4.0 ENVIRONMENTAL IMPACT ANALYSIS
B. AIR QUALITY

1. INTRODUCTION

This section addresses potential effects on air quality associated with air emissions generated by the construction and operation of the proposed uses pursuant to the Harbor-UCLA Medical Campus Master Plan. The analysis also addresses the consistency of the Project with the air quality policies set forth within the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan and the County of Los Angeles General Plan. The analysis of Project-generated air emissions focuses on whether the Project would cause exceedance of an ambient air quality standard or SCAQMD significance threshold. Calculation worksheets, assumptions, and model outputs used in the analysis are contained in Appendix B of this Draft EIR.

2. ENVIRONMENTAL SETTING

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified as criteria air pollutants and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following criteria pollutants are regulated by the U.S. Environmental Protection Agency (USEPA) and are subject to emissions control requirements adopted by federal, state and local regulatory agencies.

Ozone (O_3): Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds and nitrogen oxides (NO_X) under favorable meteorological conditions such as high temperature and stagnation episodes. An elevated level of ozone irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower the lung efficiency.

Volatile Organic Compounds (VOCs): These are compounds comprised primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons, as are architectural coatings. Emissions of VOCs themselves are not "criteria" pollutants; however, they contribute to formation of O_3 and are regulated as O_3 precursor emissions.

Nitrogen Dioxide (NO_2): Nitrogen dioxide is a reddish-brown, reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO). The principle form of NO_2 produced by combustion is NO, but NO reacts quickly to form NO_2, creating the mixture of NO and NO_2 referred to as nitrogen oxides (NO_X). Major sources of NO_X include power plants, large industrial facilities, and motor vehicles. Emissions of NO_X can potentially irritate the nose and throat and may increase susceptibility to respiratory infections, especially in people with asthma. According to the California Air Resources Control Board (CARB), "NO_2 is an oxidizing gas capable of damaging cells lining the respiratory tract. Exposure to NO_2 along with other traffic-related pollutants, is associated with respiratory symptoms, episodes of respiratory illness and impaired lung

functioning. Studies in animals have reported biochemical, structural, and cellular changes in the lung when exposed to NO_2 above the level of the current state air quality standard. Clinical studies of human subjects suggest that NO_2 exposure to levels near the current standard may worsen the effect of allergens in allergic asthmatics, especially in children."[1]

Carbon Monoxide (CO): Carbon monoxide is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Sulfur Dioxide (SO_2): Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. Sulfur dioxide potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Particulate Matter (PM_{10} and $PM_{2.5}$): The human body naturally prevents the entry of larger particles into the body. However, small particles including fugitive dust, with an aerodynamic diameter equal to or less than ten microns (PM_{10}) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Lead (Pb): Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

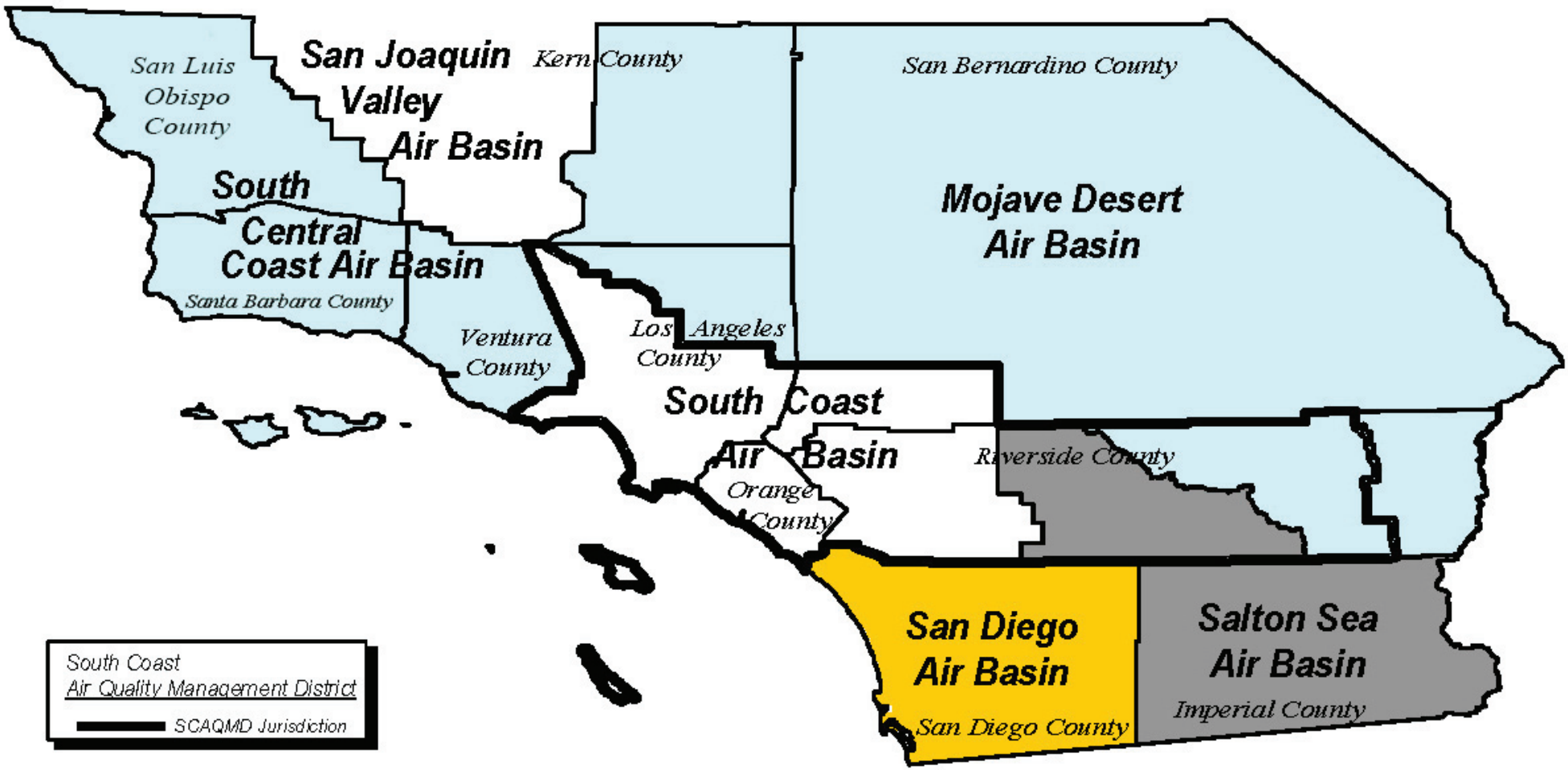
a. Existing Conditions

(1) Regional Conditions

(a) Criteria Pollutants

The Project Site is located within the South Coast Air Basin (Air Basin), which is shown in **Figure 4.B-1**, *Boundaries of the South Coast Air Quality Management District and Federal Planning Areas*. The Air Basin is

[1] *California Air Resources Board, "Nitrogen Dioxide – Overview," July 21, 2011, http://www.arb.ca.gov/research/aaqs/caaqs/no2-1/no2-1.htm. Accessed March 2015.*



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Boundaries of the South Coast Air Quality Management District and Federal Planning Areas

Harbor-UCLA Medical Center Master Plan

Source: South Coast Air Quality Management District, 2014.

FIGURE

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an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Air Basin consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside counties, in addition to the San Gorgonio Pass area in Riverside County. The terrain and geographical location determine the distinctive climate of the Air Basin, as it is a coastal plain with connecting broad valleys and low hills.

The Air Basin lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean. The usually mild climatological pattern is interrupted by periods of hot weather, winter storms, or Santa Ana winds. The extent and severity of criteria pollutant concentrations in the Air Basin is a function of the area's natural physical characteristics (weather and topography) and man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential. The Air Basin's meteorological conditions, in combination with regional topography, are particularly conducive to the formation and retention of O_3, which is a secondary pollutant that forms through photochemical reactions in the atmosphere. Thus, the greatest air pollution impacts throughout the Air Basin typically occur from June through September. This condition is generally attributed to the emissions occurring in the Air Basin, light winds, and shallow vertical atmospheric mixing. These factors reduce the potential for pollutant dispersion causing elevated air pollutant levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. Concentrations of O_3, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert.

(b) Air Toxics

In addition to criteria pollutants, the SCAQMD periodically assesses levels of toxic air contaminants (TACs) in the Air Basin. A TAC is defined by California Health and Safety Code Section 39655:

> *"Toxic air contaminant" means 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 pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant.*

During July 2012 and June 2013, the SCAQMD conducted the Multiple Air Toxics Exposure Study (MATES IV), which is a follow-up to previous air toxics studies conducted in the Air Basin. The MATES IV Final Report was issued in October 2014. The study, based on actual monitored data throughout the Air Basin, consisted of several elements a monitoring program, an updated emissions inventory of TACs, and a modeling effort to characterize carcinogenic risk across the Air Basin from exposure to TACs. The study applied a two-kilometer (1.24-mile) grid over the Air Basin and reported carcinogenic risk within each grid space (covering an area of four square kilometers or 1.54 square miles). The study concluded that the average of the modeled air toxics concentrations measured at each of the monitoring stations in the Air Basin equates to a background cancer risk of approximately 418 in 1,000,000 primarily due to diesel exhaust, which is about 65 percent lower than the previous MATES III cancer risk.[2] The California Environmental Protection Agency

[2] *South Coast Air Quality Management District, Draft Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2014) ES-2.*

Office of Environmental Health Hazard Assessment (OEHHA) is in the process of updating the methods for estimating cancer risks.[3] The proposed new method utilized higher estimates of cancer potency during early life exposures and uses different assumptions for breathing rates and length of residential exposures. When combined together, SCAQMD staff estimates that risks for the same inhalation exposure level will be about 2.7 times higher using the proposed updated methods.[4] This would be reflected in the average lifetime air toxics cancer risk estimated from the monitoring sites data going from 418 per million to 1,128 per million. The updated OEHHA methodology has not yet been formally adopted for use in risk assessments; therefore, discussion of risk utilizes the approved methodology from the 2003 OEHHA guidance.[5] However, even under the updated methodology, the relative reduction in risk from the MATES IV results compared to MATES III would be the same (about 65 percent).

Approximately 68 percent of the risk is attributed to diesel particulate emissions, approximately 22 percent to other toxics associated with mobile sources (including benzene, butadiene, and formaldehyde), and approximately 10 percent of all airborne carcinogenic risk is attributed to stationary sources (which include industries and other certain businesses, such as dry cleaners and chrome plating operations).[6] The study also found lower ambient concentrations of most of the measured air toxics compared to the levels measured in the previous study conducted during 2004 and 2006. Specifically, benzene and 1,3-butadiene, pollutants generated mainly from vehicles, were down 35 percent and 11 percent, respectively.[7] The reductions were attributed to air quality control regulations and improved emission control technologies. In addition to air toxics, MATES IV included continuous measurements of black carbon and ultrafine particles (particles smaller than 0.1 microns in size), which are emitted by combustion of diesel fuels. Sampling sites located near heavily-trafficked freeways or near industrial areas were characterized by increased levels of black carbon and ultrafine particles compared to more rural sites.

As part of MATES IV, the SCAQMD prepared maps that show regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps represent the estimated number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years). The Project site spans across portions of two MATES IV grid spaces. The grids, in which the Project site is located, are shown in **Figure 4.B-2**, *Background Inhalation Cancer Risk for Project Site Area*. As shown, the potential cancers per million people for the two grids are estimated at 1,033 to 1,210 per million (the majority of the Project site is in the grid with a risk of

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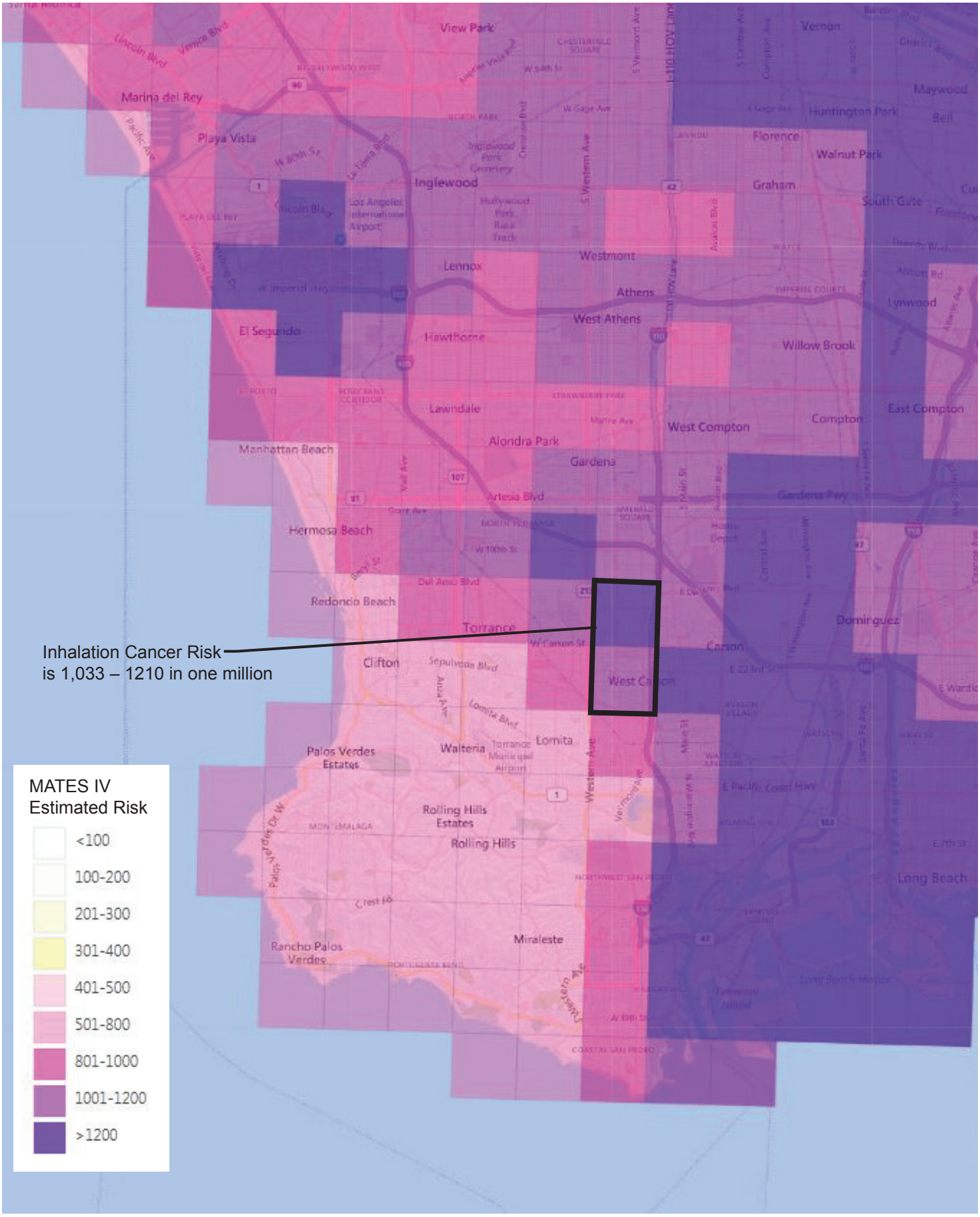
[3] *California Environmental Protection Agency, Office of Health Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines – The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, June Review Draft, (June 2014).*

[4] *South Coast Air Quality Management District, Agenda No. 8b, Potential Impacts of New OEHHA Risk Guidelines on SCAQMD Programs, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2014/may-specsess-8b.pdf?sfvrsn=4. Accessed March 2015.*

[5] *California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines, The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, (2003).*

[6] *South Coast Air Quality Management District, Draft Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2014) ES-2.*

[7] *South Coast Air Quality Management District, Draft Report – Multiple Air Toxics Exposure Study in the South Coast Air Basin, (2014) 6-1.*



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Background Inhalation Cancer Risk for Project Site Area

Harbor-UCLA Medical Center Master Plan
Source: South Coast Air Quality Management District, 2016.

FIGURE
4.B-2

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1,033 per million).[8] This is in the general range of the Basin average of 1,128 in a million. Generally, the risk from air toxics is lower near the coastline: it increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

(2) Local Conditions

(a) Existing Pollutants Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The monitoring station most representative of the Project site is the Southwest Los Angeles County Coastal Monitoring Station. Criteria pollutants monitored at this station include O_3, NO_2, CO, and PM_{10}. The next most representative station is the South Los Angeles County Coastal Monitoring Station. Criteria pollutants monitored at this station include SO_2 and $PM_{2.5}$. The most recent data available from the SCAQMD for these monitoring stations are from years 2010 to 2014.[9] The pollutant concentration data for these years are summarized in **Table 4.B-1**, *Ambient Air Quality Data*.

Table 4.B-1

Ambient Air Quality Data

Pollutant/Standard	2010	2011	2012	2013	2014
O_3 (1-hour)					
Maximum Concentration (ppm)	0.089	0.078	0.106	0.105	0.114
Days > CAAQS (0.09 ppm)	0	0	1	1	1
O_3 (8-hour)					
Maximum Concentration (ppm)	0.070	0.067	0.075	0.081	0.080
4th High 8-hour Concentration (ppm)	0.059	0.062	0.059	0.060	0.075
Days > CAAQS (0.070 ppm)	1	0	1	1	6
Days > NAAQS (0.075 ppm)	0	0	0	0	3
NO_2 (1-hour)					
Maximum Concentration (ppm)	0.076	0.098	0.062	0.078	0.087
98th Percentile Concentration (ppm)	0.061	0.065	0.055	0.058	0.066
Days > CAAQS (0.18 ppm)	0	0	0	0	0
NO_2 (Annual)					
Annual Arithmetic Mean (0.030 ppm)	0.012	0.013	0.010	0.012	0.012

[8] *South Coast Air Quality Management District, Multiple Air Toxics Exposure Study, MATES IV Carcinogenic Risk Interactive Map, http://www.aqmd.gov/home/library/air-quality-data-studies/health-studies/mates-iv. Accessed March 2015.*

[9] *South Coast Air Quality Management District, Historical Data by Year, http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. Accessed February 2016.*

Table 4.B-1 (Continued)

Ambient Air Quality Data

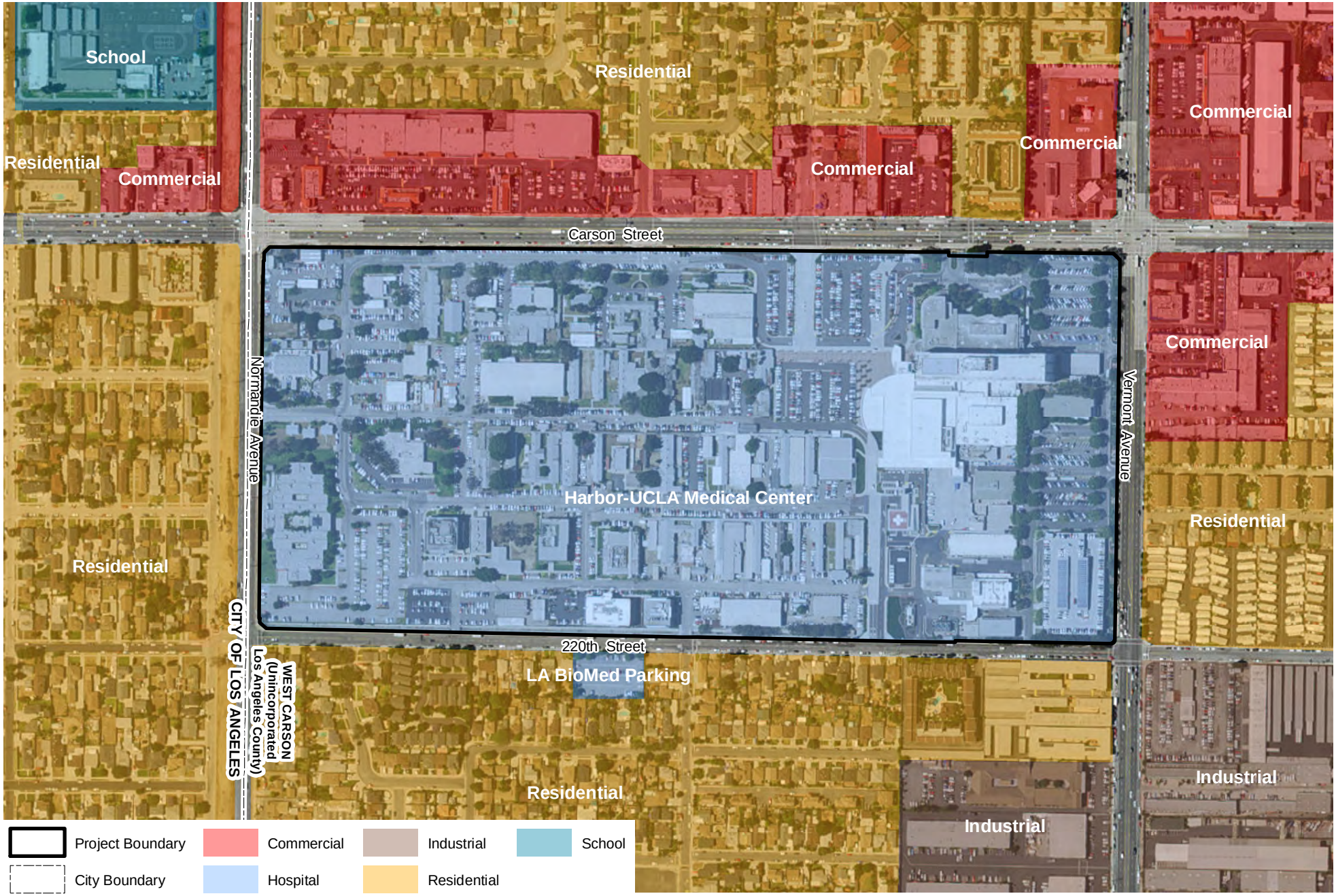
Pollutant/Standard	2010	2011	2012	2013	2014
CO (1-hour)					
Maximum Concentration (ppm)	3	2.3	2.8	3.1	3
Days > CAAQS (20 ppm)	0	0	0	0	0
Days > NAAQS (35 ppm)	0	0	0	0	0
CO (8-hour)					
Maximum Concentration (ppm)	2.2	1.8	2.5	2.5	1.9
Days > CAAQS (9 ppm)	0	0	0	0	0
Days > NAAQS (9 ppm)	0	0	0	0	0
SO_2 (1-hour)					
Maximum Concentration (ppm)	0.026	0.012	0.005	0.010	0.015
99th Percentile Concentration (ppm)	–	0.008	0.005	0.007	0.009
Days > CAAQS (0.25 ppm)	0	0	0	0	0
Days > NAAQS (0.075 ppm)	–	0	0	0	0
PM_{10} (24-hour)					
Maximum Concentration (µg/m³)	37	41	31	38	46
Samples > CAAQS (50 µg/m³)	0	0	0	0	0
Samples > NAAQS (150 µg/m³)	0	0	0	0	0
PM_{10} (Annual Average)					
Annual Arithmetic Mean (20 µg/m³)	20.6	21.7	19.8	20.8	22
$PM_{2.5}$ (24-hour)					
Maximum Concentration (µg/m³)	33.7	42	46.7	42.9	52.2
98th Percentile Concentration (µg/m³)	26.5	26.6	25.1	24.6	27.2
Samples > NAAQS (35 µg/m³)	0	3	4	1	2
$PM_{2.5}$ (Annual)					
Annual Arithmetic Mean (12 µg/m³)	10.4	10.7	10.57	10.97	10.72
Lead					
Maximum 30-day average (µg/m³)	0.01	0.008	0.005	0.005	0.012
Samples > CAAQS (1.5 µg/m³)	0	0	0	0	0

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

Sources: South Coast Air Quality Management District, Historical Data by Year, http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. Accessed February 2016.

(b) Sensitive Receptors and Locations

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential effects of air pollution than others. Sensitive land uses in close proximity to the Project site are shown in **Figure 4.B-3**, *Sensitive Receptor Locations Nearest to the Project Site*, and include the following:



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Sensitive Receptor Locations Nearest to the Project Site

Harbor-UCLA Medical Center Master Plan
Source: Microsoft, 2010 (Aerial); PCR Services Corporation, 2016.

FIGURE
4.B-3

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- The Harbor-UCLA Medical Center Employee Children's Center (Child Care Center) and a multifamily residential apartment complex, Harbor Cove Villa, are located on Carson Street just west of the intersection with Vermont Avenue.

- The area north of Carson Street is a predominantly single-family residential neighborhood.

- Vermont Avenue, the southern half of the block facing the Medical Center Campus, at 219th Street, is developed with a condominium complex, Torrance Park Villas, and mobile home parks, Starlite Trailer Park and Rainbow Mobile Home Park.

- Single-Family and multi-family residential neighborhoods border the Medical Center Campus to the south, across 220th Street, as well as to the west, across Normandie Avenue within the Harbor City community of Los Angeles.

- Halldale Avenue Elementary School is located to the northwest of the Medical Center Campus west of Normandie Avenue and north of 216th Street.

- White Middle School is located to the southeast of the Medical Center Campus east of Interstate 110 and Figueroa Street and south of 220th Street.

(c) Existing Site Emissions

The Project site is currently developed with approximately 1,279,284 square feet of differentiated buildings including the Existing Hospital Tower and the recent hospital expansion in the east sector of the site; LA Biomed facilities in the central portion of the site; administration and facilities management buildings in various locations of the site; and large tenants, such as the Children's Institute International and MFI's Harbor-UCLA Professional Building (outpatient care) and Imaging Center, in the west sector of the site. The existing site generates mobile source emissions from vehicle trips to and from the site and from the operation of medical helicopters. The existing site generates on-site stationary source emissions from the combustion of natural gas from the existing Central Plant for building cooling and heating. The Central Plant consists of a Boiler Plant and Chiller Plant. The site also maintains six two-megawatt (MW) emergency generators that would result in stationary source emissions from the combustion of fuel oil when required to operate. Other existing emissions include on-site combustion and evaporative area source emissions from fossil-fueled landscaping equipment and evaporative losses associated with cleaning and maintenance activities (consumer product usage, solvents, adhesives, coatings, etc.). The Project would not result in changes in emissions associated with the operation of the Central Plant or emergency generators. In addition, the operation of medical helicopters under existing conditions is expected to be similar under the Project on a daily basis. In order to compare the change in emissions from the existing site to Project implementation, this analysis estimates emissions from existing uses that would be demolished, replaced, or renovated under the Project. Mobile source emissions from visitors and employees traveling to and from the site are also included in the emissions estimate.

The existing operational emissions were estimated using the California Emissions Estimator Model (CalEEMod) (Version 2013.2.2) software, an emissions inventory model recommended by the SCAQMD for land use development projects. CalEEMod was used to forecast the daily regional emissions from mobile and area sources. In calculating mobile source emissions, an operational year of 2015 was used and the trip length values were based on the distances provided in CalEEMod. The trip distances were applied to the maximum daily trip estimates, based on standard Institute of Transportation Engineers (ITE) trip generation

rates, for each existing land use provided by the Project traffic study[10] to estimate the total vehicle miles traveled (VMT). Area source emissions from landscaping equipment and evaporative losses associated with cleaning and maintenance activities are based on usage rates and emission factors specific to the Air Basin as provided in CalEEMod. Helicopter emissions from take-offs and landings are generated by the existing Emergency Department helistop. The helistop would remain operational after the Project build-out and be temporarily relocated during construction of Phases 3 through 6. Patient air transport is not predicted to increase due to the similar capacity of the Project compared to existing. The maximum daily air lifts would continue to be one helicopter take-off and landing, thus helicopter emissions were not evaluated due to there being no net change in helistop usage.

The estimated existing site emissions from uses and elements that would be demolished, replaced, or renovated under the Project are summarized in **Table 4.B-2**, *Existing Site Emissions*. Detailed emissions calculations are provided in Appendix B of this Draft EIR.

Table 4.B-2

Existing Site Emissions (pounds per day) [a]

Source	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Area (Coating, Consumer Products, Landscaping)	23	<1	0.1	<1	<1	<1
Energy (Natural Gas)	1	8	6	<1	1	1
Motor Vehicles	77	211	834	2	127	36
Total Existing Emissions	**102**	**219**	**841**	**2**	**128**	**37**

[a] *Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix B.*

Source: PCR Services Corporation, 2016

b. Regulatory Framework

A number of statutes, regulations, plans, and policies have been adopted that address air quality issues. The Project is subject to air quality regulations developed and implemented at the federal, state, and local levels. This section provides a summary of pertinent air quality regulations affecting the Project at the federal, state, and local levels.

(1) Federal

The federal Clean Air Act of 1963 was the first federal legislation regarding air pollution control and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. At the federal level, the USEPA is responsible for implementation of certain portions of the Clean Air Act including mobile source requirements. Other portions of the Clean Air Act, such as stationary source requirements, are implemented by state and local agencies.

[10] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, (2016).*

The Clean Air Act establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS) and specifies future dates for achieving compliance. The Clean Air Act also mandates that the state submit and implement a State Implementation Plan for areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. The 1990 amendments to the Clean Air Act identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the Clean Air Act which are most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions). Title I requirements are implemented for the purpose of attaining NAAQS for the following criteria pollutants: (1) O_3; (2) NO_2; (3) CO; (4) SO_2; (5) PM_{10}; and (6) lead. The NAAQS were amended in July 1997 to include an 8-hour standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. The NAAQS were last amended in September 2006 to include an established methodology for calculating $PM_{2.5}$ as well as revoking the annual PM_{10} threshold. **Table 4.B-3**, *Ambient Air Quality Standards*, shows the NAAQS currently in effect for each criteria pollutant.

Table 4.B-3

Ambient Air Quality Standards

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
O_3 [h]	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m³)		0.070 ppm (137 µg/m³)		
NO_2 [i]	1 Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemi-luminescence	100 ppb (188 µg/m³)	None	Gas Phase Chemi-luminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)		53 ppb (100 µg/m³)	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m³)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m³)		9 ppm (10 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		—	—	
SO_2 [j]	1 Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)[9]
	3 Hour	—		—	0.5 ppm (1300 µg/m³)	
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas)[j]	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) [j]	—	
PM_{10} [k]	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		—		

Table 4.B-3 (Continued)

Ambient Air Quality Standards

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]
$PM_{2.5}$ [k]	24 Hour	No Separate State Standard		35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12.0 µg/m³ [k]	15 µg/m³	
Lead [l,m]	30 Day Average	1.5 µg/m³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m³ (for certain areas)[m]	Same as Primary Standard	
	Rolling 3-Month Average [m]	--		0.15 µg/m³		
Visibility Reducing Particles [n]	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 (SO_4)	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride [l]	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

[a] *California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.*

[b] *National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (µg/m³) is equal to or less than one. For $PM_{2.5}$, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.*

[c] *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.*

[d] *Any equivalent procedure which can be shown to the satisfaction of the California Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.*

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

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

[g] *Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.*

[h] *On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.*

Table 4.B-3 (Continued)

Ambient Air Quality Standards

Pollutant	Average Time	California Standards [a]		National Standards [b]		
		Concentration [c]	Method [d]	Primary [c,e]	Secondary [c,f]	Method [g]

[i] *To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.*

[j] *On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 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 non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.*

[k] *On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3.*

[l] *The California Air Resources Board 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.*

[m] *The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.*

[n] *In 1989, the California Air Resources Board converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.*

Source: California Air Resources Board, Ambient Air Quality Standards (10/1/15), http://www.arb.ca.gov/research/aaqs/aaqs2.pdf. Accessed January 2016.

The Project is located within the South Coast Air Basin, which is an area designated as non-attainment because it does not currently meet NAAQS for certain pollutants regulated under the Clean Air Act according to the February 2016 designations[11]. The Clean Air Act sets certain deadlines for meeting the NAAQS within the Air Basin including the following: (1) 1-hour O_3 by the year 2010 (however, this deadline was not attained, the new deadline is 2023); (2) 8-hour O_3 by the year 2024;[12] (3) PM_{10} by the year 2006[13]; and (4) $PM_{2.5}$ by the year 2019[14]. Nonattainment designations are categorized into seven levels of severity: (1) basic, (2) marginal, (3) moderate, (4) serious, (5) severe-15, (6) severe-17, and (7) extreme.[15] On June 11, 2007, the USEPA reclassified the Air Basin as a federal "attainment" area for CO and approved the CO maintenance

[11] *South Coast Air Quality Management District, National Ambient Air Quality Standards and California Ambient Air Quality Standards Attainment Status for South Coast Air Basin, February 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2. Accessed February 2016.*

[12] *The 8-hour ozone attainment deadline for the 1997 standard of 80 parts per billion is 2024. The 8-hour ozone attainment deadline for the 2008 standard of 75 parts per billion is 2032 and the 8-hour ozone attainment deadline for the 2015 standard of 70 parts per billion is 2037.*

[13] *Annual PM_{10} standard was revoked, effective December 18, 2006; 24-hour PM_{10} NAAQS deadline was December 31, 2006; SCAQMD request for attainment redesignation and PM_{10} maintenance plan was approved by U.S. EPA on June 26, 2013, effective July 26, 2013.*

[14] *Attainment deadline for the 2006 24-hour $PM_{2.5}$ NAAQS (designation effective December 14, 2009) is December 31, 2019 (end of the 10th calendar year after effective date of designations for Serious nonattainment areas). Annual $PM_{2.5}$ standard was revised on January 15, 2013, effective March 18, 2013, from 15 to 12 µg/m^3. Designations effective April 15, 2015, so Serious area attainment deadline is December 31, 2025.*

[15] *The "-15" and "-17" designations reflect the number of years within which attainment must be achieved.*

plan for the Air Basin.[16] The Air Basin previously exceeded the NAAQS for PM_{10}, but has met the NAAQS at all monitoring stations and the USEPA approved the request for re-designation to attainment effective July 26, 2013.[17] The Air Basin does not meet the NAAQS for O_3 and $PM_{2.5}$ and is classified as being in non-attainment for these pollutants. The Los Angeles County portion of the Air Basin is designated as non-attainment for lead under the NAAQS; however, this is due to localized emissions from one source-specific lead monitoring station in Vernon.[18] However, this lead battery recycling facility has agreed to shut down as of March 2015.[19] The attainment status of the Los Angeles County portion of the Air Basin with respect to the NAAQS is summarized in **Table 4.B-4**, *South Coast Air Basin Attainment Status (Los Angeles County)*.

Table 4.B-4

South Coast Air Basin Attainment Status (Los Angeles County)

Pollutant	National Standards	California Standards
O_3 (1-hour standard)	Non-attainment - Extreme [a]	Non-attainment
O_3 (8-hour standard)	Non-attainment – Extreme	Non-attainment
CO	Attainment (Maintenance)	Attainment
NO_2	Attainment (Maintenance)	Attainment
SO_2	Unclassifiable/Attainment	Attainment
PM_{10}	Attainment (Maintenance)	Non-attainment
$PM_{2.5}$	Non-attainment (Serious)	Non-attainment
Lead	Non-attainment (Partial)	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Attainment
Vinyl Chloride	N/A	Attainment

N/A = not applicable

[a] *The NAAQS for 1-hour ozone was revoked on June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data and is still subject to anti-backsliding requirements.*

[b]

Source: South Coast Air Quality Management District, National Ambient Air Quality Standards and California Ambient Air Quality Standards Attainment Status for South Coast Air Basin, February 2016. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2. Accessed February 2016. United States Environmental Protection Agency, The Green Book Non-attainment Areas for Criteria Pollutants, http://www.epa.gov/oaqps001/greenbk/index.html. Accessed February 2016; California Air Resources Board, Area Designations Maps/State and National, http://www.arb.ca.gov/desig/adm/adm.htm. Accessed February 2016.

Title II of the federal Clean Air Act pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a

[16] *"Approval and Promulgation of Implementation Plans and Designation of Areas for Air Quality Planning Purposes: California, Final Rule." Federal Register 72 (11 May 2007):26718-26721*

[17] *Federal Register, Vol. 78, No. 123, June 26, 2013, 38223-38226.*

[18] *South Coast Air Quality Management District, Board Meeting, Agenda No. 30, Adopt the 2012 Lead State Implementation Plan for Los Angeles County, May 4, 2012.*

[19] *Los Angeles Times, Regulators detail Exide battery plant closure after decades of pollution, http://www.latimes.com/local/lanow/la-me-ln-exide-plant-closure-20150312-story.html#page=1 , Accessed August 2015*

few of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have been lowered substantially, and the specification requirements for cleaner burning gasoline are more stringent.

(2) State

(a) California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CAAQS apply to the same criteria pollutants as the federal Clean Air Act but also include State-identified criteria pollutants, which include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. CARB has primary responsibility for ensuring the implementation of the California Clean Air Act,[20] responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state. Table 4.B-3 shows the CAAQS currently in effect for each of the criteria pollutants as well as the other pollutants recognized by the state. As shown in Table 4.B-3, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. Table 4.B-4 provides a summary of the attainment status of the Los Angeles County portion of the Air Basin with respect to the state standards. The Air Basin is designated as attainment for the California standards for sulfates, hydrogen sulfide, and vinyl chloride and unclassified for visibility-reducing particles.

(b) California Air Resources Board Air Quality and Land Use Handbook

CARB published the *Air Quality and Land Use Handbook* in April 2005 to serve as a general guide for considering impacts to sensitive receptors from facilities that emit toxic air contaminant (TAC) emissions.[21] The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); and (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines.

(c) California Air Resources Board On-Road and Off-Road Vehicle Rules

In 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel PM and other TACs. The measure applies to diesel-fueled

[20] *Chapter 1568 of the Statutes of 1988.*

[21] *California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, (2005).*

commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008 CARB approved the Truck and Bus regulation to reduce NO_X, PM_{10}, and $PM_{2.5}$ emissions from existing diesel vehicles operating in California. The requirements were amended in December 2010 and apply to nearly all diesel fueled trucks and busses with a gross vehicle weight rating greater than 14,000 pounds. For the largest trucks in the fleet, those with a gross vehicle weight rating greater than 26,000 pounds, there are two methods to comply with the requirements. The first way is for the fleet owner to retrofit or replace engines, starting with the oldest engine model year, to meet 2010 engine standards, or better. This is phased over 8 years, starting in 2015 and would be fully implemented by 2023, meaning that all trucks operating in the State subject to this option would meet or exceed the 2010 engine emission standards for NO_X and PM by 2023. The second option, if chosen, requires fleet owners, starting in 2012, to retrofit a portion of their fleet with diesel particulate filters achieving at least 85 percent removal efficiency, so that by January 1, 2016 their entire fleet is equipped with diesel particulate filters. However, diesel particulate filters do not typically lower NO_X emissions. Thus, fleet owners choosing the second option must still comply with the 2010 engine emission standards for their trucks and busses by 2020.

In addition to limiting exhaust from idling trucks, CARB recently promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models. Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with the largest fleets to begin compliance by January 1, 2014. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (e.g., engine retrofits) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits be fully implemented by 2023 in all equipment in large and medium fleets and across 100 percent of small fleets by 2028.

(3) Local

(a) South Coast Air Quality Management District

The SCAQMD has jurisdiction over air quality planning for all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The Air Basin is a subregion within SCAQMD jurisdiction. While air quality in the Air Basin has improved, the Air Basin requires continued diligence to meet the air quality standards.

(i) Air Quality Management Plan

The SCAQMD has adopted a series of AQMPs to meet the CAAQS and NAAQS. In December 2012, the SCAQMD adopted the *2012 Air Quality Management Plan*, which incorporates the latest scientific and

technological information and planning assumptions, including growth projections from the Southern California Association of Government's (SCAG) *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy*, and updated emission inventory methodologies for various source categories.[22] The 2012 AQMP is the most recent plan to achieve air quality attainment within the region and builds upon other agencies' plans to achieve federal standards for air quality in the Air Basin. It incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, and on-road and off-road mobile sources. The 2012 AQMP builds upon improvements in previous plans, and includes new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. In addition, it highlights the significant amount of emission reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under the federal Clean Air Act.

The key undertaking of the 2012 AQMP is to bring the Air Basin into attainment with the NAAQS for the 24-hour $PM_{2.5}$ standard by 2014. It also intensifies the scope and pace of continued air quality improvement efforts toward meeting the 2024 8-hour O_3 standard deadline with new measures designed to reduce reliance on the federal Clean Air Act Section 182(e)(5) long-term measures for NO_X and VOC reductions. The SCAQMD expects exposure reductions to be achieved through implementation of new and advanced control technologies as well as improvement of existing technologies.

The control measures in the 2012 AQMP consist of four components: (1) Air Basin-wide and Episodic Short-term $PM_{2.5}$ Measures; (2) Contingency Measures; (3) 8-hour O_3 Implementation Measures; and (4) Transportation and Control Measures provided by the SCAG. The 2012 AQMP includes eight short-term $PM_{2.5}$ control measures, 16 stationary source 8-hour O_3 measures, 10 early action measures for mobile sources and seven early action measures proposed to accelerate near-zero and zero emission technologies for goods movement related sources, and five on-road and five off-road mobile source control measures. In general, the SCAQMD's control strategy for stationary and mobile sources is based on the following approaches: (1) available cleaner technologies; (2) best management practices; (3) incentive programs; (4) development and implementation of zero- near-zero technologies and vehicles and control methods; and (5) emission reductions from mobile sources.

The SCAQMD is currently working on the 2016 AQMP and expects to have a draft available by Spring 2016. The upcoming 2016 AQMP will develop integrated strategies and measures to meet the following NAAQS: 8-hour Ozone (75 ppb) by 2032, Annual PM2.5 (12 µg/m3) by 2021-2025, 8-hour Ozone (80 ppb) by 2024, 1-hour Ozone (120 ppb) by 2023, and 24-hour PM2.5 (35 µg/m3) by 2019. The 2016 AQMP will also take an initial look at the new 2015 federal 8-hour ozone standard (70 ppb), as well as incorporate energy, climate, transportation, goods movement, infrastructure and other planning efforts that affect future air quality.

(ii) SCAQMD Air Quality Guidance Documents

The *CEQA Air Quality Handbook* was published by the SCAQMD in November 1993 to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts. The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses in

[22] *South Coast Air Quality Management District, 2012 Air Quality Management Plan, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan. Accessed March 2015.*

EIRs and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* with the *Air Quality Analysis Guidance Handbook*. While this process is underway, the SCAQMD recommends that lead agencies avoid using the screening tables in Chapter 6 (Determining the Air Quality Significance of a Project) of the *CEQA Air Quality Handbook*, because the tables were derived using an obsolete version of CARB's mobile source emission factor inventory, and the trip generation characteristics of the land uses identified in these screening tables were based on the fifth edition of the Institute of Transportation Engineer's *Trip Generation Manual*, instead of the most current edition. Additionally, the lead agency should avoid using the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L (EMFAC7EP Emission Factors for Passenger Vehicles and Trucks, Emission Factors for Estimating Material Hauling, and Emission Factors for Oxides of Sulfur and Lead).[23]

The SCAQMD has published a guidance document called the *Localized Significance Threshold Methodology* for CEQA Evaluations that is intended to provide guidance in evaluating localized effects from mass emissions during construction.[24] The SCAQMD adopted additional guidance regarding $PM_{2.5}$ in a document called *Final Methodology to Calculate Particulate Matter ($PM_{2.5}$) and $PM_{2.5}$ Significance Thresholds*.[25] This latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and *Localized Significance Threshold Methodology*.

The SCAQMD has also adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TACs.[26] The SCAQMD's distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity of freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). The guidance document introduces land use related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. The SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

(iii) SCAQMD Rules and Regulations

Several SCAQMD rules adopted to implement portions of the AQMP may apply to the proposed Project. For example, SCAQMD Rule 403 requires implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads. The Project may be subject to the following SCAQMD rules and regulations:

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[23] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993), http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). Accessed March 2015.*

[24] *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

[25] *South Coast Air Quality Management District, Final Methodology to Calculate Particulate Matter (PM)2.5 and PM2.5 Significance Thresholds, (2006).*

[26] *South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, (2005).*

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules which may apply to the Project:

- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM_{10} emissions to less than 50 micrograms per cubic meter ($\mu g/m^3$) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for different specific sources. The following is a list of rules which may apply to the Project:

- **Rule 1113 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1146.1 – Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule (greater than 2 million British thermal units [Btu] per hour and less than 5 million Btu per hour).
- **Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_X emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule (less than or equal to 2 million Btu per hour).
- **Rule 1186 – PM_{10} Emissions from Paved and Unpaved Roads, and Livestock Operations:** This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM_{10} emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Regulation XIV – Toxics and Other Non-Criteria Pollutants: Regulation XI sets emissions standards for TACs and other non-criteria pollutant emissions. The following is a list of rules which may apply to the Project:

- **Rule 1402 – Control of Toxic Air Contaminants from Existing Sources:** This rule sets standards for health risk associated with emissions of TACs from existing sources by specifying limits for maximum individual cancer risk (MICR), cancer burden, and non-cancer acute and chronic hazard index (HI) applicable to total facility emissions and by requiring facilities to implement risk reduction plans to achieve specified risk limits, as required by the AB 2588 Air Toxics Hot Spots Program and this rule. The rule also specifies public notification and inventory requirements.
- **Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities:** This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.
- **Rule 1404 – Hexavalent Chromium Emissions from Cooling Towers:** This rule sets limits and restrictions on hexavalent chromium in cooling tower circulating water.
- **Rule 1472 – Requirements for Facilities with Multiple Stationary Emergency Standby Diesel-Fueled Internal Combustion Engines:** This rule regulated diesel particulate matter emissions from facilities with three or more stationary emergency standby diesel-fueled internal combustion engines. Facilities which comply with all applicable requirements of Rule 1402, including emissions from diesel engines at the facility, may be exempt from this rule.

(b) Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization for the majority of the Southern California region and is the largest Metropolitan Planning Organization in the nation. With regard to air quality planning, SCAG adopted the 2016 RTP/SCS in April 2016, which addresses regional development and growth forecasts and forms the basis for the land use and transportation control portions of the AQMP. The growth forecasts are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. The Regional Transportation Plan/Sustainable Communities Strategy and AQMP are based on projections originating within local jurisdictions.

SCAG's 2016 RTP/SCS provides specific strategies for successful implementation. These strategies include supporting projects that encourage a diverse job opportunities for a variety of skills and education, recreation and culture and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a "Complete Streets" policy that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.

In 2008, SCAG released the Regional Comprehensive Plan which addresses regional issues such as housing, traffic/transportation, water, and air quality. The Regional Comprehensive Plan serves as an advisory document to local agencies in the Southern California region for their information and voluntary use for preparing local plans and handling local issues of regional significance. The Regional Comprehensive Plan

presents a vision of how southern California can balance air quality with growth and development by including goals such as: reducing emissions of criteria pollutants to attain federal air quality standards by prescribed dates and stated ambient air quality standards as soon as practicable; reverse current trends in greenhouse gas emissions to support sustainability goals for energy, water supply, agriculture, and other resource areas; and to minimize land uses that increase the risk of adverse air pollution-related health impacts from exposure to TACs, particulates (PM_{10} and $PM_{2.5}$) and CO.

(c) County of Los Angeles General Plan

Local jurisdictions, such as the County, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the County is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The County is also responsible for the implementation of transportation control measures as outlined in the AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the County assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits and monitors and enforces implementation of such mitigation measures.

The Los Angeles County General Plan 2035 (March 2015) provides the fundamental basis for the County's land use and development policy, and represents the basic community values, ideals, and aspirations to govern a shared environment through 2035. The General Plan addresses all aspects of development including public health, land use, community character, transportation, economics, housing, air quality, and other topics. The General Plan sets forth objectives, policies, standards, and programs for land use and new development, Circulation and Public access, and Service Systems for the Community as a whole.

The applicable measures of the Los Angeles County General Plan Air Quality element are specified below as being the most current standards. These measures will be implemented in connection with development of the Project.[27]

Goal AQ 1 Protection from exposure to harmful air pollutants.

- **Policy AQ 1.1** Minimize health risks to people from industrial toxic or hazardous air pollutant emissions, with an emphasis on local hot spots, such as existing point sources affecting immediate sensitive receptors.
- **Policy AQ 1.2** Encourage the use of low or no volatile organic compound (VOC) emitting materials.
- **Policy AQ 1.3** Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.

[27] *Los Angeles County Department of Regional Planning, 2014. Public Review Draft Los Angeles County General Plan 2035, Chapter 8 – Air Quality. http:// http://planning.lacounty.gov/assets/upl/project/gp_2035_Chapter8_2014.pdf. Accessed March 2015.*

- **Policy AQ 1.4** Work with local air quality management districts to publicize air quality warnings, and to track potential sources of airborne toxics from identified mobile and stationary sources.

Goal AQ 2 The reduction of air pollution and mobile source emissions through coordinated land use, transportation and air quality planning.

- **Policy AQ 2.1** Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.

- **Policy AQ 2.2** Participate in, and effectively coordinate the development and implementation of community and regional air quality programs.

3. ENVIRONMENTAL IMPACTS

a. Thresholds of Significance

The potential for air quality impacts is based on thresholds derived from the County's Initial Study Checklist questions, which are based in part on Appendix G of the State *CEQA Guidelines.* These questions are as follows:

(III) Air Quality. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

c) 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);

d) Expose sensitive receptors to substantial pollutant concentrations; or

e) Create objectionable odors affecting a substantial number of people.

The State CEQA Guidelines (Section 15064.7) provide that, when available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make determinations of significance. The potential air quality impacts of the Project are, therefore, evaluated according to thresholds developed by SCAQMD in the CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent guidance, discussed below. These thresholds generally incorporate the checklist questions contained in Appendix G of the State CEQA Guidelines. Greenhouse Gas Emissions and related "climate change" issues are addressed in Section 4.E., Greenhouse Gas Emissions, of this Draft EIR.

Based on the above factors, the Project would have a potentially significant impact on Air Quality if it would result in any of the following:

AQ-1 Would the project conflict with or obstruct implementation of the applicable air quality plan?

The SCAQMD is required, pursuant to the CAA to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of Federal standards. The future development pursuant to the proposed Specific Plan would be subject to the SCAQMD's 2012 AQMP.[28] The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by SCAG.

With regard to air quality planning, SCAG has prepared the RCPG, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control portions of the AQMP, and are utilized in the preparation of air quality forecasts and consistency analysis included in the AQMP. Both the RCPG and AQMP strategy incorporate projections from local planning documents.

The 2012 AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within areas under the jurisdiction of SCAQMD, to return clean air to the region, and to minimize the impact of reduced air quality on the economy. Projects that are considered to be consistent with the AQMP would not interfere with attainment, because this growth is included in the projections used during the preparation of the AQMP. The 2012 AQMP relies on assumptions and data regarding County of Los Angeles growth consistent with the applicable zoning under the existing General Plan. The AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving ambient air quality standards. These strategies are developed, in part, based on regional population, housing, and employment projections prepared by SCAG.

Projects that are consistent with the employment and population projections identified in the Growth Management Chapter of the RCPG prepared by SCAG are considered consistent with the AQMP growth projections, since the Growth Management Chapter forms the basis of the land use and transportation control portions of the AQMP. SCAG's RCP and Guide provide growth forecasts that are used in the development of air quality-related land use and transportation control strategies. The RCP provided control strategies introduce enforceable measures by which area wide reductions in annual vehicle miles traveled can be achieved. The reduction in vehicle miles traveled correlates with a reduction in emissions of criteria pollutants.

A project is consistent with the AQMP if it is consistent with the applicable rules and regulations and the population, housing and employment assumptions which were used in the development of the AQMP.

AQ-2 Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Because of the SCAQMD's regulatory role in the Air Basin, the significance thresholds and analysis methodologies in the SCAQMD *CEQA Air Quality Handbook* guidance document was used in evaluating Project impacts. The SCAQMD has established mass emission thresholds below which it is unlikely that an

[28] *South Coast Air Quality Management District, AQMD Website, http://www.aqmd.gov/aqmp/2012aqmp/index.htm.*

individual project's incremental increase in emissions could cause or contribute substantially to an exceedance of applicable ambient air quality standards. Based on these criteria, the Project would result in a potentially significant impact if any of the following would occur:

(1) Construction Thresholds

A potentially significant impact may occur if regional emissions during construction from both direct and indirect sources would exceed any of the following SCAQMD mass emission threshold levels listed below. If so, air quality dispersion modeling may be used determine if the emissions would cause an exceedance of applicable air quality standards. The numerical thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.[29]

- 550 pounds per day CO;
- 75 pounds per day of VOC;
- 100 pounds per day of NO_X;
- 150 pounds per day of SO_X;
- 150 pounds per day of PM_{10}; and
- 55 pounds per day of $PM_{2.5.}$

Exceedance of SCAQMD mass emission thresholds does not explicitly mean an exceedance of applicable air quality standards is expected. Refined air quality dispersion modeling should be performed to predict impacts to ground level ambient pollutant levels, as discussed below under subsection (3), Localized Significance Thresholds.

(2) Operation Thresholds

A potentially significant impact may occur if regional emissions during operations from both direct and indirect sources would exceed any of the following SCAQMD mass emission threshold levels listed below. The numerical thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.[30] The SCAQMD has established numeric thresholds for operation in part based on Section 182(e) of the Clean Air Act which identifies 10 tons per year of VOC as a significance level for stationary source emissions in extreme non-attainment areas for ozone.[31] As shown in Table 4.B-4, the Air Basin is designated as extreme non-attainment for ozone. The SCAQMD converted this significance level to pounds per day for ozone precursor emissions (10 tons per year × 2,000 pounds per ton ÷ 365 days per year = 55 pounds per day). The numeric indicators for other pollutants are also based on federal stationary source significance levels. If the thresholds are exceeded, air quality dispersion modeling may be used to determine if the emissions would cause an exceedance of applicable air quality standards.

[29] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.*

[30] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-2.*

[31] *South Coast Air Quality Management District, CEQA Air Quality Handbook (1993) 6-1.*

- 550 pounds per day of CO;
- 55 pounds per day of VOC;
- 55 pounds per day of NO_X;
- 150 pounds per day of SO_X;
- 150 pounds per day of PM_{10}; and
- 55 pounds per day of $PM_{2.5}$.

Exceedance of SCAQMD mass emission thresholds does not explicitly mean an exceedance of applicable air quality standards is expected. Refined air quality dispersion modeling should be performed to predict impacts to ground level ambient pollutant levels.

(3) Localized Significance Thresholds

Localized Significance Thresholds (LSTs) were developed in response to the SCAQMD Governing Board's Environmental Justice Enhancement Initiative (I-4). The LST methodology was provisionally adopted by the SCAQMD Governing Board in October 2003 and formally approved by SCAQMD's Mobile Source Committee in February 2005. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the local ambient concentrations of that pollutant and distance to the nearest sensitive receptor.

LSTs, which are voluntary, only apply to CO, NO_2, PM_{10}, and $PM_{2.5}$ emissions during construction and operation at the discretion of the lead agency. Screening-level analysis of LSTs is only recommended for construction activities at project sites that are 5 acres or less. The SCAQMD recommends that operational activities and construction for any project over 5 acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors. Dispersion modeling would be required for CO_2, NO_X, PM_{10}, and $PM_{2.5}$ emissions during construction and for operational activities. NO_X to NO_2 conversion would be accounted for during the modeling to determine the maximum NO_2 concentrations at the nearest sensitive receptors.

The SCAQMD has developed methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards. Impacts would be considered significant if the following would occur:

- Maximum daily localized emissions would be greater than the LSTs, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for CO and NO_2.[32]
- Maximum localized PM_{10} or $PM_{2.5}$ emissions during construction would be greater than the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed 50 $\mu g/m^3$ over five hours (SCAQMD Rule 403 control requirement).

[32] *South Coast Air Quality Management District, LST Methodology, http://www.aqmd.gov/ceqa/handbook/lst/Method_fina.pdf.*

- Maximum localize PM_{10} or $PM_{2.5}$ emissions during operations would be greater than the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed 2.5 $\mu g/m^3$ over a 24-hour period or 1.0 $\mu g/m^3$ over an annual period.

Based on criteria set forth in the SCAQMD *CEQA Air Quality Handbook*, the proposed project would have a significant impact with regard to operational emissions if any of the following would occur:

- Traffic generated by the project causes an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively, at an intersection or roadway within one-quarter mile of a sensitive receptor.
- The project would not be compatible with County of Los Angeles, SCAQMD and SCAG air quality policies.

AQ-3 Would the project 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)?

The Air Basin fails to meet national and state standards for O_3 (for both the 1-hour and 8-hour standard), PM_{10} (24 hour and annual) and $PM_{2.5}$, and therefore is considered a federal and state "non-attainment" area for these pollutants. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant.

AQ-4 Would the project expose sensitive receptors to substantial pollutant concentrations?

The SCAQMD *CEQA Air Quality Handbook* states that the determination of the significance of TACs shall be made on a case-by-case basis, considering the following factors:

- The regulatory framework for the toxic material(s) and process(es) involved
- The proximity of the TACs to sensitive receptors
- The quantity, volume and toxicity of the contaminants expected to be emitted
- The likelihood and potential level of exposure
- The degree to which the design of the proposed project will reduce the risk of exposure

Impacts from TAC emissions may be assessed via a health risk assessment (HRA). The California Air Pollution Control Officers Association (CAPCOA) has provided general guidance for preparing HRAs. CAPCOA's *Health Risk Assessments for Proposed Land Use Projects* describes significance levels that have been used by various air districts in California as enumerated below:[33]

[33] *California Air Pollution Control Officers Association, Health Risk Assessments for Proposed Land Use Projects, (2009) 12.*

- Thresholds can be based on a specific risk level such that a 10 per million excess cancer risk and an acute and chronic hazard index of one should not be exceeded. These thresholds tend to be consistent with the Hot Spot Program thresholds.
- Thresholds can also be based on the region's existing background cancer risk value if one exists.
    - One option is to establish a risk level equal to a region's background risk level.
    - Another option is to establish a risk level equal to twice a region's background risk level.
    - Still another option is to look at the ambient risk in the immediate vicinity of the project area rather than the regional risk level.
- Case by case thresholds may also be defined.

The SCAQMD *CEQA Handbook* recommends: (a) a lifetime probability of contracting cancer greater than 10 in one million (10×10^{-6}) as a significance threshold for evaluating cancer impacts from a facility, and (b) a health hazard index of 1.0 as a significance threshold for evaluating non-carcinogenic impacts from a facility.[34] These thresholds are normally applied to new facilities that emit TACs into the surrounding environment and potentially impact off-site sensitive receptors. In this case, the Project involves locating a new sensitive receptor rather than a new source of TACs. According to SCAQMD Staff, projects that would locate sensitive receptors within 500 feet of a freeway should also utilize these thresholds when assessing impacts to the project site from motor vehicles traveling on the freeway. Based on these guidelines, the Project would have a significant impact from TACs, if:

- On-site stationary sources emit carcinogenic air contaminants or TACs that individually or cumulatively exceed the maximum individual cancer risk of ten in one million or an acute or chronic hazard index of 1.0.[35]
- Hazardous materials associated with on-site stationary sources result in an accidental release of air toxic emissions or acutely hazardous materials posing a threat to public health and safety.

In addition, since the project introduces potentially sensitive populations to the area, CARB's siting guidelines for TAC emissions (as discussed above under the Regulatory Framework section) will be used in addition the SCAQMD criteria listed above.

AQ-5 Would the project create objectionable odors affecting a substantial number of people?

The SCAQMD *CEQA Air Quality Handbook* contains secondary thresholds consistent with Appendix G CEQA guidelines regarding odors. More specifically, the Project would have a significant impact if it has the potential to create, or be subjected to, an objectionable odor that could impact a substantial number of sensitive receptors.

[34] *South Coast Air Quality Management District, SCAQMD Air Quality Significance Thresholds, (2011).*

[35] *SCAQMD Risk Assessment Procedures for Rules 1401 and 212, November 1998.*

b. Methodology

The evaluation of potential impacts to local and regional air quality that may result from the construction and long-term operations of the Project is conducted as follows:

(1) Consistency with Air Quality Management Plan

The 2012 AQMP was prepared to accommodate growth, reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are consistent with the assumptions used in the AQMP do not interfere with attainment because the growth is included in the projections utilized in the formulation of the AQMP, as discussed above. Thus, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's numeric indicators.

(2) Construction Impacts

Construction of the proposed uses pursuant to the Harbor-UCLA Medical Campus Master Plan has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project site. Mobile source emissions, primarily NO_X, would result from the use of construction equipment such as bulldozers, wheeled loaders, cranes, and haul trucks. Workers commuting to and from the site would also generate mobile source emissions from passenger vehicles. Fugitive dust emissions would result from demolition, grading soil movement and excavation activities. Evaporative emissions of VOCs would be generated from the application of architectural coatings (i.e., paints) and asphalt paving. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions. The assessment of construction air quality impacts considers each of these potential sources.

Build-out of the Campus Master Plan is expected to occur in eight phases, with each phase lasting several years. Construction is anticipated to begin as early as late-2016 and full build-out of all phases is expected in 2030. From 2020 through the end of construction, phases may overlap; therefore, the emissions are estimated assuming overlapping phases in order to evaluate the maximum daily emissions. The amount of construction equipment used and the duration of construction activity could have a substantial effect upon the amount of construction emissions, concentrations and the resulting impacts occurring at any one time. As such, the emission forecasts provided reflect a set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. There are typically four major types of construction activities for development projects: demolition, site preparation, grading, and building construction. The building construction phase can typically be broken down into three sub-categories: building construction, architectural painting, and asphalt paving. The emissions from construction equipment that would be used during each activity were modeled assuming that several activities would occur simultaneously (i.e., overlap) within each of the phases. This would ensure that the analysis provides a reasonably conservative estimate of the maximum daily regional emissions.

Mass daily emissions during construction were calculated using CalEEMod, which is an emissions estimation/evaluation model developed in conjunction with SCAQMD and other California Air Districts.

CalEEMod was used to assist in quantifying emissions from construction activities for build-out of the proposed Campus Master Plan. The output values used in this analysis were adjusted to be Project-specific, based on construction equipment types and the construction schedule. For fugitive dust, consistent with Rule 403, water would be applied to disturbed areas of the site with a control efficiency of 61 percent. Detailed construction equipment lists, construction scheduling, and emissions calculations are provided in Appendix B of this Draft EIR.

The potential for localized effects from the on-site portion of daily emissions are evaluated at nearby sensitive receptor locations that could be impacted by the Project based on the SCAQMD's LST methodology, which utilizes on-site mass emission rate look-up tables and project-specific modeling, where appropriate. LSTs are applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard. For NO_X and CO emissions, LSTs are developed based on the local ambient concentrations of that pollutant and distance to the nearest sensitive receptor. For PM_{10} and $PM_{2.5,}$ LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the project is located, (2) the size of the project site, and (3) the distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals). The screening criteria are generally applicable to projects five acres or less in disturbed area. If a project exceeds five acres or any applicable LST when the mass rate look-up tables are used as a screening analysis, then project specific air quality modeling model may be performed. Construction of the proposed uses pursuant to the Campus Master Plan would potentially disturb more than five acres. Therefore, Project-specific dispersion modeling was conducted for NO_2, CO, PM_{10}, and $PM_{2.5}$ using the USEPA AERMOD dispersion model with meteorological data from the applicable SCAQMD monitoring station (i.e., LAX Airport).[36] Maximum on-site emissions from the various phases and activities were modeled at locations on the Campus where the construction activities would take place. Nearby receptors representing locations of off-site sensitive uses (i.e., residential uses) were placed in all directions around the Project site in order to estimate maximum impacts. The results of the LST dispersion modeling analysis are provided in Appendix B of this Draft EIR.

(3) Operational Impacts

Operation of the Project has the potential to generate criteria pollutant emissions through vehicle trips traveling to and from the site. In addition, emissions would result from stationary and area sources such as fossil fuel combustion for cooling and heating and from landscaping equipment, and evaporative loss emissions associated with cleaning and maintenance activities (consumer product usage, solvents, adhesives, coatings, etc.).

The operational emissions were estimated for an interim build-out year (2023) and full build-out year (2030). The mobile and area source emissions were estimated using CalEEMod. In calculating mobile source

[36] *The Project site is located in SRA 3 and the meteorological station in SRA 3 is located at Los Angeles International Airport. However, the site is located on the border of SRA 4 and is physically closer to the meteorological station for that region. Therefore, the meteorological data from the Long Beach station in SRA 4 is used for dispersion modeling purposes.*

emissions, the trip length values were based on the distances provided in CalEEMod. The trip distances were applied to the maximum daily trip estimates, based on trip generation rates provided by the Project traffic study[37] to estimate the total vehicle miles traveled (VMT). Stationary and area source emissions from fossil fuel combustion for heating and cool and landscaping equipment, and evaporative losses associated with cleaning and maintenance activities are based on usage rates and emission factors specific to the Air Basin as provided in CalEEMod.

Regional operational air quality impacts are assessed based on the incremental increase in emissions compared to baseline conditions. CEQA established the baseline environmental setting at the time that environmental assessment commences. For purposes of the operational emissions analysis, the existing baseline year is assumed to be 2015. Therefore, the incremental change in operational emissions is based on the Project emissions minus the existing baseline emissions.

The potential for localized effects from the on-site portion of daily operation emissions were evaluated at sensitive receptor locations that could be impacted by the Project based on the SCAQMD's LST methodology. Maximum on-site emissions were compared to applicable LST using the mass rate look-up tables. The screening criteria were for a project site greater than 5 acres with a receptor distance of less than 25 meters in Source Receptor Area 3 (Southwest Los Angeles County Coastal). Localized CO concentrations are evaluated based on prior dispersion modeling of the four busiest intersections in the Basin that has been conducted by the SCAQMD for its CO Attainment Demonstration Plan in the AQMP. The analysis compares the intersections with the greatest peak-hour traffic volumes that would be impacted by the Project to the intersections modeled by the SCAQMD. Project-impacted intersections with peak-hour traffic volumes that are lower than the intersections modeled by the SCAQMD, in conjunction with lower background CO levels, would result in lower overall CO concentrations compared to the SCAQMD modeled values in its AQMP.

(4) Toxic Air Contaminants (TAC) Impacts (Construction and Operations)

TAC emissions sources during construction consist of diesel particulate matter (DPM) from construction equipment and operations consist of chemicals from aircraft maintenance and fueling. Sensitive receptor locations are identified and site-specific dispersion modeling was conducted to determine Project impacts. Potential TAC impacts are evaluated by conducting a detailed analysis using AERMOD dispersion modeling.

The OEHHA is responsible for developing and revising guidelines for performing HRAs under the State's Air Toxics Hot Spots Program Risk Assessment (AB 2588) regulation. In March 2015, OEHHA adopted new guidelines that update the previous guidance by incorporating advances in risk assessment with consideration of infants and children using Age Sensitivity Factors (ASF). These changes also take into account the sensitivity of children to TAC emissions, different breathing rates, and time spent at home. Children have a higher breathing rate compared to adults and would likely spend more time at home resulting in longer exposure durations. On June 5, 2015, SCAQMD incorporated these guidelines in to

[37] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, 2016.*

relevant rules designed for permitting of stationary sources.[38] Although construction would be temporary, construction impacts associated with TACs are addressed quantitatively in a refined HRA.

The HRA was performed in accordance with the OEHHA *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments* (OEHHA Guidance).[39] The analysis incorporates the estimated construction emissions, as previously discussed, and dispersion modeling using the USEPA AERMOD model with meteorological data from the closest SCAQMD monitoring station. Sensitive receptors used for modeling were placed at the location of sensitive receptor (i.e., residential) buildings near to the subject property. Heavy-duty equipment and trucks were modeled as volume sources and were located on the subject property and on roadways that trucks would potentially travel on within a 0.25 mile distance of the subject property. Health risk calculations were performed using a spreadsheet tool consistent with the OEHHA Guidance and CARB Hotspots Analysis and Reporting Program (HARP) version 2 spreadsheet methodology. Detailed information about the HRA is provided in Appendix B of this Draft EIR.

Potential TAC impacts for operations are evaluated by conducting a qualitative screening-level analysis. The screening-level analysis consists of identification of new or modified TAC emissions sources. If it is determined that a project would introduce a potentially significant new source, or modify an existing TAC emissions source, then downwind sensitive receptor locations are identified and site-specific dispersion modeling is conducted to determine project impacts.

(5) Odor Impacts (Construction and Operations)

Potential odor impacts are evaluated by conducting a screening-level analysis followed by a more detailed analysis (i.e., dispersion modeling) as necessary. The screening-level analysis consists of reviewing the project's site plan and project description to identify new or modified odor sources. If it is determined that the proposed Project would introduce a potentially significant new odor source, or modify an existing odor source, then downwind sensitive receptor locations are identified and site-specific dispersion modeling is conducted to determine proposed Project impacts.

c. Project Characteristics or Design Features

(1) Project Characteristics

The Project includes characteristics consistent with the CAPCOA guidance document[40] for mitigating or reducing emissions from land use development projects. The Project would provide and encourage employees and visitors to utilize alternative modes of transportation which would reduce vehicle trips and VMT. More specifically, the Project would be located within a quarter-mile of public transportation, including existing Torrance Transit System bus routes (e.g., routes 1 and 3) with stops on South Vermont Street and West Carson Street, and Los Angeles Metro bus routes (e.g., routes 205 and 550) with stops on South Vermont Street. While the Project site's transit accessibility would result in a corresponding reduction

[38] *South Coast Air Quality Management District, Minutes of the June 5, 2015 Meeting, http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2015/2015-Jul10-001.pdf?sfvrsn=8, Accessed September 28, 2015*

[39] *Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, (2015).*

[40] *California Air Pollution Control Officers Association, Quantifying Greenhouse Gas Mitigation Measures, (2010).*

in transportation-related emissions, the emissions calculations do not incorporate reductions from the transit accessibility characteristics. As a result, the emissions calculations are considered to be conservative and may overestimate actual emissions.

(2) Project Design Features

The Project would achieve the applicable objectives of the Los Angeles County General Plan Framework Element, SCAG Regional Transportation Plan, and SCAQMD Air Quality Management Plan for establishing a regional land use pattern that promotes sustainability. The Project would support pedestrian activity on the Project site, and incorporate energy efficient and water efficient measures.

The Project would be designed to meet the standards for Leadership in Energy and Environmental Design (LEED) Silver Certification by the U.S. Green Building Council (USGBC) through the incorporation of green building techniques and other sustainability features. A sustainability program would be prepared and monitored by a LEED-accredited design consultant to provide guidance in Project design, construction and operations; and to provide performance monitoring during Project operations to reconcile design and energy performance and enhance energy savings. The Project would also be designed to comply with the Los Angeles County Green Building Standards Code. The following Project Design Features would reduce air pollutant emissions as well as greenhouse gas emissions, which would be incorporated into the bid document requirements for the design and construction of future development projects under the Master Plan Project:

PDF AQ-1: Green Building Measures: The Master Plan Project would be designed and operate to meet or exceed the applicable green building, energy, water, and waste requirements of the State of California Green Building Standards Code and the Los Angeles County Green Building Ordinance and meet the standards of the USGBC LEED Silver Certification level or its equivalent. Green building measures would include, but are not limited to the following:

- The Project would implement a construction waste management plan to recycle and/or salvage nonhazardous construction debris that meets or exceeds the County's adopted Construction and Demolition Debris Recycling and Reuse ordinance.
- The Project would be designed to optimize energy performance and reduce building energy cost by 5 percent or more for new construction and 3 percent or more for major renovations compared to ASHRAE 90.1-2010, Appendix G and the Title 24 (2013) Building Standards Code.
- The Project would reduce indoor and outdoor water use by a minimum of 20 percent compared to baseline standards by installing water fixtures that exceed applicable standards. The reduction in potable water would be achieved through the installation of high-efficiency water faucets, high-efficiency toilets, flushless urinals, water-efficient irrigation systems, planting native or drought-tolerant plant species, using recycled water for landscaping, or other similar means.
- The Project would include lighting controls with occupancy sensors to take advantage of available natural light.
- The Project shall install cool roofs for heat island reduction and strive to meet the CALGreen Tier 1 Solar Reflectance Index (SRI) or equivalent.

- Project buildings shall be constructed with solar-ready rooftops that would allow for the future installation of on-site solar photovoltaic (PV) or solar water heating (SWH) systems. The building design documents shall show an allocated Solar Zone and the pathway for interconnecting the PV or SWH system with the building electrical or plumbing system. The Solar Zone is a section of the roof that has been specifically designated and reserved for the installation of a solar PV system, SWH system, and/or other solar generating system. The Solar Zone must be kept free from roof penetrations and have minimal shading.
- The Project would be design and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 15 as required for hospital inpatient care.
- To encourage carpooling and the use of electric vehicles by project employees and visitors, the Applicant shall designate a minimum of eight (8) percent on on-site parking for carpool and/or alternative-fueled vehicles and shall pre-wire, or install conduit and panel capacity for, electric vehicle charging stations for a minimum of five (5) percent of on-site parking spaces.
- The Project shall appropriate incorporate bicycle infrastructure including bicycle parking and "end-of-trip" facilities in compliance with the applicable portions of the County's Healthy Design Ordinance (HDO) (Los Angeles County Code, Title 22, Section 22.52.1225).

PDF AQ-2: Construction Measures: The Project shall implement the following measures during construction activities:

- The Project shall require construction contractor(s) to utilize off-road diesel-powered construction equipment that meets or exceeds the CARB and USEPA Tier 4 off-road emissions standard for equipment rated at 50 hp or greater during Project construction. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment.
- To the greatest extent possible, electric power will be made available for use for electric tools, equipment, lighting, etc.
- The Project shall encourage construction contractors to apply for SCAQMD "SOON" funds, which provides funds to accelerate the use of less polluting off-road diesel vehicles, such as heavy duty construction equipment. More information on this program can be found at the following website: http://www.aqmd.gov/tao/Implementation/SOONProgram.htm.
- In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.
- The Applicant shall prohibit heavy-duty construction equipment and truck queuing and staging in front of on-site building entrances and exits.

- The Project shall comply with the applicable provisions of SCAQMD Rule 403 to minimize generation of fugitive dust. Active demolition or grading construction areas and unpaved roads shall be controlled by temporary covers or wetted sufficiently to reduce dust.
- Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation.
- On-site vehicles shall be limited to 15 miles per hour on unpaved roadways.
- Haul trucks carrying dirt, soil, sand, or other loose material shall be covered and maintain a freeboard height of 12 inches.
- Prior to leaving areas of active construction, haul trucks would be inspected and put through procedures as necessary to remove loose debris from tire wells and on the truck exterior to prevent track out.
- Construction areas shall install temporary fencing, if necessary, to prevent debris and material movement on the site and into patient care buildings or to off-site areas.
- The Applicant shall ensure building air filtration media and heating, ventilation, and air conditioning (HVAC) systems are serviced, maintained, and replaced per manufacturers specifications and are not compromised from the accumulation of particulate matter and fugitive dust.
- All coatings used on-site shall comply with SCAQMD Rule 1113, as applicable. The project will strive to utilize material which is pre-primed or pre-painted. Additionally, the project shall limit daily application of architectural coatings applied on-site to 170 gallons per day with an average of 50 grams VOC per liter of coating, less water and less exempt compounds, or equivalent usage resulting in similar or less VOC emissions. For example, stains, specialty primers, and industrial maintenance coatings allowed by Rule 1113 that contain VOCs at a level of 100 grams per liter of coating, less water and less exempt compounds would be limited to 85 gallons per day on site.

d. Project Impacts

(1) Consistency with Air Quality Management Plan

Threshold AQ-1:	Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact Statement AQ-1: *Construction and operation of the Project would not conflict with the growth projections in the SCAQMD AQMP and would comply with applicable control measures. As a result, the Project would not conflict with or obstruct implementation of the Plan and impacts would be less than significant.*

(a) Construction

Under this criterion, the SCAQMD recommends that lead agencies demonstrate that a project would not directly obstruct implementation of an applicable air quality plan and that a project be consistent with the assumptions (typically land-use related, such as resultant employment or residential units) upon which the air quality plan are based. The Project would result in an increase in short-term employment compared to

existing conditions. Being relatively small in number and temporary in nature, construction jobs under the Project would not conflict with the long-term employment projections upon which the AQMP is based. Control strategies in the AQMP with potential applicability to short-term emissions from construction activities include strategies denoted in the AQMP as ONRD-04 and OFFRD-01, which are intended to reduce emissions from on-road and off-road heavy-duty vehicles and equipment by accelerating replacement of older, emissions-prone engines with newer engines meeting more stringent emission standards. The Project would not conflict with implementation of these strategies. Additionally, the Project would comply with CARB requirements to minimize short-term emissions from on-road and off-road diesel equipment. The Project would also comply with SCAQMD regulations for controlling fugitive dust pursuant to SCAQMD Rule 403.

Compliance with these requirements is consistent with and meets or exceeds the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Because the Project would not conflict with the control strategies intended to reduce emissions from construction equipment, the Project would not conflict with or obstruct implementation of the AQMP, and impacts would be less than significant.

(b) Operation

The 2012 AQMP was prepared to accommodate growth, reduce the levels of pollutants within the areas under the jurisdiction of SCAQMD, return clean air to the region, and minimize the impact on the economy. Projects that are considered consistent with the AQMP would not interfere with attainment because this growth is included in the projections used in the formulation of the AQMP.

As discussed in Section 4.H., *Land Use*, of this Draft EIR, the Project site is designated "P" (Public and Semi-Public) by the County of Los Angeles 2035 General Plan Update. The "P" General Plan Land Use (GPLU) designation permits a broad range of public and semi-public facilities and community-serving uses, including public buildings and campuses, schools, hospitals, cemeteries, fairgrounds, airports and other major transportation facilities, landfills, solid and liquid waste disposal sites, multiple use storm water treatment facilities, and major utilities at a maximum FAR of 3:1.[41] As such, the Project would be consistent with the growth projections as contained in the County's General Plan and thus be consistent with the growth projections in the AQMP.

The AQMP includes Transportation Control Measures that are intended to reduce regional mobile source emissions. While the majority of the measures are implemented by cities, counties, and other regional agencies such as SCAG and SCAQMD, the Project would be supportive of measures related to reducing vehicle trips for patrons and employees and increasing commercial density near public transit (see discussion under Subsection 4.C.3.c, *Project Design Features*).

As the Project would be consistent with the growth projections in the AQMP and would be supportive of relevant Transportation Control Measures aimed at reducing vehicle trips, impacts would be less than significant.

[41] *County of Los Angeles, County of Los Angeles General Plan Update (2035), Chapter 6: Land Use Element, Table 6.2, Land Use Designations. Adopted October 6, 2015.*

(2) Violation of Air Quality Standards

Threshold AQ-2: Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact Statement AQ-2: *Construction of the Project would not exceed the applicable SCAQMD daily numeric indicators for VOC, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators. As a result, construction and operations of the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation and operational impacts would be less than significant.*

(a) Construction

Construction of the proposed uses has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated from construction workers traveling to and from the Project site. In addition, fugitive dust emissions would result from excavation and debris removal. The maximum daily regional construction emissions were calculated for the eight phases of construction. It should be noted that the maximum daily emissions are predicted values for the worst-case day and do not represent the emissions that would occur for every day within the construction period. Detailed emissions calculations are provided in Appendix B of this Draft EIR. Results of the criteria pollutant calculations are presented in **Table 4.B-5**, *Maximum Unmitigated Regional Construction Emissions*. As shown therein, construction-related daily emissions for the criteria and precursor pollutants would not exceed the SCAQMD regional thresholds of significance for VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Therefore, with respect to regional emissions, impacts would be less than significant during construction of the Project.

These calculations include appropriate dust control measures that would be implemented during each phase of construction, as required by SCAQMD Rule 403 (Control of Fugitive Dust). All construction equipment with a rating of 50 horsepower or greater was assumed to have an engine that meets CARB and USEPA Tier 4 Final off-road emissions standard. Low-VOC coatings, as specified in PDF AQ-1, were utilized for architectural coatings phases.

(b) Operation

Operational emissions were assessed for mobile, area, and stationary sources. Operational criteria pollutant emissions were calculated for the Project for an interim build-out year (2023) and the full build-out year (2030). Based on the Project Design Features incorporated into the Project, the energy usage rate and the number of vehicle trips from the Project would be reduced compared to the appropriate baseline level (see discussed under Subsection 4.C.3.c, *Project Design Features*). Daily trip generation rates for the Project were provided by the Project traffic study[42] and include trips associated with the hospital and research and development uses. Detailed emissions calculations are provided in Appendix B of this Draft EIR. Results of the criteria pollutant calculations are presented in **Table 4.B-6**, *Maximum Unmitigated Regional Operational Emissions*. Table 4.B-6 also shows the existing emissions from the existing uses on the site. The evaluation of

[42] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, (2016).*

Table 4.B-5

Maximum Unmitigated Regional Construction Emissions [a]
(pounds per day)

Construction Year	Maximum Daily Regional Emissions [b]					
	VOC	NO_X	CO	SO_X	PM_{10} [c]	$PM_{2.5}$ [c]
Construction Year 1	1	24	50	<1	5	1
Construction Year 2	1	10	39	<1	5	1
Construction Year 3	2	46	114	<1	12	4
Construction Year 4	2	20	112	<1	11	4
Construction Year 5	51	26	149	<1	18	6
Construction Year 6	52	92	210	1	31	10
Construction Year 7	16	46	225	1	45	13
Construction Year 8	54	49	276	1	52	15
Construction Year 9	29	52	351	1	83	23
Construction Year 10	64	46	229	1	73	20
Construction Year 11	64	31	220	1	67	19
Construction Year 12	2	13	89	<1	22	6
Construction Year 13	2	13	79	<1	21	6
Construction Year 14	14	13	82	<1	22	6
Construction Year 15	14	9	55	<1	8	2
Maximum Regional Emissions	**64**	**92**	**351**	**1**	**83**	**23**
Regional Significance Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Over (Under)	(11)	(8)	(199)	(149)	(67)	(32)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the CalEEMod printout sheets and/or calculation worksheets that are presented in Appendix B.*

[b] *Shaded values indicate maximum emissions.*

[c] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

Source: PCR Services Corporation, 2016

the Project's significance with respect to the SCAQMD thresholds of significance is based on the net change in operational emissions from the existing site and the Project. As shown therein, the net operational-related daily emissions for the criteria and precursor pollutants (VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$) would not exceed the threshold of significance during interim operations when combined with on-going construction emissions. Additionally at full build-out, operation of the Project would not exceed the SCAQMD numeric indicators. Therefore, with respect to regional emissions from operations, impacts would be less than significant during the interim year and at full build-out.

Table 4.B-6

Maximum Unmitigated Regional Operational Emissions – Interim and Build-Out [a]
(pounds per day)

Operational Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Existing Emissions	**102**	**219**	**841**	**2**	**128**	**37**
Project Interim Year						
Area (Coating, Consumer Products, Landscaping)	29	<1	0.1	<1	<1	<1
Energy (Natural Gas)	1	6	5	<1	0.5	0.5
Motor Vehicles	58	132	611	2	143	40
Construction (Interim Year)	54	49	276	1	52	15
Total Project Interim Year Emissions	**142**	**188**	**892**	**3**	**195**	**56**
Total Net Increase/(Decrease) in Emissions (Total Interim – Existing)	**40**	**(31)**	**51**	**1**	**67**	**19**
SCAQMD Significance Threshold	55	55	550	150	150	55
Over/(Under)	(15)	(86)	(499)	(149)	(83)	(36)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Project Build-Out						
Area (Coating, Consumer Products, Landscaping)	40	<1	0.2	<1	<1	<1
Energy (Natural Gas)	1	8	6	<1	0.6	0.6
Motor Vehicles	63	148	666	3	183	52
Total Project Build-Out Emissions	**104**	**156**	**672**	**3**	**184**	**53**
Total Net Increase/(Decrease) in Emissions (Project Build-Out - Existing)	**2**	**(63)**	**(169)**	**1**	**56**	**16**
SCAQMD Significance Threshold	55	55	550	150	150	55
Over/(Under)	(53)	(118)	(719)	(149)	(94)	(39)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the CalEEMod printout sheets and/or calculation worksheets that are presented in Appendix B.*

Source: PCR Services Corporation, 2016

(3) Non-Attainment Pollutants

Threshold AQ-3: Would the project 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)?

Impact Statement AQ-3: *Construction of the Project would not exceed the SCAQMD daily regional numeric indicators. The incremental change in interim operational emissions, when combined with on-going construction emissions, would not exceed the thresholds of significance. The incremental change in operational emissions at full build-out of the Project would not exceed the SCAQMD daily regional numeric indicators. Thus, construction and operations of the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment and impacts would be less than significant.*

(a) Construction

Construction of the Project would not result in the emission of criteria pollutants for which the region is in nonattainment. The Los Angeles County portion of the Air Basin is designated non-attainment for ozone and $PM_{2.5}$ NAAQS and non-attainment for ozone, NO_2, PM_{10}, and $PM_{2.5}$ CAAQS. As shown in Table 4.B-5, maximum daily emissions from construction of the Project would not exceed the numeric indicator of significance for any of these pollutants nor their precursors. Project compliance with CARB and SCAQMD control measures and Project Design Features would be implemented to minimize and reduce construction emissions. As a result, the Project would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment. Therefore, construction impacts would be less than significant.

(b) Operation

Operation of the Project would not result in the emission of criteria pollutants for which the region is in nonattainment. As shown in Table 4.B-6, maximum daily emissions from operation of the Project would not exceed the threshold of significance for any of pollutants in nonattainment nor their precursors. During interim operations that overlap with construction emissions and at full build-out, operation of the Project would not exceed the applicable thresholds of significance. Therefore, operational impacts would be less than significant.

(4) Substantial Pollutant Concentrations

Threshold AQ-4: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact Statement AQ-4: *Construction of the Project would not exceed SCAQMD localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$ at nearby sensitive receptors. Interim operation of the Project, when combined with on-going construction emissions, would not exceed the localized significance thresholds for NO_X, CO, PM_{10}, or $PM_{2.5}$. Operation of the Project at full build-out would not exceed SCAQMD localized significance thresholds at nearby sensitive receptors for NO_X, CO, PM_{10}, or $PM_{2.5}$. Construction and operation of the Project would not result in substantial emissions of TACs at nearby sensitive receptors. Construction activities would not result in health risks that exceed SCAQMD numeric indicators of an allowable incremental increase in cancer risk of 10 in one million and non-cancer health index of 1.0. Construction and operation of the Project would not result in traffic congestion that would cause or contribute to formation of localized CO hotspots that exceed the CAAQS or NAAQS. As a result, construction and operation of the Project would not expose sensitive receptors to substantial pollutant concentrations, and localized emissions during construction and interim operations would result in a less than significant impact.*

(a) Construction

(i) Localized Impacts

The localized construction air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (June 2003, revised July 2008).[43] The screening criteria provided in the *Localized Significance Threshold Methodology* were used to determine localized

[43] *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

construction emissions thresholds for the Project. The maximum daily localized emissions for each of the construction phases and localized significance thresholds are presented in **Table 4.B-7**, *Maximum Unmitigated Localized Significance Threshold Analysis – Construction*. As shown therein, maximum localized concentrations during construction activities would not exceed the allowable thresholds at the closest sensitive receptors for the relevant standards. Therefore, with respect to localized construction emissions, impacts would be less than significant.

Table 4.B-7

Maximum Unmitigated Localized Significance Threshold Analysis – Construction

Pollutant [a]	Averaging Period	Project Concentration (ug/m^3)	Ambient Background [b] (ug/m^3)	Total (ug/m^3)	Threshold (ug/m^3)	Exceed Threshold?
CO	1-hr	273.1	3,548	3,821	23,000	No
CO	8-hr	42.7	2,862	2,904	10,000	No
NO_2	1-hr	86.1	163.6	249.7	339	No
NO_2	1-hr (98th percentile) [c]	50.9	112.2	163.1	188	No
PM_{10}	24-hr	0.87	—	0.87	10.4	No
$PM_{2.5}$	24-hr	0.34	—	0.34	10.4	No

[a] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

[b] *Background concentrations are based on the maximum of the most recent three years for which data is available from the SCAQMD for the Long Beach Monitoring Station (2011-2013). See SCAQMD website: http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year. The 1-hour CO concentration is based on data from the same time period from the USEPA. See USEPA website: http://www.epa.gov/airdata/ad_rep_mon.html. Accessed March 2015.*

[c] *Based on the 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum concentrations.*

Source: PCR Services Corporation, 2016

(ii) Toxic Air Contaminants

The greatest potential for TAC emissions would be related to diesel particulate matter emissions associated with heavy equipment operations during demolition, grading and excavation, and building construction activities. In addition, incidental amounts of toxic substances such as oils, solvents, and paints would be used. These products would comply with all applicable SCAQMD rules for their manufacture and use. The Project will be subject to several SCAQMD rules designed to limit exposure to TACs during construction activities. The Project would be required to comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than 5 minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction. The Project would also comply with the requirements of SCAQMD Rule 1403 if asbestos is found during the renovation and construction activities. Furthermore, the Project would voluntarily implement the construction control measures described in PDF-AQ-2.

Health risk impacts (cancer risk) were assessed for nearby existing and future off-site sensitive receptors (residential and school uses). **Table 4.B-8**, *Maximum Carcinogenic Risk for Off-Site Sensitive Receptors from Construction*, summarizes the carcinogenic risk for representative receptors located throughout the site vicinity. For carcinogenic exposures, the cancer risk from DPM emissions from construction of the project is estimated to result in a maximum carcinogenic risk of 4.1 per one million. The maximum impact would

Table 4.B-8

Maximum Carcinogenic Risk from Project Construction

Sensitive Receptor	Maximum Cancer Risk (# in one million)	
	Starting Exposure Age: 3rd Trimester	Starting Exposure Age: Adult (16 and over)
North of Project Site	2.2	0.2
South of Project Site	4.1	0.4
East of Project Site	2.2	0.2
West of Project Site	0.6	0.1
Maximum Individual Cancer Risk Threshold	*10*	*10*
Exceeds Threshold?	*No*	*No*

Source: PCR Services Corporation, 2016.

occur at sensitive land uses (residences) directly south of the site. As discussed previously, the lifetime exposure under OEHHA guidelines takes into account early life (infant and children) exposure. It should be noted that the calculated cancer risk conservatively assumes sensitive receptors (residential school uses) would not have any mitigation such as mechanical filtration. As the maximum impact would be less than the risk threshold of 10 in one million, impacts would be considered less than significant.

Potential non-cancer effects of chronic (i.e., long term) DPM exposures were evaluated using the Hazard Index approach as described in the OEHHA Guidance. A hazard index equal to or greater than 1.0 represents a significant chronic health hazard. As shown in **Table 4.B-9**, *Maximum Non-Cancer Chronic Impacts for Off-Site Sensitive Receptors,* nearby off-site sensitive receptors would not be exposed to chronic impacts that would exceed the threshold of 1.0. The maximum impact would occur at sensitive receptors directly east of the site. Therefore, non-cancer chronic impacts would be considered less than significant.

Table 4.B-9

Maximum Non-Cancer Chronic Impacts from Project Construction

Sensitive Receptor	Chronic Hazard Index
North of Project Site	0.002
South of Project Site	0.007
East of Project Site	0.002
West of Project Site	0.001
Total Hazard Index	*1.0*
Exceeds threshold?	*No*

Source: PCR Services Corporation, 2016.

The process of assessing health risks and impacts includes a degree of uncertainty. The level of uncertainty is dependent on the availability of data and the extent to which assumptions are relied upon in cases where

the data are incomplete or unknown. All HRAs rely upon scientific studies in order to reduce the level of uncertainty; however, it is not possible to completely eliminate uncertainty from the analysis. Where assumptions are used to substitute for incomplete or unknown data, it is standard practice in performing HRAs to err on the side of health protection in order to avoid underestimating or underreporting the risk to the public. In general, sources of uncertainty that may lead to an overestimation or an underestimation of the risk include extrapolation of toxicity data in animals to humans and uncertainty in the exposure estimates. In addition to uncertainty, there exists "a natural range or variability in the human population in such properties as height, weight, and susceptibility to chemical toxicants."[44] As mentioned previously, it is typical to err on the side of health protection by assessing risk on the most sensitive populations, such as children and the elderly.

(b) Operation

(i) Localized Impacts

The localized operational air quality analysis was conducted using the methodology described in the SCAQMD *Localized Significance Threshold Methodology* (June 2003, revised July 2008).[45] The screening criteria provided in the *Localized Significance Threshold Methodology* were used to determine localized operational emissions thresholds for the Project. The maximum daily localized emissions and localized significance thresholds are presented in **Table 4.B-10**, *Maximum Unmitigated Localized Operational Emissions – Interim and Build-Out*. Emissions were evaluated for the interim and full build-out operational phases of the Project. Existing emissions were deducted from Project emissions and the net (incremental) emissions were compared to the screening thresholds. For some pollutants, existing operational emissions are greater than Project emissions resulting in negative net emissions. As shown therein, maximum localized operational emissions for sensitive receptors would not exceed the localized thresholds for NO_X, CO, PM_{10} and $PM_{2.5}$. Therefore, with respect to localized operational emissions, impacts would be less than significant.

(ii) Carbon Monoxide Hotspots (Construction and Operations)

The potential for the Project to cause or contribute to CO hotspots is evaluated by comparing Project intersections (both intersection geometry and traffic volumes) with prior studies conducted by the SCAQMD in support of their AQMPs and considering existing background CO concentrations. As discussed below, this comparison provides evidence that the Project would not cause or contribute to the formation of CO hotspots, that CO concentrations at Project impacted intersections would remain well below the ambient air quality standards, and that no further CO analysis is warranted or required.

As shown previously in Table 4.B-1, CO levels in the Project area are substantially below the federal and state standards. Maximum CO levels in recent years are 3 ppm (one-hour average) and 2.5 ppm (eight-hour average) compared to the thresholds of 20 ppm (one-hour average) and 9.0 (eight-hour average). Carbon monoxide decreased dramatically in the Air Basin with the introduction of the catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the Air Basin for some time and the Air Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS. Thus, it is not

[44] *OEHHA, Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, (August 2003) 1-4.*

[45] *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, (2008).*

expected that CO levels at Project-impacted intersections would rise to the level of an exceedance of these standards.

Table 4.B-10

Maximum Unmitigated Localized Operational Emissions – Build-Out [a]
(pounds per day)

Operational Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Existing Emissions	**24.2**	**7.7**	**6.6**	**<1**	**0.6**	**0.6**
Project Build-Out						
Area (Coating, Consumer Products, Landscaping)	39.8	0.0	0.2	<1	<0.1	<0.1
Energy (Natural Gas)	0.8	7.5	6.3	<1	0.6	0.6
Total Project Build-Out Emissions	**40.6**	**7.5**	**6.5**	**<1**	**<1**	**<1**
Total Net Increase/(Decrease) in Onsite Emissions (Project Build-Out– Existing)	**16.4**	**(0.2)**	**(0.1)**	**<1**	**<0.1**	**<0.1**
SCAQMD Significance Threshold	–	197	1,796	–	4.0	2.0
Over/(Under)	–	(197)	(1,796)	–	(4)	(2)
Exceed Threshold?	**–**	**No**	**No**	**–**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the CalEEMod printout sheets and/or calculation worksheets that are presented in Appendix B.*

Source: PCR Services Corporation, 2016

The SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin. These include: (a) Wilshire Boulevard and Veteran Avenue; (b) Sunset Boulevard and Highland Avenue; (c) La Cienega Boulevard and Century Boulevard; (d) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, the SCAQMD notes that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County with an average daily traffic volume of about 100,000 vehicles per day.[46] This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (one-hour average) and 3.2 (eight-hour average) at Wilshire Boulevard and Veteran Avenue.[47] When added to the existing background CO concentrations, the screening values would be 7.6 ppm (one-hour average) and 5.7 ppm (eight-hour average).

Based on the Project traffic study, of the studied intersections that are predicted to operate at a Level of Service ("LOS") of D, E, or F under interim year 2023 and future year 2030 plus Project conditions, multiple intersections would potentially have peak traffic volumes greater than 100,000 per day.[48] However, these intersection already operate at LOS of D, E, or F under existing conditions. The net change in peak traffic

[46] *South Coast Air Quality Management District, 2003 Air Quality Management Plan, Appendix V: Modeling and Attainment Demonstrations, (2003) V-4-24.*

[47] *The eight-hour average is based on a 0.7 persistence factor, as recommended by the SCAQMD.*

[48] *Fehr & Peers, Harbor-UCLA Medical Center Traffic Study, 2016.*

volumes would be less than 100,000 per day; as a result, CO concentrations are expected to remain below thresholds. Thus, this comparison provides evidence that the Project would not contribute to the formation of CO hotspots and no further CO analysis is required. Therefore, the Project would result in less than significant impacts with respect to CO hotspots.

(iii) Toxic Air Contaminants

The SCAQMD recommends that a health risk assessment (HRA) be conducted for substantial sources of diesel particulates (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[49] The CARB siting guidelines, *Air Quality and Land Use Handbook*,[50] which the SCAQMD cites in its own guidelines, *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (May 2005), defines a warehouse as having more than 100 truck trips or 40 refrigerated truck trips per day. While the Project would generate minor amounts of diesel emissions from delivery trucks and incidental maintenance activities, the Project would not result in daily truck trips at the level of a warehouse facility. Trucks would comply with the applicable provisions of the CARB Truck and Bus regulation to minimize and reduce PM and NO_X emissions from existing diesel trucks. The Project would not generate diesel emissions equivalent to 100 or more truck trips per day. Therefore, the Project would not be considered a substantial source of diesel particulates.

In addition, typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes, automotive repair facilities, and dry cleaning facilities. The Project does not propose these activities on-site. Minimal emissions of air toxics may result from maintenance, such as from the use of architectural coatings and other products. Toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed land uses within the Project site. Based on the uses expected on the Project site, potential long-term operational impacts associated with the release of TACs would be less than significant.

(5) Odors

Threshold AQ-5: Would the project create objectionable odors affecting a substantial number of people?

Impact Statement AQ-5: *Construction and operation of the Project would not create or introduce objectionable odors affecting a substantial number of people. Therefore, odor impacts would be less than significant.*

(a) Construction

Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents. SCAQMD Rule 1113 limits the allowable amount of VOCs from architectural coatings and solvents. Since compliance with SCAQMD Rules governing these compounds is mandatory, no construction activities or materials are proposed that would create objectionable odors. Therefore, no significant impact would occur and no mitigation is required.

[49] *South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.*

[50] *California Air Resources Board,* Air Quality and Land Use Handbook: A Community Health Perspective*, (2005).*

(b) Operations

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food-processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Long-term Project operations would not introduce new sources of odors and would not be create objectionable odors that could affect nearby sensitive receptors. The Project does not include any uses identified by the SCAQMD as being typically associated with objectionable or nuisance odors. Waste collection areas and disposal for the Project would be covered and situated away from the property line and sensitive off-site uses. Medical waste would be properly sealed and stored in accordance with applicable rules to ensure that no objectionable medical waste-related odors would be created. Best management and good housekeeping practices would be sufficient to prevent nuisance odors. Therefore, potential odor impacts would be less-than-significant and no mitigation is required.

(6) On-Site Sensitive Uses

Hospital uses are normally considered sensitive receptors. However, potential effects resulting from a Project on sensitive populations on the Project-site are not considered an impact to the environment under CEQA. Nonetheless, due to the sensitivity of on-site receptors, the potential for air pollutant emissions to affect on-site receptors is disclosed herein.

As required in PDF-AQ-2, construction of the Project would utilize heavy-duty construction equipment that meet the most stringent USEPA and CARB certified Tier 4 standards, which would result in substantially reduced combustion emissions of NO_X, PM_{10}, and $PM_{2.5}$ as compared to the statewide fleet average. PDF-AQ-2 requires the Project to comply with strict idling limits in accordance with Section 2485 in Title 13 of the California Code of Regulations and to prohibit the queuing and staging of heavy-duty equipment and trucks in front of on-site building entrances and exits and as far away as possible from patient rooms and building air intake systems, which would minimize the potential for exposure of construction emissions to on-site sensitive receptors. The Project would also implement numerous fugitive dust control measures as best management practices in compliance with SCAQMD Rule 403, which would include, but is not limited to, the use of covers and watering, limiting on-site vehicles speeds on unpaved roads, requiring haul trucks to be covered with adequate freeboard space, and implementing haul truck procedures to prevent the track out of dust and debris. Enhanced watering shall be required for soil moving activities within 100 feet of the existing patient tower, such as ensuring that water is applied not more than 15 minutes prior to soil excavation. The Project would install temporary fencing around active construction areas as needed to prevent debris and material movement on the site and into patient care buildings or to off-site areas. Furthermore, the Project would ensure building air filtration media and HVAC systems are serviced, maintained, and replaced to ensure a high level of indoor air quality. As listed in PDF-AQ-1, the Project buildings would be designed and operated with mechanically ventilated areas that would utilize air filtration media for outside and return air prior to occupancy that provides at least a MERV of 15 as required for hospital inpatient care. Per ASHRAE Standard 52.2 (2012), MERV 15 would result in a removal efficiency of at least 85 percent for particles from 0.3 to 1.0 micrometers (µm), 90 percent for 1.0 to 3.0 µm, and 95 percent for 3.0 to 10.0 µm.[51] As such, the use of MERV 15 air filtration media or better would achieve

[51] *ASHRAE, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size. https://www.ashrae.org/File%20Library/docLib/StdsAddenda/52_2_2012_2015Supplement.pdf. Accessed March 2016.*

substantial reductions in PM_{10} and $PM_{2.5}$ from outdoor air concentrations, including from construction-related DPM concentrations and associated health risks. Implementation of PDF-AQ-1 and PDF-AQ-2 and compliance with applicable regulations and other construction best management practices in accordance with SCAQMD Rule 403 would ensure that construction-related emissions would not adversely affect on-site sensitive receptors.

Operation of the Project would not introduce new substantial sources of emissions. The Existing Hospital has 373 budgeted/staffed beds. The Project would result in 379 budgeted/staffed beds, which is an increase of 6 budgeted/staffed beds over existing conditions. As a result, the Project would not result in substantial changes to hospital operations and would not result in a substantial increase in the number of vendor and service trucks and emergency vehicles visiting the site. As discussed previously, CARB adopted an ATCM to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to DPM and other TACs and air pollutants. The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds, licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given time. Potential localized net changes in air quality impacts from on-site sources of emissions, including DPM, would be minimal since hospital operations and the number of vendor and service trucks and emergency vehicles visiting the site under the Project would be generally similar to existing conditions. Typical sources of acutely and chronically hazardous toxic air contaminants include industrial manufacturing processes, automotive repair facilities, and dry cleaners. The Project would not introduce new sources of these types. Minimal emissions may result from use of consumer and cleaning products; however, usage of these products under the Project would be similar to existing conditions. As such, the Project would not result in a substantial net change in localized on-site emissions, including DPM and other TACs. Therefore, operation of the Project would not adversely affect on-site sensitive receptors.

4. CUMULATIVE IMPACTS

a. Construction

There are a number of related projects in the Project area that have not yet been built or are currently under construction. Since the Applicant has no control over the timing or sequencing of the related projects, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be speculative. For this reason, the SCAQMD's methodology to assess a project's cumulative impact differs from the cumulative impacts methodology employed elsewhere in this Draft EIR.

With respect to the Project's short-term construction-related air quality emissions and cumulative conditions, the SCAQMD has developed strategies to reduce criteria pollutant emissions outlined in the AQMP pursuant to the federal Clean Air Act mandates. As such, construction of the Project would comply with SCAQMD Rule 403 requirements and the ATCM to limit heavy duty diesel motor vehicle idling to no more than 5 minutes at any given time. In addition, the Project would utilize a construction contractor(s) that complies with required and applicable Best Available Control Technology ("BACT") and the In-Use Off-Road Diesel Vehicle Regulation. Per SCAQMD rules and mandates as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects in the Air Basin, which would include each of the related projects in the Project area. As shown above in Table 4.B-5 and Table 4.B-7, regional and

localized construction emissions associated with the Project would not exceed the SCAQMD numeric indicators. As such, the Project's contribution to cumulatively significant construction impacts to air quality would be less than significant.

b. Operation

The SCAQMD's approach for assessing cumulative impacts related to operations or long-term implementation is based on attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. As discussed earlier, the SCAQMD has developed a comprehensive plan, the AQMP, which addresses the region's cumulative air quality condition.

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the Los Angeles County portion of the Air Basin is currently in nonattainment for ozone, PM_{10}, and $PM_{2.5}$, related projects could exceed an air quality standard or contribute to an existing or projected air quality exceedance. Cumulative impacts to air quality are evaluated under two sets of thresholds for CEQA and the SCAQMD. In particular, Section 15064(h)(3) of the CEQA *Guidelines* provides guidance in determining the significance of cumulative impacts. Specifically, Section 15064(h)(3) states in part that:

> *"A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency…"*

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the Project's incremental contribution to cumulative air quality impacts is determined based on compliance with the SCAQMD adopted 2012 AQMP. The Project would not conflict with or obstruct implementation of AQMP and would be consistent with the growth projections in the AQMP.

Nonetheless, SCAQMD no longer recommends relying solely upon consistency with the AQMP as an appropriate methodology for assessing cumulative air quality impacts. The SCAQMD recommends that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality. As discussed previously, the Project would not exceed the SCAQMD regional numeric indicators. Therefore, the Project's incremental contribution to long-term emissions of non-attainment pollutants and ozone precursors, considered together with related projects, would not be cumulatively considerable, and therefore impacts would be less than significant.

5. MITIGATION MEASURES

The Project would result in less-than-significant impacts with respect to emissions of construction and operational emissions and consistency with applicable air quality plans, policies, or regulations. Therefore, no mitigation measures would be required.

6. LEVEL OF SIGNIFICANCE AFTER MITIGATION

Impacts regarding construction and operational emissions and consistency with applicable air quality plans, policies, or regulations would be less than significant.