

Lyons Canyon Ranch Draft Environmental Impact Report

5.5 AIR QUALITY

This section of the EIR evaluates the potential air quality impacts associated with the development of the proposed project. This section provides a brief discussion of the physical setting of the project area, the regulatory framework for air quality, as well as provides data on existing air quality, evaluates potential air quality impacts associated with the proposed project, and identifies measures recommended to limit potential impacts.

The analysis presented in this section is based on the calculations, analysis, and conclusions contained in the project's *Air Quality Impact Analysis* report, performed by LSA Associates (July 2005), which is included in its entirety as Appendix E. The *Air Quality Impact Analysis* was prepared in conformance with appropriate standards, utilizing procedures and methodologies in the South Coast Air Quality Management District (SCAQMD) California Environmental Quality Act (CEQA) *CEQA Air Quality Handbook* (SCAQMD, April 1993). The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing air quality analyses¹. Although some of the data included in the SCAQMD CEQA Air Quality Handbook (April 1993) are outdated, the procedures identified in the Handbook are still current and acceptable to the SCAQMD review. Modeled air quality levels discussed in the *Air Quality Impact Analysis* are based upon vehicle data and project trip generation included in a traffic study prepared for the proposed project (Austin-Foust Associates, Inc. [AFA] August 2004). Predictions for air pollutant emissions generated by project traffic were calculated with the URBEMIS 2002 model. Construction emissions were calculated using the most current SCAQMD construction equipment emission factors and the construction emission methodology recommended by the SCAQMD Air Quality Handbook. Per the SCAQMD, Either the URBEMIS model or the procedures identified in the Handbook can be used to estimate construction emissions. However, because the URBEMIS provides a more generic estimate of construction emissions, the SCAQMD Air Quality Handbook guidelines were used to provide a more project-specific emissions estimate, which is more realistic and resembles what can be expected during the project construction. Emissions from stationary sources such as natural gas usage were also calculated with URBEMIS 2002. CO concentrations were predicted for the existing (2004), interim year (2015), and interim year (2015) with the project, based on traffic data provided in the traffic study (Austin-Foust Associates, 2004) prepared for the proposed project. CALINE 4, the fourth generation California Line Source Dispersion Model developed by the California Department of Transportation (Caltrans), was used to calculate CO concentrations. All of these analyses are included as part of the *Air Quality Impact Analysis* report prepared by LSA Associates, and included in its entirety as Appendix E.

5.5.1 ENVIRONMENTAL SETTING

EXISTING AIR QUALITY CONDITIONS

Regional Air Quality

¹ South Coast Air Quality Management District, Comments on Notice of Preparation of the Lyons Canyon Ranch Draft Environmental Impact Report. July 14, 2005.

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The project site is located in an unincorporated portion of Los Angeles County, immediately west of the City of Santa Clarita's corporate boundary. The project site is located within the South Coast Air Basin (Basin), which includes Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties. Air quality regulation in the Basin is administered by the SCAQMD, a regional agency created for the Basin.

The Basin climate 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 boundary, and high mountains surround the rest of the Basin. The region 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. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than that of inland areas. The climatological station closest to the project site is the San Fernando Station.² Although this station was closed after 1974, the monitored temperatures are considered representative for the project area. The annual average maximum temperature recorded between 1927 and 1974 at this station is 78.2 degrees Fahrenheit, and the annual average minimum is 49.3 degrees Fahrenheit, with the hottest month being in August.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin along the coastal side of the mountains. Average rainfall measured at the San Fernando Station varied from 3.53 inches in January to 0.41 inch or less between May and October, with an average annual total of 16.16 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 a semipermanent high pressure cell over the Pacific Ocean (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 mid to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning or do not form.

Winds in the vicinity of the project area blow predominantly from the east-southeast, with relatively low velocities averaging about four 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

² Western Regional Climatic Center, at Website wrcc.dri.edu, 2004.

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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 onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are carbon monoxide (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.

Local Air Quality

The proposed site is located within the SCAQMD's jurisdiction. The SCAQMD maintains ambient air quality monitoring stations throughout the Basin. The air quality monitoring station closest to the site with more complete air quality data is the Santa Clarita Station. The criteria pollutants monitored at this station are shown in Table 5.5-1, Ambient Air Quality at Santa Clarita Air Monitoring Station. Carbon monoxide and nitrogen dioxide (NO₂) levels monitored at this station have not exceeded State and Federal standards in the past three years. Ozone (O₃) concentrations monitored at this station exceeded the State one-hour O₃ standard from 44 to 89 days per year in the past three years. The Federal one-hour O₃ standard was exceeded at this station from 9 to 35 days per year over the three-year period. The Federal eight-hour O₃ standard was exceeded from 25 to 69 days per year. Particulate matter less than 10 microns in diameter (PM₁₀) monitored at this station exceeded the State 24-hour standard from 61 to 72 days per year, but did not exceed the Federal standard in the past three years. The Burbank-West Palm Avenue Station is the closest station that monitors particulate matter less than 2.5 microns in diameter (PM_{2.5}) and sulfur dioxide (SO₂). Data for PM_{2.5} and SO₂ taken from the Burbank-West Palm Avenue Station are included in Table 5.5-1. The Federal PM_{2.5} standard was exceeded from zero to four days per year. There is no State PM_{2.5} standard. The Federal and State standards for SO₂ were not exceeded in the past ten years.

REGULATORY FRAMEWORK

Federal Regulations/Standards

Pursuant to the Federal Clean Air Act (CAA) of 1970, the U.S. Environmental Protection Agency (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 ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

The NAAQS are two tiered: primary, to protect public health, and secondary, to prevent degradation of the environment (e.g., impairment of visibility, damage to vegetation and property). The six criteria pollutants are O₃, CO, PM₁₀, NO₂, SO₂, and lead (Pb). The primary standards for these pollutants are shown in Table 5.5-2, California and Federal Ambient Air

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Quality Standards, and the health effects from exposure to the criteria pollutants are described in Table 5.5-3, Health Effects Summary of the Major Criteria Air Pollutants. In July 1997, the EPA adopted new standards for eight-hour O₃ and PM_{2.5}, as shown in Table 5.5-2.

Data collected at permanent monitoring stations are used by the California Air Resources Board (ARB) to classify regions as “attainment” or “nonattainment,” depending on whether the regions met the requirements stated in the primary NAAQS. Significant authority for air quality control within the 15 statewide air basins has been given to local air districts (i.e. SCAQMD) that regulate stationary source emissions and develop local nonattainment plans.

The CAA Amendments designated the South Coast Air Basin as “extreme” for O₃, requiring attainment with the Federal O₃ standard by 2010; “serious” for CO, requiring attainment of Federal CO standards by 2000; and “serious” for PM₁₀, requiring attainment with Federal standards by 2001. Table 5.5-4, South Coast Air Basin Attainment Status, lists the air quality attainment status for the Basin.

**Table 5.5-1
Ambient Air Quality at Santa Clarita Air Monitoring Station**

	One-Hour Carbon Monoxide		One-Hour Ozone		Coarse Suspended Particulate (PM ₁₀)		Nitrogen Dioxide	
	Max. 1-Hour Conc. (ppm)	Number of Days Exceeded	Max. 1-Hour Conc. (ppm)	Number of Days Exceeded	Max. 24-Hour Conc. (g/m ³)	Number of Days Exceeded	Max. 1-Hour Conc. (ppm)	Number of Days Exceeded
<i>State Stds.</i>	> 20 ppm/1 hr		> .09 ppm/1 hr		> 50 g/m ³ , 24 hrs		> .25 ppm/1 hr	
2004	5.2	0	0.16	69	54	1	0.09	0
2003	3.3	0	0.19	89	72	8	0.12	0
2002	3.3	0	0.17	81	61	6	0.09	0
Maximum	3.3		0.19		72		0.12	
<i>Federal Stds.</i>	> 35 ppm/1 hr		> .12 ppm/1 hr		> 150 g/m ³ , 24 hrs		0.053 ppm, annual average	
2004	5.2	0	0.16	13	54	0	0.20	0
2003	3.3	0	0.19	35	72	0	0.021	0
2002	3.3	0	0.17	32	61	0	0.019	0
Maximum	3.3		0.19		72		0.021	
	Eight-Hour Carbon Monoxide		Eight-Hour Ozone		Fine Suspended Particulate (PM _{2.5}) ³		Sulfur Dioxide ³	
	Max. 8-Hour Conc. (ppm)	Number of Days Exceeded	Max. 8-Hour Conc. (ppm)	Number of Days Exceeded	Max. 24-Hour Conc. (g/m)	Number of Days Exceeded	Max. 24-Hour Conc. (ppm)	Number of Days Exceeded
<i>State Stds.</i>	9.0 ppm/8 hrs		No State Standard		No State Standard		> .04 ppm/24 hrs	
2004	3.7	0	0.13	NA ⁴	60	NA ⁴	0.009	0
2003	1.7	0	0.15	NA	121	NA	0.005	0
2002	1.7	0	0.14	NA	63	NA	0.007	0
Maximum	2.2		0.15		121		0.009	
<i>Federal Stds.</i>	9.0 ppm/8 hrs		> .08 ppm/8 hrs		> 65 g/m ³ , 24 hrs		0.14 ppm/24 hrs	
2004	3.7	0	0.13	52	60	0	0.003	0

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2003	1.7	0	0.15	69	121	1	0.001	0
2002	1.7	0	0.14	52	63	0	0.002	0
Maximum	2.2		0.15		121		0.002	

Source: ARB and EPA 2001–2003.

- ¹ Data taken from the EPA Web site; others taken from Air Resources Board (ARB) Web site.
- ² No data available for this year.
- ³ Data taken from Burbank-W Palm Avenue Station, the closest station that monitors PM_{2.5} and sulfur dioxide data.
- ⁴ No State standard.

**Table 5.5-2
California and Federal Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{2,5}	Secondary ^{2,6}	Method ⁷
Ozone (O ₃)	1-Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	0.12 ppm (235 µg/m ³) ⁸	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	–		0.08 ppm (157 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 *		50 µg/m ³		
Fine Particulate Matter (PM _{2.5})	24-Hour	No Separate State Standard		65 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	15 µg/m ³		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m ³)	Nondispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Nondispersive 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	–	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1-Hour	0.25 ppm (470 µg/m ³)		–		
Lead	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	
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	–	Ultraviolet Fluorescence	0.030 ppm (80 µg/m ³)	–	Spectrophotometry (Pararosaniline Method)

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	24-Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)	-	
	3-Hour	-		-	0.5 ppm (1300 µg/m ³)	
	1-Hour	0.25 ppm (655 µg/m ³)		-	-	

**Table 5.5-2 (continued)
California and Federal Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{2,5}	Secondary ^{2,6}	Method ⁷
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 ⁹	24-Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

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Source: ARB (July 2003).

Footnotes:

- ¹ California standards for ozone; carbon monoxide (except Lake Tahoe); sulfur dioxide (1 and 24 hour); nitrogen dioxide; suspended particulate matter, PM₁₀; 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 PM₁₀, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. 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 U.S. EPA for further clarification and current Federal policies.
- ³ Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- ⁴ Any equivalent procedure that can be shown to the satisfaction of the 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 New Federal eight-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current Federal policies.
- ⁹ 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.

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**Table 5.5-3
Health Effects Summary of the Major Criteria Air Pollutants**

Pollutants	Sources	Primary Effects
Ozone (O ₃)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight.	Aggravation of respiratory and cardiovascular diseases. Irritation of eyes. Impairment of cardiopulmonary function. Plant leaf injury.
NO ₂	Motor vehicle exhaust. High-temperature stationary combustion. Atmospheric reactions.	Aggravation of respiratory illness. Reduced visibility. Reduced plant growth. Formation of acid rain.
CO	Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust. Natural Events, such as decomposition of organic matter.	Reduced tolerance for exercise. Impairment of mental function. Impairment of fetal development. Death at high levels of exposure. Aggravation of some heart diseases (angina).
PM ₁₀	Stationary combustion of solid fuels. Construction activities. Industrial processes. Atmospheric chemical reactions.	Reduced lung function. Aggravation of the effects of gaseous pollutants. Aggravation of respiratory and cardiorespiratory diseases. Increased cough and chest discomfort. Soiling. Reduced visibility.
SO ₂	Combustion of sulfur-containing fossil fuels. Smelting of sulfur-bearing metal ores. Industrial processes.	Aggravation of respiratory diseases (asthma, emphysema). Reduced lung function. Irritation of eyes. Reduced visibility. Plant injury. Deterioration of metals, textiles, leather, finishes, coatings, etc.
Lead (Pb)	Contaminated soil.	Impairment of blood function and nerve construction. Behavioral and hearing problems in children.
Source: ARB 2000		

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**Table 5.5-4
South Coast Air Basin Attainment Status**

	State	Federal
One-Hour O ₃	Nonattainment	Extreme Nonattainment (attainment date 2010)
Eight-Hour O ₃	No State Standard	Severe 17 Nonattainment (attainment date 2021)
PM _{2.5}	Not Established	Not Established
PM ₁₀	Non-attainment	Serious Non-attainment
CO	Attainment (except Los Angeles County)	Attainment (data finding in 2003 AQMP)
NO ₂	Attainment	Attainment/Maintenance
All Others	Attainment/Unclassified	Attainment/Unclassified
Source: ARB and SCAQMD, April 2004.		

The EPA established new national air quality standards for ground-level O₃ and PM_{2.5} in 1997. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the CAA, as applied in setting the new public health standards for O₃ 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 O₃ and soot in 1997. Nevertheless, the Court threw out the EPA's policy for implementing new O₃ rules, saying the agency ignored a section of the law that restricts its authority. It ordered the agency to come up with a more "reasonable" interpretation of the law.

The EPA issued the final eight-hour ozone nonattainment designations/boundaries on April 15, 2004. Across the nation, states were provided three years, to April 2007, to develop eight-hour ozone State Implementation Plans (SIPs). Overall, states were given until April 15, 2005 to demonstrate conformity with the SIPs, in eight-hour ozone nonattainment areas, given the one-year grace period following the April 15, 2004 final designations. However, it is important to note that various areas in the State of California have different attainment dates based on their corresponding classifications. For example, the SCAB is identified by the EPA as a severe non-attainment area for Ozone. Thus, the maximum ozone attainment date for ozone within the SCAB is 2021.

The eight-hour ozone implementation rule revokes the one-hour standard issued in April 2005. This will change the attainment status in some areas; however, it does not change any commitment each area made for attaining the one-hour ozone standard.

State Regulations/Standards

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The State of California began to set California ambient air quality standards (CAAQS) in 1969 under the mandate of the Mulford-Carrell Act. The CAAQS are generally more stringent than the NAAQS. In addition to the six criteria pollutants covered by the NAAQS, there are CAAQS for sulfates (SO₄), hydrogen sulfide (H₂S), vinyl chloride (VC), and visibility-reducing particles. These standards are also listed in Table C in Appendix E.

Originally, there were no attainment deadlines for the CAAQS. However, the California Clean Air Act (CCAA) of 1988 provided a timeframe and planning structure to promote their attainment.

The CCAA required nonattainment areas in the State to prepare attainment plans and proposed to classify each such area on the basis of the submitted plan, as follows: moderate, if CAAQS attainment could not occur before December 31, 1994; serious, if CAAQS attainment could not occur before December 31, 1997; and severe, if CAAQS attainment could not be conclusively demonstrated at all.

REGIONAL AIR QUALITY PLANNING FRAMEWORK

The 1976 Lewis Air Quality Management Act established the SCAQMD and other air districts throughout the State. The 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 Air Resources Board (ARB) coordinates and oversees both State and Federal air pollution control programs in California. The ARB oversees activities of local air quality management agencies and is responsible for incorporating air quality management plans for local air basins into a SIP for EPA approval. The ARB maintains air quality monitoring stations throughout the State in conjunction with local air districts. Data collected within these local air district stations are used by the ARB to classify air basins as “attainment” or “nonattainment” with respect to each pollutant and to monitor progress in attaining air quality standards. The ARB has divided the State into 15 air basins. Significant authority for air quality control within the basins has been given to local air districts that regulate stationary source emissions and develop local nonattainment plans. The CCAA provides the SCAQMD with the authority to manage transportation activities at indirect sources and regulate stationary source emissions. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. An example of this would be the motor vehicles at an intersection, at a mall, and on highways. As a State agency, the ARB regulates motor vehicles and fuels for their emissions.

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Regional Air Quality Management Plan

The SCAQMD and SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the Basin. Every three years, the SCAQMD prepares a new AQMP, updating the previous plan and having a twenty-year horizon. The SCAQMD adopted the 2003 AQMP in August 2003 and forwarded it to the 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 O₃ and PM₁₀; 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 NO₂ standard that the Basin has met since 1992.

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. The 2003 AQMP is consistent with and builds upon the approaches taken in the 1997 AQMP and the 1999 Amendments to the Ozone SIP for the Basin for the attainment of the Federal ozone air quality standard. However, this revision points to the urgent need for additional emission reductions (beyond those incorporated in the 1997/1999 Plan) from all sources, specifically those under the jurisdiction of the ARB and the U.S. EPA, which account for approximately 80 percent of the ozone precursor emissions in the Basin.

The 1999 Amendment to the 1997 Ozone SIP Revision for the Basin, adopted by the SCAQMD on December 10, 1999, and approved by the EPA in April 2000, is the most recent Federally approved AQMP.

The 1999 Amendment provides additional short-term stationary source control measures that implement portions of the 1997 Ozone SIPs long-term stationary source control measures. In addition, the Amendment revises the adoption and implementation schedule for the remaining 1997 Ozone SIP short-term stationary source control measures that the AQMD is responsible to implement.

The 1999 Amendment addresses the EPA's concerns relative to the adoption schedule for the 1997 Ozone SIP Revision short-term control measures and the increased reliance on long-term control measures. The EPA indicated, in a letter to the Governing Board, that it believes the 1999 Amendment would be approvable and would expedite the review and approval process.

The 1999 Amendment does not revise the PM₁₀ portion of the 1997 AQMP, the emission inventories, the mobile source portions of the 1997 Ozone SIP Revision, or the ozone attainment demonstration. However, with the new short-term stationary source control measures, additional emission reductions are projected to occur in the near future.

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5.5.2 SIGNIFICANCE THRESHOLD CRITERIA

THRESHOLDS FOR CONSTRUCTION EMISSIONS

The following significance thresholds for construction emissions have been established by the SCAQMD:

- ◆ 75 pounds per day of reactive organic compounds (ROC)
- ◆ 100 pounds per day of NO_x
- ◆ 550 pounds per day of CO
- ◆ 150 pounds per day of PM₁₀
- ◆ 150 pounds per day of SO_x

Projects in the Basin with construction-related emissions that exceed any of the emission thresholds above are considered significant per CEQA.

Thresholds for Pollutants with Regional Effects from Project Operations

The daily operational emissions significance thresholds are as follows:

- ◆ 55 pounds per day of ROC
- ◆ 55 pounds per day of NO_x
- ◆ 550 pounds per day of CO
- ◆ 150 pounds per day of PM₁₀
- ◆ 150 pounds per day of SO_x

Projects in the Basin with operation-related emissions that exceed any of the emission thresholds are considered significant per CEQA.

Standards for Pollutants with Localized Carbon Monoxide “Hot Spot” Effects

Air pollutant standards for CO are as follows:

- ◆ California State one-hour CO standard of 20.0 ppm
- ◆ California State/Federal eight-hour CO standard of 9.0 ppm

The significance of localized CO project impacts depends on whether ambient CO levels in the vicinity of the project are above or below State and Federal CO standards. When ambient levels are below the standards without the project emissions, a project is considered to have significant impacts if project-related emissions result in an exceedance of one or more of these standards. According to the SCAQMD the SCAQMD is in attainment for CO; therefore, project emissions are considered significant if they exceed the one-hour CO concentrations and the eight-hour CO concentrations as listed above (SCAQMD Air Quality Significance Thresholds, January 2006).

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5.5.3 IMPACTS AND MITIGATION MEASURES

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. The SCAQMD's current guidelines, *CEQA Air Quality Handbook* (April 1993 and its amended sections), were adhered to in the assessment of air quality impacts for the proposed project. The SCAQMD encourages the use of this Air Quality Handbook in preparing air quality analyses².

The air quality assessment includes estimating emissions associated with short-term construction and long-term operation of the proposed project. Criteria pollutants with regional impacts would be emitted by project-related vehicular trips. In addition, localized air quality impacts (i.e., slight increase in CO concentrations (CO hot spots) near intersections or roadway segments in the project vicinity) would result from project-related vehicle trips.

CO concentrations were predicted for the existing (2004), interim year (2015) without the project, and interim year (2015) with the project, based on traffic data provided in the project traffic study (Austin-Foust Associates [AFA], August 2004). CALINE4, the fourth generation California Line Source Dispersion Model developed by the California Department of Transportation (Caltrans), was used to calculate the CO concentrations pursuant to the South Coast Air Quality Management District Guidelines. Input data for this model include meteorology, street network geometrics, traffic information, and emission generation rates. Meteorological data required include temperature, sigma theta (standard deviation of wind direction change), wind direction, and wind speed. Street network geometrics require use of an "x, y" coordinate system onto which the modeled roadway can be overlaid in order to identify the relative locations of the traffic lane(s) and nearby receptor(s). Required traffic information included peak-hour traffic volumes, speed limit, level of service, and signal cycle times. Emission factors were calculated using the ARB EMFAC 2002 emission factors.

Output from the model includes one-hour CO concentrations in parts per million (ppm) at selected receptor locations. To reflect total concentrations, the ambient CO concentration of the vicinity must be added to the CO concentration predicted by CALINE4. Based on the methodology suggested by the EPA and included in Caltrans CO Protocol, the existing ambient concentration was determined as the higher of the second highest annual one-hour and annual eight-hour observation at the nearest representative monitoring station over the past two years. Ambient concentrations for the year 2005 and year 2015 scenarios are assumed to be the same as the existing levels, which were determined to be the higher of the second highest CO concentrations monitored in the past two years at the nearest monitoring station, for the worst-case scenario. The predicted CALINE4 concentration is calculated for the one-hour averaging time. The one-hour CO concentrations predicted by CALINE4 were multiplied by a persistence factor of 0.7 to determine the predicted eight-hour CO concentrations.

²South Coast Air Quality Management District, Comments on Notice of Preparation of the Lyons Canyon Ranch Draft Environmental Impact Report. July 14, 2005

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Regional emissions were calculated for motor vehicles. Predictions for air pollutant emissions generated by the project traffic were calculated with the URBEMIS 2002 model, based on the trip generations projected for the project from the traffic study (AFA, August 2004). Emissions from stationary sources such as natural gas usage were also calculated with URBEMIS 2002.

◆ ***PROJECT RELATED CONSTRUCTION IMPACTS WOULD EXCEED THE ESTABLISHED AIR POLLUTANT THRESHOLDS.***

Level of Significance Before Mitigation: Significant Impact.

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

Construction activities associated with the proposed project would temporarily increase localized PM₁₀, ROC, NO_x, and CO concentrations in the project vicinity. The primary sources of construction-related ROC and NO_x emissions are gasoline- and diesel-powered, heavy-duty mobile construction equipment such as scrapers and motor graders. Primary sources of PM₁₀ emissions would be clearing activities, excavation and grading operations, construction vehicle traffic on unpaved ground, and wind blowing over exposed earth surfaces.

Emissions generated from construction activities are anticipated to cause temporary increases in pollutant concentrations that could contribute to the continuing violations of the Federal and State maximum concentration standards. The frequency and concentrations of such violations would depend on several factors, including the soil composition on the site, the amount of soil disturbed, wind speed, the number and type of machinery used, the construction schedule, and the proximity of other construction and demolition projects.

As a conservative assumption in the air quality modeling, project grading and building construction was anticipated to be completed in one phase.

Grading Activities

It is expected that the grading of 3.8 million cubic yards of earth would likely take 18 months to complete. The total quantity of cut and fill would be approximately 3.8 million cubic yards, resulting in a balanced operation. Equipment exhaust, material transport, and construction crew commutes would generate gaseous emissions. It is assumed that on a peak day during the grading phase, the following equipment could be used: 10 rubber-tired dozers, 5 scrapers, 10 rubber-tired loaders, 5 tractors/loaders/backhoes, 5 crawler tractors, 1 water truck, 1 mechanic truck, 1 fuel truck, and 1 foreman truck. Based on emission factors in the EPA AP-42 documents and the SCAQMD CEQA Air Quality Handbook, Table 5.5-5, Peak-Day Construction Equipment Exhaust Emissions, lists the construction equipment exhaust emissions during a peak grading day. Table 5.5-5 also lists the vehicle exhaust emissions associated with the worker commute on a peak grading day, assuming a crew of 50 and an average round-trip

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commute of 50 miles. Table 5.5-5 shows that on a peak grading day, emissions from the construction activities would exceed the SCAQMD established daily emissions thresholds for construction. On a typical average grading day, it is estimated that only 60 percent of the workload, or proportionally the air pollutant emissions, would be emitted.

**Table 5.5-5
Peak-Day Construction Equipment Exhaust Emissions**

Number and Equipment Type ¹	No. of Hours in Operation	Pollutants ² (pounds/day)				
		CO	ROC	NO _x	SO _x	PM ₁₀
10 Rubber-Tired Dozers	8	249.7	45.4	522.2	45.5	22.7
5 Scrapers	8	142.3	12.9	245.8	25.9	19.4
10 Rubber-Tired Loaders	8	247.1	44.9	516.7	44.9	33.7
5 Tractors/Loaders/Backhoes	8	30.7	6.1	45.0	4.1	2.0
5 Crawler Tractors	8	119.9	21.8	250.7	21.8	10.9
1 Water Truck	40 miles	1.6	0.1	0.6	0.0	0.0
1 Mechanic Truck	10 miles	0.4	0.0	0.2	0.0	0.0
1 Fuel Truck	10 miles	0.4	0.0	0.2	0.0	0.0
1 Foreman Truck	10 miles	0.1	0.0	0.0	0.0	0.0
Workers Commute ³	50 miles	18.8	1.0	3.7	0.0	0.0
TOTAL		811	132	1,585	142	89
SCAQMD Threshold		550	75	100	150	150
Exceeds Threshold?		Yes	Yes	Yes	No	No
Source: LSA, 2004; SCAQMD <i>CEQA Air Quality Handbook</i> , Chapter 5: Determining Air Quality Impacts, SCAQMD Air Quality Significance Thresholds. January 2006. and EPA, <i>AP-42, Fifth Edition</i> , 1995						
¹ Number of equipment, equipment type, and number of workers are based on estimates provided to LSA by Diamond West Engineering, November 2004.						
² Emissions factors are from the SCAQMD CEQA Air Quality Handbook, Table A9-8-A, Table A9-8-B, and Table A9-8-C.						
³ Assumption based on 50 workers traveling 50 miles (round trip) per worker.						

Fugitive dust emissions are generally associated with grading, land clearing, exposure, vehicle and equipment travel on unpaved roads, and dirt/debris pushing. Dust generated during construction activities would vary substantially depending on the level of activity, the specific operations, and weather conditions. Sensitive receptors in the project vicinity (i.e. those single-family residential and commercial uses located immediately north of the subject site) and on-site construction workers may be exposed to blowing dust, depending upon prevailing wind conditions.

Regional rules exist that would help reduce fugitive dust emissions during construction periods, which reduce short-term air quality impacts. Fugitive dust from a construction-site must 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. Dust suppression techniques would be implemented to prevent fugitive dust from creating a nuisance off-site. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and

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thus the PM₁₀ component) by 50 percent or more. Compliance with these rules would reduce impacts on nearby sensitive receptors.

PM₁₀ emissions from site clearance and grading operations during a peak construction day for the project site are based on assumptions and LSA's past experience on similarly sized projects. The SCAQMD estimates that one acre of graded surface creates about 26.4 pounds of PM₁₀ per workday during the construction phase of the project and 21.8 pounds of PM₁₀ per hour from dirt/debris pushing per dozer. Based on the construction estimates, fugitive dust emissions from excavation, hauling/transport, dumping/reclamation, wind erosion, and miscellaneous activities during grading days, the uncontrolled PM₁₀ emissions would be 962.5 pounds per day (lbs/day). However, with the implementation of the Standard Air Pollution Control Measures, fugitive dust emissions from construction activities are expected to be reduced by 50 percent. The PM₁₀ emissions under the controlled condition would be reduced to 481.3 lbs/day. Table 5.5-6, Peak Grading Day Total Emissions, lists fugitive dust emissions and construction equipment exhausts.

Table 5.5-6 shows that, during peak grading days, daily total construction emissions with compliance with the Standard Air Pollution Control Measures would exceed the SCAQMD thresholds for CO, ROC, NO_x, and PM₁₀. This is considered a significant impact.

**Table 5.5-6
Peak Grading Day Total Emissions**

Category	Emissions (lbs/day)				
	CO	ROC	NO _x	SO _x	PM ₁₀
Vehicle/Equipment Exhaust (Table 5.5-5)	811	132	1,585	142	89
Fugitive Dust from Soil Disturbance, No Controls	—	—	—	—	963
Fugitive Dust from Soil Disturbance, with 50 Percent Control Efficiency	—	—	—	—	481
Total Grading, No Controls	811	132	1,585	142	1,052
Total Grading, with Controls	811	132	1,585	142	570
SCAQMD Threshold	550	75	100	150	150
Significant? (With Controls)	Yes	Yes	Yes	No	Yes ¹
Source: LSA, 2004; EPA, AP-42, Fifth Edition, 1995.					
¹ With control measures for fugitive dust implemented.					

Building Activities

Building construction would be completed after mass grading is completed. Building construction uses different types of equipment on the project site than during the grading period. Similarities do exist in terms of equipment exhaust emissions and fugitive dust emissions. However, it is anticipated that emissions during building construction would be below peak grading day emissions. Therefore, air pollution control measures implemented for the peak grading day emissions would be adequate to reduce emissions during other construction periods.

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Architectural Coatings

Architectural coatings contain volatile organic compounds (VOC) that are similar to ROC and are part of the O₃ precursors. At this time, there is no project-specific information available for the types and volumes of architectural coatings needed for the proposed on-site buildings. An emissions estimate for architectural coatings is, therefore, not provided in this analysis. Based on the number of proposed dwelling units and the square footage of neighborhood commercial uses, the proposed project is expected to result in architectural coatings-related ROC emissions exceeding the SCAQMD daily threshold of 75 lbs/day. The proposed project would be required to comply with the SCAQMD Rule 1113 on the use of architectural coatings. Following the SCAQMD Rule 1113, emissions associated with architectural coatings could be reduced by using precoated/natural colored building materials, water-based or low-VOC coating on all interior and exterior walls, and coating transfer or spray equipment with high transfer efficiency. For example, a high-volume, low-pressure (HVLP) spray method is a coating application system operated at air pressure between 0.1 and 10 pounds per square inch gauge (psig), with 65 percent transfer efficiency. Manual coating applications such as a paintbrush, hand roller, trowel, spatula, dauber, rag, or sponge have 100 percent transfer efficiency. Although implementation of applicable mitigation measures would reduce VOC emissions associated with construction-related architectural coatings, VOC emissions are anticipated to exacerbate the exceedance of the SCAQMD daily emissions threshold for ROC. As such, VOC-related impacts would be considered significant.

Summary of Construction Emission Impacts

Based on the above, with implementation of feasible measures during construction of the proposed project, emissions from construction equipment exhaust and soil disturbance would be minimized. However, construction emissions from the project would exceed the daily emissions thresholds for CO, ROC (including VOC), NO_x, and PM₁₀ established by the SCAQMD. Construction of the proposed project would result in significant air quality impacts.

Mitigation Measures:

Because project-related construction emissions would exceed the SCAQMD thresholds for criteria pollutants, the following mitigation measures are recommended to minimize air pollutant emissions. Compliance with the fugitive dust palliative SCAQMD Rules 402 and 403 have been utilized in the impact analyses to reduce potential PM₁₀ emissions to the extent practicable, although not below SCAQMD thresholds.

AQ1 The construction contractor shall be responsible for ensuring that all measures listed in Table 5.5-7, Standard Measures for Construction-Related Emissions are implemented. To achieve the particulate control efficiencies shown, it is assumed that finished surfaces will be stabilized with water and/or soy-based, or other non-chloride-based, dust palliatives and isolated from traffic flows to prevent emissions of fugitive dust from these areas. In addition, the following water application rates are assumed:

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- ◆ Roads traveled by autos, rock trucks, water trucks, fuel trucks, and maintenance trucks: up to twice per hour;
- ◆ Roads traveled by scrapers and loaders; active excavation area: up to three times per hour; and
- ◆ Finish grading area: up to once every two hours.

AQ2 All construction equipment shall be maintained in good operating condition so as to reduce operational emissions. The construction contractor shall ensure that all construction equipment is being properly serviced and maintained.

AQ3 The construction contractor shall utilize pre-coated/natural colored building materials, water-based or low-VOC coating on all interior and exterior walls, and coating transfer or spray equipment with high transfer efficiency, such as HVLP spray method, or manual coatings application such as a paintbrush, hand roller, trowel, spatula, dauber, rag, or sponge.

AQ4 Low-emitting paints and solvents shall be used on all future on-site structures.

Level of Significance After Mitigation: Significant and Unavoidable Impact.

**Table 5.5-7
Standard Measures for Construction-Related Emissions**

Construction Vehicle/Equipment Operation
<ul style="list-style-type: none"> ◆ Configure construction parking to minimize traffic interference. ◆ Provide temporary traffic control during all phases of construction activities to improve traffic flow (e.g., flag person). ◆ Provide on-site food service for construction workers. ◆ Prohibit truck idling in excess of 10 minutes. ◆ Apply four to six degree injection timing retard to diesel IC engines, whenever feasible. ◆ Use reformulated low-sulfur diesel fuel in all equipment, whenever feasible. ◆ Use catalytic converters on all gasoline-powered equipment. ◆ Minimize concurrent use of equipment through equipment phasing. ◆ Use low NO_x engines, alternative fuels, and electrification, whenever feasible. ◆ Substitute electric and gasoline-powered equipment for diesel-powered equipment, whenever feasible. ◆ Turn off engines when not in use. ◆ Wash truck wheels before the trucks leave the construction-site. ◆ When operating on-site, do not leave trucks idling for periods in excess of 10 minutes. ◆ Operate clean fuel van(s), preferably vans that run on compressed natural gas or propane, to transport construction workers to and from the construction-site. ◆ Provide documentation to the County of Los Angeles prior to beginning construction, demonstrating that the project proponents will comply with all SCAQMD regulations including 402, 403, 1113, and 1403. ◆ Suspend use of all construction equipment operations during second stage smog alerts.

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Grading
<ul style="list-style-type: none"> ◆ Apply nontoxic soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more). ◆ Enclose, cover, water twice daily, or apply nontoxic soil binders, according to manufacturers' specifications, to exposed piles (i.e., gravel, sand, dirt) with 5 percent or greater silt content. ◆ Water active sites at least twice daily. ◆ Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 mph. ◆ Cover all trucks hauling dirt, sand, soil, or other loose materials on-site or maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with the requirements of CDC Section 23114. ◆ Cover all trucks hauling these materials off-site.
Paved Roads
<ul style="list-style-type: none"> ◆ Sweep streets at the end of the day if visible soil material is carried onto adjacent public paved road (water sweepers with reclaimed water are recommended). ◆ Sweep public streets at the conclusion of construction work. ◆ Install adequate storm water control systems to prevent mud deposition onto paved areas.
Unpaved Roads
<ul style="list-style-type: none"> ◆ Apply water three times daily, or nontoxic soil stabilizers according to manufacturers' specifications, to all unpaved parking or staging areas or unpaved road surfaces.
Source: SCAQMD Rules 402 and 403; LSA, 2004.

◆ ***OPERATION OF THE PROPOSED PROJECT WOULD INCREASE AIR POLLUTANT CONCENTRATIONS IN THE PROJECT AREA.***

Level of Significance Before Mitigation: Significant Impact.

Impact Analysis:

Area Sources Emissions

The proposed project would result in stationary source emissions from natural gas usage and consumer products. The emissions associated with area sources would be small when compared to mobile source emissions. Emissions associated with area sources were calculated with URBEMIS 2002 and are included in Table 5.5-8, Project Operational Emissions.

Mobile Sources Emissions

The proposed project is estimated to generate 1,261 vehicular trips per day (AFA, July 2005). Using the default emission factors included in URBEMIS 2002, emissions associated with project-related vehicular trips were calculated and are included in Table 5.5-8.

Table 5.5-8 shows that total project-related emissions for CO, ROC, and NO_x would be less than the SCAQMD daily emissions thresholds. Therefore, no significant regional air quality impacts would occur as a result of operation of the proposed project.

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**Table 5.5-8
Project Operational Emissions**

Source	Pollutants, lbs/day				
	CO	ROC	NO _x	SO ₂	PM ₁₀
Stationary Sources: Summer	8.96	17.17	2.42	0.09	0.04
Vehicular Traffic: Summer	156.22	14.23	14.00	0.14	12.82
Subtotal Summer	165.17	31.40	16.42	0.23	12.85
Stationary Sources: Winter	1.01	15.95	2.38	0.00	0.00
Vehicular Traffic: Winter	147.84	12.41	20.38	0.13	12.82
Subtotal Winter	148.85	28.36	22.76	0.13	12.82
SCAQMD Threshold	550	55	55	150	150
Exceeds Threshold? ¹	No/No	No/No	No/No	No/No	No/No
Significant Impact?	No	No	No	No	No
Source: LSA, November 2004. SCAQMD <i>CEQA Air Quality Handbook</i> , Chapter 5: Determining Air Quality Impacts, SCAQMD Air Quality Significance Thresholds. January 2006.					
Notes: 1) Summer/Winter violation					

Mitigation Measures:

- AQ5 Future on-site buildings shall incorporate design principles of the Energy Star program and/or Leadership in Energy and Environmental Design (LEED) program, and associated energy-saving features, including energy-efficient heating and cooling systems, tight construction and ducts, improved insulation, high-performance windows, and built-in energy efficient appliances.
- AQ6 All public and private parking areas (i.e. recreational facilities, trailhead parking, senior housing parking) shall be planted with trees to insure shading and prevent heat buildup.

Level of Significance After Mitigation: Less Than Significant Impact.

- ◆ ***OPERATION OF THE PROPOSED PROJECT COULD CREATE CARBON MONOXIDE “HOT SPOT” IMPACTS IN THE PROJECT AREA.***

Level of Significance Before Mitigation: Less Than Significant Impact.

Impact Analysis: The intersection vehicle turn volumes included in the project traffic study report (AFA, August 2004) were used in Caltrans CALINE4 model to evaluate the local CO concentrations at intersections most affected by project traffic. Although the currently proposed project includes the construction of 186 dwelling units, a worst-case analysis assuming the traffic associated with an 835 dwelling unit project was used to estimate local CO concentrations at area intersections. Eight intersections that either have the highest turn volumes or worst level of service (LOS) in the project vicinity most affected by the project traffic were selected for the CO hot spot analysis. Table 5.5-9, Existing CO Concentrations, lists the CO concentrations for eight intersections in the project vicinity under the existing (2004) conditions. Table 5.5-10, Interim

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Year (2015) CO Concentrations, lists the CO level in the interim year (2015) under the with project and without project scenarios. It should be pointed out that, due to technology improvements, emission factors (for vehicle exhaust) for future years are likely to decrease. In addition, background concentrations in future years are anticipated to continue to decrease as the concerted effort to improve regional air quality progresses. Therefore, CO concentrations in future years are anticipated to be lower than existing conditions in the future.

The proposed project would contribute to increased CO concentrations at intersections in the project vicinity. As shown in Tables 5.5-9 and 5.5-10, none of the eight intersections analyzed would have a one-hour CO concentration exceeding State standards of 20 ppm under existing and 2015 with and without project conditions. The eight-hour CO concentration at these intersections would also be below the State standard of 9.0 ppm.

The project-related increase in CO concentrations at all eight intersections would be 0.2 ppm or less for the one-hour period and 0.1 ppm or less for the eight-hour period. Since no Federal or State standards would be exceeded, no CO hot spot would occur. Therefore, no air pollution control measures are necessary or recommended for CO emissions.

Mitigation Measures: No mitigation measures are required.

Level of Significance After Mitigation: Not applicable.

**Table 5.5-9
Existing CO Concentrations**

Intersection	Receptor to Road Centerline Distance (Meters)	Existing One-Hour CO Concentration (ppm)	Existing Eight-Hour CO Concentration (ppm)	Exceeds State Standards	
				1-Hr	8-Hr
Wiley Canyon Road and Lyons Avenue	15	5.7	3.7	No	No
	15	5.7	3.5	No	No
	16	5.5	3.4	No	No
	17	5.5	3.4	No	No
Orchard Village Road and Wiley Canyon Road	14	5.0	3.0	No	No
	14	4.9	3.0	No	No
	15	4.9	3.0	No	No
	15	4.8	2.9	No	No
The Old Road and Valencia Boulevard	19	4.7	2.8	No	No
	21	4.7	2.8	No	No
	22	4.5	2.7	No	No
	22	4.5	2.7	No	No
The Old Road and McBean Parkway	15	5.5	3.4	No	No
	17	5.5	3.4	No	No
	17	5.4	3.3	No	No
	19	5.1	3.1	No	No
The Old Road and Pico Canyon Road	14	5.3	3.2	No	No
	14	5.3	3.2	No	No
	15	4.9	3.0	No	No
	17	4.8	2.9	No	No
Chiquella Lane and	7	5.4	3.3	No	No

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Pico Canyon Road	7	5.4	3.3	No	No
	13	5.4	3.3	No	No
	14	5.4	3.3	No	No
Marriott Way and The Old Road	7	4.1	2.4	No	No
	7	4.1	2.4	No	No
	7	4.1	2.4	No	No
Chiquella Lane and The Old Road	7	4.2	2.5	No	No
	7	4.2	2.5	No	No
	7	4.1	2.4	No	No
	7	4.1	2.4	No	No

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**Table 5.5-10
Interim Year (2015) CO Concentrations**

Intersection	Receptor to Road Centerline Distance (Meters)	Project Related Increase 1-hr/8-hr (ppm)	Without/With Project One-Hour CO Concentration (ppm)	Without/With Project Eight-Hour CO Concentration (ppm)	Exceeds State Standards	
					1-Hr	8-Hr
Wiley Canyon Road and Lyons Avenue	21/21	0.0/0.0	4.6/4.6	2.8/2.8	No	No
	19/19	0.0/0.0	4.6/4.6	2.8/2.8	No	No
	19/19	0.0/0.0	4.5/4.5	2.7/2.7	No	No
	17/17	0.0/0.0	4.5/4.5	2.7/2.7	No	No
Orchard Village Road and Wiley Canyon Road	17/17	0.0/0.0	4.7/4.8	2.9/2.9	No	No
	17/17	0.0/0.0	4.6/4.6	2.8/2.8	No	No
	17/17	0.0/0.0	4.4/4.4	2.6/2.6	No	No
	14/14	0.0/0.0	4.4/4.4	2.6/2.6	No	No
The Old Road and Valencia Boulevard	24/24	0.0/0.0	4.2/4.2	2.5/2.5	No	No
	24/24	0.0/0.0	4.2/4.2	2.5/2.5	No	No
	24/24	0.0/0.0	4.2/4.2	2.5/2.5	No	No
	22/22	0.1/0.1	4.1/4.2	2.4/2.5	No	No
The Old Road and McBean Parkway	21/21	0.1/0.1	4.7/4.8	2.8/2.9	No	No
	21/21	0.0/0.0	4.7/4.7	2.8/2.8	No	No
	19/19	0.0/0.0	4.7/4.7	2.8/2.8	No	No
	17/17	0.1/0.0	4.6/4.7	2.8/2.8	No	No
The Old Road and Pico Canyon Road	17/17	0.0/0.0	4.5/4.5	2.7/2.7	No	No
	17/17	0.1/0.1	4.4/4.5	2.6/2.7	No	No
	15/17	0.0/0.0	4.3/4.3	2.5/2.5	No	No
	15/15	0.0/0.0	4.2/4.2	2.5/2.5	No	No
Chiquella Lane and Pico Canyon Road	14/14	0.0/0.0	4.7/4.7	2.8/2.8	No	No
	14/14	0.1/0.0	4.6/4.7	2.8/2.8	No	No
	13/13	0.1/0.0	4.6/4.7	2.8/2.8	No	No
	13/13	0.0/0.0	4.6/4.6	2.8/2.8	No	No
Marriott Way and The Old Road	8/8	0.1/0.0	3.6/3.7	2.1/2.1	No	No
	8/8	0.1/0.0	3.6/3.7	2.1/2.1	No	No
	8/8	0.1/0.0	3.6/3.7	2.1/2.1	No	No
	8/8	0.1/0.0	3.6/3.7	2.1/2.1	No	No
Chiquella Lane and The Old Road	12/12	0.2/0.1	3.5/3.7	2.0/2.1	No	No
	8/12	0.1/0.1	3.5/3.6	2.0/2.1	No	No
	8/8	0.1/0.1	3.5/3.6	2.0/2.1	No	No
	8/8	0.1/0.1	3.5/3.6	2.0/2.1	No	No

Source: LSA Associates, Inc., July 2005.

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◆ ***THE PROPOSED PROJECT WOULD CONFLICT WITH THE ADOPTED SCAQMD AIR QUALITY MANAGEMENT PLAN.***

Level of Significance Before Mitigation: Significant Impact.

Impact Analysis: In order to accurately assess the environmental impacts as a result of new or renovated developments, environmental pollution and population growth are projected for future scenarios in the general plans of local jurisdictions and incorporated into the regional AQMPs. The project pollutants emissions would contribute to new exceedances of the SCAQMD's established daily air emission thresholds. The proposed project would not require amendments to the projections of the County's General Plan but would conflict with SCAQMD's 1997 AQMP due to project related air emissions above SCAQMD thresholds of significance. The proposed project is therefore considered inconsistent with the most recently adopted AQMP.

Mitigation Measures: No mitigation measures are recommended that could feasibly reduce the significant impacts referenced.

Level of Significance After Mitigation: Significant and Unavoidable Impact.

◆ ***THE PROPOSED PROJECT WOULD CREATE OBJECTIONABLE ODORS THAT COULD ADVERSELY AFFECT PEOPLE IN THE VICINITY OF THE PROJECT SITE.***

Level of Significance Before Mitigation: Significant Impact.

Impact Analysis: Construction of the proposed project would involve operation of diesel-powered equipment and application of paint and other architectural coatings, which create odorous emissions. However, construction-related odors would be temporary in nature, as they would only occur during the construction period, and would be adequately minimized through implementation of all applicable mitigation measures identified previously (AQ1 through AQ4).

The proposed residential uses on the project site, once constructed, are not anticipated to generate objectionable odors that would be noticeable to surrounding uses. Residential uses typically do not generate objectionable odors. Nonetheless, all such uses would be required to comply with SCAQMD Rule 402, *Nuisance*, which would preclude the possibility of impacts to surrounding uses resulting from nuisance odor.

Mitigation Measures: Refer to mitigation measures AQ1 through AQ4. No additional mitigation measures are required.

Level of Significance After Mitigation: Less Than Significant Impact.

5.5.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

- ◆ ***THE PROPOSED PROJECT AND OTHER CUMULATIVE PROJECTS WOULD RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE CRITERIA POLLUTANTS.***

Level of Significance Before Mitigation: Significant Impact.

Impact Analysis: As discussed in Section 5.10, Traffic and Circulation, cumulative projects were considered in the assessment of traffic impacts, and therefore mobile source air quality impacts, were considered for the proposed project. The traffic study included vehicular trips from all present and future projects in the Santa Clarita Valley and in the project vicinity. Therefore, CO hot spot concentrations calculated at these intersections include the cumulative traffic effect. Based on Table 5.5-10, no significant cumulative CO impacts would occur.

Construction of the proposed project would contribute cumulatively to the local and regional air pollutants together with other projects under construction. Emissions associated with operations of the proposed project would contribute to long-term regional air pollutants. Therefore, even though mitigation measures would be implemented to reduce impacts to the maximum extent practicable, implementation of the proposed project would contribute to significant cumulative air quality impacts.

Mitigation Measures: Refer to mitigation measures AQ1 through AQ6. No additional mitigation measures are required.

Level of Significance After Mitigation: Significant and Unavoidable Impact.