5.2 AIR QUALITY

This section describes the existing air quality conditions of the site and the regulatory setting and evaluates potential impacts resulting from construction and operation of the proposed project. This section is based on the following document (included in Appendix C of this EIR): *Air Quality and Greenhouse Gas Technical Report for the La Brea Tar Pits Master Plan* (SWCA 2023).

5.2.1 Existing Conditions

5.2.1.1 Overview of Air Pollution and Potential Health Effects

CRITERIA AIR POLLUTANTS

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of specific pollutants in order to protect the public health and welfare. These pollutants are referred to as "criteria air pollutants" and the national and state standards have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety; and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

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 and regulated as part of the overall endeavor to prevent further deterioration and facilitate improvement in the air quality with the South Coast Air Basin (Air Basin). The criteria air pollutants for which national and state standards have been promulgated and which are most relevant to current air quality planning and regulation in the Air Basin include carbon monoxide (CO), ozone (O_3), particulate matter (PM), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead, sulfates, and hydrogen sulfide (H_2S). These pollutants, as well as volatile organic compounds (VOCs) and toxic air contaminants (TACs), are discussed in the following paragraphs. The national and state criteria pollutants and the applicable ambient air quality standards are listed in Table 5.2-1.

Ozone

O_3 is a strong-smelling, pale blue, reactive, toxic chemical gas consisting of three oxygen atoms. It is a secondary pollutant formed in the atmosphere by a photochemical process involving the sun's energy and O_3 precursors. These precursors are mainly oxides of nitrogen (NO_x) and VOCs. The maximum effects of precursor emissions on O_3 concentrations usually occur several hours after they are emitted and many miles from the source. Meteorology and terrain play major roles in O_3 formation, and ideal conditions occur during summer and early autumn on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. O3 exists in the upper atmosphere O_3 layer (stratospheric ozone) and at the Earth's surface in the troposphere (ozone). The O_3 that the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) regulate as a criteria air pollutant is produced close to the ground level, where people live, exercise, and breathe. Ground-level O_3 is a harmful air pollutant that causes numerous adverse health effects and is thus considered "bad" O_3. Stratospheric, or "good" O_3 is found naturally in the upper atmosphere, where it reduces the amount of ultraviolet light (i.e., solar radiation) entering the Earth's atmosphere. Without the protection of the beneficial stratospheric O_3 layer, plant and animal life would be seriously harmed.

Table 5.2-1. State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
			Primary	**Secondary**
Ozone (O_3)	1 hour	0.09 ppm (180 μg/m³)	–	Same as Primary
	8 hour	0.070 ppm (137 μg/m³)	0.070 ppm (137 μg/m³)	
Respirable particulate matter (PM_{10})	24 hour	50 μg/m³	150 μg/m³	Same as Primary
	Annual mean	20 μg/m³	–	
Fine particulate matter ($PM_{2.5}$)	24 hour	–	35 μg/m³	Same as Primary
	Annual mean	12 μg/m³	12.0 μg/m³	15 μg/m³
Carbon monoxide (CO)	1 hour	20 ppm (23 μg/m³)	35 ppm (40 mg/m³)	–
	8 hour	9.0 ppm (10 mg/m³)	9 ppm (10 mg/m³)	–
Nitrogen dioxide(NO_2)	1 hour	0.18 ppm (339 μg/m³)	100 ppb (188 μg/m³)	–
	Annual mean	0.030 ppm (57 μg/m³)	0.053 ppm (100 μg/m³)	Same as Primary
Sulfur dioxide (SO_2)	1 hour	0.25 ppm (655 μg/m³)	75 ppb (196 μg/m³)	–
	3 hour	–	–	0.5 ppm (1,300 μg/m³)
	24 hour	0.04 ppm (105 μg/m³)	0.14 ppm	–
	Annual mean	–	0.030 ppm	–
Lead	30-day average	1.5 μg/m³	–	–
	Calendar quarter	–	1.5 μg/m³	Same as Primary
	Rolling 3-month average	–	0.15 μg/m³	Same as Primary
Visibility-reducing particles	8 hour	10-mile visibility standard, extinction of 0.23 per kilometer	No National Standards	
Sulfates	24 hour	25 μg/m³		
Hydrogen sulfide (H_2S)	1 hour	0.03 ppm (42 μg/m³)		
Vinyl chloride	24 hour	0.01 ppm (265 μg/m³)		

Source: California Air Resources Board (2016)

Notes: ppm = parts per million; ppb = parts per billion; μg/m³ = micrograms per cubic meter; – = no standard.

O_3 in the troposphere causes numerous adverse health effects; short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes (EPA 2022a). These health problems are particularly acute in sensitive receptors such as the sick, the elderly, and young children.

Nitrogen Dioxide

NO_2 is a brownish, highly reactive gas that is present in all urban atmospheres. The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO), which is a colorless, odorless gas. NO_x plays a major role, together with VOCs, in the atmospheric reactions that produce O_3. NO_x is formed from fuel combustion under high temperature or pressure. In addition, NO_x is an important precursor to acid rain and may affect both terrestrial and aquatic ecosystems. The two major emissions sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections (EPA 2022a).

Carbon Monoxide

CO is a colorless, odorless gas formed by the incomplete combustion of hydrocarbon, or fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions—primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, which is a typical situation at dusk in urban areas from November to February. The highest levels of CO typically occur during the colder months of the year, when inversion conditions are more frequent.

In terms of adverse health effects, CO competes with oxygen, often replacing it in the blood, reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can include dizziness, fatigue, and impairment of central nervous system functions (EPA 2022a).

Sulfur Dioxide

SO_2 is a colorless, pungent gas formed primarily from incomplete combustion of sulfur-containing fossil fuels. The main sources of SO_2 are coal and oil used in power plants and industries; as such, the highest levels of SO_2 are generally found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels.

SO_2 is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. When combined with particulate matter, SO_2 can injure lung tissue and reduce visibility and the level of sunlight. SO_2 can also yellow plant leaves and erode iron and steel (EPA 2022a).

Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Coarse particulate matter (PM_{10}) is 10 microns or less in diameter and is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. Fine particulate matter ($PM_{2.5}$) is 2.5 microns or less in diameter and is roughly 1/28 the diameter of a human hair. $PM_{2.5}$ results from fuel combustion (e.g., from motor vehicles and power generation and industrial facilities), residential fireplaces, and woodstoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as sulfur oxides (SOx), NO_x, and VOCs.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, sulfates, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport adsorbed gases such as chlorides or ammonium into the lungs, also causing injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissue. Suspended particulates also damage and discolor surfaces on which they settle and produce haze and reduce regional visibility.

People with influenza, people with chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death as a result of breathing particulate matter. People with bronchitis can expect aggravated symptoms from breathing in particulate matter. Children may experience a decline in lung function due to breathing in $PM_{2.5}$ and PM_{10} (EPA 2022a).

Lead

Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paints, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phaseout of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phaseout of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance, including intelligence quotient (IQ) performance, psychomotor performance, reaction time, and growth. Children are highly susceptible to the effects of lead (EPA 2022a).

Others

Sulfates. Sulfates are the fully oxidized form of sulfur, which typically occur in combination with metals or hydrogen ions. Sulfates are produced from reactions of SO_2 in the atmosphere. Sulfates can result in respiratory impairment, as well as reduced visibility.

Vinyl chloride. Vinyl chloride is a colorless gas with a mild, sweet odor, which has been detected near landfills, sewage plants, and hazardous waste sites, due to the microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air can cause nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure through inhalation can cause liver damage, including liver cancer.

Hydrogen sulfide. H_2S is a colorless and flammable gas that has a characteristic odor of rotten eggs. Sources of H_2S include geothermal power plants, petroleum refineries, sewers, and sewage treatment plants. Exposure to H_2S can result in nuisance odors, as well as headaches and breathing difficulties at higher concentrations.

VOLATILE ORGANIC COMPOUNDS

VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids. Some VOCs are also classified by the State as TACs. While there are no specific VOC ambient air quality standards, VOC is a prime component (along with NO_x) of the photochemical processes by which such criteria pollutants as O_3, NO_2, and certain fine particles are formed. They are, thus, regulated as “precursors” to the formation of those criteria pollutants.

TOXIC AIR CONTAMINANTS

TACs refer to a diverse group of "non-criteria" air pollutants that can affect human health but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above, but because their effects tend to be local rather than regional. TACs are identified by federal and state agencies based on a review of available scientific evidence. In the state of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hot spots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over 5 years.

The federal TACs are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health, although there are no ambient standards established for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or other acute (short-term) or chronic (long-term) health problems. For TACs that are known or suspected carcinogens, the CARB has consistently found that there are no levels or thresholds below which exposure is risk free. Individual TACs vary greatly in the risks they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another. For certain TACs, a unit risk factor can be developed to evaluate cancer risk. For acute and chronic health effects, a similar factor, called a Hazard Index, is used to evaluate risk. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment (OEHHA). Examples of TAC sources include industrial processes, dry cleaners, gasoline stations, paint and solvent operations, and fossil fuel combustion sources. The TACs that are relevant to the implementation of the project include diesel particulate matter (DPM) and airborne asbestos.

DPM was identified as a TAC by the CARB in August 1998 (CARB 1998). DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 40% of the statewide total, with an additional 57% attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about 3% of emissions, include shipyards, warehouses, heavy-equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities.

Exposure to DPM can have immediate health effects. DPM can have a range of health effects including irritation of eyes, throat, and lungs, causing headaches, lightheadedness, and nausea. Exposure to DPM also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks. Children, the elderly, and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to fine-particle pollution. In California, DPM has been identified as a carcinogen.

Naturally occurring asbestos areas are identified based on the type of rock found in the area. Asbestos-containing rocks found in California are ultramafic rocks, including serpentine rocks. Asbestos has been designated a TAC by the CARB and is a known carcinogen. When this material is disturbed in connection with construction, grading, quarrying, or surface mining operations, asbestos-containing dust can be generated. Exposure to asbestos can result in adverse health effects such as lung cancer, mesothelioma (cancer of the linings of the lungs and abdomen), and asbestosis (scarring of lung tissues that results in constricted breathing) (Van Gosen and Clinkenbeard 2011). According to the California Geologic Survey, the project site is not located in an area of naturally occurring asbestos (CARB 2000).

Asbestos-containing materials become a health hazard once they are disturbed. Intact, asbestos fibers imbedded within construction materials and components are inert and do not pose a health hazard; however, once they are disturbed, through physical contact or building renovation and demolition activities, asbestos fibers may be rendered airborne (South Coast Air Quality Management District [SCAQMD] 2007).

ODORS

Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and overall is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. In a phenomenon known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

A unique feature of the project is the existing subsurface conditions which consist of a relatively thin layer of artificial fill overlying alluvial deposits. The alluvial deposits consist of stiff clay and dense tar-bearing sands. Tar-bearing sands are saturated with hydrocarbons, whereas the upper clay soils contain less hydrocarbons. The presence of the hydrocarbons in the sediments is the result of the project site being over an oil field. Hydrogen sulfide and methane gases generated within the oil field are present in the subsurface. Because the project site is located within an area of known shallow methane and H_2S gas accumulation, crude oil and methane gas leak out from the petroleum deposits and migrate through fractures and faults located within the bedrock until encountering the alluvial soils, where they permeate into the alluvium and continue to travel upward to the ground surface. These unique subsurface conditions are a potential source of odors due to the presence of H_2S. Many of the light petroleum components are lost to evaporation and biogenic processes, resulting in viscous tar seeping out of the ground surface (Deane et al. 2018).

5.2.1.2 Existing Air Quality Conditions in the Project Area

The project is located within the South Coast Air Basin, an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and San Diego County to the south. The South Coast Air Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The air quality within the Air Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

Air pollutant emissions within the Air Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack, such as combustion equipment that produces electricity or generates heat. Area sources are widely distributed and include residential and commercial water heaters, agricultural fields, landfills, and others. Mobile sources include emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

REGIONAL AIR QUALITY

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The usually mild climatology pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The regional climate within the Air Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity.

The extent and severity of air pollution in the Air Basin is a function of the area's natural physical characteristics (e.g., weather and topography), as well as human-made influences (e.g., land use development patterns, heavy vehicular traffic, and industry). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential.

Pollutant concentrations in the Air Basin vary with location, season, and time of day. O_3 concentrations, 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 Bain and adjacent desert. The most severe air pollution throughout the Air Basin occurs from June through September. This condition is generally attributed to the large amount of pollutant emissions, light winds, and shallow vertical atmospheric mixing. This frequently reduces pollutant dispersion, causing elevated air pollution levels. Over the past 30 years, substantial progress has been made in reducing air pollution levels in Southern California (CARB 2018). However, the Air Basin still fails to meet the national standards for O_3 and $PM_{2.5}$. In addition, Los Angeles County still fails to meet the national standard for lead. On May 24, 2012, the CARB approved the State Implementation Plan (SIP) revision for the federal lead standard, which the EPA revised in 2008. The SIP revision addresses attainment of the federal lead standard in the South Coast Air Basin portion of Los Angeles County, the only area in California designated as nonattainment for lead. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. SCAQMD has the responsibility for ensuring that all national and state air quality standards are achieved and maintained throughout the Air Basin. To meet the standards, SCAQMD has adopted a series of air quality management plans (AQMPs), discussed below in Section 5.2.2, Regulatory Setting.

REGIONAL ATTAINMENT STATUS

Depending on whether the applicable ambient air quality standards are met or exceeded, the Air Basin is classified on a federal and state level as being in "attainment" or "nonattainment." The EPA and CARB determine the air quality attainment status of designated areas by comparing ambient air quality measurements from state and local ambient air monitoring stations with the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). These designations are determined on a pollutant-by-pollutant basis. Consistent with federal requirements, an unclassifiable/unclassified designation is treated as an attainment designation. The Air Basin currently fails to meet the NAAQS for lead, O_3, and $PM_{2.5}$. Therefore, Los Angeles County South Coast Air Basin is considered a "non-attainment" area for these pollutants on the federal level. As of September 2022, the Air Basin is also considered in non-attainment for O_3, $PM_{2.5}$, and PM_{10} on the state level (EPA 2022b).

REGIONAL MULTIPLE AIR TOXICS EXPOSURE STUDY

The SCAQMD has released an Air Basin–wide air toxics study, the Multiple Air Toxics Exposure Study V (MATES V). The MATES V study was developed to evaluate the cancer risk from toxic air emissions throughout the Air Basin by conducting a comprehensive monitoring program, an updated emissions inventory of TACs, and a modeling effort to fully characterize health risks for those living in the Air Basin. In the past iterations of the MATES study, the air toxics cancer risks were evaluated based on inhalation exposures only. However, in MATES V, the methodology was updated to include multiple exposure pathways, such as oral and dermal. The MATES V study concluded that the average carcinogenic risk from air pollution in the Air Basin is approximately 424 in 1 million over a 70-year duration (SCAQMD 2021a). Mobile sources (e.g., cars, trucks, trains, ships, aircraft, etc.) represent the greatest contributors. Approximately 50% of the risk is attributed to diesel particulate emissions, approximately 25% to other toxic emissions associated with mobile sources (including benzene, butadiene, and carbonyls), and approximately 25% of all carcinogenic risk is attributed to stationary sources, which include large industrial operations, such as refineries and metal processing facilities, as well as smaller businesses, such as gas stations and chrome plating.

As part of the MATES V study, the SCAQMD prepared a series of maps that shows regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of the ongoing effort to provide insight into relative risks. The maps' estimates represent the number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years) in parts of the area. The MATES V map is the most recently available map to represent existing conditions near the project site. The estimated cancer risk for the vast majority of the urbanized area within the Air Basin ranges from 200 to 1,000 cancers per million over a 70-year duration. Generally, the risk from air toxics is lower near the coastline, with higher risks concentrated near large diesel sources (e.g., freeways, airports, and ports).

LOCAL AIR QUALITY

Air pollutants emissions are generated in the local vicinity by stationary and area-wide sources, such as commercial and industrial activity, space and water heating, landscape maintenance, consumer products, and mobile sources primarily consisting of automobile traffic. Motor vehicles are the primary source of pollutants in the local vicinity.

Existing Criteria Pollutant Levels at Nearby Monitoring Stations

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin and has divided the Air Basin into 38 source receptor areas (SRAs) in which 31 monitoring stations operate. The project site is located within SRA 1, which covers the Central Los Angeles area. The monitoring station most representative of the project site is the North Main Street Station, located at 1630 North Main Street in the city of Los Angeles, approximately 7.3 miles east of the project site. Criteria pollutants monitored at this station include PM_{10}, $PM_{2.5}$, O_3, CO, NO_2, lead, and sulfate. Table 5.2-2 shows the ambient pollutant concentrations that have been measured in SRA 1 for the period 2018–2020, as well as any exceedances of the NAAQS and CAAQS.

Table 5.2-2. Summary of Ambient Air Quality in the Central Los Angeles Area

Pollutant		Year 2018	2019	2020
O_3	Maximum 1-hour concentration (ppm)	0.098	0.085	0.185
	Days exceeding CAAQS (0.09 ppm)	2	0	14
	Maximum 8-hour concentration (ppm)	0.073	0.08	0.118
	Days exceeding NAAQS (0.07 ppm)	4	2	22
	Days exceeding CAAQS (0.07 ppm)	4	2	22

Pollutant		Year		
		2018	**2019**	**2020**
Respirable PM_{10}	Maximum 24-hour concentration (μg/m^3)	81	62	77
	Days exceeding NAAQS (150 μg/m^3)	0	0	0
	Days exceeding CAAQS (50 μg/m^3)	31	3	24
	Annual arithmetic mean (μg/m^3)	34.1	25.5	23
	Does measured AAM exceed CAAQS (20 μg/m^3)?	Yes	Yes	Yes
Fine $PM_{2.5}$	Maximum 24-hour concentration (μg/m^3)	43.8	43.5	47.3
	Days exceeding NAAQS (35 μg/m^3)	3	1	2
	Annual arithmetic mean (μg/m^3)	12.58	10.85	12.31
	Does measured AAM exceed NAAQS/CAAQS (12 μg/m^3)?	Yes	No	Yes
CO	Maximum 1-hour concentration (ppm)	2.0	2.0	1.9
	Days exceeding NAAQS (35.0 ppm)	0	0	0
	Days exceeding CAAQS (20.0 ppm)	0	0	0
	Maximum 8-hour concentration (ppm)	1.7	1.6	1.5
	Days exceeding NAAQS and CAAQS (9 ppm)	0	0	0
NO_2	Maximum 1-hour concentration (ppm)	0.0701	0.0697	0.0618
	Days exceeding CAAQS (0.18 ppm)	No	No	No
	Annual arithmetic mean (ppm)	0.0185	0.0177	0.0169
	Does measured AAM exceed NAAQS (0.0534 ppm)?	No	No	No
	Does measured AAM exceed CAAQS (0.03 ppm)?	No	No	No
SO_2	Maximum 1-hour concentration (ppm)	0.0179	0.01	0.0038
	Days exceeding CAAQS (0.25 ppm)	0	0	0
	Maximum 24-hour concentration (ppm)	0.003	0.003	0.003
	Days exceeding CAAQS (0.04 ppm)	0	0	0
	Days exceeding NAAQS (0.14 ppm)	0	0	0
	Annual arithmetic mean (ppm)	0.001	0.001	0.001
	Does measured AAM exceed NAAQS (0.030 ppm)?	No	No	No
Lead	Maximum 30-day average concentration (μg/m^3)	0.011	0.012	0.013
	Does measured concentration exceed NAAQS (1.5 μg/m^3)?	No	No	No
	Maximum calendar quarter concentration (μg/m^3)	0.011	0.01	0.011
	Does measured concentration exceed CAAQS (1.5 μg/m^3)?	No	No	No
Sulfates	Maximum 24-hour concentration (μg/m^3)	4.5	5.1	3.3
	Does measured concentration exceed CAAQS (25 μg/m^3)?	No	No	No

Source: SCAQMD (2022b)

Notes: AAM = annual arithmetic mean; ppm = parts per million; μg/m^3 = micrograms per cubic meter

Existing Health Risks in the Project Vicinity

Based on the MATES V model, the multi-pathway cancer risk in the area immediately surrounding the project site in the 90036 zip code is approximately 495 in 1 million (SCAQMD 2021b). The cancer risk in this area includes diesel particulate matter, benzene, formaldehyde, and arsenic. However, the cancer risk is predominantly related to nearby sources of diesel particulate (e.g., the Harbor Freeway [Interstate

110]). In general, the risk at the project site is comparable to other urbanized areas in Los Angeles as air toxics cancer risk in this zip code is higher than 63.0% of the South Coast AQMD population (OEHHA 2021).

OEHHA, on behalf of the California Environmental Protection Agency (CalEPA), provides a screening tool called CalEnviroScreen that can be used to help identify California communities disproportionately burdened by multiple sources of pollution. According to CalEnviroScreen, the project is located in the 47th percentile, which means the project area is about average in comparison to other communities within California.

Sensitive Uses

Some population groups, including children, elderly, and acutely and chronically ill persons (especially those with cardiorespiratory diseases), are considered more sensitive to air pollution than others.
A sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. The following are land uses where sensitive receptors are typically located:

- schools, playgrounds, and childcare centers
- long-term health care facilities
- rehabilitation centers
- convalescent centers
- hospitals
- retirement homes
- residences

The project site is located in a highly urbanized area and is surrounded by a mix of commercial uses, residential uses, and open spaces. Specifically, the project is bounded by the Los Angeles County Museum of Art, Park La Brea Pool, parking lots, commercial uses, and multi-family uses. The closest sensitive land uses to the project site are off-site residential uses located 50 to 150 feet from the project site. The nearest school to the project site is Fusion Academy Miracle Mile, a private learning institution for middle school and high school students, located approximately 0.12 mile away, and the nearest daycare is Michal Daycare located approximately 0.28 mile away.

5.2.2 Regulatory Setting

5.2.2.1 Federal

FEDERAL CLEAN AIR ACT

The federal Clean Air Act (CAA), which was passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The CAA delegates primary responsibility for clean air to the EPA. The EPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies. Under the act, the EPA has established the NAAQS for six criteria air pollutants that are pervasive in urban environments and for which state and national health-based ambient air quality standards have been established. O_3, CO, NO_2, SO_2, lead, and particulate matter (PM_{10} and $PM_{2.5}$) are the six criteria air pollutants. Ozone is a secondary pollutant; NO_x and VOCs are of particular interest as they are precursors to ozone formation. The NAAQS are divided into primary and secondary standards; the primary standards are set to protect human health within an adequate margin of safety, and the secondary standards are set to protect environmental values, such as plant and animal life. The standards for all criteria pollutants are presented in Table 5.2-1.

The CAA requires the EPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant, based on whether the NAAQS have been achieved. The act also mandates that the State submit and implement a state implementation plan for areas not meeting the NAAQS. These plans must include pollution control measures that demonstrate how the standards will be met.

TOXIC SUBSTANCE CONTROL ACT

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, recordkeeping, and testing, and provides restrictions relating to chemical substances and/or mixtures. TSCA became law on October 11, 1976, and became effective on January 1, 1977. The TSCA authorized the EPA to secure information on all new and existing chemical substances, as well as to control any of the substances that were determined to cause unreasonable risk to public health or the environment. Congress later added additional titles to the act, with this original part designated at Title I – Control of Hazardous Substances. TSCA regulatory authority and program implementation rests predominantly with the federal government (i.e., the EPA). However, the EPA can authorize States to operate their own, EPA-authorized programs for some portions of the statute. TSCA Title IV allows States the flexibility to develop accreditation and certification programs and work practice standards for lead-related inspection, risk assessment, renovation, and abatement that are at least as protective as existing federal standards.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (ASBESTOS)

The EPA air toxics regulation for asbestos is intended to minimize the release of asbestos fibers during activities involving the handling of asbestos. Asbestos was one of the first hazardous air pollutants regulated under the air toxics program as there are major health effects associated with asbestos exposure (lung cancer, mesothelioma, and asbestosis). On March 31, 1971, the EPA identified asbestos as a hazardous pollutant, and on April 6, 1973, EPA promulgated the Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), currently found in 40 Code of Federal Regulations 61(M). The Asbestos NESHAP has been amended several times, most comprehensively in November 1990. In 1995, the rule was amended to correct cross-reference citations to Occupational Safety and Health Administration, Department of Transportation, and other EPA rules governing asbestos. Air toxics regulations under the CAA have guidance on reducing asbestos in renovation and demolition of buildings; institutional, commercial, and industrial building; large-scale residential demolition; exceptions to the asbestos removal requirements; asbestos control methods; waste disposal and transportation; and milling, manufacturing, and fabrication.

5.2.2.2 State

CALIFORNIA CLEAN AIR ACT

The California Clean Air Act (CCAA) was adopted by the CARB in 1988. The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for O_3, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. The CARB and local air districts are responsible for achieving CAAQS, which are to be achieved through district-level AQMPs that would be incorporated into the state implementation plan. In California, the EPA has delegated authority to prepare state implementation plans to CARB, which in turn, has delegated that authority to individual air districts. Each district plan is required to either

1) achieve a 5% annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or 2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

The State of California began to set its ambient air quality standards (i.e., CAAQS) in 1969, under the mandate of the Mulford-Carrell Act. The CCAA requires all air districts of the state to achieve and maintain the CAAQS by the earliest practical date. Table 5.2-1 shows the CAAQS currently in effect for each of the criteria pollutants, as well as the other pollutants recognized by the State. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, H_2S, vinyl chloride, and visibility-reducing particles (see Table 5.2-1).

CALIFORNIA CODE OF REGULATIONS

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended, or repealed by the state agencies pursuant to the Administrative Procedure Act. The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to 5 minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operation of any stationary, diesel-fueled, compression-ignition engine shall meet specified fuel and fuel additive requirements and emission standards.

TOXIC AIR CONTAMINANTS REGULATIONS

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act of 1983 (AB 1807, also known as the Tanner Air Toxics Act) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588 – Connelly). In the early 1980s, the CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Tanner Air Toxics Act (AB 1807) created California’s program to reduce exposure to air toxics. The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks (CARB 2011).

In August 1998, CARB identified DPM emissions from diesel-fueled engines as a TAC. In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles (CARB 2000b). The goal of the plan is to reduce diesel PM_{10} (inhalable particulate matter) emissions and the associated health risk by 75% in 2010, and by 85% by 2020. The plan identified 14 measures that target new and existing on-road vehicles (e.g., heavy-duty trucks and buses, etc.), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps, etc.), and stationary engines (e.g., stand-by power generators, etc.). During the control measure phase, specific statewide regulations designed to further reduce DPM emissions from diesel-fueled engines and vehicles were evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce DPM emissions. The project would be required to comply with applicable diesel control measures.

SCAQMD has adopted two rules to limit cancer and noncancer health risks from facilities located within its jurisdiction. Rule 1401 (New Source Review of Toxic Air Contaminants) regulates new or modified facilities, and Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) regulates facilities that are already operating. Rule 1402 incorporates requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities.

5.2.2.3 Regional

SCAQMD shares responsibility with CARB for ensuring that all state and federal ambient air quality standards are achieved and maintained throughout all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, including all of Orange County and 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 of the SCAQMD jurisdiction.

To meet the CAAQS and NAAQS, the SCAQMD has adopted a series of AQMPs. The 2016 AQMP incorporates the SCAG 2016 Regional Transportation Plan/Sustainable Community Strategy (2016-2040 RTP/SCS)[1] and updated emission inventory methodologies for various source categories. The 2016 AQMP also includes the new federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

The AQMP provides emissions inventories, ambient measurements, meteorological episodes, and air quality modeling tools. The AQMP also provides policies and measures to guide responsible agencies in achieving federal standards for healthful air quality in the Air Basin. It also incorporates a comprehensive strategy aimed at controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

The SCAQMD adopts rules and regulations to implement portions of the AQMP. Several of these rules may apply to project construction or operation. For example, SCAQMD Rule 403 requires the implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earthmoving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads.

The SCAQMD is currently in the process of replacing the CEQA Air Quality Handbook, approved in 1993, with the Air Quality Analysis Guidance Handbook (SCAQMD 2022a). In order to assist the CEQA practitioner in conducting an air quality analysis in the interim while this replacement air quality analysis guidance handbook is being prepared, supplemental guidance/information is provided on the SCAQMD website and includes: 1) EMission FACtor (EMFAC) on-road vehicle emission factors; 2) background CO concentrations; 3) localized significance thresholds (LSTs); 4) mitigation measures and control efficiencies; 5) mobile source toxics analysis; 6) off-road mobile source emission factors; 7) $PM_{2.5}$ significance thresholds and calculation methodology; and 8) updated SCAQMD air quality significance thresholds (SCAQMD 2022a). The SCAQMD also recommends using approved models to calculate emissions from land use products projects, such as the California Emission Estimator Model (CalEEMod) Version 2022.1.1.17 (California Air Pollution Control Officers Association [CAPCOA] 2022). These recommendations were followed in the preparation of this analysis.

The SCAQMD has also adopted land use planning guidelines in the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning* (SCAQMD 2005), which considers impacts to sensitive receptors from facilities that emit TAC emissions. SCAQMD's siting distance recommendations are the same as those provided by CARB. The SCAQMD document introduces land use–related policies that rely on design and distance parameters to minimize emissions and lower potential health risk.

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[1] Due to the AQMD publish date of 2016, the 2016 Regional Transportation Plan was incorporated. As discussed in the 2020-2045 RTP/SCS, the actions and strategies included in the 2020-2045 RTP/SCS remain unchanged from those adopted in the 2012-2035 and 2016-2040 RTP/SCS.

SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies. The following SCAQMD rules and regulations would be applicable to the project:

SCAQMD Rule 403 required projects to incorporate fugitive dust control measures at least as effectively as the following measures:

- Use water to control dust generation during demolition of structures;
- Clean up mud and dirt carried onto paved streets from the site;
- Install wheel washers for all exiting trucks, or wash off the tires or tracks of all trucks and equipment leaving the site;
- All haul trucks would be covered or would maintain at least 6 inches of freeboard;
- All material transported off-site shall be sufficiently watered or securely covered to prevent excessive amounts of spillage or dust;
- Suspend earthmoving operations or additional watering would be implemented to meet Rule 403 criteria if wind gusts exceed 25 miles per hour;
- The owner or contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable dust control of dust caused by wind. All paved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust cover shall be used to reduce dust emissions; and
- An information sign shall be posted at the entrance to the construction site that identifies the permitted construction hours and provides a telephone number to call and receive information about the construction project or to report complaints regarding excessive fugitive dust generation. A construction relations officers shall be appointed to act as a community liaison concerning on-site activity, including investigation and resolution of issues related to fugitive dust generating.

SCAQMD Rule 1113 limits the volatile organic compound content of architectural coating.

SCAQMD Rule 1403 establishes survey requirements, notifications, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities. Any activities at the project site that would renovate or modify the existing structures, including the proposed project, would be required to comply with this rule.

SCAQMD Regulation XIII, New Source Review, requires new on-site facility nitrogen oxide emissions to be minimized through the use of emission control measures (e.g., use of best available technology control technology for new combustion sources such as boilers and water heaters).

SCAQMD has adopted two rules to limit cancer and non-cancer health risks from facilities located within its jurisdiction. Rule 1401 (New Source Review of Toxic Air Contaminants) regulates new or modified facilities, and Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) regulates facilities that are already operating. Rule 1402 incorporates requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities.

5.2.2.4 County of Los Angeles

The County Board of Supervisors adopted the County of Los Angeles 2035 General Plan (2035 General Plan) on October 6, 2015. The adopted County General Plan represents a compromise comprehensive update intended to reflect changing demographics, growth, and infrastructure conditions in the county.

The County General Plan contains an Air Quality Element that addresses air quality and related issues. Included in the Air Quality Element are goals encouraging mixed-use development, the use of "green building" principles, energy and water efficiency, reducing vehicle miles traveled and vehicle trips, and promoting alternative modes of transportation (County of Los Angeles 2015).

The Air Quality Element of the County General Plan establishes the following goals that are relevant to the project:

Goal AQ 1. Protection from exposure to harmful air pollutants

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

Goal AQ3. Implementation of plans and programs to address the impact of climate change.

> ***Policy AQ 3.2.*** Reduce energy consumption of County operations by 20% by 2015.
>
> ***Policy AQ 3.3.*** Reduce water consumption of County operations.
>
> ***Policy AQ 3.5.*** Encourage energy conservation in new development and municipal operations.
>
> ***Policy AQ 3.6.*** Support rooftop solar facilities on new and existing buildings.

The County has the authority and responsibility to reduce air pollution by assessing and mitigating air emissions resulting from its land use decisions. Consistent with CEQA, the County assesses the air quality impacts of new development projects and requires mitigation of potentially significant air quality impacts by applying required conditions to projects through the projects through the County approval process. Depending on the location, the County uses either SCAQMD's CEQA Air Quality Handbook and SCAQMD's supplemental online guidance/information or CEQA guidance from the Antelope Valley Air Quality Management District for the environmental review of plans and development proposals within its jurisdiction. These guidance documents are more specific than the 2035 General Plan goals and policies noted above. Implementation of these guidance documents and consistency with the thresholds contained therein generally ensures that development projects are supportive and consistent with the 2035 General Plan.

5.2.2.5 City of Los Angeles

While the project site is located within the city of Los Angeles, it is owned by the County of Los Angeles. Accordingly, the regulatory guidance of both the City and the County are provided in this section for informational purposes.

The Air Quality Element of the City General Plan was adopted on November 24, 1992, and sets forth the goals, objectives, and policies which guide the City in the implementation of its air quality improvement programs and strategies. The Air Quality Element acknowledges the interrelationships among transportation and land use planning in meeting the City's mobility and air quality goals. The Air Quality Element of the City General Plan establishes six goals:

Goal 1. Good air quality in an environment of continued population growth and healthy economic structure;

> ***Objective 1.1.*** It is the objective of the City of Los Angeles to reduce air pollutants consistent with the Regional Air Quality Management Plan (AQMP), increase traffic mobility, and sustain economic growth citywide.

Objective 1.3. It is the objective of the City of Los Angeles to reduce particulate air pollutants emanating from unpaved areas. parking lots, and construction sites.

Policy 1.3.1. Minimize particulate emissions from construction sites.

Policy 1.3.2. Minimize particulate emissions from unpaved roads and parking lots associated with vehicular traffic.

Goal 2. Less reliance on single-occupant vehicles with fewer commute and non-work trips;

Objective 2.1. It is the objective of the City of Los Angeles to reduce work trips as a step toward attaining trip reduction objectives necessary to achieve regional air quality goals.

Policy 2.1.1. Utilize compressed work weeks and flextime, telecommuting, carpooling, vanpooling, public transit, and improve walking/bicycling–related facilities in order to reduce vehicle trips and/or vehicle miles traveled (VMT) as an employer and encourage the private sector to do the same to reduce work trips and traffic congestion.

Policy 2.2.2. Encourage multi-occupant vehicle travel and discourage single-occupant vehicle travel by instituting parking management practices.

Objective 4.1. It is the objective of the City of Los Angeles to include regional attainment of ambient air quality standards as a primary consideration in land use planning.

Policy 4.1.1. Coordinate with all appropriate regional agencies in the implementation of strategies for the integration of land use, transportation, and air quality policies.

Objective 4.2. It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.

Policy 4.2.2. Improve accessibility for the City's residents to places of employment, shopping centers, and other establishments.

Policy 4.2.3. Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.

Policy 4.2.4. Require that air quality impacts be a consideration in the review and approval of all discretionary projects.

Policy 4.2.5. Emphasize trip reduction, alternative transit, and congestion management measures for discretionary projects.

Goal 3. Efficient management of transportation facilities and systems infrastructure using cost-effective system management and innovative demand-management techniques;

Objective 5.1. It is the objective of the City of Los Angeles to increase energy efficiency of City facilities and private developments.

Policy 5.1.2. Effect a reduction in energy consumption and shift to nonpolluting sources of energy in its buildings and operations.

Policy 5.1.4. Reduce energy consumption and associated air emissions by encouraging waste reduction and recycling.

Objective 5.3. It is the objective of the City of Los Angeles to reduce the use of polluting fuels in stationary sources.

Policy 5.3.1. Support the development and use of equipment powered by electric or low-emitting fuels.

Goal 4. Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality;

Objective 4.1. It is the objective of the City of Los Angeles to include regional attainment of ambient air quality standards as a primary consideration in land use planning.

Policy 4.1.1. Coordinate with all appropriate regional agencies in the implementation of strategies for the integration of land use, transportation, and air quality policies.

Objective 4.2. It is the objective of the City of Los Angeles to reduce vehicle trips and vehicle miles traveled associated with land use patterns.

Policy 4.2.2. Improve accessibility for the City's residents to places of employment, shopping centers, and other establishments.

Policy 4.2.3. Ensure that new development is compatible with pedestrians, bicycles, transit, and alternative fuel vehicles.

Policy 4.2.4. Require that air quality impacts be a consideration in the review and approval of all discretionary projects.

Policy 4.2.5. Emphasize trip reduction, alternative transit, and congestion management measures for discretionary projects.

Goal 5. Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservative measures including passive measures such as site orientation and tree planting; and

Goal 6. Citizens' awareness of the links between personal behavior and air pollution, and participation and efforts to reduce air pollution.

In accordance with CEQA requirements. the City 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. The City uses SCAQMD's CEQA Air Quality Handbook and SCAQMD's supplemental online guidance/information for the environmental review of plans and development proposals within its jurisdiction.

5.2.3 Thresholds of Significance

The following thresholds of significance are based on the Environmental Checklist contained in Appendix G of the State CEQA Guidelines. A project would result in significant adverse impacts related to air quality if it would:

a) Conflict with or obstruct implementation of the applicable air quality plan.
b) Result in a cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

c) Expose sensitive receptors to substantial pollutant concentrations.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

5.2.4 Impact Assessment Methodology

The following impact analysis is based, in part, on the *Air Quality and Greenhouse Gas Technical Report for the La Brea Tar Pits Master Plan* (SWCA 2023; see Appendix C). The following analysis evaluates the potential increase in criteria air pollutants resulting from the project. The evaluation of potential impacts is based on the criteria discussed in the following paragraphs.

CONSISTENCY WITH APPLICABLE AIR QUALITY PLANS

State CEQA Guidelines Section 15125 requires an analysis of project consistency with applicable governmental plans and policies. In accordance with SCAQMD's CEQA Air Quality Handbook, the following criteria were used to evaluate the project's consistency with SCAQMD's AQMP and SCAG's regional plans and policies:

- Criterion 1: Will the project result in any of the following:
    - An increase in the frequency or severity of existing air quality violations;
    - Cause or contribute to new air quality violations; or
    - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP?
- Criterion 2: Will the project exceed the assumptions utilized in preparing the AQMP?
    - Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
    - Does the project include air quality mitigation measures; or
    - To what extent is the project development consistent with AQMP control measures?

As noted in Section 5.2.2.4, in the project area, the County assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by applying required conditions to projects through the County approval process in accordance with the SCAQMD's CEQA Air Quality Handbook (SCAQMD 2022a). This guidance document is more specific than the 2035 General Plan goals and policies as well as the Air Quality Element of the City General Plan. Adherence with the SCAQMD's CEQA Air Quality Handbook and AQMP control measures would ensure that the project is supportive of and consistent with the air quality goals and policies contained in the 2035 General Plan and the City General Plan.

CONSTRUCTION

The SCAQMD has established significance thresholds based on the State CEQA Guidelines. Specifically, based on criteria set forth in the SCAQMD CEQA Handbook Air Quality Significance Thresholds, the project would have a significant impact with regard to construction emissions if any of the following would occur:

- Regional emissions from both direct and indirect sources would exceed any of the following SCAQMD-prescribed threshold levels: 1) 100 pounds per day for NO_X; 2) 75 pounds per day for VOCs; 3) 150 pounds per day for PM_{10} or sulfur oxides; 4) 55 pounds per day for $PM_{2.5}$; or 5) 550 pounds per day for CO.

- Maximum on-site daily localized emissions exceed the LST, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for CO (20 parts per million [ppm] over a 1-hour period, or 9.0 ppm averaged over an 8-hour period) and NO_2 (0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, 0.03 ppm averaged over an annual period).
- Maximum on-site localized PM_{10} or $PM_{2.5}$ emissions during construction exceed the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the project site to exceed the incremental 24-hour threshold of 10.4 micrograms per cubic meter ($\mu g/m^3$) or 1.0 $\mu g/m^3$ PM_{10} averaged over an annual period.

OPERATION

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

- Operational emissions exceed any of the following SCAQMD prescribed threshold levels: 1) 55 pounds per day for NO_X; 2) 55 pounds per day for VOCs; 3) 150 pounds per day for PM_{10} or sulfur oxides; 4) 55 pounds per day for $PM_{2.5}$; or 5) 550 pounds per day for CO.
- Maximum on-site daily localized emissions exceed the LST, resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for CO (20 ppm over a 1-hour period or 9.0 ppm averaged over an 8-hour period) and NO_2 (0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, 0.03 ppm averaged over an annual period).
- Maximum on-site localized operational PM_{10} or $PM_{2.5}$ emissions exceed the incremental 24-hour threshold of 2.5 $\mu g/m^3$ or 1.0 $\mu g/m^3$ PM_{10} averaged over an annual period.
- The project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively.
- The project creates an odor nuisance pursuant to SCAQMD Rule 402.

TOXIC AIR CONTAMINANTS

The determination of significance 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 toxic air contaminants to sensitive receptors;
- the quantity, volume, and toxicity of the contaminants expected to be emitted;
- the likelihood and potential level of exposure; and
- the degree to which project design would reduce the risk of exposure.

Based on the criteria set forth in SCAQMD's CEQA Air Quality Handbook, the project may have a significant TAC impact if:

- The project results in the exposure of sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in 1 million or an acute or chronic hazard index of 1.0. For projects with a maximum incremental cancer risk between 1 in 1 million and

10 in 1 million, a project would result in a significant impact if the cancer burden exceeds 0.5 excess cancer cases.

5.2.5 Environmental Impact Analysis

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

According to the SCAQMD's CEQA Air Quality Handbook, in order to be consistent with the SCAQMD and SCAG regional plans and policies, including the AQMP, the project must be consistent with the air quality standards and the land use assumptions identified in the AQMP, as evaluated below.

AQMP AIR QUALITY STANDARDS

Construction of the project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (e.g., off-road construction equipment, soil disturbance, VOC off-gassing from asphalt pavement application) and off-site sources (e.g., vendor trucks, haul trucks, and worker vehicle trips). VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$ are the primary pollutants of concern during construction activities.

In addition, operation of the project would generate VOCs, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; water, waste, off-road, and stationary sources; and energy sources, including combustion of fuels used for space and water heating.

As described in detail in AQ Impact 2, below, the project would not increase the frequency or severity of an existing air quality violation or cause or contribute to new violations for any pollutants during either construction or operation of the project. As the project would not exceed any of the state and federal standards, the project would also not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP. Therefore, the project would be consistent with air quality standards included in the AQMP during both construction and operation.

AQMP AIR QUALITY ASSUMPTIONS

Table 5.2-3 summarizes the project's consistency with the assumptions included in the AQMP. As shown in Table 5.2-3, the project would be consistent with the land uses assumptions identified in the AQMP.

Table 5.2-3. Consistency with Assumptions of the AQMP

Assumptions	
Is the project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based?	**Consistent.** The project would result in the renovation and expansion of an existing museum facility. The project would not directly contribute to population growth in the vicinity of the project as the project does not include new housing. Further, the project is not expected to create a significant increase in the number of employees because the proposed improvements are not expected to result in an increase in the average amount of programming, hours, or the daily or annual attendance levels that have been experienced at La Brea Tar Pits. Therefore, projected levels of project employees and visitors would be consistent with the population and employment forecast for the subregion as adopted by SCAG. Because these same projections form the basis of the 2016 AQMP, it could be concluded that the project would be consistent with the population and employment growth projections of the AQMP.

Assumptions	
Does the project include air quality mitigation measures?	**Consistent.** The project would incorporate a number of key control measures identified by the SCAQMD, which have been included as Mitigation Measure AQ/mm-3.1. As such, the project meets this AQMP consistency criteria since all feasible mitigation measures would be implemented.
To what extent is project development consistent with the AQMP land use policies?	**Consistent.** The project includes various characteristics that minimize VMT and vehicle trips to the project site, including providing a diversity and mix of uses on the project site and within the "Miracle Mile" area, which would minimize vehicle trips and VMT by encouraging walking and non-automotive forms of transportation, and improved design including developing ground-floor museum uses and improved streetscape, which would enhance walkability in the project vicinity, among other project characteristics. Mitigation Measure GHG/mm-1.1 has been included in Section 5.7, Greenhouse Gas Emissions, to reduce project employee and visitor vehicle trips and increase alternative modes such as walking, bicycling, public transit, and rideshare through the preparation and implementation of a Transportation Demand Management program, which will be developed in consultation with Los Angeles Department of Transportation. Because the project implements the County of Los Angeles, City of Los Angeles, and SCAQMD objectives of minimizing VMT and the related vehicular air emissions, the project would be consistent with AQMP land use policies.

CONCLUSION

As evaluated above, the project would not have a significant long-term impact on the region's ability to meet state and federal air quality standards. Further, the project would be consistent with the land use assumptions included in the AQMP. Therefore, the project would be consistent with the SCAQMD's AQMP during both project construction and operation, and impacts would be *less than significant*.

AQ Impact 1
The project would not conflict with or obstruct implementation of applicable air quality plans during either construction or operation. Construction and operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. a)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to consistency with applicable air quality plans would be less than significant.

b) Would the project result in a cumulatively considerable new increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The Air Basin is designated as a nonattainment area for federal O_3 and $PM_{2.5}$ standards and the rolling 3-month average lead standard. It is designated as a nonattainment area for state O_3, PM_{10}, and $PM_{2.5}$ standards (CARB 2017; EPA 2022b). The Air Basin is designated as attainment or unclassified for all other federal and state pollutants.

CONSTRUCTION

Construction of the project would result in the temporary addition of pollutants to the local airshed caused by on-site sources (e.g., off-road construction equipment, soil disturbance, VOC off-gassing from asphalt pavement application) and off-site sources (e.g., vendor trucks, haul trucks, and worker vehicle trips). Specifically, entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. Internal combustion engines used by construction equipment, haul trucks, vendor trucks (i.e., delivery trucks), and worker vehicles would result in emissions of VOCs, NO_x, CO, PM_{10}, and $PM_{2.5}$. 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.

CalEEMod was used to calculate air pollutant emissions that would occur during proposed construction activities, which is anticipated last a total of approximately 4 years. Table 5.2-4 identifies the estimated unmitigated maximum daily construction emissions generated during construction of the project in comparison to the applicable SCAQMD regional significance thresholds. See Appendix C for a description of modeling inputs.

Table 5.2-4. Unmitigated Daily Construction Emissions Summary

	Unmitigated Construction Emissions Summary					
	ROG	**NOx**	**CO**	**PM10**	**PM2.5**	**SO2**
Construction Year	**Pollutant Emission (pounds per day)**					
2024	1.66	29.6	48.3	21.8	9.7	0.11
2025	1.47	12.0	30.4	4.74	0.96	0.03
2026	8.96	11.8	32.2	6.38	1.19	0.03
2027	1.76	11.7	38.6	6.5	1.21	0.04
Peak daily emission	*8.96*	*29.6*	*48.3*	*21.8*	*9.7*	*0.11*
SCAQMD regional significance thresholds	*75*	*100*	*550*	*150*	*55*	*150*
Threshold exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

Note: ROG = reactive organic gases. Emissions were quantified using CalEEMod version 2022.1.1.17 (CAPCOA 2022).

Summer model results are presented above. Model results (summer, winter, and annual) and assumptions are provided in Appendix A of the Air Quality and Greenhouse Gas Technical Report (see Appendix C) (SWCA 2023).

As shown in Table 5.2-4, estimated unmitigated construction emissions for all pollutants are below SCAQMD regional significance thresholds.

The project would be required to comply with SCAQMD Rule 403 to control dust emissions generated during any dust-generating activities. Standard construction practices that would be employed to reduce fugitive dust emissions include watering of the active dust areas up to three times per day, depending on weather conditions, using water to control dust emissions during demolition activities, washing vehicle wheels before they leave the site, etc. Adherence to SCAQMD Rule 403 would further reduce construction-related emissions of fugitive dust at the project site. Therefore, construction-related impacts would be *less than significant*.

OPERATION

Project operations would generate VOCs, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions from mobile sources, including vehicle trips; area sources, including the use of consumer products, architectural coatings for repainting, and landscape maintenance equipment; water, waste, off-road, and stationary sources; and energy sources, including combustion of fuels used for space and water heating.

CalEEMod was used to calculate the maximum daily emissions associated with operation of the project in 2028 at buildout. Table 5.2-5 identifies the estimated unmitigated maximum daily operational emissions of the project in comparison to the applicable SCAQMD regional significance thresholds. See Appendix C for a description of modeling inputs.

Table 5.2-5. Unmitigated Daily Operational Emissions Summary

	Unmitigated Operations Emissions Summary					
	ROG	NOx	CO	PM_{10}	$PM_{2.5}$	SO_2
Operations Source Type	Pollutant Emission (pounds per day)					
Mobile	4.98	3.17	37.0	8.40	2.17	0.09
Area	2.59	0.04	4.61	0.01	0.01	<0.005
Energy	0.17	3.02	2.54	0.23	0.23	0.02
Off-road	0.03	0.29	0.52	0.01	0.01	<0.005
Stationary	0.84	2.73	3.04	0.12	0.12	<0.005
Total	***8.61***	***9.25***	***47.71***	***8.77***	***2.54***	***0.13***
SCAQMD regional operational significance thresholds	*55*	*55*	*550*	*150*	*55*	*150*
Threshold exceeded?	*No*	*No*	*No*	*No*	*No*	*No*

Note: ROG = reactive organic gases. CalEEMod emissions were quantified using CalEEMod, version 2022.1.1.17 (CAPCOA 2022).

Summer model results are presented above for daily emissions. Model results (summer, winter, and annual) and assumptions are provided in Appendix A of the Air Quality and Greenhouse Gas Technical Report (see Appendix C) (SWCA 2023).

The values for each operational source type shown are the maximum summer daily emissions results from the CalEEMod output, assuming operational year 2028. The total values may not sum exactly due to rounding.

As shown in Table 5.2-5, maximum daily operational emissions of VOCs, NO_x, CO, SO_x, PM_{10}, and $PM_{2.5}$ generated by the project would not exceed the SCAQMD's significance thresholds. Therefore, operational impacts would be *less than significant*.

AQ Impact 2
The project would not result in a cumulatively considerable net increase of criteria pollutants that would exceed applicable SCAQMD thresholds during either construction or operation. Construction and operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. b)
Mitigation Measures
No mitigation is required.

AQ Impact 2
Impacts Following Mitigation
Not applicable. Impacts related to a net increase of criteria pollutants would be less than significant.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Project construction activities would result in temporary sources of on-site criteria air pollutant emissions associated with construction equipment exhaust and dust-generating activities, which could adversely affect nearby sensitive land uses. The closest sensitive land uses to the project site are off-site residential uses located between 50 to 150 feet from the project site.

A localized significance threshold (LST) analysis was performed to evaluate localized air quality impacts to sensitive receptors in the immediate vicinity of the project as a result of project activities. A detailed description of the localized significance threshold analysis is included in Appendix C. Table 5.2-6 shows the maximum daily on-site construction emissions generated during construction of the project in comparison to SCAQMD thresholds.

Table 5.2-6. Construction Localized Significance Thresholds Analysis

	NOx	CO	PM10	PM2.5
Year	Pounds per Day*			
2024	29.6	48.3	9.01	4.07
2025	12.0	30.4	3.39	0.85
2026	11.8	32.2	4.05	0.97
2027	11.7	38.6	4.02	0.99
SCAQMD construction LST criteria	*161*	*1,861*	*16*	*8*
Threshold exceeded?	*No*	*No*	*No*	*No*

Source: SCAQMD (2009)

* Localized significance thresholds are shown for a 5.0-acre disturbed area corresponding to a distance to a sensitive receptor of 25 meters in SRA 1. Conservatively includes on-site and off-site emissions.

As shown in Table 5.2-6, proposed construction activities would not generate emissions in excess of LSTs for the Central Los Angeles area; therefore, project construction would not expose sensitive receptors to localized emissions concentrations in excess of SCAQMD standards, and construction impacts related to localized emissions concentrations would be *less than significant*.

In addition to construction-related emissions, maximum daily on-site operational emissions in comparison to SCAQMD thresholds are shown in Table 5.2-7.

As shown in Table 5.2-7, proposed operations would not generate emissions in excess of site-specific LSTs; therefore, project operation would not expose sensitive receptors to localized emissions concentrations in excess of SCAQMD standards, and operation impacts related to localized emissions concentrations would be *less than significant*.

Table 5.2-7. Operational Localized Significance Thresholds Analysis

Year	NOx	CO	PM10	PM2.5
	Pounds per Day (On-site)*			
2028	6.08	10.71	0.37	0.37
SCAQMD operational LST criteria	*161*	*1,861*	*4*	*2*
Threshold exceeded?	*No*	*No*	*No*	*No*

Source: SCAQMD (2009)

* Localized significance thresholds are shown for a 5.0-acre disturbed area corresponding to a distance to a sensitive receptor of 25 meters in SRA 1.

TOXIC AIR CONTAMINANTS CONSTRUCTION HEALTH RISK ASSESSMENT

A construction health risk assessment (HRA) was performed to estimate the Maximum Individual Cancer Risk and the Chronic Hazard Index for residential receptors resulting from project construction. Table 5.2-8 summarizes the results of the construction HRA.

As shown in Table 5.2-8, the HRA results from the unmitigated scenario show that project construction would result in a Residential Chronic Hazard Index of 0.08, which is below the 1.0 significance threshold; however, project construction would result in cancer risks exceeding the 10 in 1 million threshold.
For these reasons, without mitigation, project construction could result in toxic air contaminants exposure that could be *significant*.

Table 5.2-8. Construction Health Risk Assessment Results – Unmitigated

Impact Parameter	Unit	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	per million	78.07	10	Potentially Significant
Chronic Hazard Index – Residential	Index Value	0.08	1.0	Less than Significant

Source: SCAQMD (2019)

Note: See Appendix C (SWCA 2023) for detailed results.

TOXIC AIR CONTAMINANTS OPERATIONAL HEALTH RISK ASSESSMENT

In addition, an operational HRA was performed to estimate the Maximum Individual Cancer Risk and the Chronic Hazard Index for residential receptors as a result of operation of the project, including truck trips and off-road/stationary equipment. Table 5.2-9 summarizes the results of the operational HRA.

Table 5.2-9. Operational Health Risk Assessment Results – Unmitigated

Impact Parameter	Unit	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	per million	7.81	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.003	1.0	Less than Significant

Source: SCAQMD (2019)

Note: See Appendix C (SWCA 2023) for detailed results.

As shown in Table 5.2-9, project operational activities would result in a Residential Maximum Individual Cancer Risk of 7.81 in 1 million, which would be less than the significance threshold of 10 in 1 million.

Project operations would also result in a Residential Chronic Hazard Index of 0.003, which is below the 1.0 significance threshold. Thus, operational impacts associated with potential cancer risk would be *less than significant*.

LOCAL CARBON MONOXIDE CONCENTRATIONS

At the time that the SCAQMD 1993 Handbook was published, the Air Basin was designated nonattainment under the CAAQS and NAAQS for CO. In 2007, the SCAQMD was designated in attainment for CO under both the CAAQS and NAAQS as a result of the steady decline in CO concentrations in the Air Basin due to turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities. The SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin: 1) Wilshire Boulevard and Veteran Avenue, 2) Sunset Boulevard and Highland Avenue, 3) La Cienega Boulevard and Century Boulevard, and 4) Long Beach Boulevard and Imperial Highway. At the time the 2003 AQMP was prepared, the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in Los Angeles County, with an average daily traffic volume of about 100,000 vehicles per day. Using CO emission factors for 2002, the peak modeled CO 1-hour concentration was estimated to be 4.6 ppm at the intersection of Wilshire Boulevard and Veteran Avenue. When added to the maximum 1-hour CO concentration from 2018 through 2020 at the North Main Street monitoring station, which was 2 ppm in 2019, the 1-hour CO would be 6.6 ppm, while the CAAQS is 20 ppm.

The 2003 AQMP also projected 8-hour CO concentrations at these four intersections for 1997 and from 2002 through 2005. From years 2002 through 2005, the maximum 8-hour CO concentration was 3.8 ppm at the Sunset Boulevard and Highland Avenue intersection in 2002; the maximum 8-hour CO concentration was 3.4 ppm at the Wilshire Boulevard and Veteran Avenue in 2002. Adding the 3.8 ppm to the maximum 8-hour CO concentration from 2018through 2020 at the North Main Street monitoring station, which was 1.7 ppm in 2018, the 8-hour CO would be 5.5 ppm, while the CAAQS is 9.0 ppm. Accordingly, CO concentrations at congested intersections would not exceed the 1-hour or 8-hour CO CAAQS unless projected daily traffic would be at least over 100,000 vehicles per day. Because the project would not increase daily traffic volumes at any study intersection to more than 100,000 vehicles per day as shown in the La Brea Tar Pits Master Plan Final Transportation Assessment (Kittelson and Associates, Inc. 2022), a CO hot spot is not anticipated to occur during either construction or operation, and associated impacts would be *less than significant*.

AQ Impact 3	
The project could expose sensitive residential receptors to substantial pollutant concentrations during construction related to diesel exhaust. Construction impacts could be significant. Operation of the project would not expose sensitive residential receptors to substantial pollutant concentrations. Operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. c)	
Mitigation Measures	
AQ/mm-3.1	*To reduce the potential for health risks as a result of construction of the project, the following measures shall be implemented:* • *Prior to the start of construction activities, it shall be ensured that all 75 horsepower or greater diesel-powered equipment are powered with CARB-certified Tier 4 Interim engines, except where the County establishes that Tier 4 Interim equipment is not available.*

AQ Impact 3	
	There are several other SCAQMD rules and regulations that serve as mitigation measures for the project construction. These rules are: • *SCAQMD Rule 403, which requires projects to incorporate fugitive dust control measures;* • *SCAQMD Rule 1113, which limits the volatile organic compound content of architectural coating; and* • *SCAQMD Regulation XIII, New Source Review, which requires new on-site facility nitrogen oxide emissions to be minimized through the use of emission control measures (e.g., use of best available technology control technology for new combustion sources such as boilers and water heaters).*
Impacts Following Mitigation	
With implementation of Mitigation Measure AQ/mm-3.1, diesel particulate matter would be reduced during the construction period and substantial pollutant concentrations would be less than significant, as demonstrated by the analysis conducted to calculate the effectiveness of the mitigation measures, shown in Table 5.2-10.	

Mitigation Measure AQ/mm-3.1 has been identified to reduce project construction-generated DPM emissions to the extent feasible through requiring all 75 horsepower or greater diesel-powered equipment to be powered with CARB-certified Tier 4 Interim engines. The HRA results following implementation of Mitigation Measure AQ/mm-3.1 are presented in Table 5.2-10. With the implementation of Mitigation Measure AQ/mm-3.1, the estimated cancer risk during project construction would be reduced below the SCAQMD threshold of 10 in 1 million (see Table 5.2-10).

Table 5.2-10. Construction Health Risk Assessment Results – Mitigated

Impact Parameter	Unit	Project Impact	CEQA Threshold	Level of Significance
Maximum Individual Cancer Risk – Residential	per million	8.59	10	Less than Significant
Chronic Hazard Index – Residential	Index Value	0.007	1.0	Less than Significant

Source: SCAQMD (2019)

Note: See Appendix C (SWCA 2023) for detailed results.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

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. The project does not include any uses identified by the SCAQMD as being associated with odors.

CONSTRUCTION

Construction activities associated with the project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be temporary and would not generate a new, long-term source of odor within the project area. In addition, the project would be required to comply with 13 CCR 2449(d)(3) and 2485, which require minimizing construction equipment idling time by either shutting it off when not in use or by reducing the time of idling to no more than 5 minutes, which would further reduce the detectable odors from heavy-duty equipment exhaust. The project would also be required to comply with the SCAQMD Regulation XI, Rule 1113 –

Architectural Coating, which would minimize odor impacts from reactive organic gas emissions during architectural coating. The project site is not located in an area of naturally occurring asbestos and asbestos-containing materials are a potential due to a small amount of demolition. However, any modification to the existing buildings would be required to comply with SCAQMD Rule 1403, which specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials. SCAQMD Rule 403 also contains measures that are required to be incorporated that would further reduce any odors associated with construction emissions. Therefore, impacts related to the generation of adverse odors or other emissions during project construction would be *less than significant*.

OPERATION

Operation of the project does not include any component with the potential to generate odorous emissions that could affect a substantial number of people. Therefore, impacts related to the generation of adverse odors or other emissions during project operation would be *less than significant*.

AQ Impact 4
The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people during either project construction or operation. Construction and operation impacts would be less than significant. (CEQA Checklist Appendix G Threshold III. d)
Mitigation Measures
No mitigation is required.
Impacts Following Mitigation
Not applicable. Impacts related to adverse odors and other emissions would be less than significant.

5.2.6 Cumulative Impact Analysis

The geographic area affected by the project and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. For air quality, the geographic scope for the project's cumulative impact analysis encompasses the Air Basin.

Based on SCAQMD guidance, individual construction projects that exceed SCAQMD's recommended daily thresholds for project-specific impacts would cause a cumulatively considerable increase in emissions for those pollutants for which the Air Basin is in non-attainment, as discussed below (SCAQMD 2003):

> *As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR… Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.*

Therefore, consistent with the accepted and established SCAQMD cumulative impact evaluation methodologies, the project's construction or operation emissions would be considered cumulatively considerable if project-specific emissions exceed an applicable SCAQMD-recommended significance threshold.

As analyzed in Section 5.2.5, the project would be consistent with the SCAQMD's AQMP during both project construction and operation (threshold a), and the project would not result in a cumulatively considerable net increase of criteria pollutants that would exceed applicable SCAQMD thresholds during either construction or operation (threshold b). In addition, the project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people during either project construction or operation (threshold d). As such, and consistent with SCAQMD guidance, the project would not contribute significantly to cumulative impacts associated with these issues.

However, the project's toxic air contamination HRA determined the project could expose sensitive residential receptors to substantial pollutant concentrations during construction related to diesel exhaust emissions (threshold c). Given the construction and diesel exhaust emissions that could occur in the vicinity of the project concurrent with project construction, prior to mitigation, this impact could be considered both a direct impact and a contribution to cumulative impacts related to diesel emissions.

In summary, for most of the threshold issue areas for the topic of air quality, the project would not contribute significantly to cumulative impacts. However, regarding toxic air contamination, the HRA determined that the project could contribute significantly to pollutant concentrations during construction (threshold c). Prior to mitigation, this contribution would be both a significant direct impact of the project as well as a potentially significant contribution to cumulative toxic air contamination in the vicinity of the project. The project's air pollutant emissions related to diesel exhaust during construction could result in a cumulative contribution to air pollution in the region, which would be *significant*. Operation of the project would not result in a significant contribution to air pollution in the region.

Implementation of Mitigation Measure AQ/mm-3.1 would reduce project construction emissions below the SCAQMD threshold, as shown in Table 5.2-10. As such, and consistent with SCAQMD guidance, after implementation of the mitigation measure, the project's contribution to diesel emissions would be less than significant both individually and cumulatively.

AQ Impact 5 (Cumulative Impacts)
The project's air pollutant emissions related to diesel exhaust during construction could result in a cumulative contribution to air pollution in the region. Operation of the project would not result in a significant contribution to air pollution in the region.
Mitigation Measures
Implement Mitigation Measure AQ/mm-3.1.
Impacts Following Mitigation
With implementation of the identified mitigation measure to reduce project-specific impacts, the project's contribution to cumulative impacts would be less than significant.

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