

5. *Environmental Analysis*

5.1 **AIR QUALITY**

This section of the Subsequent Draft Environmental Impact Report (SDEIR) evaluates the potential for the Crown City Medical Center (proposed project) to impact air quality in a local and regional context. The analysis in this section is based on the proposed project's land uses and trip generation provided by Iteris (Appendix F to this SDEIR). The air quality model output sheets are included in Appendix C of this SDEIR.

5.1.1 **Environmental Setting**

South Coast Air Basin

The project site lies within the South Coast Air Basin (SoCAB), which includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semipermanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (SCAQMD 2005).

Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, 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 nearest to the project site is the Pasadena Monitoring Station (ID No. 046719). The average low is reported at 42.5°F in January while the average high is 89.2°F in August (WRCC 2012).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall averages 20.24 inches per year in the project area (WRCC 2012).

Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (SCAQMD 2005).



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Wind

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur, both in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (SCAQMD 2005).

Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two similarly distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area (SCAQMD 2005).

Air Pollutants of Concern

Criteria Air Pollutants

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb) are primary air pollutants. Of these, CO, SO₂, NO₂, PM₁₀, and PM_{2.5} are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. VOC and oxides of nitrogen (NO_x) are air pollutant precursors that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O₃) and NO₂ are the principal secondary pollutants. A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

Carbon Monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion, engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (SCAQMD 2005). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2011).

Volatile Organic Compounds (VOC) are compounds composed primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons.

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Other sources of VOCs include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by VOCs, but rather by reactions of VOCs to forms of secondary pollutants such as ozone (SCAQMD 2005). There are no ambient air quality standards established for VOCs. However, because they contribute to the formation of O₃, the South Coast Air Quality Management District (SCAQMD) has established a significance threshold for this pollutant (SCAQMD 2005).

Nitrogen Oxides (NO_x) are a byproduct of fuel combustion and contribute to the formation of O₃, PM₁₀, and PM_{2.5}. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO₂). The principal form of NO₂ produced by combustion is NO, but NO reacts with oxygen to form NO₂, creating the mixture of NO and NO₂ commonly called NO_x. NO₂ acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO₂ is only potentially irritating. There is some indication of a relationship between NO₂ and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 part per million (ppm). NO₂ absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure (SCAQMD 2005). The SoCAB is designated as an attainment area for NO₂ under the National AAQS and nonattainment under the California AAQS (CARB 2011).

Sulfur Dioxide (SO₂) is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO₂ (SCAQMD 2005). When sulfur dioxide forms sulfates (SO₄) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_x). Thus, SO₂ is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO₂ may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO₂ may do greater harm by injuring lung tissue. The SoCAB is designated as attainment under the California and National AAQS (CARB 2011).

Suspended Particulate Matter (PM₁₀ and PM_{2.5}) consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM₁₀, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or PM_{2.5}, have an aerodynamic diameter of 2.5 microns (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on arid landscapes also contributes substantially to local particulate loading (i.e., fugitive dust). Both PM₁₀ and PM_{2.5} may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems (SCAQMD 2005).

The US Environmental Protection Agency's (EPA) scientific review concluded that PM_{2.5}, which penetrates deeply into the lungs, is more likely than PM₁₀ to contribute to health effects and at concentrations that extend well below those allowed by the current PM₁₀ 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. Diesel particulate matter (DPM) is classified by the California Air



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Resources Board (CARB) as a carcinogen. The SoCAB is a nonattainment area for PM_{2.5} and PM₁₀ under California and National AAQS (CARB 2011).¹

Ozone (O₃) is commonly referred to as “smog” and is a gas that is formed when VOCs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O₃ is a secondary criteria air pollutant. O₃ concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for the formation of this pollutant. O₃ poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Additionally, O₃ has been tied to crop damage, typically in the form of stunted growth and premature death. O₃ can also act as a corrosive, resulting in property damage such as the degradation of rubber products (SCAQMD 2005). The SoCAB is designated as extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2011).

Lead (Pb) concentrations decades ago exceeded the state and federal AAQS by a wide margin, but have not exceeded state or federal air quality standards at any regular monitoring station since 1982 (SCAQMD 2005). However, in 2008 the EPA and CARB adopted more strict lead standards, and special monitoring sites immediately downwind of lead sources² recorded very localized violations of the new state and federal standards. As a result of these localized violations, the Los Angeles County portion of the SoCAB was designated in 2010 as nonattainment under the California and National AAQS for lead (CARB 2011). The project is not characteristic of industrial-type projects that have the potential to emit lead. Therefore, lead is not a pollutant of concern for the project.

Toxic Air Contaminants

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit designated TACs. If there is a threshold exposure level below which there are no adverse health impacts expected for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If threshold exposure levels have not been established, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

¹ CARB approved the SCAQMD's request to redesignate the SoCAB from serious nonattainment for PM₁₀ to attainment for PM₁₀ under the National AAQS on March 25, 2010, because the SoCAB has not violated federal 24-hour PM₁₀ standards during the period from 2004 to 2007. However, the EPA has not yet approved this request.

² Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 identified that the Trojan Battery Company and Exide Technologies exceed the federal standards (SCAQMD 2010).

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Air toxics from stationary sources are also regulated in California under the Air Toxics “Hot Spot” Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

In 2000, SCAQMD conducted a study on ambient concentrations of TACs and estimated the potential health risks from air toxics. The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,400 in a million. The largest contributor to this risk was diesel exhaust, accounting for 71 percent of the air toxics risk. In 2008, SCAQMD conducted its third update to its study on ambient concentrations of TACs and estimated the potential health risks from air toxics. The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in one million. The largest contributor to this risk was diesel exhaust, accounting for approximately 84 percent of the air toxics risk (SCAQMD 2008). In the vicinity of the project site, excess cancer risk is 711 in a million (SCAQMD 2012).



Regulatory Framework

AAQS have been promulgated at the local, state, and federal levels for criteria pollutants. The project site is in the SoCAB and is subject to the rules and regulations imposed by SCAQMD, as well as the California AAQS adopted by CARB and federal AAQS.

Ambient Air Quality Standards

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

These National AAQS and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or

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exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 5.1-1, these pollutants include O₃, NO₂, CO, SO₂, PM₁₀, PM_{2.5}, and lead (Pb). 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.

Table 5.1-1
Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Ozone (O ₃)	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.075 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO ₂)	Annual Average	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	*	0.030 ppm ²	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm ¹	
	24 hours	0.04 ppm	0.014 ppm ²	
Respirable Coarse Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m ³	150 µg/m ³	
Respirable Fine Particulate Matter (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	15 µg/m ³	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m ³	
Lead (Pb)	Monthly	1.5 µg/m ³	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	*	1.5 µg/m ³	
	3-Month Average	*	0.15 µg/m ³	
Sulfates (SO ₄)	24 hours	25 µg/m ³	*	Industrial processes.

Table 5.1-1
Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Major Pollutant Sources
Visibility-Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles ¹	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2012

Notes: ppm: parts per million; µg/m³: micrograms per cubic meter

¹ When relative humidity is less than 70 percent.

² On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

* Standard has not been established for this pollutant/duration by this entity.



Air Quality Management Planning

SCAQMD, in coordination with the Southern California Association of Governments (SCAG), is the agency responsible for preparing the air quality management plan (AQMP) for the SoCAB. Since 1979, a number of AQMPs have been prepared. The most recent plan was adopted on June 1, 2007, 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 2007 AQMP proposes attainment demonstration of the federal PM_{2.5} standards through a more focused control of SO_x, directly emitted PM_{2.5}, and focused control of NO_x and VOC by 2015. The eight-hour ozone control strategy builds upon the PM_{2.5} strategy, augmented with additional NO_x and VOC reductions to meet the standard by 2024, assuming an extended attainment date is obtained.

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan (SIP). Areas are classified as

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attainment or nonattainment areas for particular pollutants, depending on whether they meet ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

The attainment status for the SoCAB is shown in Table 5.1-2. The SoCAB is also designated in attainment of the California AAQS for sulfates. According to the 2007 AQMP, the SoCAB will have to meet the new federal 8-hour O₃ standard by 2024, PM_{2.5} standards by 2015, and the recently revised 24-hour PM_{2.5} standard by 2020. SCAQMD has recently designated the SoCAB as nonattainment for NO₂ (entire basin) and lead (Los Angeles County only) under the California AAQS. Transportation conformity for nonattainment and maintenance areas is required under the Federal CAA to ensure federally supported highway and transit projects conform to the SIP. The U.S. EPA approved California's SIP revisions for attainment of the 1997 8-hour O₃ National AAQS for the SoCAB in March 2012. Findings for the new 8-hour O₃ emissions budgets for the SoCAB and consistency with the recently adopted 2012 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) were submitted to the U.S. EPA for approval.

*Table 5.1-2
Attainment Status of Criteria Pollutants in the South Coast Air Basin*

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Severe-17 Nonattainment ¹
PM ₁₀	Serious Nonattainment	Nonattainment ²
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO ₂	Nonattainment	Attainment/Maintenance
SO ₂	Attainment	Attainment
Lead	Nonattainment (Los Angeles County only) ³	Nonattainment (Los Angeles County only) ³
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2011.

¹ SCAQMD may petition for Extreme Nonattainment designation.

² Annual standard revoked September 2006. CARB approved SCAQMD's request to redesignate the SoCAB from serious nonattainment for PM₁₀ to attainment for PM₁₀ under the National AAQS on March 25, 2010, because the SoCAB has not violated federal 24-hour PM₁₀ standards from 2004 to 2007. However, the EPA has not yet approved this request.

³ The Los Angeles portion of the SoCAB was designated nonattainment for lead under the new federal and existing state AAQS as a result of large industrial emitters. Remaining areas within the SoCAB are unclassified.

Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site and project area are best documented by measurements made by SCAQMD. The project site is in Source Receptor Area (SRA) 8 – West San Gabriel Valley. The air quality monitoring station closest to the project is the Pasadena Monitoring Station. This station does not monitor PM₁₀ or SO₂; therefore, data from the Azusa and Burbank monitoring stations was obtained for these criteria pollutants, respectively. Data from these stations are summarized in Table 5.1-3. The data show that the area frequently exceeds the state and federal one-hour and eight-hour O₃ standards and state PM₁₀ standard and occasionally exceeds the federal PM_{2.5} standards. The CO, SO₂, and NO₂ standards have not been exceeded in the last five years in the project vicinity.

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*Table 5.1-3
Ambient Air Quality Monitoring Summary*

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations				
	2007	2008	2009	2010	2011
Ozone (O₃)¹					
State 1-Hour ≥ 0.09 ppm	13	16	12	1	5
State 8-hour ≥ 0.07 ppm	21	26	19	6	13
Federal 8-Hour > 0.075 ppm	11	16	12	3	5
Max. 1-Hour Conc. (ppm)	0.149	0.122	0.176	0.101	0.107
Max. 8-Hour Conc. (ppm)	0.101	0.100	0.114	0.082	0.085
Carbon Monoxide (CO)¹					
State 8-Hour > 9.0 ppm	0	0	0	0	0
Federal 8-Hour ≥ 9.0 ppm	0	0	0	0	0
Max. 8-Hour Conc. (ppm)	2.28	2.21	2.13	1.94	2.26
Nitrogen Dioxide (NO₂)¹					
State 1-Hour ≥ 0.18 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.092	0.105	0.080	0.071	0.102
Sulfur Dioxide (SO₂)²					
State 1-Hour ≥ 0.04 ppm	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.003	0.003	0.003	0.004	0.002
Coarse Particulates (PM₁₀)³					
State 24-Hour > 50 µg/m ³	11	12	7	5	8
Federal 24-Hour > 150 µg/m ³	11654	0	0	0	0
Max. 24-Hour Conc. (µg/m ³)		98.0	74.0	70.0	65.0
Fine Particulates (PM_{2.5})¹					
Federal 24-Hour > 35 µg/m ³	3	2	3	0	1
Max. 24-Hour Conc. (µg/m ³)	68.8	66.0	51.9	35.2	43.8

Source: CARB 2012.

ppm: parts per million; µg/m³: or micrograms per cubic meter.

¹ Data obtained from the Pasadena Monitoring Station.

² Data obtained from the Burbank Monitoring Station.

³ Data obtained from the Azusa Monitoring Station.

⁴ Includes data related to an exceptional event (e.g., forest fire). The second highest PM₁₀ concentration recorded was 81.0 µg/m³.



Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

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The project is in downtown Pasadena, which is primarily developed with high-density commercial, cultural facilities, and public use facilities, such as historic City Hall, Central Library, and Civic Auditorium complex. The nearest sensitive receptors to the project site are the Oakwood Apartments, approximately 140 feet northeast of the boundary of the site.

5.1.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- AQ-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- AQ-4 Expose sensitive receptors to substantial pollutant concentrations.
- AQ-5 Create objectionable odors affecting a substantial number of people.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold AQ-1
- Threshold AQ-5

These impacts will not be addressed in the following analysis.

South Coast Air Quality Management District Thresholds

The City of Pasadena has not adopted specific significance thresholds for air quality impacts. However, because of the SCAQMD's regulatory role in the SoCAB, the significance thresholds developed for CEQA projects in the SoCAB will be used in evaluating project impacts. The analysis of the proposed project's air quality impacts follows the guidance and methodologies recommended in SCAQMD's *CEQA Air Quality Handbook* and the significance thresholds on SCAQMD's website.³ CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. SCAQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed though an analysis of localized CO impacts and localized significance thresholds (LSTs).

³ SCAQMD's Air Quality Significance Thresholds are current as of March 2011 and can be found here: <http://www.aqmd.gov/ceqa/hdbk.html>.

Regional Significance Thresholds

SCAQMD has adopted regional construction and operational emissions thresholds to determine a project’s cumulative impact on air quality in the SoCAB. Table 5.1-4 lists SCAQMD’s regional significance thresholds.

Table 5.1-4
SCAQMD Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Nitrogen Oxides (NO _x)	100 lbs/day	55 lbs/day
Sulfur Oxides (SO _x)	150 lbs/day	150 lbs/day
Particulates (PM ₁₀)	150 lbs/day	150 lbs/day

Source: SCAQMD 2011.

CO Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. Typically, for an intersection to exhibit a significant CO concentration, it would operate at level of service (LOS) E or worse without improvements (Caltrans 1997).



Localized Significance Thresholds

SCAQMD developed LSTs for emissions of NO₂, CO, PM₁₀, and PM_{2.5} generated at the project site (offsite mobile-source emissions are not included the LST analysis). LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS. LSTs are based on the ambient concentrations of that pollutant within the project SRA and the distance to the nearest sensitive receptor. LST analysis for construction is applicable to all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required. In accordance with SCAQMD’s LST methodology, construction LSTs are based on the acreage disturbed per day based on equipment use. Based on the anticipated equipment use, construction activities would disturb approximately 1.5 acres per day, and therefore the 1.5-acre LSTs are the thresholds for construction and the five-acre LSTs are the thresholds for operation. The construction and operational LSTs in SRA 8 are shown in Table 5.1-5 for nonsensitive receptors within 82 feet (25 meters) and sensitive receptors at 140 feet (43 meters). Because the project is not an industrial project that has the potential to emit substantial sources of stationary emissions, operational LSTs are not an air quality impact of concern associated with the project and will not be addressed further.

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Table 5.1-5
SCAQMD Localized Significance Thresholds

Air Pollutant	Threshold (lbs/day)
	Construction
Nitrogen Oxides (NO _x)	108
Carbon Monoxide (CO)	788
Coarse Particulates (PM ₁₀)	14
Fine Particulates (PM _{2.5})	5

Source: SCAQMD 2003; SCAQMD 2006, Based on receptors in SRA 8.

Notes:

Operational LSTs are based on a 5-acre site with receptors within 82 feet (25 meters).

Construction LSTs are based on 1.5 acres disturbed per day with sensitive land uses at 140 feet (43 meters) for PM₁₀ and PM_{2.5} and non-sensitive land uses within 82 feet (25 meters) for CO and NO₂.

Methodology

This air quality evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely to occur in conjunction with the type and scale of development associated with the Crown City Medical Center project. SCAQMD has published the *CEQA Air Quality Handbook* (Handbook) with updates on its Web site that are intended to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The Handbook provides standards, methodologies, and procedures for conducting air quality analyses in environmental impact reports and was used extensively in the preparation of this analysis.

SCAQMD has published two additional guidance documents—Localized Significance Threshold Methodology for CEQA Evaluations (2003) and Particulate Matter (PM) 2.5 Significance Thresholds and Calculation Methodology (2006)—that are intended to provide guidance in evaluating localized effects from emissions during construction. These documents were used in the preparation of this analysis, as was the California Emissions Estimator Model (CalEEMod), Version 2011.1.1, for determination of daily construction and operational emissions, and guidance included in the SCAQMD Final Localized Significance Threshold Methodology for localized construction impacts. Construction emissions are based on the construction schedule and equipment list provided by the applicant (see Appendix C). Where information was unavailable, CalEEMod program defaults were utilized. The proposed project is not considered a sensitive land use and is not a substantial generator of TACs that would require permitting by SCAQMD, and therefore an evaluation of TACs was not conducted.

5.1.3 Environmental Impacts

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

IMPACT 5.1-1: **SHORT-TERM CONSTRUCTION EMISSIONS GENERATED BY THE CROWN CITY MEDICAL CENTER WOULD NOT EXCEED THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT'S REGIONAL SIGNIFICANCE THRESHOLDS OR CUMULATIVELY CONTRIBUTE TO THE NONATTAINMENT DESIGNATIONS OF THE SOUTH COAST AIR BASIN. [THRESHOLDS AQ-2 AND AQ-3]**

Impact Analysis: Construction activities produce combustion emissions from various sources, such as onsite heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor

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vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM₁₀ and PM_{2.5}) from demolition and soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities onsite would vary daily as construction activity levels change.

Construction air pollutant emissions are based on the preliminary phasing schedule and construction equipment list developed for the project. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment and phasing for comparable projects. Construction of the project would commence in 2013 and would involve the demolition of the existing surface parking lot and subsequent construction of the Crown City Medical Center. Demolition would take place over an approximately two-week period. Site improvements, including grading would take approximately 3.5 months. Site preparation activities would involve up to 80,000 cubic yards of soil export associated with the five-story subterranean parking structure, resulting in up to 227 truck trips per day. Building construction would occur over an approximately 11-month period. Architectural coatings would be applied as the building is completed, over an approximately 4-month period. An estimate of maximum daily construction emissions is provided in Table 5.1-6. As shown in this table, construction activities associated with the project would not exceed SCAQMD's regional significance thresholds. Therefore, criteria air pollutant emissions generated by construction of the proposed project would not cumulatively contribute to nonattainment designations of the SoCAB.

*Table 5.1-6
Maximum Daily Construction Regional Emissions
(in pounds per day)*

Construction Phase	VOC	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Demolition 2013	2	13	9	<1	1	1
Site Preparation 2013	8	63	51	<1	4	3
Grading 2013	2	11	8	<1	1	1
Building Construction 2013	5	37	31	<1	4	2
Architectural Coatings 2013	39	3	4	0	1	<1
Building Construction 2014	5	34	29	<1	4	2
Architectural Coatings 2014	39	3	4	0	1	<1
Maximum Daily Emissions	44	63	51	<1	4	3
SCAQMD Regional Significance Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No

Source: CalEEMod, Version 2011.1.1. Totals may not total to 100 percent due to rounding.

Notes: Construction phasing and equipment is based on the preliminary information provided by the applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment and phasing for comparable projects.

Modeling corrected for an error in CalEEMod that calculates PM₁₀ fugitive dust from hauling over the entire haul duration to occur on one day.

Assumes overlap of building construction and architectural coatings. Also assumes the parking structure is primarily unpainted concrete or constructed of precoated materials. (see Appendix C).

PM₁₀ and PM_{2.5} fugitive dust emissions assume application of Rule 403, which includes watering exposed surfaces at least two times daily, managing haul road dust by watering two times daily, street sweeping, and restricting speeds onsite to 15 miles per hour.



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IMPACT 5.1-2: BUILDOUT OF THE CROWN CITY MEDICAL CENTER WOULD NOT GENERATE A SUBSTANTIAL INCREASE IN CRITERIA AIR POLLUTANT EMISSIONS THAT EXCEED SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT'S REGIONAL SIGNIFICANCE THRESHOLDS OR SIGNIFICANTLY CONTRIBUTE TO THE NONATTAINMENT DESIGNATIONS OF THE SOUTH COAST AIR BASIN. [THRESHOLDS AQ-2 AND AQ-3]

Impact Analysis: Buildout of the Crown City Medical Center would result in direct and indirect criteria air pollutant emissions from transportation, energy (e.g., natural gas use), and area sources (e.g., gas fireplaces, aerosols, and landscaping equipment). Transportation sources of criteria air pollutant emission are based on the traffic impact analysis conducted by Iteris. Criteria air pollutant emissions were modeled using CalEEMod. Operation of the proposed project is forecast to occur by 2015. The proposed project would generate a total of 4,118 average daily vehicle trips. The results of the criteria air pollutant modeling for the proposed project is included in Table 5.1-7. As shown in this table, the project would generate an increase in criteria air pollutant emissions, but emissions would not exceed the SCAQMD's regional significance thresholds. Therefore, criteria air pollutant emissions generated by the proposed project would not cumulatively contribute to nonattainment designations of the SoCAB.

Table 5.1-7
Maximum Daily Operational Phase Regional Emissions
(in pounds per day)

Phase	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	8	0	0	0	0	0
Energy	<1	<1	<1	0	<1	<1
Transportation	17	40	152	<1	29	3
Total	25	40	152	<1	29	3
SCAQMD Regional Threshold	55	55	550	150	150	55
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2011.1.1. Based on highest winter or summer emissions. Totals may not add to 100 percent due to rounding.

IMPACT 5.1-3: CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE CROWN CITY MEDICAL CENTER WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. [THRESHOLD AQ-4]

Impact Analysis: The proposed project could expose sensitive receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevated levels. Unlike the mass of construction emissions shown in the regional emissions analysis in Table 5.1-7, described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or µg/m³) and can be correlated to potential health effects.

Toxic Air Contaminants

The greatest potential for toxic air contaminant (TAC) emissions would be related to diesel particulate emissions associated with heavy equipment operations during grading and excavation activities. In addition, incidental amounts of toxic substances such as oils, solvents, and paints would be used. These substances would comply with all applicable SCAQMD rules for their manufacture and use. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk." Individual cancer risk is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment

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methodology. Given the relatively short-term construction schedule for activities (15 months compared to 70 years) and distance to the nearest sensitive land uses, the proposed project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions. Therefore, project-related diesel particulate matter impacts during construction would not be significant.

Localized Construction Analysis

LSTs are the amount of project-related emissions at which localized concentrations (ppm or $\mu\text{g}/\text{m}^3$) would exceed the ambient air quality standards for criteria air pollutants for which the SoCAB is designated nonattainment. LSTs are based on the size of the project site and distance to the nearest sensitive receptor. Thresholds are based on the California AAQS, which are the most stringent AAQS, established to provide a margin of safety in the protection of the public health and welfare. They are designed to protect sensitive receptors most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Onsite construction emissions generated are shown in Table 5.1-8. The table shows that maximum daily construction emissions would not exceed the LSTs. Construction equipment exhaust combined with fugitive particulate matter emissions would not expose sensitive receptors to substantial concentrations of $\text{PM}_{2.5}$.

*Table 5.1-8
Maximum Daily Onsite Construction Localized Emissions*

Source	Pollutants			
	NO_x	CO	PM_{10}	$\text{PM}_{2.5}$
Demolition	11	8	1	1
Site Preparation	26	17	2	1
Grading	11	8	1	1
Building Construction	27	16	1	1
Architectural Coatings	3	2	<1	<1
Maximum Daily Emissions	30	18	2	2
SCAQMD LST Threshold	108	788	14	5
Significant?	No	No	No	No

Source: CalEEMod Version 2011.1.1., SCAQMD 2003, and SCAQMD 2006.

Notes: Based on receptors in SRA 8. Totals may not add up to 100 percent due to rounding.

Construction LSTs are based on 1.5 acres disturbed per day with sensitive land uses at 140 feet (43 meters) for PM_{10} and $\text{PM}_{2.5}$ and non-sensitive land uses within 82 feet (25 meters) for CO and NO_2 .

Construction phasing and equipment is based on the preliminary information provided by the applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment and phasing for comparable projects.

Modeling corrected for an error in CalEEMod that calculates PM_{10} fugitive dust from hauling over the entire haul duration to occur on one day.

Assumes overlap of building construction and architectural coatings. Also assumes the parking structure is primarily unpainted concrete or constructed of pre-coated materials. (see Appendix C).

PM_{10} and $\text{PM}_{2.5}$ fugitive dust emissions assume application of Rule 403, which includes watering exposed surfaces at least two times daily, managing haul road dust by watering two times daily, street sweeping, and restricting speeds onsite to 15 miles per hour.



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IMPACT 5.1-4: OPERATION OF THE PROPOSED CROWN CITY MEDICAL CENTER WOULD NOT EXPOSE OFFSITE SENSITIVE RECEPTORS TO SUBSTANTIAL CONCENTRATIONS OF AIR POLLUTANTS. [THRESHOLD AQ-4]

Impact Analysis: As shown in previous Table 5.1-7, operation of the Crown City Medical Center would not generate substantial quantities of emissions from onsite, stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions that would require a permit from SCAQMD include industrial land uses, such as chemical processing, and warehousing operations where substantial truck idling could occur onsite. Operation of the medical office/retail building would include occasional use of landscaping equipment and natural gas consumption for heating. Air pollutant emissions generated from these activities are nominal, and no significant impact would occur.

CO Hotspot Analysis

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. At the time of the 1993 Handbook, the SoCAB was designated nonattainment under the California AAQS and National AAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined. In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hot spot analysis conducted for the attainment by SCAQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation of CO standards.⁴ As identified in SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2011). The proposed project would not produce the volume of traffic required to generate a CO hotspot. Therefore, CO hotspots are not an environmental impact of concern for the proposed project. Localized air quality impacts related to mobile-source emissions would therefore be less than significant.

5.1.4 Cumulative Impacts

In accordance with SCAQMD's methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Cumulative projects within the local area include new development and general growth within the project area. The greatest source of emissions within the SoCAB is mobile sources. Due to the extent of the area potentially impacted from cumulative project emissions (i.e., the SoCAB), SCAQMD considers a project cumulatively significant when project-related emissions exceed the SCAQMD regional emissions thresholds shown in Table 5.1-4. No significant cumulative impacts were identified with regard to CO hotspots.

Construction

The SoCAB is designated nonattainment for O₃, PM_{2.5}, PM₁₀, and lead (Los Angeles County only) under the California and National AAQS and nonattainment for NO₂ under the California AAQS. Construction of

⁴ The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

cumulative projects will further degrade the regional and local air quality. Air quality will be temporarily impacted during construction activities. It is assumed that implementation of mitigation measures for related projects would reduce the incremental effect of each project to below a level of significance, and therefore there would not be significant and unavoidable cumulative impacts. Project-related construction emissions would not exceed the SCAQMD significance thresholds. Consequently, the project's incremental contribution to cumulative air quality impacts would not be cumulatively considerable.

Operation

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values is not considered by SCAQMD to be a substantial source of air pollution and does not add significantly to a cumulative impact. Operation of the project would not result in emissions in excess of the SCAQMD regional emissions thresholds. Therefore, the project's air pollutant emissions would not be cumulatively considerable and are less than significant.

5.1.5 Existing Regulations and Standard Conditions

The following measures are existing plans, programs, or policies that apply to the proposed project and will help to reduce and avoid their respective potential impacts related to air quality:

- CARB Rule 2485 – Airborne Toxics Control Measure (ATCM)
- SCAQMD Rule 201 – Permit to Construct
- SCAQMD Rule 402 – Nuisance Odors
- SCAQMD Rule 403 – Fugitive Dust
- SCAQMD Rule 1108 – Cutback Asphalt
- SCAQMD Rule 1113 – Architectural Coatings
- SCAQMD Rule 1186 – Street Sweeping
- SCAQMD Rule 1301 – New Source Review
- SCAQMD Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
- CARB Rule 2480 (13 CCR 2480) - Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools: limits nonessential idling for commercial trucks and school buses within 100 feet of a school.
- CARB Rule 2485(13 CCR 2485) – Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling: limits nonessential idling to five minutes or less for commercial trucks.
- CARB Rule 2449(13 CCR 2449) – In-Use Off-Road Diesel Idling Restricts: limits nonessential idling to five minutes or less for diesel-powered off-road equipment.
- Building Energy Efficiency Standards (Title 24)
- Appliance Energy Efficiency Standards (Title 20)
- Motor Vehicle Standards (AB 1493)



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5.1.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, the following impacts would be less than significant: 5.1-1, 5.1-2, 5.1-3, 5.1-4, and cumulative impacts.

5.1.7 Mitigation Measures

No potentially significant impacts have been identified, and no mitigation measures are required.

5.1.8 Level of Significance After Mitigation

No mitigation measures or significant impact have been identified. Impacts relating to air quality are less than significant.