	.0	.0
13. ES blk	271.	.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	270.	.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.	.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: Rancho Palos Verdes General Plan
RUN: Existing-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

CONC/LINK (PPM)

RECEPTOR	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	.2	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S
BRG= WORST CASE
CLAS= 7 (G)
MIXH= 1000. M
SIGTH= 10. DEGREES

Z0= 100. CM
VD= .0 CM/S
VS= .0 CM/S
AMB= .0 PPM
TEMP= 10.0 DEGREE (C)

ALT= 335. (M)

II. LINK VARIABLES

LINK DESCRIPTION	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
	LINK COORDINATES (M)								
A. Via Rive NBA	2	-150	2	0	AG	0	3.4	.0	10.0
B. Via Rive NBD	2	0	2	150	AG	99	3.9	.0	10.0
C. Via Rive NBL	2	-150	0	0	AG	0	3.4	.0	10.0
D. Via Rive SBA	-2	150	-2	0	AG	14	6.2	.0	10.0
E. Via Rive SBD	-2	0	-2	-150	AG	25	3.9	.0	10.0
F. Via Rive SBL	-2	150	0	0	AG	57	6.7	.0	10.0
G. Hawthorn EBA	-150	-9	0	-9	AG	458	4.9	.0	13.5
H. Hawthorn EBD	0	-9	150	-9	AG	515	3.5	.0	10.0
I. Hawthorn EBL	-150	-5	0	0	AG	30	6.7	.0	10.0
J. Hawthorn WBA	150	9	0	9	AG	549	4.9	.0	13.5
K. Hawthorn WBD	0	9	-150	9	AG	494	3.5	.0	10.0
L. Hawthorn WBL	150	5	0	0	AG	25	6.7	.0	10.0
M. Via Riv NBAX	2	-750	2	-150	AG	0	3.4	.0	10.0
N. Via Riv NBDX	2	150	2	750	AG	99	3.4	.0	10.0
O. Via Riv SBAX	-2	750	-2	150	AG	71	3.4	.0	10.0
P. Via Riv SBDX	-2	-150	-2	-750	AG	25	3.4	.0	10.0
Q. Hawthor EBAX	-750	-9	-150	-9	AG	488	3.4	.0	13.5
R. Hawthor EBDX	150	-9	750	-9	AG	515	3.4	.0	10.0
S. Hawthor WBAX	750	9	150	9	AG	574	3.4	.0	13.5
T. Hawthor WBDX	-150	9	-750	9	AG	494	3.4	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
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	276.	.6	.0	.0	.0	.0	.0	.0	.3	.0
2. NW	96.	.7	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	278.	.5	.0	.0	.0	.0	.0	.0	.3	.0
4. NE	98.	.6	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	278.	.5	.0	.0	.0	.0	.0	.0	.0	.3
6. WN mdblk	97.	.5	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	82.	.6	.0	.0	.0	.0	.0	.0	.3	.0
8. EN mdblk	262.	.6	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	358.	.2	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	171.	.2	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	3.	.2	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	188.	.2	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	277.	.5	.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.	.5	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	358.	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	175.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	3.	.0	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	185.	.2	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
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	.4	.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	.4	.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	.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	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.0	.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	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-04 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Hawthorn NBA	7	-150	7	0	AG	498	4.9	.0	10.0
B. Hawthorn NBD	7	0	7	150	AG	628	3.5	.0	10.0
C. Hawthorn NBL	5	-150	0	0	AG	31	6.7	.0	10.0
D. Hawthorn SBA	-7	150	-7	0	AG	883	5.2	.0	10.0
E. Hawthorn SBD	-7	0	-7	-150	AG	759	3.5	.0	10.0
F. Hawthorn SBL	-5	150	0	0	AG	55	6.7	.0	10.0
G. Eddinghi EBA	-150	-2	0	-2	AG	46	6.2	.0	10.0
H. Eddinghi EBD	0	-2	150	-2	AG	70	3.9	.0	10.0
I. Eddinghi EBL	-150	-2	0	0	AG	113	6.7	.0	10.0
J. Eddinghi WBA	150	2	0	2	AG	37	6.2	.0	10.0
K. Eddinghi WBD	0	2	-150	2	AG	212	4.0	.0	10.0
L. Eddinghi WBL	150	2	0	0	AG	6	6.7	.0	10.0
M. Hawthor NBAX	7	-750	7	-150	AG	529	3.4	.0	10.0
N. Hawthor NBDX	7	150	7	750	AG	628	3.4	.0	10.0
O. Hawthor SBAX	-7	750	-7	150	AG	938	3.4	.0	10.0
P. Hawthor SBDX	-7	-150	-7	-750	AG	759	3.4	.0	10.0
Q. Eddingh EBAX	-750	-2	-150	-2	AG	159	3.4	.0	10.0
R. Eddingh EBDX	150	-2	750	-2	AG	70	3.4	.0	10.0
S. Eddingh WBAX	750	2	150	2	AG	43	3.4	.0	10.0
T. Eddingh WBDX	-150	2	-750	2	AG	212	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
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: Rancho Palos Verdes General Plan
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	352.	.7	.0	.3	.0	.2	.0	.0	.0	.0
2. NW	8.	.9	.0	.0	.0	.7	.0	.0	.0	.0
3. SW	7.	1.0	.0	.0	.0	.6	.0	.0	.0	.0
4. NE	352.	.7	.0	.3	.0	.2	.0	.0	.0	.0
5. ES mdblk	274.	.3	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	97.	.4	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	82.	.4	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	267.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	353.	.8	.4	.0	.0	.1	.0	.0	.0	.0
10. NW mdblk	172.	1.0	.0	.0	.0	.7	.0	.0	.0	.0
11. SW mdblk	6.	.7	.0	.0	.0	.0	.4	.0	.0	.0
12. NE mdblk	188.	.7	.0	.3	.0	.2	.0	.0	.0	.0
13. ES blk	274.	.2	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.3	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	.3	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	267.	.2	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.6	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.8	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.7	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	.7	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
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	.1	.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	.1	.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	.1	.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	.1
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.1	.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	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.1	.5	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.1	.0	.0	.4	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.4	.2	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

```
    U=    .5 M/S             Z0= 100. CM            ALT=   335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Hawthorn NBA	9	-150	9	0	AG	532	4.9	.0	13.5
B. Hawthorn NBD	9	0	9	150	AG	547	3.5	.0	10.0
C. Hawthorn NBL	5	-150	0	0	AG	26	6.7	.0	10.0
D. Hawthorn SBA	-9	150	-9	0	AG	603	5.1	.0	13.5
E. Hawthorn SBD	-9	0	-9	-150	AG	765	3.5	.0	10.0
F. Hawthorn SBL	-5	150	0	0	AG	50	6.7	.0	10.0
G. Crest R EBA	-150	-7	0	-7	AG	78	6.2	.0	10.0
H. Crest R EBD	0	-7	150	-7	AG	273	3.9	.0	10.0
I. Crest R EBL	-150	-5	0	0	AG	117	6.7	.0	10.0
J. Crest R WBA	150	7	0	7	AG	126	6.2	.0	10.0
K. Crest R WBD	0	7	-150	7	AG	209	4.0	.0	10.0
L. Crest R WBL	150	5	0	0	AG	262	7.2	.0	10.0
M. Hawthor NBAX	9	-750	9	-150	AG	558	3.4	.0	13.5
N. Hawthor NBDX	9	150	9	750	AG	547	3.4	.0	10.0
O. Hawthor SBAX	-9	750	-9	150	AG	653	3.4	.0	13.5
P. Hawthor SBDX	-9	-150	-9	-750	AG	765	3.4	.0	10.0
Q. Crest EBAX	-750	-7	-150	-7	AG	195	3.4	.0	10.0
R. Crest EBDX	150	-7	750	-7	AG	273	3.4	.0	10.0
S. Crest WBAX	750	7	150	7	AG	388	3.4	.0	10.0
T. Crest WBDX	-150	7	-750	7	AG	209	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. SE	17	-14	1.8
2. NW	-17	14	1.8
3. SW	-15	-14	1.8
4. NE	15	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	17	-150	1.8
10. NW mdblk	-17	150	1.8
11. SW mdblk	-15	-150	1.8
12. NE mdblk	15	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	17	-600	1.8
18. NW blk	-17	600	1.8
19. SW blk	-15	-600	1.8
20. NE blk	15	600	1.8

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

JOB: Rancho Palos Verdes General Plan
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	350.	.7	.0	.2	.0	.1	.0	.0	.0	.0
2. NW	171.	.7	.0	.0	.0	.0	.3	.0	.0	.0
3. SW	7.	.8	.0	.0	.0	.4	.0	.0	.0	.0
4. NE	187.	.8	.3	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	278.	.5	.0	.0	.0	.0	.0	.0	.0	.2
6. WN mdblk	96.	.5	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	84.	.5	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	261.	.6	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	.7	.4	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	172.	.8	.0	.0	.0	.4	.0	.0	.0	.0
11. SW mdblk	7.	.7	.0	.0	.0	.0	.4	.0	.0	.0
12. NE mdblk	187.	.7	.0	.3	.0	.0	.0	.0	.0	.0
13. ES blk	276.	.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.3	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.3	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.4	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.6	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.6	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	.7	.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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-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	.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	.1	.0	.0	.0	.0
5. ES mdblk	.0	.0	.0	.1	.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	.1	.0	.2	.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	.0	.0	.0	.1
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.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	.4	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.1	.0	.0	.4	.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: Rancho Palos Verdes General Plan
RUN: Existing-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Hawthorn NBA	9	-150	9	0	AG	529	4.9	.0	13.5
B. Hawthorn NBD	9	0	9	150	AG	533	3.5	.0	10.0
C. Hawthorn NBL	5	-150	0	0	AG	22	6.7	.0	10.0
D. Hawthorn SBA	-7	150	-7	0	AG	648	5.1	.0	10.0
E. Hawthorn SBD	-7	0	-7	-150	AG	622	3.5	.0	10.0
F. Hawthorn SBL	-5	150	0	0	AG	6	6.7	.0	10.0
G. Dupre Dr EBA	-150	-4	0	-4	AG	15	6.2	.0	10.0
H. Dupre Dr EBD	0	-4	150	-4	AG	18	3.9	.0	10.0
I. Dupre Dr EBL	-150	-2	0	0	AG	9	6.7	.0	10.0
J. Dupre Dr WBA	150	2	0	2	AG	5	6.2	.0	10.0
K. Dupre Dr WBD	0	2	-150	2	AG	69	3.9	.0	10.0
L. Dupre Dr WBL	150	2	0	0	AG	8	6.7	.0	10.0
M. Hawthor NBAX	9	-750	9	-150	AG	551	3.4	.0	13.5
N. Hawthor NBDX	9	150	9	750	AG	533	3.4	.0	10.0
O. Hawthor SBAX	-7	750	-7	150	AG	654	3.4	.0	10.0
P. Hawthor SBDX	-7	-150	-7	-750	AG	622	3.4	.0	10.0
Q. Dupre D EBAX	-750	-4	-150	-4	AG	24	3.4	.0	10.0
R. Dupre D EBDX	150	-4	750	-4	AG	18	3.4	.0	10.0
S. Dupre D WBAX	750	2	150	2	AG	13	3.4	.0	10.0
T. Dupre D WBDX	-150	2	-750	2	AG	69	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
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	188.	.6	.4	.0	.0	.0	.0	.0	.0	.0
2. NW	8.	.7	.0	.0	.0	.5	.0	.0	.0	.0
3. SW	7.	.7	.0	.0	.0	.4	.0	.0	.0	.0
4. NE	186.	.6	.4	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	273.	.1	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	96.	.2	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	83.	.2	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	267.	.1	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	.6	.4	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	173.	.7	.0	.0	.0	.5	.0	.0	.0	.0
11. SW mdblk	7.	.6	.0	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	187.	.6	.0	.3	.0	.0	.0	.0	.0	.0
13. ES blk	273.	.0	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	94.	.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.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.	.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	187.	.5	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
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	.0	.0	.0	.0	.0	.0	.0	.1	.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	.4	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.1	.0	.0	.4	.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: Rancho Palos Verdes General Plan
RUN: Existing-07 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

```
      U=    .5 M/S           Z0= 100. CM           ALT=   335. (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. Hawthorn NBA	9	-150	9	0	AG	519	4.9	.0	13.5
B. Hawthorn NBD	9	0	9	150	AG	533	3.5	.0	10.0
C. Hawthorn NBL	5	-150	0	0	AG	10	6.7	.0	10.0
D. Hawthorn SBA	-9	150	-9	0	AG	608	5.1	.0	13.5
E. Hawthorn SBD	-9	0	-9	-150	AG	588	3.5	.0	10.0
F. Hawthorn SBL	-5	150	0	0	AG	3	6.7	.0	10.0
G. Vallon D EBA	-150	-4	0	-4	AG	7	6.2	.0	10.0
H. Vallon D EBD	0	-4	150	-4	AG	5	3.9	.0	10.0
I. Vallon D EBL	-150	-2	0	0	AG	13	6.7	.0	10.0
J. Vallon D WBA	150	2	0	2	AG	3	6.2	.0	10.0
K. Vallon D WBD	0	2	-150	2	AG	43	3.9	.0	10.0
L. Vallon D WBL	150	2	0	0	AG	6	6.7	.0	10.0
M. Hawthor NBAX	9	-750	9	-150	AG	529	3.4	.0	13.5
N. Hawthor NBDX	9	150	9	750	AG	533	3.4	.0	10.0
O. Hawthor SBAX	-9	750	-9	150	AG	611	3.4	.0	13.5
P. Hawthor SBDX	-9	-150	-9	-750	AG	588	3.4	.0	10.0
Q. Vallon EBAX	-750	-4	-150	-4	AG	20	3.4	.0	10.0
R. Vallon EBDX	150	-4	750	-4	AG	5	3.4	.0	10.0
S. Vallon WBAX	750	2	150	2	AG	9	3.4	.0	10.0
T. Vallon WBDX	-150	2	-750	2	AG	43	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-07 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-07 (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	.4	.0	.0	.0	.0	.0	.0	.0
2. NW	8.	.6	.0	.0	.0	.4	.0	.0	.0	.0
3. SW	6.	.7	.0	.0	.0	.4	.0	.0	.0	.0
4. NE	186.	.6	.4	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	273.	.1	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	97.	.1	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	81.	.1	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	267.	.1	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	.6	.4	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	172.	.7	.0	.0	.0	.4	.0	.0	.0	.0
11. SW mdblk	7.	.6	.0	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	187.	.5	.0	.3	.0	.0	.0	.0	.0	.0
13. ES blk	273.	.0	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	94.	.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	268.	.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.	.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	187.	.5	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-07 (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: Rancho Palos Verdes General Plan
RUN: Existing-08 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
	LINK COORDINATES (M)								
A. Crestmon NBA	5	-150	5	0	AG	36	6.2	.0	10.0
B. Crestmon NBD	5	0	5	150	AG	0	3.4	.0	10.0
C. Crestmon NBL	5	-150	0	0	AG	29	6.7	.0	10.0
D. Crestmon SBA	-2	150	-2	0	AG	1	6.2	.0	10.0
E. Crestmon SBD	-2	0	-2	-150	AG	10	3.9	.0	10.0
F. Crestmon SBL	-2	150	0	0	AG	15	6.7	.0	10.0
G. Palos Ve EBA	-150	-9	0	-9	AG	591	4.9	.0	13.5
H. Palos Ve EBD	0	-9	150	-9	AG	635	3.5	.0	10.0
I. Palos Ve EBL	-150	-5	0	0	AG	0	3.4	.0	10.0
J. Palos Ve WBA	150	7	0	7	AG	441	4.9	.0	10.0
K. Palos Ve WBD	0	7	-150	7	AG	471	3.5	.0	10.0
L. Palos Ve WBL	150	5	0	0	AG	3	6.7	.0	10.0
M. Crestmo NBAX	5	-750	5	-150	AG	65	3.4	.0	10.0
N. Crestmo NBDX	5	150	5	750	AG	0	3.4	.0	10.0
O. Crestmo SBAX	-2	750	-2	150	AG	16	3.4	.0	10.0
P. Crestmo SBDX	-2	-150	-2	-750	AG	10	3.4	.0	10.0
Q. Palos V EBAX	-750	-9	-150	-9	AG	591	3.4	.0	13.5
R. Palos V EBDX	150	-9	750	-9	AG	635	3.4	.0	10.0
S. Palos V WBAX	750	7	150	7	AG	444	3.4	.0	10.0
T. Palos V WBDX	-150	7	-750	7	AG	471	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-08 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-08 (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	276.	.6	.0	.0	.0	.0	.0	.0	.4	.0
2. NW	97.	.5	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	278.	.6	.0	.0	.0	.0	.0	.0	.4	.0
4. NE	98.	.5	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	277.	.6	.0	.0	.0	.0	.0	.0	.0	.3
6. WN mdblk	97.	.5	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	83.	.6	.0	.0	.0	.0	.0	.0	.4	.0
8. EN mdblk	263.	.6	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	.2	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	177.	.1	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	9.	.1	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	183.	.1	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	276.	.5	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	.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	263.	.5	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	356.	.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	178.	.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	5.	.0	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	183.	.0	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-08 (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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NE	.0	.3	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
5. ES mdblk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.2	.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	.3	.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	.3
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	.1	.3	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.0	.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	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-09 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1 (M)	Y1 (M)	X2 (M)	Y2 (M)	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Gravania NBA	4	-150	4	0	AG	53	6.2	.0	10.0
B. Gravania NBD	4	0	4	150	AG	481	5.7	.0	10.0
C. Gravania NBL	2	-150	0	0	AG	15	6.7	.0	10.0
D. Gravania SBA	-7	150	-7	0	AG	128	6.2	.0	10.0
E. Gravania SBD	-7	0	-7	-150	AG	96	3.9	.0	10.0
F. Gravania SBL	-5	150	0	0	AG	278	6.7	.0	10.0
G. Hawthorn EBA	-150	-7	0	-7	AG	647	5.1	.0	10.0
H. Hawthorn EBD	0	-7	150	-7	AG	925	3.6	.0	10.0
I. Hawthorn EBL	-150	-5	0	0	AG	72	6.7	.0	10.0
J. Hawthorn WBA	150	9	0	9	AG	1211	5.7	.0	13.5
K. Hawthorn WBD	0	9	-150	9	AG	939	3.6	.0	10.0
L. Hawthorn WBL	150	5	0	0	AG	37	6.7	.0	10.0
M. Gravani NBAX	4	-750	4	-150	AG	68	3.4	.0	10.0
N. Gravani NBDX	4	150	4	750	AG	481	3.4	.0	10.0
O. Gravani SBAX	-7	750	-7	150	AG	406	3.4	.0	10.0
P. Gravani SBDX	-7	-150	-7	-750	AG	96	3.4	.0	10.0
Q. Hawthor EBAX	-750	-7	-150	-7	AG	719	3.4	.0	10.0
R. Hawthor EBDX	150	-7	750	-7	AG	925	3.4	.0	10.0
S. Hawthor WBAX	750	9	150	9	AG	1248	3.4	.0	13.5
T. Hawthor WBDX	-150	9	-750	9	AG	939	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-09 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-09 (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	353.	1.2	.0	.4	.0	.0	.0	.2	.0	.2
2. NW	97.	1.5	.0	.1	.0	.0	.0	.0	.0	.0
3. SW	81.	1.0	.0	.0	.0	.0	.0	.0	.0	.4
4. NE	98.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	279.	1.0	.0	.0	.0	.0	.0	.0	.0	.5
6. WN mdblk	96.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	83.	1.1	.0	.0	.0	.0	.0	.0	.5	.0
8. EN mdblk	262.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	357.	.5	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	168.	.7	.0	.2	.0	.1	.0	.2	.0	.0
11. SW mdblk	5.	.5	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	189.	.8	.0	.4	.0	.0	.0	.1	.0	.0
13. ES blk	277.	.9	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.8	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	83.	.8	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.9	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	357.	.2	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.5	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	5.	.3	.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: Rancho Palos Verdes General Plan
RUN: Existing-09 (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	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. NW	.0	.8	.0	.0	.0	.0	.0	.0	.0	.1	.1	.0
3. SW	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0
4. NE	.0	.9	.0	.0	.0	.0	.0	.0	.0	.1	.1	.0
5. ES mdblk	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.1	.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.9	.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	.5	.3	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.5
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	.2	.6	.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

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-10 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Grayslak NBA	7	-150	7	0	AG	332	6.9	.0	10.0
B. Grayslak NBD	7	0	7	150	AG	193	3.9	.0	10.0
C. Grayslak NBL	5	-150	0	0	AG	38	6.7	.0	10.0
D. Grayslak SBA	-7	150	-7	0	AG	37	6.2	.0	10.0
E. Grayslak SBD	-7	0	-7	-150	AG	573	6.7	.0	10.0
F. Grayslak SBL	-5	150	0	0	AG	104	6.7	.0	10.0
G. Hawthorn EBA	-150	-9	0	-9	AG	915	5.2	.0	13.5
H. Hawthorn EBD	0	-9	150	-9	AG	1303	3.7	.0	10.0
I. Hawthorn EBL	-150	-5	0	0	AG	10	6.7	.0	10.0
J. Hawthorn WBA	150	9	0	9	AG	1350	5.7	.0	13.5
K. Hawthorn WBD	0	9	-150	9	AG	1248	3.7	.0	10.0
L. Hawthorn WBL	150	5	0	0	AG	531	7.3	.0	10.0
M. Graysla NBAX	7	-750	7	-150	AG	370	3.4	.0	10.0
N. Graysla NBDX	7	150	7	750	AG	193	3.4	.0	10.0
O. Graysla SBAX	-7	750	-7	150	AG	141	3.4	.0	10.0
P. Graysla SBDX	-7	-150	-7	-750	AG	573	3.4	.0	10.0
Q. Hawthor EBAX	-750	-9	-150	-9	AG	925	3.4	.0	13.5
R. Hawthor EBDX	150	-9	750	-9	AG	1303	3.4	.0	10.0
S. Hawthor WBAX	750	9	150	9	AG	1881	3.4	.0	13.5
T. Hawthor WBDX	-150	9	-750	9	AG	1248	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-10 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. SE	14	-15	1.8
2. NW	-14	15	1.8
3. SW	-14	-17	1.8
4. NE	14	17	1.8
5. ES mdblk	150	-15	1.8
6. WN mdblk	-150	15	1.8
7. WS mdblk	-150	-17	1.8
8. EN mdblk	150	17	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	-15	1.8
14. WN blk	-600	15	1.8
15. WS blk	-600	-17	1.8
16. EN blk	600	17	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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-10 (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	80.	1.4	.0	.0	.0	.0	.0	.0	.0	.7
2. NW	97.	1.8	.0	.0	.0	.0	.0	.0	.0	.1
3. SW	79.	1.7	.0	.0	.0	.0	.3	.0	.1	.5
4. NE	99.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	280.	1.4	.0	.0	.0	.0	.0	.0	.0	.7
6. WN mdblk	96.	1.3	.0	.0	.0	.0	.0	.0	.0	.1
7. WS mdblk	83.	1.3	.0	.0	.0	.0	.0	.0	.6	.0
8. EN mdblk	260.	1.8	.0	.0	.0	.0	.0	.0	.1	.1
9. SE mdblk	351.	.8	.4	.0	.0	.0	.2	.0	.0	.0
10. NW mdblk	174.	.6	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	11.	1.0	.1	.0	.0	.0	.6	.0	.0	.0
12. NE mdblk	185.	.6	.0	.1	.0	.0	.1	.0	.0	.0
13. ES blk	277.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	.9	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	1.3	.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.	.6	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	183.	.3	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-10 (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	.2	.0	.2	.0	.0	.0	.0	.0	.0	.2	.0
2. NW	.0	.9	.1	.3	.0	.0	.0	.0	.0	.2	.1	.0
3. SW	.0	.3	.0	.2	.0	.0	.0	.0	.0	.0	.1	.0
4. NE	.0	1.0	.0	.2	.0	.0	.0	.0	.0	.2	.1	.0
5. ES mdblk	.0	.3	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.1	.6	.1	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.2	.0	.1	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	.0	1.0	.0	.3	.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	.7	.3	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.7
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.5	.0	.0	.2
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.9	.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	.0	.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	.1	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-11 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Highridg NBA	*	5	-150	5	0	*	AG	21	6.2	.0	10.0
B. Highridg NBD	*	5	0	5	150	*	AG	84	3.9	.0	10.0
C. Highridg NBL	*	5	-150	0	0	*	AG	6	6.7	.0	10.0
D. Highridg SBA	*	-5	150	-5	0	*	AG	58	6.2	.0	10.0
E. Highridg SBD	*	-5	0	-5	-150	*	AG	32	3.9	.0	10.0
F. Highridg SBL	*	-5	150	0	0	*	AG	20	6.7	.0	10.0
G. Crest R EBA	*	-150	-7	0	-7	*	AG	258	4.8	.0	10.0
H. Crest R EBD	*	0	-7	150	-7	*	AG	283	3.5	.0	10.0
I. Crest R EBL	*	-150	-5	0	0	*	AG	53	6.7	.0	10.0
J. Crest R WBA	*	150	7	0	7	*	AG	402	4.9	.0	10.0
K. Crest R WBD	*	0	7	-150	7	*	AG	436	3.5	.0	10.0
L. Crest R WBL	*	150	5	0	0	*	AG	17	6.7	.0	10.0
M. Highrid NBAX	*	5	-750	5	-150	*	AG	27	3.4	.0	10.0
N. Highrid NBDX	*	5	150	5	750	*	AG	84	3.4	.0	10.0
O. Highrid SBAX	*	-5	750	-5	150	*	AG	78	3.4	.0	10.0
P. Highrid SBDX	*	-5	-150	-5	-750	*	AG	32	3.4	.0	10.0
Q. Crest EBAX	*	-750	-7	-150	-7	*	AG	311	3.4	.0	10.0
R. Crest EBDX	*	150	-7	750	-7	*	AG	283	3.4	.0	10.0
S. Crest WBAX	*	750	7	150	7	*	AG	419	3.4	.0	10.0
T. Crest WBDX	*	-150	7	-750	7	*	AG	436	3.4	.0	10.0

JOB: Rancho Palos Verdes General Plan
RUN: Existing-11 (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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-11 (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.	.4	.0	.0	.0	.0	.0	.0	.2	.0
2. NW	97.	.5	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	278.	.4	.0	.0	.0	.0	.0	.0	.2	.0
4. NE	262.	.5	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	277.	.4	.0	.0	.0	.0	.0	.0	.0	.2
6. WN mdblk	97.	.4	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	83.	.5	.0	.0	.0	.0	.0	.0	.2	.0
8. EN mdblk	263.	.5	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	355.	.2	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	172.	.2	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	4.	.2	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	188.	.2	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	276.	.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.4	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.4	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	357.	.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	175.	.1	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	3.	.1	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	185.	.2	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-11 (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	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NE	.0	.0	.2	.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	.2	.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	.3	.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	.0	.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	.0	.3	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.0	.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	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-12 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Silver S NBA	5	-150	5	0	AG	386	5.1	.0	10.0
B. Silver S NBD	5	0	5	150	AG	406	3.6	.0	10.0
C. Silver S NBL	5	-150	0	0	AG	60	6.7	.0	10.0
D. Silver S SBA	-7	150	-7	0	AG	340	4.8	.0	10.0
E. Silver S SBD	-7	0	-7	-150	AG	480	3.5	.0	10.0
F. Silver S SBL	-5	150	0	0	AG	5	6.7	.0	10.0
G. Basswood EBA	-150	-5	0	-5	AG	71	6.2	.0	10.0
H. Basswood EBD	0	-5	150	-5	AG	19	3.9	.0	10.0
I. Basswood EBL	-150	-5	0	0	AG	19	6.7	.0	10.0
J. Basswood WBA	150	5	0	5	AG	21	6.2	.0	10.0
K. Basswood WBD	0	5	-150	5	AG	93	3.9	.0	10.0
L. Basswood WBL	150	5	0	0	AG	96	6.7	.0	10.0
M. Silver NBAX	5	-750	5	-150	AG	446	3.4	.0	10.0
N. Silver NBDX	5	150	5	750	AG	406	3.4	.0	10.0
O. Silver SBAX	-7	750	-7	150	AG	345	3.4	.0	10.0
P. Silver SBDX	-7	-150	-7	-750	AG	480	3.4	.0	10.0
Q. Basswoo EBAX	-750	-5	-150	-5	AG	90	3.4	.0	10.0
R. Basswoo EBDX	150	-5	750	-5	AG	19	3.4	.0	10.0
S. Basswoo WBAX	750	5	150	5	AG	117	3.4	.0	10.0
T. Basswoo WBDX	-150	5	-750	5	AG	93	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-12 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. SE	12	-12	1.8
2. NW	-14	12	1.8
3. SW	-14	-12	1.8
4. NE	12	12	1.8
5. ES mdblk	150	-12	1.8
6. WN mdblk	-150	12	1.8
7. WS mdblk	-150	-12	1.8
8. EN mdblk	150	12	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	-12	1.8
14. WN blk	-600	12	1.8
15. WS blk	-600	-12	1.8
16. EN blk	600	12	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: Rancho Palos Verdes General Plan
RUN: Existing-12 (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	172.	.6	.1	.0	.0	.0	.2	.0	.0	.0
3. SW	172.	.5	.0	.0	.0	.0	.3	.0	.0	.0
4. NE	187.	.6	.3	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	275.	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	97.	.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	263.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	353.	.6	.3	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	174.	.5	.0	.0	.0	.2	.0	.0	.0	.0
11. SW mdblk	7.	.5	.0	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	186.	.5	.0	.2	.0	.0	.0	.0	.0	.0
13. ES blk	275.	.1	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.2	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	265.	.2	.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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-12 (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	.1	.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	.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	.2	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-13 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Hawthorn NBA	5	-150	5	0	AG	903	5.2	.0	13.5
B. Hawthorn NBD	5	0	5	150	AG	946	3.6	.0	10.0
C. Hawthorn NBL	2	-150	0	0	AG	0	3.4	.0	10.0
D. Hawthorn SBA	-7	150	-7	0	AG	1075	5.4	.0	10.0
E. Hawthorn SBD	-7	0	-7	-150	AG	1090	3.6	.0	10.0
F. Hawthorn SBL	-5	150	0	0	AG	117	6.7	.0	10.0
G. Blackhor EBA	-150	0	0	0	AG	0	3.4	.0	10.0
H. Blackhor EBD	0	0	150	0	AG	146	3.9	.0	10.0
I. Blackhor EBL	-150	-2	0	0	AG	0	3.4	.0	10.0
J. Blackhor WBA	150	0	0	0	AG	72	6.2	.0	10.0
K. Blackhor WBD	0	0	-150	0	AG	0	3.4	.0	10.0
L. Blackhor WBL	150	2	0	0	AG	15	6.7	.0	10.0
M. Hawthor NBAX	5	-750	5	-150	AG	903	3.4	.0	13.5
N. Hawthor NBDX	5	150	5	750	AG	946	3.4	.0	10.0
O. Hawthor SBAX	-7	750	-7	150	AG	1192	3.4	.0	10.0
P. Hawthor SBDX	-7	-150	-7	-750	AG	1090	3.4	.0	10.0
Q. Blackho EBAX	-750	0	-150	0	AG	0	3.4	.0	10.0
R. Blackho EBDX	150	0	750	0	AG	146	3.4	.0	10.0
S. Blackho WBAX	750	0	150	0	AG	87	3.4	.0	10.0
T. Blackho WBDX	-150	0	-750	0	AG	0	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-13 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-13 (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	350.	1.0	.0	.4	.0	.3	.0	.0	.0	.0
2. NW	8.	1.2	.0	.1	.0	.8	.0	.0	.0	.0
3. SW	7.	1.2	.0	.1	.0	.8	.0	.0	.0	.0
4. NE	187.	1.1	.7	.0	.0	.0	.1	.0	.0	.0
5. ES mdblk	279.	.4	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	91.	.2	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	88.	.2	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	262.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	353.	1.1	.6	.0	.0	.1	.1	.0	.0	.0
10. NW mdblk	172.	1.3	.1	.1	.0	.8	.0	.1	.0	.0
11. SW mdblk	7.	1.1	.2	.0	.0	.0	.5	.0	.0	.0
12. NE mdblk	188.	1.0	.0	.5	.0	.2	.0	.0	.0	.0
13. ES blk	275.	.3	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	89.	.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	88.	.1	.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.	.8	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	.9	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	.9	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-13 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

CONC/LINK (PPM)

RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.0	.0	.0	.0	.1	.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	.1	.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	.1	.0	.0
17. SE blk	.0	.0	.0	.0	.5	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.6	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.2	.0	.0	.6	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.5	.3	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-14 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	335. (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. Crenshaw NBA	7	-150	7	0	AG	514	4.9	.0	10.0
B. Crenshaw NBD	7	0	7	150	AG	638	3.5	.0	10.0
C. Crenshaw NBL	5	-150	0	0	AG	142	6.7	.0	10.0
D. Crenshaw SBA	-5	150	-5	0	AG	1152	5.4	.0	13.5
E. Crenshaw SBD	-5	0	-5	-150	AG	1161	3.6	.0	10.0
F. Crenshaw SBL	-2	150	0	0	AG	0	3.4	.0	10.0
G. Indian P EBA	-150	-5	0	-5	AG	183	6.2	.0	10.0
H. Indian P EBD	0	-5	150	-5	AG	0	3.4	.0	10.0
I. Indian P EBL	-150	-5	0	0	AG	124	6.7	.0	10.0
J. Indian P WBA	150	0	0	0	AG	0	3.4	.0	10.0
K. Indian P WBD	0	0	-150	0	AG	316	4.4	.0	10.0
L. Indian P WBL	150	2	0	0	AG	0	3.4	.0	10.0
M. Crensha NBAX	7	-750	7	-150	AG	656	3.4	.0	10.0
N. Crensha NBDX	7	150	7	750	AG	638	3.4	.0	10.0
O. Crensha SBAX	-5	750	-5	150	AG	1152	3.4	.0	13.5
P. Crensha SBDX	-5	-150	-5	-750	AG	1161	3.4	.0	10.0
Q. Indian EBAX	-750	-5	-150	-5	AG	307	3.4	.0	10.0
R. Indian EBDX	150	-5	750	-5	AG	0	3.4	.0	10.0
S. Indian WBAX	750	0	150	0	AG	0	3.4	.0	10.0
T. Indian WBDX	-150	0	-750	0	AG	316	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-14 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. SE	14	-12	1.8
2. NW	-14	7	1.8
3. SW	-12	-12	1.8
4. NE	14	7	1.8
5. ES mdblk	150	-12	1.8
6. WN mdblk	-150	7	1.8
7. WS mdblk	-150	-12	1.8
8. EN mdblk	150	7	1.8
9. SE mdblk	14	-150	1.8
10. NW mdblk	-14	150	1.8
11. SW mdblk	-12	-150	1.8
12. NE mdblk	14	150	1.8
13. ES blk	600	-12	1.8
14. WN blk	-600	7	1.8
15. WS blk	-600	-12	1.8
16. EN blk	600	7	1.8
17. SE blk	14	-600	1.8
18. NW blk	-14	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: Rancho Palos Verdes General Plan
RUN: Existing-14 (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	352.	.8	.0	.3	.0	.3	.0	.0	.0	.0
2. NW	171.	1.0	.1	.0	.0	.0	.5	.0	.0	.0
3. SW	6.	1.3	.0	.0	.0	.8	.0	.0	.0	.0
4. NE	264.	.9	.0	.1	.0	.2	.0	.0	.1	.0
5. ES mdblk	272.	.3	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	100.	.6	.0	.0	.0	.0	.0	.0	.1	.0
7. WS mdblk	79.	.6	.0	.0	.0	.0	.0	.0	.2	.0
8. EN mdblk	268.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	1.0	.4	.0	.1	.1	.2	.0	.0	.0
10. NW mdblk	173.	1.2	.0	.0	.0	.8	.0	.0	.0	.0
11. SW mdblk	7.	1.0	.1	.0	.0	.0	.6	.0	.0	.0
12. NE mdblk	188.	.9	.0	.3	.0	.3	.0	.0	.0	.0
13. ES blk	271.	.1	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.4	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	269.	.1	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	.8	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.8	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.9	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	.8	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-14 (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	.1	.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	.1	.0	.0	.0	.0	.0
4. NE	.1	.0	.2	.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	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.1	.0	.1	.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	.1	.0	.0	.2
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	.0	.0	.0
17. SE blk	.0	.0	.0	.0	.4	.0	.0	.3	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.1	.6	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.2	.0	.0	.6	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.4	.3	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-15 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Crenshaw NBA	9	-150	9	0	AG	444	4.9	.0	13.5
B. Crenshaw NBD	9	0	9	150	AG	655	3.5	.0	10.0
C. Crenshaw NBL	5	-150	0	0	AG	14	6.7	.0	10.0
D. Crenshaw SBA	-9	150	-9	0	AG	1113	5.4	.0	13.5
E. Crenshaw SBD	-9	0	-9	-150	AG	738	3.5	.0	10.0
F. Crenshaw SBL	-5	150	0	0	AG	37	6.7	.0	10.0
G. Crestrid EBA	-150	-5	0	-5	AG	19	6.2	.0	10.0
H. Crestrid EBD	0	-5	150	-5	AG	40	3.9	.0	10.0
I. Crestrid EBL	-150	-5	0	0	AG	176	6.7	.0	10.0
J. Crestrid WBA	150	4	0	4	AG	43	6.2	.0	10.0
K. Crestrid WBD	0	4	-150	4	AG	417	5.7	.0	10.0
L. Crestrid WBL	150	2	0	0	AG	4	6.7	.0	10.0
M. Crensha NBAX	9	-750	9	-150	AG	458	3.4	.0	13.5
N. Crensha NBDX	9	150	9	750	AG	655	3.4	.0	10.0
O. Crensha SBAX	-9	750	-9	150	AG	1150	3.4	.0	13.5
P. Crensha SBDX	-9	-150	-9	-750	AG	738	3.4	.0	10.0
Q. Crestri EBAX	-750	-5	-150	-5	AG	195	3.4	.0	10.0
R. Crestri EBDX	150	-5	750	-5	AG	40	3.4	.0	10.0
S. Crestri WBAX	750	4	150	4	AG	47	3.4	.0	10.0
T. Crestri WBDX	-150	4	-750	4	AG	417	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-15 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-15 (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	350.	.7	.0	.3	.0	.2	.0	.0	.0	.0
2. NW	8.	1.1	.0	.0	.0	.8	.0	.0	.0	.0
3. SW	6.	1.3	.0	.0	.0	.7	.0	.0	.0	.0
4. NE	263.	.9	.0	.2	.0	.2	.0	.0	.0	.0
5. ES mdblk	275.	.3	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	98.	.6	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	78.	.5	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	268.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	.7	.3	.0	.0	.2	.0	.0	.0	.0
10. NW mdblk	172.	1.1	.0	.0	.0	.8	.0	.0	.0	.0
11. SW mdblk	5.	.8	.0	.0	.0	.1	.3	.0	.0	.0
12. NE mdblk	190.	.8	.0	.3	.0	.2	.0	.0	.0	.0
13. ES blk	275.	.2	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.4	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	268.	.2	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	.5	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.8	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.6	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	.7	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-15 (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	.1	.0	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0
3. SW	.0	.0	.1	.0	.0	.1	.1	.0	.0	.0	.0	.0
4. NE	.1	.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	.2	.0	.2	.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	.3
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.1
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	.6	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.1	.0	.0	.4	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.4	.2	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-16 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Crenshaw NBA	7	-150	7	0	AG	86	4.8	.0	10.0
B. Crenshaw NBD	7	0	7	150	AG	406	3.5	.0	10.0
C. Crenshaw NBL	5	-150	0	0	AG	38	6.7	.0	10.0
D. Crenshaw SBA	-9	150	-9	0	AG	569	4.9	.0	13.5
E. Crenshaw SBD	-9	0	-9	-150	AG	159	3.5	.0	10.0
F. Crenshaw SBL	-5	150	0	0	AG	102	6.7	.0	10.0
G. Crest Ro EBA	-150	-7	0	-7	AG	82	6.2	.0	10.0
H. Crest Ro EBD	0	-7	150	-7	AG	143	3.9	.0	10.0
I. Crest Ro EBL	-150	-5	0	0	AG	252	6.7	.0	10.0
J. Crest Ro WBA	150	4	0	4	AG	86	6.2	.0	10.0
K. Crest Ro WBD	0	4	-150	4	AG	509	6.7	.0	10.0
L. Crest Ro WBL	150	2	0	0	AG	2	6.7	.0	10.0
M. Crensha NBAX	7	-750	7	-150	AG	124	3.4	.0	10.0
N. Crensha NBDX	7	150	7	750	AG	406	3.4	.0	10.0
O. Crensha SBAX	-9	750	-9	150	AG	671	3.4	.0	13.5
P. Crensha SBDX	-9	-150	-9	-750	AG	159	3.4	.0	10.0
Q. Crest R EBAX	-750	-7	-150	-7	AG	334	3.4	.0	10.0
R. Crest R EBDX	150	-7	750	-7	AG	143	3.4	.0	10.0
S. Crest R WBAX	750	4	150	4	AG	88	3.4	.0	10.0
T. Crest R WBDX	-150	4	-750	4	AG	509	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-16 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-16 (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	279.	.6	.0	.0	.0	.0	.0	.0	.0	.0
2. NW	261.	.8	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	6.	.9	.0	.0	.0	.4	.0	.0	.0	.0
4. NE	263.	1.0	.0	.0	.0	.1	.0	.0	.0	.0
5. ES mdblk	275.	.4	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	99.	.8	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	78.	.6	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	267.	.4	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	354.	.4	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	171.	.6	.0	.0	.0	.4	.0	.0	.0	.0
11. SW mdblk	3.	.4	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	193.	.5	.0	.2	.0	.2	.0	.0	.0	.0
13. ES blk	275.	.2	.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.	.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	267.	.2	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.2	.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.	.2	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	.5	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-16 (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	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. NW	.2	.0	.5	.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	.2	.0	.4	.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	.1	.0	.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.2	.0	.2	.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	.1	.0	.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	.0	.0	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.4	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.2	.2	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-17 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Forresta NBA	5	-150	5	0	AG	27	5.3	.0	10.0
B. Forresta NBD	5	0	5	150	AG	85	3.6	.0	10.0
C. Forresta NBL	5	-150	0	0	AG	12	6.7	.0	10.0
D. Forresta SBA	-5	150	-5	0	AG	28	5.3	.0	10.0
E. Forresta SBD	-5	0	-5	-150	AG	35	3.6	.0	10.0
F. Forresta SBL	-5	150	0	0	AG	64	6.7	.0	10.0
G. Palos Ve EBA	-150	-7	0	-7	AG	577	6.1	.0	10.0
H. Palos Ve EBD	0	-7	150	-7	AG	657	4.1	.0	10.0
I. Palos Ve EBL	-150	-5	0	0	AG	16	6.7	.0	10.0
J. Palos Ve WBA	150	7	0	7	AG	526	6.1	.0	10.0
K. Palos Ve WBD	0	7	-150	7	AG	493	3.7	.0	10.0
L. Palos Ve WBL	150	5	0	0	AG	20	6.7	.0	10.0
M. Forrest NBAX	5	-750	5	-150	AG	39	3.4	.0	10.0
N. Forrest NBDX	5	150	5	750	AG	85	3.4	.0	10.0
O. Forrest SBAX	-5	750	-5	150	AG	92	3.4	.0	10.0
P. Forrest SBDX	-5	-150	-5	-750	AG	35	3.4	.0	10.0
Q. Palos V EBAX	-750	-7	-150	-7	AG	593	3.4	.0	10.0
R. Palos V EBDX	150	-7	750	-7	AG	657	3.4	.0	10.0
S. Palos V WBAX	750	7	150	7	AG	546	3.4	.0	10.0
T. Palos V WBDX	-150	7	-750	7	AG	493	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-17 (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: Rancho Palos Verdes General Plan
RUN: Existing-17 (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.	.7	.0	.0	.0	.0	.0	.0	.5	.0
2. NW	98.	.8	.0	.0	.0	.0	.0	.0	.0	.1
3. SW	82.	.7	.0	.0	.0	.0	.0	.0	.0	.3
4. NE	98.	.7	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	278.	.7	.0	.0	.0	.0	.0	.0	.0	.4
6. WN mdblk	97.	.6	.0	.0	.0	.0	.0	.0	.1	.0
7. WS mdblk	83.	.8	.0	.0	.0	.0	.0	.0	.5	.0
8. EN mdblk	262.	.8	.0	.0	.0	.0	.0	.0	.0	.1
9. SE mdblk	356.	.2	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	171.	.3	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	5.	.2	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	187.	.2	.0	.0	.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.	.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	357.	.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	175.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	4.	.1	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	185.	.2	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-17 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

CONC/LINK (PPM)

RECEPTOR	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	.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	.5	.0	.0	.0	.0	.0	.0	.0	.1	.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	.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	.4	.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	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.0	.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	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-18 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Palos Ve NBA	4	-150	4	0	AG	299	4.9	.0	10.0
B. Palos Ve NBD	4	0	4	150	AG	490	3.6	.0	10.0
C. Palos Ve NBL	2	-150	0	0	AG	0	3.4	.0	10.0
D. Palos Ve SBA	-5	150	-5	0	AG	201	4.9	.0	10.0
E. Palos Ve SBD	-5	0	-5	-150	AG	501	3.6	.0	10.0
F. Palos Ve SBL	-5	150	0	0	AG	419	7.3	.0	10.0
G. Miralest EBA	-150	0	0	0	AG	0	3.4	.0	10.0
H. Miralest EBD	0	0	150	0	AG	579	6.7	.0	10.0
I. Miralest EBL	-150	-2	0	0	AG	0	3.4	.0	10.0
J. Miralest WBA	150	5	0	5	AG	351	6.9	.0	10.0
K. Miralest WBD	0	5	-150	5	AG	0	3.4	.0	10.0
L. Miralest WBL	150	5	0	0	AG	300	7.2	.0	10.0
M. Palos V NBAX	4	-750	4	-150	AG	299	3.4	.0	10.0
N. Palos V NBDX	4	150	4	750	AG	490	3.4	.0	10.0
O. Palos V SBAX	-5	750	-5	150	AG	620	3.4	.0	10.0
P. Palos V SBDX	-5	-150	-5	-750	AG	501	3.4	.0	10.0
Q. Mirales EBAX	-750	0	-150	0	AG	0	3.4	.0	10.0
R. Mirales EBDX	150	0	750	0	AG	579	3.4	.0	10.0
S. Mirales WBAX	750	5	150	5	AG	651	3.4	.0	10.0
T. Mirales WBDX	-150	5	-750	5	AG	0	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-18 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-18 (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.	1.3	.0	.3	.0	.0	.0	.3	.0	.3
2. NW	98.	1.3	.0	.0	.0	.0	.0	.2	.0	.3
3. SW	83.	1.3	.0	.0	.0	.0	.1	.0	.0	.5
4. NE	98.	1.0	.0	.0	.0	.0	.0	.0	.0	.3
5. ES mdblk	281.	1.1	.0	.0	.0	.0	.0	.0	.0	.6
6. WN mdblk	92.	.4	.0	.0	.0	.0	.0	.0	.0	.1
7. WS mdblk	87.	.4	.0	.0	.0	.0	.0	.0	.0	.1
8. EN mdblk	259.	1.1	.0	.0	.0	.0	.0	.0	.0	.3
9. SE mdblk	356.	.6	.2	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	170.	1.0	.0	.1	.0	.2	.0	.5	.0	.0
11. SW mdblk	7.	.7	.0	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	187.	.7	.0	.3	.0	.0	.0	.2	.0	.0
13. ES blk	276.	.7	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	90.	.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	89.	.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.7	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	355.	.4	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.6	.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.	.6	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-18 (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	.1	.0	.0	.0	.0	.0	.0	.0	.0
2. NW	.0	.3	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	.0	.2	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0
4. NE	.0	.4	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.2	.0	.2	.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	.4	.0	.4	.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	.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	.2	.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	.2	.4	.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	.3	.2	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-19 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Palos Ve NBA	9	-150	9	0	AG	116	4.8	.0	13.5
B. Palos Ve NBD	9	0	9	150	AG	275	3.5	.0	10.0
C. Palos Ve NBL	5	-150	0	0	AG	22	6.7	.0	10.0
D. Palos Ve SBA	-9	150	-9	0	AG	290	4.8	.0	13.5
E. Palos Ve SBD	-9	0	-9	-150	AG	245	3.5	.0	10.0
F. Palos Ve SBL	-5	150	0	0	AG	38	6.7	.0	10.0
G. Crest Ro EBA	-150	-4	0	-4	AG	25	6.2	.0	10.0
H. Crest Ro EBD	0	-4	150	-4	AG	52	3.9	.0	10.0
I. Crest Ro EBL	-150	-2	0	0	AG	71	6.7	.0	10.0
J. Crest Ro WBA	150	2	0	2	AG	103	6.2	.0	10.0
K. Crest Ro WBD	0	2	-150	2	AG	127	3.9	.0	10.0
L. Crest Ro WBL	150	2	0	0	AG	34	6.7	.0	10.0
M. Palos V NBAX	9	-750	9	-150	AG	138	3.4	.0	13.5
N. Palos V NBDX	9	150	9	750	AG	275	3.4	.0	10.0
O. Palos V SBAX	-9	750	-9	150	AG	328	3.4	.0	13.5
P. Palos V SBDX	-9	-150	-9	-750	AG	245	3.4	.0	10.0
Q. Crest R EBAX	-750	-4	-150	-4	AG	96	3.4	.0	10.0
R. Crest R EBDX	150	-4	750	-4	AG	52	3.4	.0	10.0
S. Crest R WBAX	750	2	150	2	AG	137	3.4	.0	10.0
T. Crest R WBDX	-150	2	-750	2	AG	127	3.4	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-19 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-19 (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	352.	.3	.0	.1	.0	.0	.0	.0	.0	.0
2. NW	96.	.3	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	6.	.4	.0	.0	.0	.2	.0	.0	.0	.0
4. NE	264.	.4	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	276.	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	95.	.3	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	84.	.3	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	265.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	354.	.3	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	172.	.4	.0	.0	.0	.2	.0	.0	.0	.0
11. SW mdblk	6.	.3	.0	.0	.0	.0	.1	.0	.0	.0
12. NE mdblk	188.	.3	.0	.2	.0	.0	.0	.0	.0	.0
13. ES blk	275.	.2	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.2	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	266.	.2	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.2	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.3	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.3	.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: Rancho Palos Verdes General Plan
RUN: Existing-19 (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	.1	.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	.0	.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	.2	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-20 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Palos Ve NBA	0	-150	0	0	AG	0	3.4	.0	10.0
B. Palos Ve NBD	0	0	0	150	AG	134	3.9	.0	10.0
C. Palos Ve NBL	2	-150	0	0	AG	0	3.4	.0	10.0
D. Palos Ve SBA	-5	150	-5	0	AG	99	6.2	.0	10.0
E. Palos Ve SBD	-5	0	-5	-150	AG	0	3.4	.0	10.0
F. Palos Ve SBL	-5	150	0	0	AG	53	6.7	.0	10.0
G. Palos Ve EBA	-150	-5	0	-5	AG	547	5.4	.0	10.0
H. Palos Ve EBD	0	-5	150	-5	AG	600	3.6	.0	10.0
I. Palos Ve EBL	-150	-5	0	0	AG	95	6.7	.0	10.0
J. Palos Ve WBA	150	4	0	4	AG	500	5.2	.0	10.0
K. Palos Ve WBD	0	4	-150	4	AG	560	3.6	.0	10.0
L. Palos Ve WBL	150	2	0	0	AG	0	3.4	.0	10.0
M. Palos V NBAX	0	-750	0	-150	AG	0	3.4	.0	10.0
N. Palos V NBDX	0	150	0	750	AG	134	3.4	.0	10.0
O. Palos V SBAX	-5	750	-5	150	AG	152	3.4	.0	10.0
P. Palos V SBDX	-5	-150	-5	-750	AG	0	3.4	.0	10.0
Q. Palos V EBAX	-750	-5	-150	-5	AG	642	3.4	.0	10.0
R. Palos V EBDX	150	-5	750	-5	AG	600	3.4	.0	10.0
S. Palos V WBAX	750	4	150	4	AG	500	3.4	.0	10.0
T. Palos V WBDX	-150	4	-750	4	AG	560	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-20 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-20 (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.	.8	.0	.0	.0	.0	.0	.0	.4	.0
2. NW	97.	.7	.0	.0	.0	.0	.0	.0	.0	.1
3. SW	277.	.8	.0	.0	.0	.0	.0	.0	.4	.0
4. NE	262.	.8	.0	.0	.0	.0	.0	.0	.2	.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	.2	.0
7. WS mdblk	82.	.8	.0	.0	.0	.0	.0	.0	.4	.0
8. EN mdblk	264.	.7	.0	.0	.0	.0	.0	.0	.0	.1
9. SE mdblk	357.	.2	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	170.	.3	.0	.0	.0	.1	.0	.0	.0	.0
11. SW mdblk	2.	.2	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	190.	.3	.0	.0	.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.	.5	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	358.	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	175.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	360.	.0	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	.2	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-20 (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	.3	.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	.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	.1	.0	.1	.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	.2	.0	.0	.3
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	.2	.3	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.1	.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	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-21 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Miralest NBA	4	-150	4	0	AG	296	4.9	.0	10.0
B. Miralest NBD	4	0	4	150	AG	428	3.6	.0	10.0
C. Miralest NBL	2	-150	0	0	AG	0	3.4	.0	10.0
D. Miralest SBA	-5	150	-5	0	AG	372	5.1	.0	10.0
E. Miralest SBD	-5	0	-5	-150	AG	416	3.6	.0	10.0
F. Miralest SBL	-5	150	0	0	AG	200	6.7	.0	10.0
G. 1st Stre EBA	-150	0	0	0	AG	0	3.4	.0	10.0
H. 1st Stre EBD	0	0	150	0	AG	244	4.0	.0	10.0
I. 1st Stre EBL	-150	-2	0	0	AG	0	3.4	.0	10.0
J. 1st Stre WBA	150	5	0	5	AG	176	6.2	.0	10.0
K. 1st Stre WBD	0	5	-150	5	AG	0	3.4	.0	10.0
L. 1st Stre WBL	150	5	0	0	AG	44	6.7	.0	10.0
M. Mirales NBAX	4	-750	4	-150	AG	296	3.4	.0	10.0
N. Mirales NBDX	4	150	4	750	AG	428	3.4	.0	10.0
O. Mirales SBAX	-5	750	-5	150	AG	572	3.4	.0	10.0
P. Mirales SBDX	-5	-150	-5	-750	AG	416	3.4	.0	10.0
Q. 1st Str EBAX	-750	0	-150	0	AG	0	3.4	.0	10.0
R. 1st Str EBDX	150	0	750	0	AG	244	3.4	.0	10.0
S. 1st Str WBAX	750	5	150	5	AG	220	3.4	.0	10.0
T. 1st Str WBDX	-150	5	-750	5	AG	0	3.4	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-21 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-21 (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	352.	.7	.0	.2	.0	.1	.0	.1	.0	.0
2. NW	7.	.6	.0	.0	.0	.3	.0	.1	.0	.0
3. SW	7.	.6	.0	.0	.0	.3	.0	.1	.0	.0
4. NE	352.	.6	.0	.2	.0	.1	.0	.1	.0	.0
5. ES mdblk	281.	.4	.0	.0	.0	.0	.0	.0	.0	.2
6. WN mdblk	92.	.2	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	87.	.2	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	260.	.4	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	355.	.5	.2	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	171.	.7	.0	.1	.0	.3	.0	.2	.0	.0
11. SW mdblk	6.	.5	.0	.0	.0	.0	.2	.0	.0	.0
12. NE mdblk	187.	.6	.0	.2	.0	.1	.0	.1	.0	.0
13. ES blk	276.	.3	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	89.	.0	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	88.	.0	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.3	.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.	.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: Rancho Palos Verdes General Plan
RUN: Existing-21 (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	.1	.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	.2	.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	.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	.1	.1	.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	.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	.3	.2	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: Existing-22 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Western NBA	7	-150	7	0	AG	1304	5.7	.0	10.0
B. Western NBD	7	0	7	150	AG	1291	3.7	.0	10.0
C. Western NBL	5	-150	0	0	AG	62	6.7	.0	10.0
D. Western SBA	-9	150	-9	0	AG	1395	5.7	.0	13.5
E. Western SBD	-9	0	-9	-150	AG	1504	3.9	.0	10.0
F. Western SBL	-5	150	0	0	AG	49	6.7	.0	10.0
G. Toscanin EBA	-150	-4	0	-4	AG	85	6.2	.0	10.0
H. Toscanin EBD	0	-4	150	-4	AG	125	3.9	.0	10.0
I. Toscanin EBL	-150	-2	0	0	AG	31	6.7	.0	10.0
J. Toscanin WBA	150	4	0	4	AG	23	6.2	.0	10.0
K. Toscanin WBD	0	4	-150	4	AG	82	3.9	.0	10.0
L. Toscanin WBL	150	2	0	0	AG	53	6.7	.0	10.0
M. Western NBAX	7	-750	7	-150	AG	1366	3.4	.0	10.0
N. Western NBDX	7	150	7	750	AG	1291	3.4	.0	10.0
O. Western SBAX	-9	750	-9	150	AG	1444	3.4	.0	13.5
P. Western SBDX	-9	-150	-9	-750	AG	1504	3.4	.0	10.0
Q. Toscani EBAX	-750	-4	-150	-4	AG	116	3.4	.0	10.0
R. Toscani EBDX	150	-4	750	-4	AG	125	3.4	.0	10.0
S. Toscani WBAX	750	4	150	4	AG	76	3.4	.0	10.0
T. Toscani WBDX	-150	4	-750	4	AG	82	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-22 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: Existing-22 (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.	1.5	1.0	.0	.0	.0	.1	.0	.0	.0
2. NW	8.	1.4	.0	.1	.0	1.0	.0	.0	.0	.0
3. SW	7.	1.6	.0	.1	.0	1.0	.0	.0	.0	.0
4. NE	188.	1.5	.9	.0	.0	.0	.2	.0	.0	.0
5. ES mdblk	276.	.4	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	96.	.4	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	84.	.4	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	264.	.4	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	1.7	1.0	.0	.0	.2	.2	.0	.0	.0
10. NW mdblk	172.	1.6	.2	.1	.0	1.0	.0	.0	.0	.0
11. SW mdblk	8.	1.4	.2	.1	.0	.0	.8	.0	.0	.0
12. NE mdblk	188.	1.3	.0	.7	.0	.2	.1	.0	.0	.0
13. ES blk	275.	.3	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.3	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.3	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	265.	.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.1	.0	.0	.0	.0	.0	.0	.0	.0

JOB: Rancho Palos Verdes General Plan
RUN: Existing-22 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

CONC/LINK (PPM)

RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.0	.0	.0	.0	.2	.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	.7	.0	.0	.3	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.7	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.3	.0	.0	.8	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.7	.3	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Palos Ve NBA	9	-150	9	0	AG	893	5.2	.0	13.5
B. Palos Ve NBD	9	0	9	150	AG	679	3.5	.0	10.0
C. Palos Ve NBL	5	-150	0	0	AG	18	6.7	.0	10.0
D. Palos Ve SBA	-7	150	-7	0	AG	497	4.9	.0	10.0
E. Palos Ve SBD	-7	0	-7	-150	AG	1170	3.6	.0	10.0
F. Palos Ve SBL	-5	150	0	0	AG	302	7.3	.0	10.0
G. Hawthorn EBA	-150	-2	0	-2	AG	50	6.2	.0	10.0
H. Hawthorn EBD	0	-2	150	-2	AG	841	5.7	.0	10.0
I. Hawthorn EBL	-150	-2	0	0	AG	6	6.7	.0	10.0
J. Hawthorn WBA	150	7	0	7	AG	330	6.9	.0	10.0
K. Hawthorn WBD	0	7	-150	7	AG	78	3.9	.0	10.0
L. Hawthorn WBL	150	5	0	0	AG	672	7.3	.0	10.0
M. Palos V NBAX	9	-750	9	-150	AG	911	3.4	.0	13.5
N. Palos V NBDX	9	150	9	750	AG	679	3.4	.0	10.0
O. Palos V SBAX	-7	750	-7	150	AG	799	3.4	.0	10.0
P. Palos V SBDX	-7	-150	-7	-750	AG	1170	3.4	.0	10.0
Q. Hawthor EBAX	-750	-2	-150	-2	AG	56	3.4	.0	10.0
R. Hawthor EBDX	150	-2	750	-2	AG	841	3.4	.0	10.0
S. Hawthor WBAX	750	7	150	7	AG	1002	3.4	.0	10.0
T. Hawthor WBDX	-150	7	-750	7	AG	78	3.4	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-01 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-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	80.	1.5	.0	.0	.0	.0	.0	.0	.0	.7
2. NW	98.	1.5	.0	.0	.0	.2	.0	.1	.0	.3
3. SW	82.	1.9	.2	.0	.0	.0	.3	.0	.0	.6
4. NE	187.	1.6	.6	.0	.0	.0	.1	.0	.0	.2
5. ES mdblk	281.	1.4	.0	.0	.0	.0	.0	.0	.0	.7
6. WN mdblk	93.	.7	.0	.0	.0	.0	.0	.0	.0	.1
7. WS mdblk	87.	.7	.0	.0	.0	.0	.0	.0	.0	.1
8. EN mdblk	258.	1.4	.0	.0	.0	.0	.0	.0	.0	.3
9. SE mdblk	353.	1.1	.6	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	172.	1.1	.1	.0	.0	.4	.0	.3	.0	.0
11. SW mdblk	9.	1.1	.2	.0	.0	.0	.6	.0	.0	.0
12. NE mdblk	186.	.9	.0	.3	.0	.0	.1	.0	.0	.0
13. ES blk	276.	.9	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	93.	.3	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	88.	.3	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	.9	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.8	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.8	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.0	.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: Rancho Palos Verdes General Plan
RUN: GPBO-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	.0	.2	.0	.5	.0	.0	.0	.0	.0	.0	.0	.0
2. NW	.0	.3	.0	.4	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	.0	.2	.0	.5	.0	.0	.0	.0	.0	.0	.0	.0
4. NE	.0	.2	.0	.2	.0	.0	.0	.1	.0	.0	.0	.0
5. ES mdblk	.0	.2	.0	.4	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.4	.0	.6	.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	.5	.3	.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	.2	.5	.0
17. SE blk	.0	.0	.0	.0	.5	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.4	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.2	.0	.0	.6	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.4	.2	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Palos Ve NBA	7	-150	7	0	AG	856	5.2	.0	10.0
B. Palos Ve NBD	7	0	7	150	AG	907	3.6	.0	10.0
C. Palos Ve NBL	5	-150	0	0	AG	28	6.7	.0	10.0
D. Palos Ve SBA	-5	150	-5	0	AG	1126	5.4	.0	13.5
E. Palos Ve SBD	-5	0	-5	-150	AG	1166	3.6	.0	10.0
F. Palos Ve SBL	-2	150	0	0	AG	0	3.4	.0	10.0
G. Lower Po EBA	-150	0	0	0	AG	40	6.2	.0	10.0
H. Lower Po EBD	0	0	150	0	AG	0	3.4	.0	10.0
I. Lower Po EBL	-150	-2	0	0	AG	51	6.7	.0	10.0
J. Lower Po WBA	150	0	0	0	AG	0	3.4	.0	10.0
K. Lower Po WBD	0	0	-150	0	AG	28	3.9	.0	10.0
L. Lower Po WBL	150	2	0	0	AG	0	3.4	.0	10.0
M. Palos V NBAX	7	-750	7	-150	AG	884	3.4	.0	10.0
N. Palos V NBDX	7	150	7	750	AG	907	3.4	.0	10.0
O. Palos V SBAX	-5	750	-5	150	AG	1126	3.4	.0	13.5
P. Palos V SBDX	-5	-150	-5	-750	AG	1166	3.4	.0	10.0
Q. Lower P EBAX	-750	0	-150	0	AG	91	3.4	.0	10.0
R. Lower P EBDX	150	0	750	0	AG	0	3.4	.0	10.0
S. Lower P WBAX	750	0	150	0	AG	0	3.4	.0	10.0
T. Lower P WBDX	-150	0	-750	0	AG	28	3.4	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-02 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-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	188.	1.0	.6	.0	.0	.0	.2	.0	.0	.0
2. NW	8.	1.1	.0	.1	.0	.8	.0	.0	.0	.0
3. SW	6.	1.3	.0	.1	.0	.9	.0	.0	.0	.0
4. NE	187.	1.0	.6	.0	.0	.0	.2	.0	.0	.0
5. ES mdblk	272.	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	98.	.3	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	82.	.3	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	269.	.2	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	353.	1.1	.6	.0	.0	.1	.1	.0	.0	.0
10. NW mdblk	172.	1.2	.1	.1	.0	.8	.0	.0	.0	.0
11. SW mdblk	7.	1.0	.2	.0	.0	.0	.6	.0	.0	.0
12. NE mdblk	188.	1.0	.0	.5	.0	.3	.0	.0	.0	.0
13. ES blk	271.	.1	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	94.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.2	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	270.	.1	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	.9	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.9	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	.9	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	.9	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-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	.1	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.0	.0	.0	.0	.1	.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	.5	.0	.0	.3	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.6	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.2	.0	.0	.6	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.5	.3	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 335. (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. Via Rive NBA	2	-150	2	0	AG	0	3.4	.0	10.0
B. Via Rive NBD	2	0	2	150	AG	126	3.9	.0	10.0
C. Via Rive NBL	2	-150	0	0	AG	0	3.4	.0	10.0
D. Via Rive SBA	-2	150	-2	0	AG	69	6.2	.0	10.0
E. Via Rive SBD	-2	0	-2	-150	AG	34	3.9	.0	10.0
F. Via Rive SBL	-2	150	0	0	AG	17	6.7	.0	10.0
G. Hawthorn EBA	-150	-9	0	-9	AG	856	5.2	.0	13.5
H. Hawthorn EBD	0	-9	150	-9	AG	873	3.6	.0	10.0
I. Hawthorn EBL	-150	-5	0	0	AG	30	6.7	.0	10.0
J. Hawthorn WBA	150	9	0	9	AG	1124	5.4	.0	13.5
K. Hawthorn WBD	0	9	-150	9	AG	1097	3.6	.0	10.0
L. Hawthorn WBL	150	5	0	0	AG	34	6.7	.0	10.0
M. Via Riv NBAX	2	-750	2	-150	AG	0	3.4	.0	10.0
N. Via Riv NBDX	2	150	2	750	AG	126	3.4	.0	10.0
O. Via Riv SBAX	-2	750	-2	150	AG	86	3.4	.0	10.0
P. Via Riv SBDX	-2	-150	-2	-750	AG	34	3.4	.0	10.0
Q. Hawthor EBAX	-750	-9	-150	-9	AG	886	3.4	.0	13.5
R. Hawthor EBDX	150	-9	750	-9	AG	873	3.4	.0	10.0
S. Hawthor WBAX	750	9	150	9	AG	1158	3.4	.0	13.5
T. Hawthor WBDX	-150	9	-750	9	AG	1097	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-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.	1.0	.0	.0	.0	.0	.0	.0	.6	.0
2. NW	97.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	278.	.9	.0	.0	.0	.0	.0	.0	.6	.0
4. NE	98.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	278.	.9	.0	.0	.0	.0	.0	.0	.0	.5
6. WN mdblk	97.	1.0	.0	.0	.0	.0	.0	.0	.1	.0
7. WS mdblk	82.	1.0	.0	.0	.0	.0	.0	.0	.6	.0
8. EN mdblk	262.	1.2	.0	.0	.0	.0	.0	.0	.1	.0
9. SE mdblk	358.	.2	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	171.	.3	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	3.	.2	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	188.	.3	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	277.	.8	.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.	.8	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.9	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	358.	.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	175.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	3.	.1	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	185.	.2	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-03 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

CONC/LINK (PPM)

RECEPTOR	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	.1
2. NW	.0	.8	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
3. SW	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2
4. NE	.0	.8	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
5. ES mdblk	.0	.2	.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	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.8	.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	.5	.2	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.6
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.5	.0	.0	.2
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.6	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.0	.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	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-04 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Hawthorn NBA	7	-150	7	0	AG	757	5.1	.0	10.0
B. Hawthorn NBD	7	0	7	150	AG	944	3.6	.0	10.0
C. Hawthorn NBL	5	-150	0	0	AG	37	6.7	.0	10.0
D. Hawthorn SBA	-7	150	-7	0	AG	407	4.9	.0	10.0
E. Hawthorn SBD	-7	0	-7	-150	AG	248	3.5	.0	10.0
F. Hawthorn SBL	-5	150	0	0	AG	69	6.7	.0	10.0
G. Eddinghi EBA	-150	-2	0	-2	AG	55	6.2	.0	10.0
H. Eddinghi EBD	0	-2	150	-2	AG	87	3.9	.0	10.0
I. Eddinghi EBL	-150	-2	0	0	AG	153	6.7	.0	10.0
J. Eddinghi WBA	150	2	0	2	AG	58	6.2	.0	10.0
K. Eddinghi WBD	0	2	-150	2	AG	265	4.0	.0	10.0
L. Eddinghi WBL	150	2	0	0	AG	8	6.7	.0	10.0
M. Hawthor NBAX	7	-750	7	-150	AG	794	3.4	.0	10.0
N. Hawthor NBDX	7	150	7	750	AG	944	3.4	.0	10.0
O. Hawthor SBAX	-7	750	-7	150	AG	476	3.4	.0	10.0
P. Hawthor SBDX	-7	-150	-7	-750	AG	248	3.4	.0	10.0
Q. Eddingh EBAX	-750	-2	-150	-2	AG	208	3.4	.0	10.0
R. Eddingh EBDX	150	-2	750	-2	AG	87	3.4	.0	10.0
S. Eddingh WBAX	750	2	150	2	AG	66	3.4	.0	10.0
T. Eddingh WBDX	-150	2	-750	2	AG	265	3.4	.0	10.0

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-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	352.	.8	.0	.4	.0	.0	.0	.0	.0	.0
2. NW	170.	.6	.2	.0	.0	.0	.1	.0	.0	.0
3. SW	8.	.8	.0	.1	.0	.3	.0	.0	.0	.0
4. NE	187.	.8	.5	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	274.	.3	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	98.	.5	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	82.	.5	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	267.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	353.	.9	.6	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	172.	.7	.0	.1	.0	.3	.0	.0	.0	.0
11. SW mdblk	7.	.5	.1	.0	.0	.0	.1	.0	.0	.0
12. NE mdblk	188.	.8	.0	.5	.0	.0	.0	.0	.0	.0
13. ES blk	274.	.2	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.4	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	.3	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	267.	.2	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.6	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.6	.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.	.7	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-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	.1	.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	.1	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.2	.0	.1	.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	.2
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.1
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	.0	.0	.0	.0	.4	.0	.0	.0	.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	.2	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.5	.1	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Hawthorn NBA	9	-150	9	0	AG	947	5.2	.0	13.5
B. Hawthorn NBD	9	0	9	150	AG	836	3.6	.0	10.0
C. Hawthorn NBL	5	-150	0	0	AG	30	6.7	.0	10.0
D. Hawthorn SBA	-9	150	-9	0	AG	882	5.2	.0	13.5
E. Hawthorn SBD	-9	0	-9	-150	AG	1359	3.7	.0	10.0
F. Hawthorn SBL	-5	150	0	0	AG	61	6.7	.0	10.0
G. Crest R EBA	-150	-7	0	-7	AG	98	6.2	.0	10.0
H. Crest R EBD	0	-7	150	-7	AG	491	4.0	.0	10.0
I. Crest R EBL	-150	-5	0	0	AG	144	6.7	.0	10.0
J. Crest R WBA	150	7	0	7	AG	200	6.2	.0	10.0
K. Crest R WBD	0	7	-150	7	AG	270	4.0	.0	10.0
L. Crest R WBL	150	5	0	0	AG	594	7.3	.0	10.0
M. Hawthor NBAX	9	-750	9	-150	AG	977	3.4	.0	13.5
N. Hawthor NBDX	9	150	9	750	AG	836	3.4	.0	10.0
O. Hawthor SBAX	-9	750	-9	150	AG	943	3.4	.0	13.5
P. Hawthor SBDX	-9	-150	-9	-750	AG	1359	3.4	.0	10.0
Q. Crest EBAX	-750	-7	-150	-7	AG	242	3.4	.0	10.0
R. Crest EBDX	150	-7	750	-7	AG	491	3.4	.0	10.0
S. Crest WBAX	750	7	150	7	AG	794	3.4	.0	10.0
T. Crest WBDX	-150	7	-750	7	AG	270	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. SE	17	-14	1.8
2. NW	-17	14	1.8
3. SW	-15	-14	1.8
4. NE	15	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	17	-150	1.8
10. NW mdblk	-17	150	1.8
11. SW mdblk	-15	-150	1.8
12. NE mdblk	15	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	17	-600	1.8
18. NW blk	-17	600	1.8
19. SW blk	-15	-600	1.8
20. NE blk	15	600	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-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	350.	1.2	.1	.3	.0	.2	.0	.0	.0	.1
2. NW	170.	1.1	.2	.0	.0	.1	.5	.0	.0	.0
3. SW	81.	1.3	.2	.0	.0	.0	.3	.0	.0	.2
4. NE	187.	1.4	.6	.0	.0	.0	.1	.0	.0	.0
5. ES mdblk	280.	.8	.0	.0	.0	.0	.0	.0	.0	.3
6. WN mdblk	95.	.7	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	85.	.7	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	259.	1.0	.0	.0	.0	.0	.0	.0	.0	.1
9. SE mdblk	352.	1.1	.7	.0	.0	.1	.1	.0	.0	.0
10. NW mdblk	172.	1.1	.1	.0	.0	.6	.0	.0	.0	.0
11. SW mdblk	9.	1.2	.2	.0	.0	.0	.7	.0	.0	.0
12. NE mdblk	187.	1.0	.0	.4	.0	.1	.1	.0	.0	.0
13. ES blk	276.	.6	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.4	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.4	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.7	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	.9	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.8	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	186.	.8	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-05 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

CONC/LINK (PPM)

RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.0	.0	.2	.0	.0	.1	.0	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.2	.0	.0	.0	.2	.0	.0	.0	.0
5. ES mdblk	.0	.0	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.1	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.2	.0	.5	.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	.0	.0	.0	.2
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.4	.0
17. SE blk	.0	.0	.0	.0	.5	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.5	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.2	.0	.0	.7	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.5	.2	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Hawthorn NBA	9	-150	9	0	AG	944	5.2	.0	13.5
B. Hawthorn NBD	9	0	9	150	AG	948	3.6	.0	10.0
C. Hawthorn NBL	5	-150	0	0	AG	26	6.7	.0	10.0
D. Hawthorn SBA	-7	150	-7	0	AG	1252	5.7	.0	10.0
E. Hawthorn SBD	-7	0	-7	-150	AG	1224	3.7	.0	10.0
F. Hawthorn SBL	-5	150	0	0	AG	10	6.7	.0	10.0
G. Dupre Dr EBA	-150	-4	0	-4	AG	18	6.2	.0	10.0
H. Dupre Dr EBD	0	-4	150	-4	AG	28	3.9	.0	10.0
I. Dupre Dr EBL	-150	-2	0	0	AG	11	6.7	.0	10.0
J. Dupre Dr WBA	150	2	0	2	AG	9	6.2	.0	10.0
K. Dupre Dr WBD	0	2	-150	2	AG	83	3.9	.0	10.0
L. Dupre Dr WBL	150	2	0	0	AG	13	6.7	.0	10.0
M. Hawthor NBAX	9	-750	9	-150	AG	970	3.4	.0	13.5
N. Hawthor NBDX	9	150	9	750	AG	948	3.4	.0	10.0
O. Hawthor SBAX	-7	750	-7	150	AG	1262	3.4	.0	10.0
P. Hawthor SBDX	-7	-150	-7	-750	AG	1224	3.4	.0	10.0
Q. Dupre D EBAX	-750	-4	-150	-4	AG	29	3.4	.0	10.0
R. Dupre D EBDX	150	-4	750	-4	AG	28	3.4	.0	10.0
S. Dupre D WBAX	750	2	150	2	AG	22	3.4	.0	10.0
T. Dupre D WBDX	-150	2	-750	2	AG	83	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-06 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-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	188.	1.0	.6	.0	.0	.0	.0	.0	.0	.0
2. NW	8.	1.3	.0	.0	.0	1.0	.0	.0	.0	.0
3. SW	8.	1.3	.0	.1	.0	.9	.0	.0	.0	.0
4. NE	187.	1.1	.7	.0	.0	.0	.1	.0	.0	.0
5. ES mdblk	275.	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	96.	.3	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	83.	.2	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	267.	.2	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	1.1	.7	.0	.0	.2	.1	.0	.0	.0
10. NW mdblk	172.	1.4	.1	.1	.0	1.0	.0	.0	.0	.0
11. SW mdblk	7.	1.1	.1	.0	.0	.1	.6	.0	.0	.0
12. NE mdblk	188.	1.0	.0	.5	.0	.2	.1	.0	.0	.0
13. ES blk	273.	.2	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	94.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.2	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	267.	.1	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	.8	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	.9	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-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	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.0	.0	.0	.0	.2	.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	.5	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.7	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.2	.0	.0	.6	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.5	.2	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-07 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

```
     U=    .5 M/S              Z0= 100. CM            ALT=   335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Hawthorn NBA	9	-150	9	0	AG	932	5.2	.0	13.5
B. Hawthorn NBD	9	0	9	150	AG	949	3.6	.0	10.0
C. Hawthorn NBL	5	-150	0	0	AG	12	6.7	.0	10.0
D. Hawthorn SBA	-9	150	-9	0	AG	1208	5.7	.0	13.5
E. Hawthorn SBD	-9	0	-9	-150	AG	1179	3.6	.0	10.0
F. Hawthorn SBL	-5	150	0	0	AG	5	6.7	.0	10.0
G. Vallon D EBA	-150	-4	0	-4	AG	8	6.2	.0	10.0
H. Vallon D EBD	0	-4	150	-4	AG	7	3.9	.0	10.0
I. Vallon D EBL	-150	-2	0	0	AG	15	6.7	.0	10.0
J. Vallon D WBA	150	2	0	2	AG	4	6.2	.0	10.0
K. Vallon D WBD	0	2	-150	2	AG	56	3.9	.0	10.0
L. Vallon D WBL	150	2	0	0	AG	7	6.7	.0	10.0
M. Hawthor NBAX	9	-750	9	-150	AG	944	3.4	.0	13.5
N. Hawthor NBDX	9	150	9	750	AG	949	3.4	.0	10.0
O. Hawthor SBAX	-9	750	-9	150	AG	1213	3.4	.0	13.5
P. Hawthor SBDX	-9	-150	-9	-750	AG	1179	3.4	.0	10.0
Q. Vallon EBAX	-750	-4	-150	-4	AG	23	3.4	.0	10.0
R. Vallon EBDX	150	-4	750	-4	AG	7	3.4	.0	10.0
S. Vallon WBAX	750	2	150	2	AG	11	3.4	.0	10.0
T. Vallon WBDX	-150	2	-750	2	AG	56	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-07 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-07 (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.	1.0	.6	.0	.0	.0	.0	.0	.0	.0
2. NW	8.	1.2	.0	.0	.0	.9	.0	.0	.0	.0
3. SW	7.	1.3	.0	.0	.0	.9	.0	.0	.0	.0
4. NE	187.	1.0	.7	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	274.	.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	80.	.2	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	268.	.2	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	1.1	.6	.0	.0	.2	.0	.0	.0	.0
10. NW mdblk	172.	1.3	.1	.0	.0	.9	.0	.0	.0	.0
11. SW mdblk	7.	1.0	.1	.0	.0	.1	.6	.0	.0	.0
12. NE mdblk	188.	1.0	.0	.5	.0	.2	.1	.0	.0	.0
13. ES blk	273.	.1	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	94.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.2	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	268.	.1	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	.8	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.9	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	.9	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	.9	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-07 (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	.2	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.0	.0	.0	.0	.2	.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	.5	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.6	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.2	.0	.0	.6	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.5	.2	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-08 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Crestmon NBA	5	-150	5	0	AG	159	6.2	.0	10.0
B. Crestmon NBD	5	0	5	150	AG	2	3.9	.0	10.0
C. Crestmon NBL	5	-150	0	0	AG	173	6.7	.0	10.0
D. Crestmon SBA	-2	150	-2	0	AG	1	6.2	.0	10.0
E. Crestmon SBD	-2	0	-2	-150	AG	260	4.0	.0	10.0
F. Crestmon SBL	-2	150	0	0	AG	21	6.7	.0	10.0
G. Palos Ve EBA	-150	-9	0	-9	AG	1153	5.4	.0	13.5
H. Palos Ve EBD	0	-9	150	-9	AG	1188	3.6	.0	10.0
I. Palos Ve EBL	-150	-5	0	0	AG	1	6.7	.0	10.0
J. Palos Ve WBA	150	7	0	7	AG	675	5.1	.0	10.0
K. Palos Ve WBD	0	7	-150	7	AG	848	3.6	.0	10.0
L. Palos Ve WBL	150	5	0	0	AG	115	6.7	.0	10.0
M. Crestmo NBAX	5	-750	5	-150	AG	332	3.4	.0	10.0
N. Crestmo NBDX	5	150	5	750	AG	2	3.4	.0	10.0
O. Crestmo SBAX	-2	750	-2	150	AG	22	3.4	.0	10.0
P. Crestmo SBDX	-2	-150	-2	-750	AG	260	3.4	.0	10.0
Q. Palos V EBAX	-750	-9	-150	-9	AG	1154	3.4	.0	13.5
R. Palos V EBDX	150	-9	750	-9	AG	1188	3.4	.0	10.0
S. Palos V WBAX	750	7	150	7	AG	790	3.4	.0	10.0
T. Palos V WBDX	-150	7	-750	7	AG	848	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-08 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-08 (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.	1.3	.0	.0	.0	.0	.0	.0	.8	.0
2. NW	98.	.9	.0	.0	.0	.0	.0	.0	.0	.1
3. SW	278.	1.1	.0	.0	.0	.0	.0	.0	.8	.0
4. NE	261.	.9	.0	.0	.0	.0	.0	.0	.2	.0
5. ES mdblk	277.	1.0	.0	.0	.0	.0	.0	.0	.0	.6
6. WN mdblk	98.	1.0	.0	.0	.0	.0	.0	.0	.2	.1
7. WS mdblk	82.	1.2	.0	.0	.0	.0	.0	.0	.8	.0
8. EN mdblk	262.	1.1	.0	.0	.0	.0	.0	.0	.2	.1
9. SE mdblk	349.	.6	.2	.0	.2	.0	.0	.0	.0	.0
10. NW mdblk	177.	.3	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	10.	.5	.0	.0	.1	.0	.2	.0	.0	.0
12. NE mdblk	183.	.3	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	276.	.9	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	.9	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	.9	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	.8	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.4	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	178.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.4	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	182.	.1	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-08 (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	.1
2. NW	.0	.5	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
3. SW	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
4. NE	.0	.0	.4	.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	.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	.5	.0	.1	.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	.6	.2	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.5
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.6	.0	.0	.2
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.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	.0	.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	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-09 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	335. (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. Gravania NBA	4	-150	4	0	AG	409	7.2	.0	10.0
B. Gravania NBD	4	0	4	150	AG	247	4.0	.0	10.0
C. Gravania NBL	2	-150	0	0	AG	45	6.7	.0	10.0
D. Gravania SBA	-7	150	-7	0	AG	45	6.2	.0	10.0
E. Gravania SBD	-7	0	-7	-150	AG	678	7.0	.0	10.0
F. Gravania SBL	-5	150	0	0	AG	139	6.7	.0	10.0
G. Hawthorn EBA	-150	-7	0	-7	AG	1258	5.7	.0	10.0
H. Hawthorn EBD	0	-7	150	-7	AG	1748	4.3	.0	10.0
I. Hawthorn EBL	-150	-5	0	0	AG	12	6.7	.0	10.0
J. Hawthorn WBA	150	9	0	9	AG	1816	7.0	.0	13.5
K. Hawthorn WBD	0	9	-150	9	AG	1679	4.3	.0	10.0
L. Hawthorn WBL	150	5	0	0	AG	628	7.3	.0	10.0
M. Gravani NBAX	4	-750	4	-150	AG	454	3.4	.0	10.0
N. Gravani NBDX	4	150	4	750	AG	247	3.4	.0	10.0
O. Gravani SBAX	-7	750	-7	150	AG	184	3.4	.0	10.0
P. Gravani SBDX	-7	-150	-7	-750	AG	678	3.4	.0	10.0
Q. Hawthor EBAX	-750	-7	-150	-7	AG	1270	3.4	.0	10.0
R. Hawthor EBDX	150	-7	750	-7	AG	1748	3.4	.0	10.0
S. Hawthor WBAX	750	9	150	9	AG	2444	3.4	.0	13.5
T. Hawthor WBDX	-150	9	-750	9	AG	1679	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-09 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-09 (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	78.	2.0	.0	.0	.0	.0	.0	.0	.0	1.0
2. NW	97.	2.5	.0	.0	.0	.0	.0	.0	.0	.2
3. SW	78.	2.6	.1	.0	.0	.0	.3	.0	.3	.7
4. NE	100.	2.4	.0	.0	.0	.0	.0	.0	.0	.2
5. ES mdblk	280.	2.1	.0	.0	.0	.0	.0	.0	.0	1.0
6. WN mdblk	97.	1.8	.0	.0	.0	.0	.0	.0	.2	.2
7. WS mdblk	83.	1.9	.0	.0	.0	.0	.0	.0	1.0	.0
8. EN mdblk	260.	2.6	.0	.0	.0	.0	.0	.0	.1	.2
9. SE mdblk	351.	1.1	.5	.0	.0	.0	.3	.0	.0	.0
10. NW mdblk	174.	.8	.0	.0	.0	.0	.0	.1	.0	.0
11. SW mdblk	11.	1.3	.2	.0	.0	.0	.7	.0	.0	.0
12. NE mdblk	183.	.8	.0	.1	.0	.0	.1	.0	.0	.0
13. ES blk	277.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	1.3	.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.	1.6	.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.	.5	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.8	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	183.	.4	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-09 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

	CONC/LINK (PPM)											
RECEPTOR	I	J	K	L	M	N	O	P	Q	R	S	T
1. SE	.0	.5	.0	.3	.0	.0	.0	.0	.0	.0	.2	.0
2. NW	.0	1.4	.2	.3	.0	.0	.0	.0	.0	.2	.2	.0
3. SW	.0	.6	.0	.4	.0	.0	.0	.0	.0	.0	.1	.0
4. NE	.0	1.6	.0	.3	.0	.0	.0	.0	.0	.2	.1	.0
5. ES mdblk	.0	.5	.1	.3	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.2	.9	.1	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.3	.2	.1	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	.0	1.6	.0	.4	.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	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.9	.4	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.8
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.7	.0	.0	.3
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	1.1	.0
17. SE blk	.0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.1	.0	.0	.4	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-10 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Grayslak NBA	7	-150	7	0	AG	332	6.9	.0	10.0
B. Grayslak NBD	7	0	7	150	AG	193	3.9	.0	10.0
C. Grayslak NBL	5	-150	0	0	AG	38	6.7	.0	10.0
D. Grayslak SBA	-7	150	-7	0	AG	37	6.2	.0	10.0
E. Grayslak SBD	-7	0	-7	-150	AG	573	6.7	.0	10.0
F. Grayslak SBL	-5	150	0	0	AG	104	6.7	.0	10.0
G. Hawthorn EBA	-150	-9	0	-9	AG	915	5.2	.0	13.5
H. Hawthorn EBD	0	-9	150	-9	AG	1303	3.7	.0	10.0
I. Hawthorn EBL	-150	-5	0	0	AG	10	6.7	.0	10.0
J. Hawthorn WBA	150	9	0	9	AG	1350	5.7	.0	13.5
K. Hawthorn WBD	0	9	-150	9	AG	1248	3.7	.0	10.0
L. Hawthorn WBL	150	5	0	0	AG	531	7.3	.0	10.0
M. Graysla NBAX	7	-750	7	-150	AG	370	3.4	.0	10.0
N. Graysla NBDX	7	150	7	750	AG	193	3.4	.0	10.0
O. Graysla SBAX	-7	750	-7	150	AG	141	3.4	.0	10.0
P. Graysla SBDX	-7	-150	-7	-750	AG	573	3.4	.0	10.0
Q. Hawthor EBAX	-750	-9	-150	-9	AG	925	3.4	.0	13.5
R. Hawthor EBDX	150	-9	750	-9	AG	1303	3.4	.0	10.0
S. Hawthor WBAX	750	9	150	9	AG	1881	3.4	.0	13.5
T. Hawthor WBDX	-150	9	-750	9	AG	1248	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-10 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. SE	14	-15	1.8
2. NW	-14	15	1.8
3. SW	-14	-17	1.8
4. NE	14	17	1.8
5. ES mdblk	150	-15	1.8
6. WN mdblk	-150	15	1.8
7. WS mdblk	-150	-17	1.8
8. EN mdblk	150	17	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	-15	1.8
14. WN blk	-600	15	1.8
15. WS blk	-600	-17	1.8
16. EN blk	600	17	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: Rancho Palos Verdes General Plan
RUN: GPBO-10 (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	80.	1.4	.0	.0	.0	.0	.0	.0	.0	.7
2. NW	97.	1.8	.0	.0	.0	.0	.0	.0	.0	.1
3. SW	79.	1.7	.0	.0	.0	.0	.3	.0	.1	.5
4. NE	99.	1.6	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	280.	1.4	.0	.0	.0	.0	.0	.0	.0	.7
6. WN mdblk	96.	1.3	.0	.0	.0	.0	.0	.0	.0	.1
7. WS mdblk	83.	1.3	.0	.0	.0	.0	.0	.0	.6	.0
8. EN mdblk	260.	1.8	.0	.0	.0	.0	.0	.0	.1	.1
9. SE mdblk	351.	.8	.4	.0	.0	.0	.2	.0	.0	.0
10. NW mdblk	174.	.6	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	11.	1.0	.1	.0	.0	.0	.6	.0	.0	.0
12. NE mdblk	185.	.6	.0	.1	.0	.0	.1	.0	.0	.0
13. ES blk	277.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	97.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	.9	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	263.	1.3	.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.	.6	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	183.	.3	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-10 (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	.2	.0	.2	.0	.0	.0	.0	.0	.0	.2	.0
2. NW	.0	.9	.1	.3	.0	.0	.0	.0	.0	.2	.1	.0
3. SW	.0	.3	.0	.2	.0	.0	.0	.0	.0	.0	.1	.0
4. NE	.0	1.0	.0	.2	.0	.0	.0	.0	.0	.2	.1	.0
5. ES mdblk	.0	.3	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.1	.6	.1	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.2	.0	.1	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	.0	1.0	.0	.3	.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	.7	.3	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.7
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.5	.0	.0	.2
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.9	.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	.0	.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	.1	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-11 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Highridg NBA	5	-150	5	0	AG	27	6.2	.0	10.0
B. Highridg NBD	5	0	5	150	AG	121	3.9	.0	10.0
C. Highridg NBL	5	-150	0	0	AG	7	6.7	.0	10.0
D. Highridg SBA	-5	150	-5	0	AG	74	6.2	.0	10.0
E. Highridg SBD	-5	0	-5	-150	AG	46	3.9	.0	10.0
F. Highridg SBL	-5	150	0	0	AG	26	6.7	.0	10.0
G. Crest R EBA	-150	-7	0	-7	AG	481	4.9	.0	10.0
H. Crest R EBD	0	-7	150	-7	AG	514	3.5	.0	10.0
I. Crest R EBL	-150	-5	0	0	AG	71	6.7	.0	10.0
J. Crest R WBA	150	7	0	7	AG	819	5.2	.0	10.0
K. Crest R WBD	0	7	-150	7	AG	851	3.6	.0	10.0
L. Crest R WBL	150	5	0	0	AG	27	6.7	.0	10.0
M. Highrid NBAX	5	-750	5	-150	AG	34	3.4	.0	10.0
N. Highrid NBDX	5	150	5	750	AG	121	3.4	.0	10.0
O. Highrid SBAX	-5	750	-5	150	AG	100	3.4	.0	10.0
P. Highrid SBDX	-5	-150	-5	-750	AG	46	3.4	.0	10.0
Q. Crest EBAX	-750	-7	-150	-7	AG	552	3.4	.0	10.0
R. Crest EBDX	150	-7	750	-7	AG	514	3.4	.0	10.0
S. Crest WBAX	750	7	150	7	AG	846	3.4	.0	10.0
T. Crest WBDX	-150	7	-750	7	AG	851	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-11 (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: Rancho Palos Verdes General Plan
RUN: GPBO-11 (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.	.7	.0	.0	.0	.0	.0	.0	.3	.0
2. NW	97.	.9	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	278.	.7	.0	.0	.0	.0	.0	.0	.4	.0
4. NE	262.	.8	.0	.0	.0	.0	.0	.0	.1	.0
5. ES mdblk	278.	.7	.0	.0	.0	.0	.0	.0	.0	.3
6. WN mdblk	97.	.8	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	82.	.8	.0	.0	.0	.0	.0	.0	.4	.0
8. EN mdblk	263.	.9	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	355.	.2	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	172.	.3	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	5.	.2	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	188.	.3	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	277.	.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	83.	.6	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.7	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	357.	.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	175.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	3.	.1	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	185.	.2	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-11 (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	.1
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	.1
4. NE	.0	.0	.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.2	.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	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.6	.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	.1	.0	.0	.5
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	.5	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.0	.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	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-12 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Silver S NBA	5	-150	5	0	AG	469	5.2	.0	10.0
B. Silver S NBD	5	0	5	150	AG	492	3.6	.0	10.0
C. Silver S NBL	5	-150	0	0	AG	70	6.7	.0	10.0
D. Silver S SBA	-7	150	-7	0	AG	415	4.9	.0	10.0
E. Silver S SBD	-7	0	-7	-150	AG	578	3.5	.0	10.0
F. Silver S SBL	-5	150	0	0	AG	6	6.7	.0	10.0
G. Basswood EBA	-150	-5	0	-5	AG	83	6.2	.0	10.0
H. Basswood EBD	0	-5	150	-5	AG	23	3.9	.0	10.0
I. Basswood EBL	-150	-5	0	0	AG	22	6.7	.0	10.0
J. Basswood WBA	150	5	0	5	AG	25	6.2	.0	10.0
K. Basswood WBD	0	5	-150	5	AG	109	3.9	.0	10.0
L. Basswood WBL	150	5	0	0	AG	112	6.7	.0	10.0
M. Silver NBAX	5	-750	5	-150	AG	539	3.4	.0	10.0
N. Silver NBDX	5	150	5	750	AG	492	3.4	.0	10.0
O. Silver SBAX	-7	750	-7	150	AG	421	3.4	.0	10.0
P. Silver SBDX	-7	-150	-7	-750	AG	578	3.4	.0	10.0
Q. Basswoo EBAX	-750	-5	-150	-5	AG	105	3.4	.0	10.0
R. Basswoo EBDX	150	-5	750	-5	AG	23	3.4	.0	10.0
S. Basswoo WBAX	750	5	150	5	AG	137	3.4	.0	10.0
T. Basswoo WBDX	-150	5	-750	5	AG	109	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-12 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. SE	12	-12	1.8
2. NW	-14	12	1.8
3. SW	-14	-12	1.8
4. NE	12	12	1.8
5. ES mdblk	150	-12	1.8
6. WN mdblk	-150	12	1.8
7. WS mdblk	-150	-12	1.8
8. EN mdblk	150	12	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	-12	1.8
14. WN blk	-600	12	1.8
15. WS blk	-600	-12	1.8
16. EN blk	600	12	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

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

    JOB: Rancho Palos Verdes General Plan
    RUN: GPBO-12          (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide
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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.	.6	.4	.0	.0	.0	.0	.0	.0	.0
2. NW	172.	.7	.1	.0	.0	.0	.3	.0	.0	.0
3. SW	172.	.6	.1	.0	.0	.0	.3	.0	.0	.0
4. NE	187.	.7	.3	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	275.	.2	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	97.	.3	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	84.	.3	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	263.	.3	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	.7	.4	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	173.	.6	.0	.0	.0	.3	.0	.0	.0	.0
11. SW mdblk	8.	.6	.1	.0	.0	.0	.3	.0	.0	.0
12. NE mdblk	186.	.6	.0	.3	.0	.0	.0	.0	.0	.0
13. ES blk	275.	.1	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.2	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	265.	.2	.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.	.6	.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: Rancho Palos Verdes General Plan
RUN: GPBO-12 (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	.1	.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: Rancho Palos Verdes General Plan
RUN: GPBO-13 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Hawthorn NBA	5	-150	5	0	AG	1267	5.7	.0	13.5
B. Hawthorn NBD	5	0	5	150	AG	1315	3.7	.0	10.0
C. Hawthorn NBL	2	-150	0	0	AG	0	3.4	.0	10.0
D. Hawthorn SBA	-7	150	-7	0	AG	1477	6.2	.0	10.0
E. Hawthorn SBD	-7	0	-7	-150	AG	1496	3.9	.0	10.0
F. Hawthorn SBL	-5	150	0	0	AG	138	6.7	.0	10.0
G. Blackhor EBA	-150	0	0	0	AG	0	3.4	.0	10.0
H. Blackhor EBD	0	0	150	0	AG	174	3.9	.0	10.0
I. Blackhor EBL	-150	-2	0	0	AG	0	3.4	.0	10.0
J. Blackhor WBA	150	0	0	0	AG	84	6.2	.0	10.0
K. Blackhor WBD	0	0	-150	0	AG	0	3.4	.0	10.0
L. Blackhor WBL	150	2	0	0	AG	19	6.7	.0	10.0
M. Hawthor NBAX	5	-750	5	-150	AG	1267	3.4	.0	13.5
N. Hawthor NBDX	5	150	5	750	AG	1315	3.4	.0	10.0
O. Hawthor SBAX	-7	750	-7	150	AG	1615	3.4	.0	10.0
P. Hawthor SBDX	-7	-150	-7	-750	AG	1496	3.4	.0	10.0
Q. Blackho EBAX	-750	0	-150	0	AG	0	3.4	.0	10.0
R. Blackho EBDX	150	0	750	0	AG	174	3.4	.0	10.0
S. Blackho WBAX	750	0	150	0	AG	103	3.4	.0	10.0
T. Blackho WBDX	-150	0	-750	0	AG	0	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-13 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-13 (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.	1.4	.9	.0	.0	.0	.2	.0	.0	.0
2. NW	8.	1.8	.0	.2	.0	1.2	.0	.0	.0	.0
3. SW	8.	1.7	.0	.2	.0	1.2	.0	.0	.0	.0
4. NE	187.	1.6	1.0	.0	.0	.0	.2	.0	.0	.0
5. ES mdblk	279.	.4	.0	.0	.0	.1	.0	.0	.0	.1
6. WN mdblk	91.	.3	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	87.	.3	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	262.	.4	.0	.0	.0	.0	.0	.0	.0	.1
9. SE mdblk	352.	1.5	.9	.0	.0	.2	.2	.0	.0	.0
10. NW mdblk	172.	1.9	.2	.2	.0	1.2	.0	.1	.0	.0
11. SW mdblk	7.	1.5	.3	.1	.0	.1	.8	.0	.0	.0
12. NE mdblk	188.	1.4	.0	.7	.0	.3	.1	.0	.0	.0
13. ES blk	275.	.3	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	89.	.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	88.	.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	265.	.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	1.3	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.2	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-13 (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	.1	.0	.0	.2	.0	.0	.0	.0
2. NW	.0	.0	.0	.0	.0	.2	.1	.0	.0	.0	.0	.0
3. SW	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0
4. NE	.0	.0	.0	.0	.1	.0	.0	.2	.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	.1	.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	.1	.0	.0
17. SE blk	.0	.0	.0	.0	.6	.0	.0	.3	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.3	.8	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.3	.0	.0	.8	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.7	.3	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-14 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Crenshaw NBA	7	-150	7	0	AG	762	5.1	.0	10.0
B. Crenshaw NBD	7	0	7	150	AG	925	3.6	.0	10.0
C. Crenshaw NBL	5	-150	0	0	AG	240	7.2	.0	10.0
D. Crenshaw SBA	-5	150	-5	0	AG	1552	6.2	.0	13.5
E. Crenshaw SBD	-5	0	-5	-150	AG	1629	4.3	.0	10.0
F. Crenshaw SBL	-2	150	0	0	AG	0	3.4	.0	10.0
G. Indian P EBA	-150	-5	0	-5	AG	294	6.4	.0	10.0
H. Indian P EBD	0	-5	150	-5	AG	0	3.4	.0	10.0
I. Indian P EBL	-150	-5	0	0	AG	163	6.7	.0	10.0
J. Indian P WBA	150	0	0	0	AG	0	3.4	.0	10.0
K. Indian P WBD	0	0	-150	0	AG	457	5.7	.0	10.0
L. Indian P WBL	150	2	0	0	AG	0	3.4	.0	10.0
M. Crensha NBAX	7	-750	7	-150	AG	1002	3.4	.0	10.0
N. Crensha NBDX	7	150	7	750	AG	925	3.4	.0	10.0
O. Crensha SBAX	-5	750	-5	150	AG	1552	3.4	.0	13.5
P. Crensha SBDX	-5	-150	-5	-750	AG	1629	3.4	.0	10.0
Q. Indian EBAX	-750	-5	-150	-5	AG	457	3.4	.0	10.0
R. Indian EBDX	150	-5	750	-5	AG	0	3.4	.0	10.0
S. Indian WBAX	750	0	150	0	AG	0	3.4	.0	10.0
T. Indian WBDX	-150	0	-750	0	AG	457	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-14 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-14 (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.	1.3	.3	.0	.0	.0	.3	.0	.3	.0
2. NW	170.	1.6	.2	.0	.1	.0	.7	.0	.0	.0
3. SW	7.	2.0	.0	.1	.0	1.1	.1	.0	.1	.0
4. NE	263.	1.4	.0	.2	.0	.4	.0	.0	.2	.0
5. ES mdblk	272.	.4	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	101.	.9	.0	.0	.0	.0	.0	.0	.2	.0
7. WS mdblk	79.	.9	.0	.0	.0	.1	.0	.0	.3	.0
8. EN mdblk	268.	.4	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	1.5	.6	.0	.2	.2	.3	.0	.0	.0
10. NW mdblk	173.	1.7	.1	.1	.0	1.2	.1	.0	.0	.0
11. SW mdblk	7.	1.5	.1	.0	.1	.1	.9	.0	.0	.0
12. NE mdblk	188.	1.3	.0	.5	.0	.4	.1	.0	.0	.0
13. ES blk	271.	.2	.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	269.	.2	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	1.1	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.1	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-14 (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	.1	.1	.0	.0	.0	.0	.0
4. NE	.2	.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	.1	.0	.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.2	.0	.2	.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	.2	.0	.0	.3
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	.0	.0	.0
17. SE blk	.0	.0	.0	.0	.5	.0	.0	.3	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.8	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.2	.0	.0	.8	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.5	.4	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-15 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Crenshaw NBA	9	-150	9	0	AG	719	5.1	.0	13.5
B. Crenshaw NBD	9	0	9	150	AG	1347	3.7	.0	10.0
C. Crenshaw NBL	5	-150	0	0	AG	25	6.7	.0	10.0
D. Crenshaw SBA	-9	150	-9	0	AG	1127	5.4	.0	13.5
E. Crenshaw SBD	-9	0	-9	-150	AG	547	3.5	.0	10.0
F. Crenshaw SBL	-5	150	0	0	AG	53	6.7	.0	10.0
G. Crestrid EBA	-150	-5	0	-5	AG	243	6.4	.0	10.0
H. Crestrid EBD	0	-5	150	-5	AG	295	4.0	.0	10.0
I. Crestrid EBL	-150	-5	0	0	AG	587	7.2	.0	10.0
J. Crestrid WBA	150	4	0	4	AG	50	6.2	.0	10.0
K. Crestrid WBD	0	4	-150	4	AG	620	7.0	.0	10.0
L. Crestrid WBL	150	2	0	0	AG	5	6.7	.0	10.0
M. Crensha NBAX	9	-750	9	-150	AG	744	3.4	.0	13.5
N. Crensha NBDX	9	150	9	750	AG	1347	3.4	.0	10.0
O. Crensha SBAX	-9	750	-9	150	AG	1180	3.4	.0	13.5
P. Crensha SBDX	-9	-150	-9	-750	AG	547	3.4	.0	10.0
Q. Crestri EBAX	-750	-5	-150	-5	AG	830	3.4	.0	10.0
R. Crestri EBDX	150	-5	750	-5	AG	295	3.4	.0	10.0
S. Crestri WBAX	750	4	150	4	AG	55	3.4	.0	10.0
T. Crestri WBDX	-150	4	-750	4	AG	620	3.4	.0	10.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-15 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-15 (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.	1.3	.2	.0	.0	.0	.0	.0	.2	.0
2. NW	128.	1.2	.1	.0	.0	.4	.0	.0	.0	.0
3. SW	7.	1.7	.0	.1	.0	.8	.0	.0	.1	.0
4. NE	262.	1.7	.0	.3	.0	.2	.0	.0	.1	.0
5. ES mdblk	275.	.7	.0	.0	.0	.0	.0	.0	.0	.2
6. WN mdblk	100.	1.2	.0	.0	.0	.0	.0	.0	.1	.0
7. WS mdblk	79.	1.4	.0	.0	.0	.0	.0	.0	.3	.0
8. EN mdblk	267.	.6	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	353.	1.0	.5	.0	.0	.2	.0	.0	.0	.0
10. NW mdblk	172.	1.2	.1	.1	.0	.8	.0	.0	.0	.0
11. SW mdblk	5.	.9	.0	.1	.0	.1	.3	.0	.0	.0
12. NE mdblk	192.	1.2	.0	.7	.0	.3	.0	.0	.0	.0
13. ES blk	275.	.4	.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.	.8	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	267.	.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	354.	.7	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	6.	.6	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.1	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-15 (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	.4	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. NW	.2	.0	.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	.2	.0	.2	.0	.0	.2	.0	.0	.0	.0	.0	.0
4. NE	.4	.0	.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.1	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.3	.0	.7	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.6	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.1	.0	.1	.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	.2	.0	.0	.4
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.5	.0	.0	.2
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.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	.6	.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	.7	.2	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-16 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Crenshaw NBA	7	-150	7	0	AG	199	4.8	.0	10.0
B. Crenshaw NBD	7	0	7	150	AG	741	3.5	.0	10.0
C. Crenshaw NBL	5	-150	0	0	AG	77	6.7	.0	10.0
D. Crenshaw SBA	-9	150	-9	0	AG	1067	5.4	.0	13.5
E. Crenshaw SBD	-9	0	-9	-150	AG	254	3.5	.0	10.0
F. Crenshaw SBL	-5	150	0	0	AG	170	6.7	.0	10.0
G. Crest Ro EBA	-150	-7	0	-7	AG	109	6.2	.0	10.0
H. Crest Ro EBD	0	-7	150	-7	AG	226	4.0	.0	10.0
I. Crest Ro EBL	-150	-5	0	0	AG	450	7.2	.0	10.0
J. Crest Ro WBA	150	4	0	4	AG	123	6.2	.0	10.0
K. Crest Ro WBD	0	4	-150	4	AG	976	7.3	.0	10.0
L. Crest Ro WBL	150	2	0	0	AG	2	6.7	.0	10.0
M. Crensha NBAX	7	-750	7	-150	AG	276	3.4	.0	10.0
N. Crensha NBDX	7	150	7	750	AG	741	3.4	.0	10.0
O. Crensha SBAX	-9	750	-9	150	AG	1237	3.4	.0	13.5
P. Crensha SBDX	-9	-150	-9	-750	AG	254	3.4	.0	10.0
Q. Crest R EBAX	-750	-7	-150	-7	AG	559	3.4	.0	10.0
R. Crest R EBDX	150	-7	750	-7	AG	226	3.4	.0	10.0
S. Crest R WBAX	750	4	150	4	AG	125	3.4	.0	10.0
T. Crest R WBDX	-150	4	-750	4	AG	976	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-16 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-16 (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	280.	1.0	.0	.0	.0	.0	.0	.0	.1	.0
2. NW	261.	1.5	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	6.	1.6	.0	.0	.0	.7	.0	.0	.0	.0
4. NE	263.	1.8	.0	.2	.0	.2	.0	.0	.0	.0
5. ES mdblk	275.	.7	.0	.0	.0	.0	.0	.0	.0	.1
6. WN mdblk	99.	1.4	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	76.	1.1	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	267.	.7	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	353.	.7	.2	.0	.0	.1	.0	.0	.0	.0
10. NW mdblk	171.	1.1	.0	.0	.0	.8	.0	.1	.0	.0
11. SW mdblk	3.	.7	.0	.0	.0	.1	.1	.0	.0	.0
12. NE mdblk	194.	.9	.0	.4	.0	.3	.0	.0	.0	.0
13. ES blk	275.	.4	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.8	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	83.	.7	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	267.	.3	.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.	.9	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	3.	.4	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	.8	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-16 (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	.3	.0	.4	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. NW	.3	.0	1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	.2	.0	.3	.0	.0	.1	.1	.0	.0	.0	.0	.0
4. NE	.3	.0	.8	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.2	.0	1.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.4	.0	.5	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.1	.2	.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	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.5
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	.0	.0	.0
17. SE blk	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.1	.6	.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	.4	.3	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-17 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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. Forresta NBA	5	-150	5	0	AG	49	5.3	.0	10.0
B. Forresta NBD	5	0	5	150	AG	101	3.6	.0	10.0
C. Forresta NBL	5	-150	0	0	AG	18	6.7	.0	10.0
D. Forresta SBA	-5	150	-5	0	AG	29	5.3	.0	10.0
E. Forresta SBD	-5	0	-5	-150	AG	80	3.6	.0	10.0
F. Forresta SBL	-5	150	0	0	AG	28	6.7	.0	10.0
G. Palos Ve EBA	-150	-7	0	-7	AG	970	7.3	.0	10.0
H. Palos Ve EBD	0	-7	150	-7	AG	1025	6.4	.0	10.0
I. Palos Ve EBL	-150	-5	0	0	AG	20	6.7	.0	10.0
J. Palos Ve WBA	150	7	0	7	AG	882	7.2	.0	10.0
K. Palos Ve WBD	0	7	-150	7	AG	843	5.7	.0	10.0
L. Palos Ve WBL	150	5	0	0	AG	53	6.7	.0	10.0
M. Forrest NBAX	5	-750	5	-150	AG	67	3.4	.0	10.0
N. Forrest NBDX	5	150	5	750	AG	101	3.4	.0	10.0
O. Forrest SBAX	-5	750	-5	150	AG	57	3.4	.0	10.0
P. Forrest SBDX	-5	-150	-5	-750	AG	80	3.4	.0	10.0
Q. Palos V EBAX	-750	-7	-150	-7	AG	990	3.4	.0	10.0
R. Palos V EBDX	150	-7	750	-7	AG	1025	3.4	.0	10.0
S. Palos V WBAX	750	7	150	7	AG	935	3.4	.0	10.0
T. Palos V WBDX	-150	7	-750	7	AG	843	3.4	.0	10.0

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-17 (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: Rancho Palos Verdes General Plan
RUN: GPBO-17 (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.	1.4	.0	.0	.0	.0	.0	.0	.9	.1
2. NW	98.	1.4	.0	.0	.0	.0	.0	.0	.0	.3
3. SW	81.	1.5	.0	.0	.0	.0	.0	.0	.2	.8
4. NE	99.	1.4	.0	.0	.0	.0	.0	.0	.0	.2
5. ES mdblk	278.	1.5	.0	.0	.0	.0	.0	.0	.0	.9
6. WN mdblk	98.	1.3	.0	.0	.0	.0	.0	.0	.3	.2
7. WS mdblk	82.	1.6	.0	.0	.0	.0	.0	.0	1.0	.0
8. EN mdblk	262.	1.5	.0	.0	.0	.0	.0	.0	.2	.2
9. SE mdblk	355.	.3	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	173.	.3	.0	.0	.0	.0	.0	.0	.0	.0
11. SW mdblk	7.	.3	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	185.	.3	.0	.0	.0	.0	.0	.0	.0	.0
13. ES blk	276.	.9	.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.	.9	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.9	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	356.	.2	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	175.	.2	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	5.	.2	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	184.	.2	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-17 (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	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
2. NW	.0	.8	.1	.0	.0	.0	.0	.0	.0	.1	.0	.0
3. SW	.0	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
4. NE	.0	.9	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0
5. ES mdblk	.0	.2	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.7	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.0	.2	.2	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.9	.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	.6	.2	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.5
15. WS blk	.0	.0	.0	.0	.0	.0	.0	.0	.5	.0	.0	.2
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.2	.5	.0
17. SE blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.0	.0	.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	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-18 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Palos Ve NBA	4	-150	4	0	AG	459	5.2	.0	10.0
B. Palos Ve NBD	4	0	4	150	AG	677	3.7	.0	10.0
C. Palos Ve NBL	2	-150	0	0	AG	0	3.4	.0	10.0
D. Palos Ve SBA	-5	150	-5	0	AG	336	5.1	.0	10.0
E. Palos Ve SBD	-5	0	-5	-150	AG	699	3.7	.0	10.0
F. Palos Ve SBL	-5	150	0	0	AG	493	7.3	.0	10.0
G. Miralest EBA	-150	0	0	0	AG	0	3.4	.0	10.0
H. Miralest EBD	0	0	150	0	AG	692	7.0	.0	10.0
I. Miralest EBL	-150	-2	0	0	AG	0	3.4	.0	10.0
J. Miralest WBA	150	5	0	5	AG	417	7.2	.0	10.0
K. Miralest WBD	0	5	-150	5	AG	0	3.4	.0	10.0
L. Miralest WBL	150	5	0	0	AG	363	7.3	.0	10.0
M. Palos V NBAX	4	-750	4	-150	AG	459	3.4	.0	10.0
N. Palos V NBDX	4	150	4	750	AG	677	3.4	.0	10.0
O. Palos V SBAX	-5	750	-5	150	AG	829	3.4	.0	10.0
P. Palos V SBDX	-5	-150	-5	-750	AG	699	3.4	.0	10.0
Q. Mirales EBAX	-750	0	-150	0	AG	0	3.4	.0	10.0
R. Mirales EBDX	150	0	750	0	AG	692	3.4	.0	10.0
S. Mirales WBAX	750	5	150	5	AG	780	3.4	.0	10.0
T. Mirales WBDX	-150	5	-750	5	AG	0	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-18 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-18 (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.	1.6	.0	.4	.0	.1	.0	.3	.0	.3
2. NW	98.	1.6	.0	.1	.0	.1	.0	.2	.0	.4
3. SW	83.	1.7	.1	.0	.0	.0	.2	.0	.0	.6
4. NE	187.	1.2	.3	.0	.0	.0	.1	.0	.0	.2
5. ES mdblk	281.	1.4	.0	.0	.0	.0	.0	.0	.0	.7
6. WN mdblk	92.	.5	.0	.0	.0	.0	.0	.0	.0	.1
7. WS mdblk	87.	.5	.0	.0	.0	.0	.0	.0	.0	.1
8. EN mdblk	259.	1.4	.0	.0	.0	.0	.0	.0	.0	.4
9. SE mdblk	355.	.8	.3	.0	.0	.0	.1	.0	.0	.0
10. NW mdblk	170.	1.2	.0	.2	.0	.3	.0	.6	.0	.0
11. SW mdblk	7.	.9	.1	.0	.0	.0	.4	.0	.0	.0
12. NE mdblk	187.	.9	.0	.4	.0	.1	.0	.2	.0	.0
13. ES blk	276.	.8	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	90.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	89.	.2	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.8	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	355.	.6	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.8	.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: Rancho Palos Verdes General Plan
RUN: GPBO-18 (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	.2	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
2. NW	.0	.4	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	.0	.2	.0	.4	.0	.0	.0	.0	.0	.0	.0	.0
4. NE	.0	.2	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.3	.0	.3	.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	.5	.0	.4	.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	.3	.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	.2	.4	.0
17. SE blk	.0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.2	.5	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.1	.0	.0	.4	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.4	.2	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-19 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S	Z0= 100. CM	ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Palos Ve NBA	9	-150	9	0	AG	195	4.8	.0	13.5
B. Palos Ve NBD	9	0	9	150	AG	426	3.5	.0	10.0
C. Palos Ve NBL	5	-150	0	0	AG	26	6.7	.0	10.0
D. Palos Ve SBA	-9	150	-9	0	AG	384	4.8	.0	13.5
E. Palos Ve SBD	-9	0	-9	-150	AG	353	3.5	.0	10.0
F. Palos Ve SBL	-5	150	0	0	AG	102	6.7	.0	10.0
G. Crest Ro EBA	-150	-4	0	-4	AG	33	6.2	.0	10.0
H. Crest Ro EBD	0	-4	150	-4	AG	141	3.9	.0	10.0
I. Crest Ro EBL	-150	-2	0	0	AG	83	6.7	.0	10.0
J. Crest Ro WBA	150	2	0	2	AG	189	6.2	.0	10.0
K. Crest Ro WBD	0	2	-150	2	AG	153	3.9	.0	10.0
L. Crest Ro WBL	150	2	0	0	AG	61	6.7	.0	10.0
M. Palos V NBAX	9	-750	9	-150	AG	221	3.4	.0	13.5
N. Palos V NBDX	9	150	9	750	AG	426	3.4	.0	10.0
O. Palos V SBAX	-9	750	-9	150	AG	486	3.4	.0	13.5
P. Palos V SBDX	-9	-150	-9	-750	AG	353	3.4	.0	10.0
Q. Crest R EBAX	-750	-4	-150	-4	AG	116	3.4	.0	10.0
R. Crest R EBDX	150	-4	750	-4	AG	141	3.4	.0	10.0
S. Crest R WBAX	750	2	150	2	AG	250	3.4	.0	10.0
T. Crest R WBDX	-150	2	-750	2	AG	153	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-19 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-19 (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.	.5	.0	.2	.0	.0	.0	.0	.0	.0
2. NW	96.	.6	.0	.0	.0	.1	.0	.0	.0	.0
3. SW	7.	.6	.0	.0	.0	.3	.0	.0	.0	.0
4. NE	263.	.5	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	277.	.4	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	95.	.3	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	84.	.3	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	264.	.4	.0	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	354.	.4	.1	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	171.	.5	.0	.0	.0	.3	.0	.0	.0	.0
11. SW mdblk	6.	.4	.0	.0	.0	.0	.2	.0	.0	.0
12. NE mdblk	188.	.5	.0	.2	.0	.0	.0	.0	.0	.0
13. ES blk	276.	.3	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	94.	.2	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	85.	.2	.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.	.3	.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: Rancho Palos Verdes General Plan
RUN: GPBO-19 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

CONC/LINK (PPM)

RECEPTOR	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	.2	.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	.1	.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	.2	.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	.1	.0
14. WN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
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	.2	.0
17. SE blk	.0	.0	.0	.0	.1	.0	.0	.0	.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	.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: Rancho Palos Verdes General Plan
RUN: GPBO-20 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	.5 M/S	Z0=	100. CM	ALT=	335. (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. Palos Ve NBA	0	-150	0	0	AG	0	3.4	.0	10.0
B. Palos Ve NBD	0	0	0	150	AG	226	4.0	.0	10.0
C. Palos Ve NBL	2	-150	0	0	AG	0	3.4	.0	10.0
D. Palos Ve SBA	-5	150	-5	0	AG	159	6.2	.0	10.0
E. Palos Ve SBD	-5	0	-5	-150	AG	0	3.4	.0	10.0
F. Palos Ve SBL	-5	150	0	0	AG	87	6.7	.0	10.0
G. Palos Ve EBA	-150	-5	0	-5	AG	897	6.8	.0	10.0
H. Palos Ve EBD	0	-5	150	-5	AG	984	4.9	.0	10.0
I. Palos Ve EBL	-150	-5	0	0	AG	157	6.7	.0	10.0
J. Palos Ve WBA	150	4	0	4	AG	863	6.8	.0	10.0
K. Palos Ve WBD	0	4	-150	4	AG	953	4.9	.0	10.0
L. Palos Ve WBL	150	2	0	0	AG	0	3.4	.0	10.0
M. Palos V NBAX	0	-750	0	-150	AG	0	3.4	.0	10.0
N. Palos V NBDX	0	150	0	750	AG	226	3.4	.0	10.0
O. Palos V SBAX	-5	750	-5	150	AG	246	3.4	.0	10.0
P. Palos V SBDX	-5	-150	-5	-750	AG	0	3.4	.0	10.0
Q. Palos V EBAX	-750	-5	-150	-5	AG	1054	3.4	.0	10.0
R. Palos V EBDX	150	-5	750	-5	AG	984	3.4	.0	10.0
S. Palos V WBAX	750	4	150	4	AG	863	3.4	.0	10.0
T. Palos V WBDX	-150	4	-750	4	AG	953	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-20 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-20 (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.	1.4	.0	.0	.0	.0	.0	.0	.8	.0
2. NW	98.	1.4	.0	.0	.0	.0	.0	.0	.0	.3
3. SW	278.	1.4	.0	.0	.0	.0	.0	.0	.9	.0
4. NE	261.	1.5	.0	.0	.0	.0	.0	.0	.4	.0
5. ES mdblk	277.	1.3	.0	.0	.0	.0	.0	.0	.0	.7
6. WN mdblk	98.	1.4	.0	.0	.0	.0	.0	.0	.3	.0
7. WS mdblk	82.	1.6	.0	.0	.0	.0	.0	.0	.9	.0
8. EN mdblk	263.	1.4	.0	.0	.0	.0	.0	.0	.1	.2
9. SE mdblk	357.	.3	.0	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	170.	.5	.0	.0	.0	.2	.0	.1	.0	.0
11. SW mdblk	2.	.3	.0	.0	.0	.0	.0	.0	.0	.0
12. NE mdblk	191.	.5	.0	.1	.0	.1	.0	.0	.0	.0
13. ES blk	276.	.9	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	96.	.9	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	84.	1.0	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.9	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	359.	.1	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	174.	.4	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	360.	.1	.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: Rancho Palos Verdes General Plan
RUN: GPBO-20 (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	.3	.0	.0	.0	.0	.0	.0	.0	.0	.1
2. NW	.0	.7	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW	.1	.0	.2	.0	.0	.0	.0	.0	.0	.0	.0	.1
4. NE	.1	.0	.6	.0	.0	.0	.0	.0	.0	.0	.0	.0
5. ES mdblk	.0	.3	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	.0	.0	.7	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	.2	.1	.3	.0	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	.0	.8	.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	.5	.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	.6	.0	.0	.3
16. EN blk	.0	.0	.0	.0	.0	.0	.0	.0	.0	.3	.5	.0
17. SE blk	.0	.0	.0	.0	.0	.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	.0	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-21 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 335. (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	X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. Miralest NBA	4	-150	4	0	AG	346	5.1	.0	10.0
B. Miralest NBD	4	0	4	150	AG	520	3.6	.0	10.0
C. Miralest NBL	2	-150	0	0	AG	0	3.4	.0	10.0
D. Miralest SBA	-5	150	-5	0	AG	190	4.8	.0	10.0
E. Miralest SBD	-5	0	-5	-150	AG	241	3.5	.0	10.0
F. Miralest SBL	-5	150	0	0	AG	415	7.3	.0	10.0
G. 1st Stre EBA	-150	0	0	0	AG	0	3.4	.0	10.0
H. 1st Stre EBD	0	0	150	0	AG	466	5.7	.0	10.0
I. 1st Stre EBL	-150	-2	0	0	AG	0	3.4	.0	10.0
J. 1st Stre WBA	150	5	0	5	AG	225	6.4	.0	10.0
K. 1st Stre WBD	0	5	-150	5	AG	0	3.4	.0	10.0
L. 1st Stre WBL	150	5	0	0	AG	51	6.7	.0	10.0
M. Mirales NBAX	4	-750	4	-150	AG	346	3.4	.0	10.0
N. Mirales NBDX	4	150	4	750	AG	520	3.4	.0	10.0
O. Mirales SBAX	-5	750	-5	150	AG	605	3.4	.0	10.0
P. Mirales SBDX	-5	-150	-5	-750	AG	241	3.4	.0	10.0
Q. 1st Str EBAX	-750	0	-150	0	AG	0	3.4	.0	10.0
R. 1st Str EBDX	150	0	750	0	AG	466	3.4	.0	10.0
S. 1st Str WBAX	750	5	150	5	AG	276	3.4	.0	10.0
T. 1st Str WBDX	-150	5	-750	5	AG	0	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-21 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-21 (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.	1.0	.0	.3	.0	.0	.0	.3	.0	.2
2. NW	97.	.9	.0	.0	.0	.0	.0	.2	.0	.2
3. SW	83.	.8	.0	.0	.0	.0	.0	.0	.0	.4
4. NE	351.	.7	.0	.3	.0	.0	.0	.3	.0	.0
5. ES mdblk	281.	.7	.0	.0	.0	.0	.0	.0	.0	.4
6. WN mdblk	92.	.3	.0	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	87.	.3	.0	.0	.0	.0	.0	.0	.0	.0
8. EN mdblk	260.	.6	.0	.0	.0	.0	.0	.0	.0	.2
9. SE mdblk	356.	.6	.2	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	170.	.9	.0	.1	.0	.2	.0	.5	.0	.0
11. SW mdblk	6.	.5	.0	.0	.0	.0	.1	.0	.0	.0
12. NE mdblk	188.	.7	.0	.3	.0	.0	.0	.2	.0	.0
13. ES blk	276.	.5	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	89.	.1	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	88.	.1	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	264.	.4	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	355.	.4	.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.	.4	.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: Rancho Palos Verdes General Plan
RUN: GPBO-21 (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	.2	.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	.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	.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	.2	.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	.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	.2	.2	.0
17. SE blk	.0	.0	.0	.0	.2	.0	.0	.0	.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	.1	.0	.0	.2	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.3	.2	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-22 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 335. (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. Western NBA	7	-150	7	0	AG	1740	6.8	.0	10.0
B. Western NBD	7	0	7	150	AG	1724	4.3	.0	10.0
C. Western NBL	5	-150	0	0	AG	72	6.7	.0	10.0
D. Western SBA	-9	150	-9	0	AG	477	4.9	.0	13.5
E. Western SBD	-9	0	-9	-150	AG	604	3.5	.0	10.0
F. Western SBL	-5	150	0	0	AG	57	6.7	.0	10.0
G. Toscanin EBA	-150	-4	0	-4	AG	99	6.2	.0	10.0
H. Toscanin EBD	0	-4	150	-4	AG	146	3.9	.0	10.0
I. Toscanin EBL	-150	-2	0	0	AG	36	6.7	.0	10.0
J. Toscanin WBA	150	4	0	4	AG	27	6.2	.0	10.0
K. Toscanin WBD	0	4	-150	4	AG	96	3.9	.0	10.0
L. Toscanin WBL	150	2	0	0	AG	62	6.7	.0	10.0
M. Western NBAX	7	-750	7	-150	AG	1812	3.4	.0	10.0
N. Western NBDX	7	150	7	750	AG	1724	3.4	.0	10.0
O. Western SBAX	-9	750	-9	150	AG	534	3.4	.0	13.5
P. Western SBDX	-9	-150	-9	-750	AG	604	3.4	.0	10.0
Q. Toscani EBAX	-750	-4	-150	-4	AG	135	3.4	.0	10.0
R. Toscani EBDX	150	-4	750	-4	AG	146	3.4	.0	10.0
S. Toscani WBAX	750	4	150	4	AG	89	3.4	.0	10.0
T. Toscani WBDX	-150	4	-750	4	AG	96	3.4	.0	10.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-22 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

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

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-22 (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	189.	1.9	1.6	.0	.0	.0	.0	.0	.0	.0
2. NW	167.	1.0	.5	.0	.0	.0	.2	.0	.0	.0
3. SW	167.	.9	.5	.0	.0	.0	.3	.0	.0	.0
4. NE	188.	1.9	1.4	.1	.0	.0	.0	.0	.0	.0
5. ES mdblk	275.	.4	.0	.0	.0	.0	.0	.0	.0	.0
6. WN mdblk	97.	.4	.1	.0	.0	.0	.0	.0	.0	.0
7. WS mdblk	85.	.4	.0	.0	.0	.0	.0	.0	.1	.0
8. EN mdblk	263.	.4	.1	.0	.0	.0	.0	.0	.0	.0
9. SE mdblk	352.	2.0	1.6	.0	.0	.0	.0	.0	.0	.0
10. NW mdblk	172.	1.0	.2	.2	.0	.3	.0	.0	.0	.0
11. SW mdblk	10.	1.0	.4	.1	.0	.0	.3	.0	.0	.0
12. NE mdblk	187.	1.4	.1	1.0	.0	.0	.0	.0	.0	.0
13. ES blk	273.	.3	.0	.0	.0	.0	.0	.0	.0	.0
14. WN blk	95.	.3	.0	.0	.0	.0	.0	.0	.0	.0
15. WS blk	87.	.3	.0	.0	.0	.0	.0	.0	.0	.0
16. EN blk	265.	.3	.0	.0	.0	.0	.0	.0	.0	.0
17. SE blk	353.	1.2	.0	.0	.0	.0	.0	.0	.0	.0
18. NW blk	173.	.7	.0	.0	.0	.0	.0	.0	.0	.0
19. SW blk	7.	.8	.0	.0	.0	.0	.0	.0	.0	.0
20. NE blk	187.	1.1	.0	.0	.0	.0	.0	.0	.0	.0

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

JOB: Rancho Palos Verdes General Plan
RUN: GPBO-22 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

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

CONC/LINK (PPM)

RECEPTOR	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	.1	.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	.9	.0	.0	.1	.0	.0	.0	.0
18. NW blk	.0	.0	.0	.0	.0	.3	.3	.0	.0	.0	.0	.0
19. SW blk	.0	.0	.0	.0	.3	.0	.0	.3	.0	.0	.0	.0
20. NE blk	.0	.0	.0	.0	.0	.9	.1	.0	.0	.0	.0	.0

APPENDIX C

GLOBAL CLIMATE CHANGE WORKSHEETS

Greenhouse Gas Emissions Worksheet

Project Parameters		
	2012	
Vehicles (trips/day)	8,837	(Assumes these occur 365 days/year)
Electricity used (MWh/year)	7,800	MWh = Megawatt hour
(mscf/year)	35	mscf = million standard cubic feet
tons/year)	910	

Emission Source	Total (metric tons/yr)				
	CO_2	CH_4	N_2O	CO_2e	Percent of Total
Vehicles (1)	15,000	0.59	1.2	15,000	69%
Electricity Production	2,200	0.024	0.013	2,200	10%
Natural Gas Combustion(1)	2,300	0.037	0.035	2,300	11%
Solid Waste	1,200	--	--	1,200	6.0%
Other Area Sources(2)	1,000	--	--	1,000	5.0%
Total Annual Emissions	22,000	0.65	1.2	22,000	101.0%

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.

tons/metric ton
1.1025

U.S. or Metric?
○ Tons ◉ Metric Tons

Emission Source	Total CO2e (Tg/yr)				
Vehicles	0.015	1,000,000 tonne/Tg			
Electricity Production	0.0022				
Natural Gas Combustion	0.0023				
Solid Waste	0.0012				
Total (CO_2e)	0.021	Year of data	Comparison Area GHG Usage		
% of SCAG 2004 total	0.012	2004	SCAG	176.79	(Tg/yr)
% of State 2004 total	0.0044	2004	State	480	(Tg/yr)

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**			0
Retail (Other than Mall)	139	14.3			0
Education	283	**10.7**		115530	1,236
Food Sales	276	49.4			0
Food Service	213	**31.8**			0
Health Care (All)	564	**20.1**		5759	116
Inpatient Health	6,628	27.5			0
Outpatient Health	168	16.1			0
Lodging	483	**11.9**			0
Office	256	**14.6**		7232	106
Other	510	22.5			0
Public Assembly	179	12.5		10000	125
Public Order and Safety	237	15.3			0
Religious Worship	49	4.9		62426	306
Service	73	**8**			0
Vacant	42	2.4			0
Warehouse and Storage	154	**5.9**	1		154

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	462	3,521
Apartments (2-4 Units)			7,176	117	840
Apartments (5 or more Units)			6,204		0
Mobile Home			12,469		0
Total Residential (kWh)					4,361

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 0.61	short tons/MWh 0.303	tons/MWh 0.275	lb/MWh 0.0067	lb/MWh 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

	Northern	Southern
Water Supply and Conveyance	2,117	9,727
Water Treatment	111	111
Water Distribution	1,272	1,272
Wastewater Treatment	1,911	1,911
Totals	5,411	13,021

Refining Estimates of Water-Related Energy Use In California, CEC, Dec. 2006

3.26E+05 gallons/acre-feet

Project total usage 338.4 acre-feet/year

Water Supply and Conveyance	1.07E+06	kWh/year
Water Treatment	1.22E+04	kWh/year
Water Distribution	1.40E+05	kWh/year
Wastewater Treatment	2.11E+05	kWh/year
Total	1.44E+06	kWh/year

Water usage calculator

Number of Residences	579	Total Gallons Per Day	302,173
Estimated people per residence(1)	2.87	Gallons Per Year	110,293,145
Gallons/Resident/Day(2)	100	Total Acre-feet Per Year	338.43
Total Gallons Per Day	166,173		
Gallons Per Year	60,653,145		
Acre-feet Per Year	186		

(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)	1,000
Gallons/Employee/Day(2)	136
Total Gallons Per Day	136,000
Gallons Per Year	49,640,000
Acre-feet Per Year	152

(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	7232
Disposal Rate (dry short tons/sq. ft./year)	0.0108
Office Waste (Dry Short Tons/Year)	78.1056
Total Square Footage - Retail	0
Disposal Rate (dry short tons/sq. ft./year)	0.0024
Retail Waste (Dry Short Tons/Year)	0
Total Residences	579
Disposal Rate (dry short tons/unit/year)(2)	1.17
Residential Waste (Dry Short Tons/Year)	677.43
Total Square Footage - Industrial	0
Disposal Rate (lbs/1000 sq. ft./day)(3)	62.5
Industrial Waste (Dry Short Tons/Year)	0
Total Square Footage - Institutional	200947
Disposal Rate (lbs/sq. ft./day)(4)	0.007
Institutional Waste (Dry Short Tons/Year	256.7097925
Total Waste (Dry Short Tons/Year)	1000
CO_2e Tonnes/Year	1200

Dry Short Tons/Wet Short Tons of MSW	0.84	
MTCE/Wet Short Ton of MSW (6)	0.272	1 metric ton
Tonnes of CO_2e/Wet Short Ton of MSW	1.007	0.27

(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) 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

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

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

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

(6) 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 (thousand cf)	Natural Gas Consumption per Square Foot by Building Type (cf)	Project Info (enter values on Electricity worksheet) # of bldgs	total sf	Annual Natural Gas Consumption (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	0	0
Retail (Other than Mall)	362	**11.4**	0	0	0
Education	1223	**34.8**	0	115530	4,020
Food Sales	383	50.2	0	0	0
Food Service	870	141.2	0	0	0
Health Care (All)	3283	**68.7**	0	5759	396
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	7232	103
Other	1885	67.6	0	0	0
Public Assembly	678	36.4	0	10000	364
Public Order and Safety	771	43.7	0	0	0
Religious Worship	362	30.3	0	62426	1,892
Service	481	54.1	0	0	0
Vacant	557	23	0	0	0
Warehouse and Storage	687	23.4	1	0	687

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	462	22,176
Apartments (2-4 Units)(1)		48		117	5,616
Apartments (5 or more Units)			28	0	0
Mobile Home			58	0	0
Total Natural Gas Usage					27,792

(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**
Natural gas combustion	lb/10^6 scf	lb/10^6 scf	lb/10^6 scf
	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)
2012		**CO_2**	**CH_4**	**N_2O**	**Fleet %**
LDA	CAT	291.024	0.016	0.032	61.3%
LDA	DSL	358.328	0.006	0.001	0.5%
LDT	CAT	364.328	0.0215	0.042	34.3%
LDT	DSL	348.968	0.0035	0.002	0.4%
HDT	CAT	468.036	0.0568	0.088	1.8%
HDT	DSL	930.717	0.0102	0.005	1.7%
Composite		330.808	0.018	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	