4.2 AIR QUALITY

4.2.1 Introduction

The purpose of this section is to describe the potential air quality impacts that would be generated by construction and operation of the Beaumont Summit Station Specific Plan Project (Project). The ambient air quality of the local and regional area is described, along with relevant federal, state, and local air pollutant regulations and pollutant concentrations. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (SCAQMD).

The setting, context, and impact analysis in this section are based primarily on air quality and health risk assessments conducted by Kimley-Horn that are contained in **Appendices A** and **B:**

- Kimley-Horn. February 2022. Air Quality Assessment: Summit Station (**Appendix A**);
- Kimley-Horn. February 2022. Health Risk Assessment: Summit Station (**Appendix B**).

4.2.2 Environmental Setting

Climate and Meteorology

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project is located within the South Coast Air Basin (SCAB), which includes the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, as well as all of Orange County. The SCAB is on a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean on the southwest and high mountains forming the remainder of the perimeter.[1] Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The SCAB is part of a semi-permanent high-pressure zone in the eastern Pacific. As a result, the climate is mild and tempered by cool sea breezes. This usually mild weather pattern is occasionally interrupted by periods of extreme heat, winter storms, and Santa Ana winds. The annual average temperature throughout the 6,645-square-mile SCAB ranges from low 60 to high 80 degrees Fahrenheit with little variance. With more oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas.

Contrasting the steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all annual rainfall occurs between the months of November and April. Summer rainfall is reduced to widely scattered thundershowers near the coast, with slightly heavier activity in the east and over the mountains.

Although the SCAB has a semiarid climate, the air closer to the Earth's surface is typically moist because of the presence of a shallow marine layer. Except for occasional periods when dry, continental air is brought into the SCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog are

[1] South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993.

frequent and low clouds known as high fog are characteristic climatic features, especially along the coast. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SCAB.

Wind patterns across the SCAB are characterized by westerly or southwesterly on-shore winds during the day and easterly or northeasterly breezes at night. Wind speed is typically higher during the dry summer months than during the rainy winter. Between periods of wind, air stagnation may occur in both the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During winter and fall, surface high-pressure systems over the SCAB, combined with other meteorological conditions, result in very strong, downslope Santa Ana winds. These winds normally continue for a few days before predominant meteorological conditions are reestablished.

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

In addition to the characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which air pollutants are mixed. These inversions are the marine inversion and the radiation inversion. The height of the base of the inversion at any given time is called the "mixing height." The combination of winds and inversions is a critical determinant leading to highly degraded air quality for the SCAB in the summer and generally good air quality in the winter.

Air Pollutants of Concern

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by state and federal laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants.

Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in **Table 4.2-1, Air Contaminants and Associated Public Health Concerns**.

Table 4.2-1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to O_3. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

[1] Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Source: California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, http://www.capcoa.org/health-effects/, Accessed August 19, 2020.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (i.e., chronic, carcinogenic or cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting

operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

Ambient Air Quality

CARB monitors ambient air quality at approximately 250 air monitoring stations across the State. These stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing levels of ambient air quality, historical trends, and projections near the Project are documented by measurements made by the SCAQMD, the air pollution regulatory agency in the SCAB that maintains air quality monitoring stations which process ambient air quality measurements.

Pollutants of concern in the SCAB include O_3, PM_{10}, and $PM_{2.5}$. The closest air monitoring station to the Project that monitors ambient concentrations of these pollutants is the Banning Airport Monitoring Station (located approximately 9.5 miles to the southeast). Local air quality data from 2018 to 2020 are provided in **Table 4.2-2, Ambient Air Quality Data**, which lists the monitored maximum concentrations and number of exceedances of state or federal air quality standards for each year.

Table 4.2-2: Ambient Air Quality Data

Criteria Pollutant	2018	2019	2020
Ozone (O_3) [1]			
1-hour Maximum Concentration (ppm)	0.119	0.119	0.150
8-hour Maximum Concentration (ppm)	0.106	0.096	0.115
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	33	24	29
NAAQS 8-hour (>0.070 ppm)	69	59	68
Carbon Monoxide (CO) [2]			
1-hour Maximum Concentration (ppm)	2.21	1.51	1.85
Number of Days Standard Exceeded			
NAAQS 1-hour (>35 ppm)	0	0	0
CAAQS 1-hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO_2) [1]			
1-hour Maximum Concentration (ppm)	0.0506	0.0560	0.0511
Number of Days Standard Exceeded			
NAAQS 1-hour (>0.100 ppm)	0	0	0
CAAQS 1-hour (>0.18 ppm)	0	0	0

Criteria Pollutant	2018	2019	2020
Particulate Matter Less Than 10 Microns (PM_{10})[1]			
National 24-hour Maximum Concentration	39.3	63.8	69.3
State 24-hour Maximum Concentration	36.3	58.8	63.9
State Annual Average Concentration (CAAQS=20 µg/m^3)	—	—	—
Number of Days Standard Exceeded			
NAAQS 24-hour (>150 µg/m^3)	0	0	0
CAAQS 24-hour (>50 µg/m^3)	0	2	1
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$)[1]			
National 24-hour Maximum Concentration	—		—
State 24-hour Maximum Concentration	32.0	23.4	46.7
Number of Days Standard Exceeded			
NAAQS 24-hour (>35 µg/m^3)	—	—	—

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million.
µg/m^3 = micrograms per cubic meter; – = not measured

[1] Measurements taken at the Banning-Airport Monitoring Station at 200 S. Hathaway Street, Banning, California 92220 (CARB# 33164)

[2] Measurements taken at the Rubidoux - Mission Boulevard Monitoring Station at 5888 Mission Boulevard, Riverside, California 92509 (CARB# 33144), which is the closest monitoring station that measures CO.

Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (https://www.arb.ca.gov/adam) except for CO, which were retrieved from the CARB Air Quality and Meteorological Information System (https://www.arb.ca.gov/aqmis2/aqdselect.php).

Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Sensitive receptors that are in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The Project site is mainly surrounded by vacant/undeveloped land uses to the west, north, and east with few scattered residential and industrial units to the east. South of the Project site is primarily residential. Sensitive land uses nearest to the Project are shown in **Table 4.2-3, Sensitive Receptors**.

Table 4.2-3: Sensitive Receptors

Receptor Description	Distance and Direction from the Project
Single-family Residences	Adjacent to the east
Single-family Residences	165 feet to the south
Single-family Residences	530 feet to the southeast
Single-family Residences	740 feet to the west

Source: Google Earth

4.2.3 Regulatory Setting

Federal

Federal Clean Air Act

The Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the United States Environmental Protection Agency (EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including O_3, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Proposed projects in or near nonattainment areas could be subject to more stringent air permitting requirements. The FCAA requires each state to prepare a State Implementation Plan to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The EPA can withhold certain transportation funds from states that fail to comply with the planning requirements of the FCAA. If a state fails to correct these planning deficiencies within two years of Federal notification, the EPA is required to develop a Federal implementation plan for the identified nonattainment area or areas. The provisions of 40 Code of Federal Regulations Parts 51 and 93 apply in all nonattainment and maintenance areas for transportation-related criteria pollutants for which the area is designated nonattainment or has a maintenance plan. The EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in **Table 4.2-4, State and Federal Ambient Air Quality Standards**.

Table 4.2-4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
Ozone (O_3) [2, 5, 7]	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm
	1 Hour	0.09 ppm (180 µg/m^3)	NA
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m^3)	0.10 ppm[11]
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)
Sulfur Dioxide (SO_2) [8]	24 Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)
	Annual Arithmetic Mean	NA	0.03 ppm (80 µg/m^3)
Particulate Matter (PM_{10}) [1, 3, 6]	24-Hour	50 µg/m^3	150 µg/m^3
	Annual Arithmetic Mean	20 µg/m^3	NA
Fine Particulate Matter ($PM_{2.5}$) [3, 4, 6, 9]	24-Hour	NA	35 µg/m^3
	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3
Sulfates (SO_{4-2})	24 Hour	25 µg/m^3	NA
Lead (Pb) [10, 11]	30-Day Average	1.5 µg/m^3	NA
	Calendar Quarter	NA	1.5 µg/m^3
	Rolling 3-Month Average	NA	0.15 µg/m^3
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m^3)	NA
Vinyl Chloride (C_2H_3Cl) [10]	24 Hour	0.01 ppm (26 µg/m^3)	NA

Notes:
ppm = parts per million; µg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; – = no information available.

1 California standards for O_3, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. Measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe carbon monoxide standard is 6.0 ppm, a level one-half the national standard and two-thirds the State standard.

2 National standards shown are the "primary standards" designed to protect public health. National standards other than for O_3, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour O_3 standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour O_3 standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m_3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m^3.

3 Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard. NAAQS are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

4 On October 1, 2015, the national 8-hour O_3 primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour O_3 concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the O_3 level in the area.

5 The national 1-hour O_3 standard was revoked by the EPA on June 15, 2005.

6 In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.

7 The 8-hour California O_3 standard was approved by the CARB on April 28, 2005 and became effective on May 17, 2006.

Pollutant	Averaging Time	State Standards[1]	Federal Standards[2]
[8] On June 2, 2010, the EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following EPA initial designations of the new 1-hour SO_2 NAAQS.			
[9] In December 2012, EPA strengthened the annual $PM_{2.5}$ NAAQS from 15.0 to 12.0 µg/m³. In December 2014, the EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.			
[10] CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.			
[11] National lead standards, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.			
Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; California Air Resources Board, *Ambient Air Quality Standards*, May 6, 2016.			

U.S. Environmental Protection Agency

The EPA is the lead Federal Agency charged with the implementation and enforcement of the Clean Air Act (CAA). As part of this effort, the EPA is responsible for the establishment of national ambient air quality standards (referred to herein as the "Federal Standards" or NAAQS). They are designed to protect those sensitive receptors most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The EPA has established ambient air quality standards for the following air pollutants:

- Ozone (O_3)
- Nitrogen dioxide (NO_2)
- Carbon monoxide (CO)
- Sulfur dioxide (SO_2)
- Lead (Pb)
- Particulate matter (PM-10 and PM-2.5).

The CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The CAA Amendments dictate that states containing areas violating the NAAQS must revise their SIPs to include extra control measures to reduce air pollution. California's SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The SIP is periodically modified to reflect the latest emissions inventories, plans and rules and regulations of the various agencies with jurisdiction over the state's air basins. The EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

The 1977 federal CAA Amendments required the EPA to identify national emissions standards for hazardous air pollutants (HAPs) to protect public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 federal CAA Amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

State

Assembly Bill 617

Assembly Bill (AB) 617, approved in July 2017, focuses on criteria air pollutants and toxic air contaminants from non-mobile sources. AB 617 requires CARB to develop an air monitoring plan for the state, and then select, based on the plan, the highest priority locations to deploy community air monitoring systems. AB 617 also requires CARB to prepare a statewide strategy (with input from public stakeholders) to reduce emissions of toxic air contaminants and criteria pollutants in communities affected by a high cumulative exposure burden, which was due October 1, 2018. Air districts (including SCAQMD) that are in nonattainment must adopt expedited schedules to implement Best Available Retrofit Control Technology (BARCT) for existing sources of air pollution, and CARB is required to maintain a statewide clearinghouse that identifies Best Available Control Technology (BACT) and BARCT for criteria air pollutants and related technologies for toxic air contaminants.

In response to AB 617, CARB established the Community Air Protection Program (CAPP or Program). The Program's focus is to reduce exposure in communities most impacted by air pollution. CARB staff has already begun working closely with local air districts, community groups, community members, environmental organizations, and regulated industries to develop a new community-focused action framework for community protection. In September 2018 CARB selected 10 communities, three of these are in SCAQMD's jurisdiction. Muscoy, San Bernardino, one of the 2018 selected communities, is about 30 miles from Beaumont. In December 2019 CARB approved the AB 617, 2019 Community Selections. The 2019 communities located within SCAQMD boundaries are East Coachella Valley and South East Los Angeles, neither of which are proximate to the Planning Area. (CAPP 2019).

California Air Resources Board

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 3.2-3, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the State Implementation Plan for meeting federal clean air standards for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in **Table 4.2-4, State and Federal Ambient Air Quality Standards**.

Regional

South Coast Air Quality Management District

The SCAQMD is the air pollution control agency for Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that state and federal ambient air quality standards are attained and maintained in the SCAB. The SCAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, and many other activities. All projects are subject to SCAQMD rules and regulations in effect at the time of construction.

The SCAQMD is also the lead agency in charge of developing the AQMP, with input from the Southern California Association of Governments (SCAG) and CARB. The AQMP is a comprehensive plan that includes control strategies for stationery and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. CARB, in coordination with federal agencies, provides the control element for mobile sources.

The 2016 AQMP was adopted by the SCAQMD Governing Board on March 3, 2017. The purpose of the AQMP is to set forth a comprehensive and integrated program that would lead the SCAB into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the SCAQMD's commitments towards meeting the federal 8-hour O_3 standards. The AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and updated emission inventory methodologies for various source categories.

The SCAQMD has published the CEQA Air Quality Handbook (approved by the SCAQMD Governing Board in 1993 and augmented with guidance for Local Significance Thresholds [LST] in 2008). The SCAQMD guidance helps local government agencies and consultants to develop environmental documents required by California Environmental Quality Act (CEQA) and provides identification of suggested thresholds of significance for criteria pollutants for both construction and operation (see discussion of thresholds below). With the help of the CEQA Air Quality Handbook and associated guidance, local land use planners and consultants are able to analyze and document how proposed and existing projects affect air quality in order to meet the requirements of the CEQA review process. The SCAQMD periodically provides supplemental guidance and updates to the handbook on their website.

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization and under State law as a Regional Transportation Planning Agency and a Council of Governments.

The state and federal attainment status designations for the SCAB are summarized in **Table 4.2-5, South Coast Air Basin Attainment Status**. The SCAB is currently designated as a nonattainment area with respect to the State O_3, PM_{10}, and $PM_{2.5}$ standards, as well as the national 8-hour O_3 and $PM_{2.5}$ standards. The SCAB is designated as attainment or unclassified for the remaining state and federal standards.

Table 4.2-5: South Coast Air Basin Attainment Status

Pollutant	State	Federal
Ozone (O_3) (1 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Ozone (O_3) (8 Hour Standard)	Non-Attainment	Non-Attainment (Extreme)
Particulate Matter ($PM_{2.5}$) (24 Hour Standard)	–	Non-Attainment (Serious)
Particulate Matter ($PM_{2.5}$) (Annual Standard)	Non-Attainment	Non-Attainment (Moderate)
Particulate Matter (PM_{10}) (24 Hour Standard)	Non-Attainment	Attainment (Maintenance)
Particulate Matter (PM_{10}) (Annual Standard)	Non-Attainment	–
Carbon Monoxide (CO) (1 Hour Standard)	Attainment	Attainment (Maintenance)
Carbon Monoxide (CO) (8 Hour Standard)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (NO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Nitrogen Dioxide (NO_2) (Annual Standard)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (SO_2) (1 Hour Standard)	Attainment	Unclassifiable/Attainment
Sulfur Dioxide (SO_2) (24 Hour Standard)	Attainment	–
Lead (Pb) (30 Day Standard)	–	Unclassifiable/Attainment
Lead (Pb) (3 Month Standard)	Attainment	–
Sulfates (SO_{4-2}) (24 Hour Standard)	Attainment	–
Hydrogen Sulfide (H_2S) (1 Hour Standard)	Unclassified	–

Source: South Coast Air Quality Management District, *Air Quality Management Plan*, 2016; United States Environmental Protection Agency, *Nonattainment Areas for Criteria Pollutants (Green Book)*, 2021.

The following is a list of SCAQMD rules that are required of construction activities associated with the Project:

- **Rule 402 (Nuisance)** – This rule prohibits the discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403 (Fugitive Dust)** – This rule requires fugitive dust sources to implement best available control measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. This rule is intended to reduce PM_{10} emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. PM_{10} suppression techniques are summarized below.

  a) Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.

  b) All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.

  c) All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.

  d) The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.

  e) Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the workday to remove soil tracked onto the paved surface.

- **Rule 1113 (Architectural Coatings)** – This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce ROG emissions from the use of these coatings, primarily by placing limits on the ROG content of various coating categories.

- **Rule 2305 (Warehouse Indirect Source Rule)** - Rule 2305 was adopted by the SCAQMD Governing Board on May 7, 2021 to reduce NO_X and particulate matter emissions associated with warehouses and mobile sources attracted to warehouses. This rule applies to all existing and proposed warehouses over 100,000 square feet located in the SCAQMD. Rule 2305 requires warehouse operators to track annual vehicle miles traveled associated with truck trips to and from the warehouse. These trip miles are used to calculate the warehouses WAIRE (Warehouse Actions and Investments to Reduce Emissions) Points Compliance Obligation. WAIRE Points are earned based on emission reduction measures and warehouse operators are required to submit an annual WAIRE Report which includes truck trip data and emission reduction measures. Reduction strategies listed in the WAIRE menu include acquire zero emission (ZE) or near zero emission (NZE) trucks; require ZE/NZE truck visits; require ZE yard trucks; install on-site ZE charging/fueling infrastructure; install onsite energy systems; and install filtration systems in residences, schools, and other buildings in the adjacent community. Warehouse operators that do not earn a sufficient number of WAIRE points to satisfy the WAIRE Points Compliance Obligation would be required to pay a mitigation fee. Funds from the mitigation fee will be used to incentivize the purchase of cleaner trucks and charging/fueling infrastructure in communities nearby.

Air Toxics Control Plan

The Air Toxics Control Plan (March 2000, revised March 26, 2004) is a planning document designed to examine the overall direction of the SCAQMD's air toxics control program. It includes development and

implementation of strategic initiatives to monitor and control air toxics emissions. Control strategies that are deemed viable and are within the SCAQMD's jurisdiction will each be brought to the SCAQMD Board for further consideration through the normal public review process. Strategies that are to be implemented by other agencies will be developed in a cooperative effort, and the progress will be reported back to the Board periodically.

Multiple Air Toxics Exposure Study

The SCAQMD conducted an in-depth analysis of the toxic air contaminants and their resulting health risks for all of Southern California. The Multiple Air Toxics Exposure Study in the SCAB (MATES V) (August 2021) shows that carcinogenic risk from air toxics in the SCAB, based on the average concentrations at the 10 monitoring sites, is approximately 40 percent lower than the monitored average in MATES IV and 84 percent lower than the average in MATES II.

MATES V is the most comprehensive dataset documenting the ambient air toxic levels and health risks associated with the SCAB emissions. Therefore, MATES V study represents the baseline health risk for a cumulative analysis. MATES V estimates the average excess cancer risk level from exposure to TACs is 424 in one million basin-wide. In comparison, the MATES IV basin average risk was 897 per million. These model estimates were based on monitoring data collected at ten fixed sites within the SCAB. None of the fixed monitoring sites are near the Project site. However, MATES V has extrapolated the excess cancer risk levels throughout the SCAB by modeling the specific grids. MATES V modeling predicted an excess cancer risk of 286 in one million for the Project area[2]. DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 72.4 percent of the total risk shown in MATES V in this area.

Local

Beaumont Municipal Code

The Beaumont Municipal Code establishes the following air quality provisions relative to the Project.

Title 17 – Zoning, Chapter 17.04 – Performance Standards

Section 17.04.050 Air Quality

The California Air Resources Board and the South Coast Air Quality Management District (SCAQMD) are the agencies responsible for the implementation of the Clean Air Act at the local level. In order to protect the health and welfare of those persons living, working, or visiting the City of Beaumont, the following performance standards with respect to air quality are outlined in this Section.

A. Smoke and Particulates. No smoke of any type shall be emitted from a source in excess of SCAQMD standards. No elements of dust, fly ash, vapors, fumes, gases or other forms of air pollution shall be permitted in excess of the standards set by the SCAQMD or that can cause damage to human health, animals, vegetation, or that can cause excessive soiling at any location.

[2] South Coast Air Quality Management District, *MATES V Estimated Risk*, https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/home/?data_id=dataSource_105-a5ba9580e3aa43508a793fac819a5a4d%3A315&views=view_38%2Cview_1

B. Permits. Before a building or occupancy permit is issued by the City, the applicant shall be required to show proof that he has secured the necessary permits from the SCAQMD or that the project is exempt from SCAQMD regulations as of the date of filing of the City application.

C. Enforcement and Standards. In enforcing these regulations, the City shall use the same point of measurement as utilized by the SCAQMD.

Section 17.04.060 Odors

In order to protect the wellbeing of the community and to eliminate the blighting influences of odors, the following performance standards with respect to the generation of odors are outlined in this Section.

A. Odor Generating Activities. Any process that creates or emits any odors, gases, or other odorous matter shall comply with the standards set by the South Coast Air Quality Management District (SCAQMD).

B. Quantified Standard. No odors, gases, and odorous matter shall be emitted in quantities to be detectable when diluted in a ratio of one (1) volume diluted air to four (4) volumes of clean air at the point of greatest concentration.

Title 17 – Zoning, Chapter 17.11 – General Development Standards

This Chapter establishes general development standards for all land uses and development in the City. Beaumont MC § 17.11.040 states dust shall be controlled by watering or other approved methods.

City of Beaumont 2040 General Plan

The Beaumont 2040 Plan goals, policies, and implementation actions that reduce potential impacts to air quality include:

Land Use and Community Design Element

Goal 3.4: **A City that maintains and expands its commercial, industrial and other employment-generating land uses.**

Policy 3.4.8 Where industrial uses are near existing and planned residential development, require that industrial projects be designed to limit the impact of truck traffic, air and noise pollution on sensitive receptors, especially in El Barrio.

Goal 3.8: **A City that encourages a healthy lifestyle for people of all ages, income levels, and cultural backgrounds.**

Policy 3.8.2 Establish buffers between residential development and high-volume roadways, including SR-79, I-10, and SR-60, to protect residents from negative environmental health impacts.

Goal 3.10: **A City designed to improve the quality of the built and natural environments to reduce disparate health and environmental impacts.**

Policy 3.10.1 Participate in air quality planning efforts with local, regional, and State agencies that improve local air quality to protect human health and minimize the disproportionate impacts on sensitive population groups.

Policy 3.10.2 Reduce particulate emissions from paved and unpaved roads, construction activities, and agricultural operations.

Policy 3.10.3 Discourage development of sensitive land uses – defined as schools, hospitals, residences, and elder and childcare facilities – near air pollution sources that pose health risks – including freeways and polluting industrial sites.

Policy 3.10.4 Designate truck routes to avoid sensitive land uses, where feasible.

Policy 3.10.6 Provide educational information about air quality issues and their health effects, including best practices for reducing and/or eliminating sources of indoor air pollution.

Policy 3.10.7 Support practices that promote low impact development, including water resilient communities, prevention of urban runoff, and mitigation of industrial pollution.

Mobility Element

Goal 4.1: Promote smooth traffic flows and balance operational efficiency, technological, and economic feasibility.

Policy 4.1.1 Reduce vehicular congestion on auto-priority streets to the greatest extent possible.

Goal 4.6: An efficient goods movement system that ensures timely deliveries without compromising quality of life, safety, or smooth traffic flow for Beaumont residents.

Policy 4.6.2 Minimize or restrict heavy vehicle traffic near sensitive areas such as schools, parks, and neighborhoods.

Implementation M3 TDM Plan Requirements. Update the City's development processing requirements to require that TDM plans and strategies are developed for residential and employment land uses that reduce vehicle trips or vehicle trip lengths.

Implementation M26 Truck Route Map. Update the City's truck route map to focus trucks on key streets in the City that should be used for goods movement and reduce heavy vehicle travel adjacent to sensitive areas.

Health and Environmental Justice Element

Goal 6.5: A City that builds neighborhoods that enhance the safety and welfare of all people of all ages, income levels, and cultural backgrounds.

Policy 6.5.6 Discourage development of sensitive land uses – defined as schools, hospitals, residences, and elder and childcare facilities – near air pollution sources that pose health risks – including freeways and polluting industrial sites.

Goal 6.7: A City that safely and systemically addresses toxics, legacy pollutants, and hazardous materials.

Policy 6.7.5 Reduce particulate emissions from paved and unpaved roads, construction activities, and agricultural operations.

Policy 6.7.6 Designate truck routes to avoid sensitive land uses, where feasible.

Policy 6.7.8 Establish a local ordinance that exceeds the state vehicle idling restrictions where appropriate, including restrictions for bus layovers, delivery vehicles, trucks at warehouses and distribution facilities and taxis, particularly when these activities take place close to sensitive land uses (schools, senior centers, medical facilities and residences).

Implementation HEJ19 Idling Ordinance. Update zoning code to support an idling ordinance that reduces emissions from on-road heavy-duty vehicles.

Implementation HEJ20 Particulate Mitigation. Adopt mitigation measures that limit vehicular and construction-related particulate emissions.

Conservation and Open Space Element

Goal 8.4: A City that improves awareness and mitigation of negative air quality impacts.

Policy 8.4.1 Provide educational information about air quality issues and their health effects, including best practices for reducing and/or eliminating sources of indoor air pollution.

Policy 8.4.2: Participate in air quality planning efforts with local, regional, and State agencies that improve local air quality to protect human health, minimize the disproportionate impacts on sensitive population groups, and ensure that City concerns are resolved early in the process.

Policy 8.4.3 Avoid the siting of new projects and land uses that would produce localized air pollution (e.g., Interstate 10, SR-60 high traffic roads, certain industrial facilities) in a way that would adversely impact existing air quality-sensitive receptors including schools, childcare centers, senior housing, and subsidized affordable housing. The recommended minimum distance separating these uses should be 500 feet.

Policy 8.4.4 For sensitive land uses that cannot be avoided within 500 feet of sources of localized air pollution, potential design mitigation options include:

- Providing residential units with individual HVAC systems in order to allow adequate ventilation with windows closed;
- Locating air intake systems for heating, ventilation, and air conditioning (HVAC) systems as far away from existing air pollution sources as possible;
- Using HEPA air filters in the HVAC system and developing a maintenance plan to ensure the filtering system is properly maintained; and
- Utilizing only fixed windows next to any existing sources of pollution.
- Using sound walls, berms, and vegetation as physical barriers.
- Notifying new potential home buyers of risks from air pollution.

Implementation C14 Air Quality Efforts. Partner with local and regional agencies to educate and support efforts that improve local air quality.

Implementation C15 Sensitive Uses. Update the municipal code to prohibit and/or mitigate the impacts of localized air pollution, addressing specific strategies for sensitive receptors.

Safety Element

Goal 9.9: A City that promotes preparedness related to the adverse effects of high winds common in the Pass area.

Policy 9.9.2 Require implementation of best practices for dust control at all excavation and grading projects.

Policy 9.9.3 Prohibit excavation and grading during high wind conditions, defined as instantaneous wind speeds that exceed 25 miles per hour by South Coast AQMD.

Implementation S25 Dust Control. Develop guidelines for dust control at all excavation and grading projects, including addressing high wind conditions.

Noise Element

Goal 10.2: A City with minimal mobile source-generated noise levels.

Policy 10.2.3 Prohibit truck routes through neighborhoods with sensitive receptors, where feasible.

Implementation N10 Vehicle and Equipment Idling. Establish requirements that construction vehicles and equipment are not left idling for longer than five minutes when not in use.

4.2.4 Impact Thresholds and Significance Criteria

State CEQA Guidelines Appendix G contains the Environmental Checklist Form, which includes questions concerning air quality. The questions presented in the Environmental Checklist Form have been utilized as significance criteria in this section. Accordingly, the Project would have a significant effect on the environment if it would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in nonattainment under an applicable state or federal ambient air quality standard.
- Expose sensitive receptors to substantial pollutant concentrations.
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.
- Exceed SCAQMD Thresholds.

SCAQMD Thresholds

The significance criteria established by SCAQMD may be relied upon to make the above determinations. According to the SCAQMD, an air quality impact is considered significant if the Project would violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations. The SCAQMD has established thresholds of significance for air quality during construction and operational activities of land use development projects, as shown in **Table 4.2-6, South Coast Air Quality Management District Emissions Thresholds**.

Table 4.2-6: South Coast Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors	Construction-Related	Operational-Related
Reactive Organic Gases (ROG)	75	55
Carbon Monoxide (CO)	550	550
Nitrogen Oxides (NO_X)	100	55
Sulfur Oxides (SO_X)	150	150
Coarse Particulates (PM_{10})	150	150
Fine Particulates ($PM_{2.5}$)	55	55
Source: South Coast Air Quality Management District, *South Coast AQMD Air Quality Significance Thresholds*.		

Localized Carbon Monoxide

In addition to the daily thresholds listed above, development associated with the project would also be subject to the ambient air quality standards. These are addressed through an analysis of localized CO impacts. The significance of localized impacts depends on whether ambient CO levels near the Project site are above state and federal CO standards (the more stringent California standards are 20 ppm for 1-hour and 9 ppm for 8-hour). The SCAB has been designated as attainment under the 1-hour and 8-hour standards.

Localized Significance Thresholds

In addition to the CO hotspot analysis, the SCAQMD developed LSTs for emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at new development sites (off-site mobile source emissions are not included in the LST analysis). LSTs represent the maximum emissions that can be generated at a project without expecting to cause or substantially contribute to an exceedance of the most stringent state or federal ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the Project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres or less on a single day. The City of Beaumont is located within SCAQMD SRA 29. **Table 4.2-7, Local Significance Thresholds for Construction/Operations** shows the LSTs for a 1-acre, 2-acre, 4-acre (interpolated), and 5-acre project in SRA 29. Because the nearest sensitive receptors are approximately 20 meters to the east of the Project site, the thresholds for distances of 25 meters or less are listed below.

Table 4.2-7: Local Significance Thresholds for Construction/Operations

Project Size	Maximum Pounds Per Day			
	Nitrogen Oxide (NO_x)	Carbon Monoxide (CO)	Coarse Particulates (PM_{10})	Fine Particulates ($PM_{2.5}$)
1 Acre	103/103	1,000/1,000	6/2	4/1
2 Acres	149/149	1,541/1,541	10/36	10/6/2
4 Acres	207/207	2,392/2,392	17/5	9/3
5 Acres	236/236	2,817/2,817	21/6	11/3

Source: South Coast Air Quality Management District, *Localized Significance Threshold Methodology,* July 2008.

LSTs associated with all acreage categories are provided in **Table 4.2-7** for informational purposes. **Table 4.2-7** shows that the LSTs increase as acreages increase. It should be noted that LSTs are screening thresholds and are therefore conservative. The construction LST acreage is determined based daily acreage disturbed. The operational LST acreage is based on the total area of the Project site. Although the Project site is greater than five acres, the 5-acre operational LSTs are conservatively used to evaluate the Project.

Methodology

This air quality impact analysis considers construction and operational impacts associated with the Project. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a Statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Air quality impacts were assessed according to methodologies recommended by CARB and the SCAQMD. Refer to the Project Air Quality Assessment and Health Risk Assessment (Appendices A and B) for a full discussion of analysis methodology and model outputs/calculations.

Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with Project construction would generate emissions of criteria air pollutants and precursors. Daily regional construction emissions are estimated by assuming construction occurs at the earliest feasible date (i.e., a conservative estimate of construction activities) and applying off-road, fugitive dust, and on-road emissions factors in CalEEMod. Construction was modeled generally according to the following timeline:

- Phase 1: Commence in the second quarter of 2023 and conclude in the third quarter of 2024 (an approximate 18-month duration).
- Phase 2: Commence in early 2026 and conclude mid to late 2027 (an approximate 18-month duration).

Project operations would result in emissions of area sources (consumer products, architectural coating, and landscape equipment), energy sources (natural gas usage), mobile sources (motor vehicles from Project generated vehicle trips), and off-road equipment. Project-generated increases in operational emissions would be predominantly associated with motor vehicle use. Emissions from each of these categories are discussed below.

- **Area Sources.** Area source emissions would be generated due to consumer products, on-site equipment, architectural coating, and landscaping that were previously not present on the site.

Consumer products are various solvents used in non-industrial applications, which emit VOCs during product use. These typically include cleaning supplies, kitchen aerosols, cosmetics, and toiletries. The default area source VOC emission factor developed for CalEEMod is based on a statewide factor and is not applicable to the project. The entire project would not use consumer products as specified by CalEEMod user guide. The warehouses in Phase 1 include offices and may have small kitchen areas and bathrooms that would use cleaning products, however the majority of the square footage for the Project (98 percent) would be used for warehousing/distribution. Negligible quantities of personal care products, home, lawn, and garden products, disinfectants, sanitizers, polishes, cosmetics, and floor finishes would be used. The CalEEMod default consumer product VOC emissions factor assumes 2008 statewide VOC inventory and building area square footage from 2000 data. Therefore, in order to account for more recent California rulemaking to reduce VOC emissions, the emissions rate was updated to use the latest consumer products emissions from CARB (252.2 tons per day)[3] and the statewide building area has been adjusted for growth (25,625,589,321 square feet) to result in $1.97x10^{-5}$ pounds VOC per day per square foot. This is consistent with the methodology used in CalEEMod.

- **Energy Sources.** Energy source emissions would be generated due to electricity and natural gas usage associated with the Project. Primary uses of electricity and natural gas by the Project would be for miscellaneous warehouse equipment, space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. Energy source emissions were calculated in CalEEMod. No changes were made to the default energy usage consumption rates or emissions factors.
- **Mobile Sources.** Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern. NO_X and ROG react with sunlight to form O_3, known as photochemical smog. Additionally, wind currents readily transport PM_{10} and $PM_{2.5}$. However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions are based on the trip generation within the Project Traffic Impact Study and incorporated into CalEEMod as recommended by the SCAQMD. The Project generated traffic was obtained from the Project's Traffic Impact Study prepared by Kimley-Horn and Associates (February 2022). Project trip generation from the Trip Generation Analysis is based on the following Institute of Transportation Engineers (ITE) land use categories:

Phase 1

- ITE Land Use 154: High-Cube Short-Term Storage (2,199.095 thousand square feet, 3,079 total daily vehicle trips, which include 493 truck trips).
- ITE Land Use 150: Warehousing (358.370 thousand square feet, 613 total daily vehicle trips, which include 166 truck trips).

[3] California Air Resources Board, *Criteria Pollutant Emission Inventory Data, 2017 Estimated Annual Average Emissions Statewide*, https://ww2.arb.ca.gov/applications/statewide-emissions

Phase 2

- ITE Land Use 310: Hotel (220 rooms, 1,758 daily vehicle trips).
- ITE Land Use 820: Shopping Center (25 thousand square feet, 1,361 total daily vehicle trips, 898 net trips after pass-by reduction).
- ITE Land Use 932: High-Turnover (Sit-Down) Restaurant (15 thousand square feet, 1,608 total daily vehicle trips, 1,539 net trips after pass-by reduction).
- ITE Land Use 934: Fast-Food Restaurant with Drive-Through (10 thousand square feet, 4,675 total daily vehicle trips, 4,290 net trips after pass-by reduction).

Phase 1 of the Project would generate 3,692 daily trips, which includes 3,033 passenger car trips and 659 truck trips. Passenger car/employee commute trip lengths use CalEEMod default lengths for projects in Riverside County, truck trip lengths are assumed to be 33.2 miles one way.[4] Phase 2 of the Project would generate 8,485 daily vehicle trips. Full Project buildout (Phase 1 and Phase 2) would generate 12,177 total daily vehicle trips. Warehouse truck mix percentages are based on the SCAQMD Truck Trip Generation Study applied to ITE truck percentages. Mobile source emissions rates in CalEEMod have been updated with EMFAC2021 emissions rates consistent with the methodology described in the CalEEMod *User's Guide (Appendix A, Section 5.2)*[5]. It should be noted that EMFAC2021 emissions rates include CARB SAFE Rule adjustment factors.[6]

- **Off-Road Equipment.** Operational off-road emissions would be generated by off-road cargo handling equipment used during operational activities. For this project it was assumed that the warehouses would include 51 forklifts and 9 off-highway trucks for loading and unloading goods per the SCAQMD *High Cube Warehouse Truck Trip Study White Paper*[7]. It should be noted that Project Design Feature (PDF) AQ-1 indicates that the Project does not include cold storage. Cold storage is also not an allowed use in the Specific Plan. Therefore, this analysis models the warehouses as unrefrigerated, and the Project would not include emissions from transport refrigeration units (TRUs).
- **Emergency Backup Generators**. As the Project warehouses are speculative, it is unknown whether emergency backup generators would be used. Backup generators would only be used in the event of a power failure and would not be part of the Project's normal daily operations. Nonetheless, emissions associated with this equipment were included to be conservative. Emissions from an emergency backup generator for each warehouse building were calculated separately from CalEEMod; refer to Appendix A. However, CalEEMod default emissions rates were used. If backup generators are required, the end user would be required to obtain a permit from the SCAQMD prior to installation. Emergency backup generators must meet SCAQMD's Best Available Control Technology (BACT) requirements and comply with SCAQMD Rule 1470 (Requirements for

[4] California Air Resources Board, *Appendix B: Emissions Estimation Methodology for On-Road Diesel-Fueled Heavy-Duty Drayage Trucks at California Ports and Intermodal Rail Yards*, 2007. Available at: https://ww3.arb.ca.gov/msei/onroad/downloads/drayage_trucks/appbf.pdf
[5] California Air Pollution Control Officers Association (CAPCOA), *CalEEMod User Guide Appendix A: Calculation Details, Section 5.2 Methodology for Converting EMFAC2017 Emission Rates into CalEEMod Vehicle Emission Factors*, May 2021.
[6] California Air Resources Board, *EMFAC2021 Volume III Technical Document*, March 21, 2021.
[7] SCAQMD, *High Cube Warehouse Truck Trip Study White Paper Summary of Business Survey Results*, June 2014.

Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines), which would minimize emissions.

As discussed above, the SCAQMD provides significance thresholds for emissions associated with proposed Project construction and operations. The proposed Project's construction and operational emissions are compared to the daily criteria pollutant emissions significance thresholds in order to determine the significance of a Project's impact on regional air quality.

The localized effects from the Project's on-site emissions were evaluated in accordance with the SCAQMD's LST methodology, which uses on-site mass emissions rate look-up tables and Project-specific modeling. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor.

According to the SCAQMD LST methodology, LSTs would apply to the operational phase of a project only if it includes area sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). However, the CalEEMod model outputs do not separate on- and off-site emissions for mobile sources. On-site mobile emissions equate to approximately three percent of the project-related new mobile sources. The on-site one-way trip length is conservatively anticipated to be up to one mile, which is approximately three percent of the 33.2-mile truck trip length modeled in CalEEMod.

Emissions reductions attributable mitigation measures were applied in CalEEMod are derived from methodologies compiled in the CAPCOA report Quantifying GHG Measures[8]. Each measure was assessed to determine its consistency with CAPCOA criteria for the use of the measure. The following mitigation measure were applied in CalEEMod include:

- Transportation Demand Management Measures: TRT-1 (Implement Trip Reduction Program), TRT-7 (Market Commute Trip Reduction Option), and TRT-11 (Employee Vanpool/Shuttle).
- A-1 - Electric Landscape Equipment.
- BE-1 – Exceed Title 24. The project would be required to comply with CALGreen Tier 2, which requires a 30 percent improvement.
- SW-1 – 75 Percent Reduction in Solid Waste Disposal.

Additionally, the following design feature was quantified outside of CalEEMod:

- **Electric Cargo Handling Equipment**. Electric cargo handling equipment (see PDF AQ-2, below) emissions from energy consumption were calculated based on 51 forklifts and 9 yard trucks operating for 12 hours per day and the Southern California Edison (SCE) electricity CO_2e emissions factor from CalEEMod. As noted above, the assumptions for the equipment are based on the SCAQMD *High Cube Warehouse Truck Trip Study White Paper* (2014).

[8] California Air Pollution Control Officers Association, *Quantifying Greenhouse Gas Mitigation Measures*, August 2010.

Project Design Features

The Project applicant proposes the following PDFs that would be incorporated into the Project design and constructed or implemented as part of the Project. PDFs are specific design and/or operational characteristics proposed by the Project applicant that are incorporated into the Project and part of the Project description and Specific Plan. Because PDFs are incorporated into the Project, they do not constitute mitigation measures. It should be noted that PDF AQ-1 indicates that the Project would not include cold storage. Cold storage is also not an allowed use in the Specific Plan. Therefore, this analysis models the warehouses as unrefrigerated. PDF AQ-2 notes that all cargo handling equipment would be powered by electricity. Emissions from diesel cargo handling equipment are provided in the impact analysis for informational purposes and implementation of PDF AQ-2 is reflected under the mitigated scenario. Additional emissions benefits from implementation of PDF AQ-3 through PDF AQ-18 are conservatively not quantified; no credit is taken for these measures.

PDF AQ-1 The Project does not include cold storage.

PDF AQ-2 All Phase 1 outdoor cargo handling equipment (including yard trucks, hostlers, yard goats, pallet jacks, and forklifts) shall be powered by electricity. Each building shall include the necessary charging stations for cargo handling equipment. The building manager or their designee shall be responsible for enforcing these requirements. Note that SCAQMD Rule 2305 (Warehouse Indirect Source Rule) Warehouse Actions and Investments to Reduce Emissions (WAIRE) points may be earned for electric/zero emission yard truck/hostler usage.

PDF AQ-3 Tenant lease agreements for Phase 1 shall include contractual language restricting trucks and support equipment from nonessential idling longer than 5 minutes while on site.

PDF AQ-4 All heavy-duty vehicles registered in California entering or operated on the Phase 1 project site shall be model year 2010 or later. This requirement shall be included as part of tenant's agreement with third-party carriers. Tenants shall maintain records on its fleet equipment and ensure that all heavy-duty trucks accessing the project site Phase 1 use year 2010 or newer engines. The records shall be maintained onsite and be made available for inspection by the City. Encouraging the use of model year 2010 or newer trucks and other efficiency measures could incentivize near zero emission (NZE) or zero emission (ZE) truck visits, which would facilitate compliance with SCAQMD Rule 2305 (Warehouse Indirect Source Rule).

PDF AQ-5 Phase 1 facility operators shall be required to train managers and employees on efficient scheduling and load management to eliminate unnecessary queuing and idling of trucks. The building manager or their designee shall be responsible for enforcing these requirements.

PDF AQ-6 Phase 1 tenants shall train its staff in charge of keeping vehicle records in diesel technologies and compliance with CARB regulations, by attending CARB-approved courses. Facility operators shall maintain records on-site demonstrating compliance and make records available for inspection by the local jurisdiction, air district, and state upon

request. The building manager or their designee shall be responsible for enforcing these requirements.

PDF AQ-7 Phase 1 tenants shall maintain records on its fleet equipment and vehicle engine maintenance to ensure that equipment and vehicles serving the warehouses within the project are in good condition, and in proper tune pursuant to manufacturer's specifications. The building manager or their designee shall be responsible for enforcing these requirements.

PDF AQ-8 The facility operator for Phase 1 shall ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies, for example, by requiring attendance at California Air Resources Board-approved courses (such as the free, one-day Course #512). The building manager or their designee shall be responsible for enforcing these requirements.

PDF AQ-9 Phase 1 tenants shall include contractual language in tenant lease agreements that requires the tenant be in, and monitor compliance with, all current air quality regulations for on-road trucks including CARB's Heavy-Duty (Tractor-Trailer) Greenhouse Gas Regulation, Periodic Smoke Inspection Program (PSIP), and the Statewide Truck and Bus Regulation.

PDF AQ-10 The Phase 1 site shall include at least 30 electric light-duty vehicle charging stations and install conduit for 59 future electric light-duty vehicle charging stations. Spaces with conduit for future charging stations shall have properly sized and listed raceways/conduits, dedicated branch circuits, service panel or subpanel(s). Both the service panel or subpanel(s) and the raceway termination location shall be visibly marked as "EV CAPABLE."

PDF AQ-11 Designate 119 parking spaces for clean air/electric vehicle/vanpool parking.

PDF AQ-12 Phase 1 tenants shall enroll in the United States Environmental Protection Agency's SmartWay program and tenants shall use carriers that are SmartWay carriers.

PDF AQ-13 The Phase 1 facility operator shall provide tenants with an information packet that:

- Provides information on incentive programs, such as the Carl Moyer Memorial Air Quality Standards Attainment Program (Moyer Program) and Voucher Incentive Program, and other similar funding opportunities to upgrade their fleets. The Moyer Program On-Road Heavy-Duty Vehicles Voucher Incentive Program (VIP) provides funding to individuals seeking to purchase new or used vehicles with 2013 or later model year engines to replace an existing vehicle that is to be scrapped.
- Recommends the use of electric or alternatively fueled sweepers with high efficiency particulate air (HEPA) filters;
- Recommends the use of water-based or low VOC cleaning; and

- For occupants with more than 250 employees, information related to SCAQMD Rule 2202, which requires the establishment of a transportation demand management program to reduce employee commute vehicle emissions.

PDF AQ-14 Signs shall be installed at each Phase 1 exit driveway, providing directional information to the City's truck route. Text on the sign shall read "To Truck Route" with a directional arrow. Truck routes shall be clearly marked pursuant to the Municipal Code.

PDF AQ-15 The Phase 1 site shall be designed such that any check-in point for trucks is well inside the facility to ensure that there are no trucks queuing outside the facility. Vehicles can access the building using paved roads and parking lots. Further, the applicant shall provide signage to ensure that no trucks are queuing outside the facility. Signage shall also be placed at the entrance of the site for the community in case of complaints and shall include the phone number of the building manager or designee. The building manager or designee shall be responsible for ensuring compliance with this measure tenant and third-party truck owners.

PDF AQ-16 The Phase 1 portion of the Project shall provide funding for 30 grants for the purchase of electric zero emission vehicle passenger cars for on-site employees. The program shall prioritize applicants who live in the City of Beaumont and the surrounding area (i.e., employees that are residents of Beaumont, Banning, or Calimesa) and who do not already own a zero emission vehicle. Additionally, grantees must be employed at the Project site for a minimum of five years. Grantees employed for less than five years must return the zero emission vehicle so that it can be used by a current employee.

PDF AQ-17 Phase 1 shall install photocatalytic pavements or pavement coatings (such as PURETi Coat or PlusTi) that lessens pavement-related radiative forcing by reducing heat absorption and the convective re-release (pavement emissivity) from solar radiation, as well as naturally decomposing surrounding atmospheric NO2 when exposed to ultraviolet (UV) light.

PDF AQ-18 During Phase 1 the Project shall improve vegetation and tree canopy for all sensitive receptors' properties located within a 300-foot radius of the Project boundary for a maximum one-time contribution of $5,000 per sensitive receptor's property. The funds may be used for vegetation installation, the vegetation itself, and vegetation irrigation. If the Applicant provides reasonable evidence to the City of contacting the property owners of the sensitive receptor(s) and offering to plant vegetation and tree canopy, and the offer is declined or the property owner(s) cannot be reached, no further action shall be required.

4.2.5 Impacts and Mitigation Measures

Impact 4.2-1 ***Would the Project conflict with or obstruct implementation of the applicable air quality plan?***

Level of Significance: Significant Unavoidable Impact.

As part of its enforcement responsibilities, the EPA requires each state with nonattainment areas to prepare and submit a State Implementation Plan that demonstrates the means to attain the federal standards. The State Implementation Plan must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under State law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment regarding the state and federal ambient air quality standards. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

The Project is located within the SCAB, which is under the jurisdiction of the SCAQMD. The SCAQMD is required, pursuant to the FCAA, to reduce emissions of criteria pollutants for which the SCAB is in nonattainment. To reduce such emissions, the SCAQMD drafted the 2016 AQMP. The 2016 AQMP establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving state (California) and national air quality standards. The 2016 AQMP is a regional and multi-agency effort including the SCAQMD, the CARB, the SCAG, and the EPA. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, including SCAG's 2016 RTP/SCS, updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. SCAG's latest growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project is subject to the SCAQMD's AQMP.

Criteria for determining consistency with the AQMP are defined by the following indicators:

- **Consistency Criterion No. 1**: The Project will not result in an increase in the frequency or severity of existing air quality violations, or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
- **Consistency Criterion No. 2**: The Project will not exceed the assumptions in the AQMP or increments based on the years of the Project build-out phase.

According to the SCAQMD's *CEQA Air Quality Handbook*, the purpose of the consistency finding is to determine if a project is inconsistent with the assumptions and objectives of the regional air quality plans, and thus if it would interfere with the region's ability to comply with CAAQS and NAAQS.

The violations to which Consistency Criterion No. 1 refers are CAAQS and NAAQS. As shown in **Table 4.2-8, Phase 1 Construction-Related Emissions** and **Table 4.2-9, Phase 2 Construction-Related Emissions**, the Project would not exceed construction emission standards with Mitigation Measures (MM) AQ-1 and MM AQ-2. However, mitigated Phase 1 operational emissions would exceed the operational standard for NO_X and mitigated Project Buildout emissions would exceed the operational standards for ROG, NO_X, CO, and PM_{10}, despite the implementation of all feasible mitigation, as shown in **Table 4.2-11, Mitigated**

Phase 1 Operational Emissions and **Table 4.2-13, Project Buildout Mitigated Operational Emissions**. MMs AQ-3 through AQ-7 are included to reduce operation emissions to the greatest amount feasible. However, even with mitigation, operational emissions would remain above the SCAQMD threshold. Therefore, the Project would potentially contribute to an existing air quality violation. Thus, the Project is not consistent with the first criterion.

Concerning Consistency Criterion No. 2, the AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project site is presently designated as "Single Family Residential" by the General Plan. A General Plan Amendment would change the property's land use designation from Single Family Residential to Industrial, General Commercial, and Open Space. The proposed land use designations would be consistent with the proposed e-commerce center, commercial area, and open space uses. The Project includes the adoption of the Beaumont Summit Station Specific Plan. The City adopted the Sunny-Cal Specific Plan, which included the approval of 560 single-family residential dwelling units with lot sizes ranging from 7,000 to 20,000 square feet on approximately 200 acres in the City, in August 2007.

The AQMP contains air pollutant reduction strategies based on SCAG's latest growth forecasts, and SCAG's growth forecasts were defined in consultation with local governments and with reference to local general plans. The Project would result in a change of land use designations not reflected in the AQMP. Therefore, the Project is conservatively assumed to generate emissions not reflected within the current 2016 AQMP regional emissions inventory for the SCAB and is considered to be inconsistent with the AQMP. Thus, the Project is not consistent with the second criterion.

As noted above (and discussed further in Threshold 4.2-2, below), Project implementation would result in air pollutant emissions that exceed SCAQMD's operational emission thresholds. Although mitigation would reduce emissions by the greatest feasible amount, Project emissions levels would remain significant and would contribute to the nonattainment designations in the SCAB. Therefore, the Project would be inconsistent with the AQMP, resulting in a significant and unavoidable impact despite the implementation of mitigation.

In addition, in accordance with SCAQMD Rule 2305 (refer to South Coast Air Quality Management District under **Section 4.2.3, Regulatory Setting**) the Project operator would be required to pay a mitigation fee if the Project does not generate enough WAIRE Points. The Project operator may be required to implement additional emission reduction strategies. As noted above, a preliminary WAIRE calculation has been conducted for the Project and the Project would more than fulfill its Warehouse Points Compliance Obligation (WPCO) and would bank 8,161 points with implementation of **MM GHG-1** (refer to the Greenhouse Gas Emissions Assessment, see Appendix F) requiring rooftop solar and PDF AQ-2 requiring ZE yard trucks.[9,10]

[9] Conservatively assumes nine yard trucks each operating 8 hours per day (i.e., less than the nine trucks each operating 12 hours per day assumed for the emissions analysis).

[10] Note that this calculation is preliminary and provided for informational purposes. The WAIRE Points Compliance Obligation is determined by the actual number of truck trips to the facility based on logs of truck trips submitted on January 1 after the first year of operation. The trip rates that SCAQMD uses in the WAIRE User Calculator would be slightly different than what is used in the Project's Traffic Study.

Mitigation Measures:

Mitigation Measures AQ-1 through AQ-6 (refer to Impact Threshold 4.2-2, below).

Level of Significance

Significant and unavoidable impact. No additional feasible mitigation measures are available that can reduce impacts to less than significant.

Impact 4.2-2 ***Would the proposed project, result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?***

Level of Significance: Significant Unavoidable Impact

Construction Emissions

Construction associated with the Project would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the Project area include O_3-precursor pollutants (i.e., ROG and NO_X) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and of temporary duration, lasting only as long as construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SCAQMD's thresholds of significance.

Construction results in the temporary generation of emissions resulting from site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities as well as weather conditions and the appropriate application of water.

Phase 1 Construction

Construction activities associated with Phase 1 of the Project are estimated to be completed within approximately 1.5 years. Construction-generated emissions associated with the Project were calculated using the CARB-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. See **Appendix A, Air Quality Assessment**, for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the Phase 1 are summarized in **Table 4.2-8, Phase 1 Construction-Related Emissions**.

Table 4.2-8: Phase 1 Construction-Related Emissions

Construction Year	Maximum Pounds Per Day					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Unmitigated Emissions[1]						
Year 2023	12.52	**121.26**	128.18	0.51	34.98	10.25
Year 2024	**238.18**	67.16	156.81	0.54	41.10	12.19
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Threshold?	**Yes**	**Yes**	**No**	**No**	**No**	**No**
Mitigated Emissions[2]						
Year 2023	11.27	90.04	129.40	0.51	35.50	9.63
Year 2024	36.26	46.55	160.80	0.54	40.04	11.21
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

1. SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; water exposed surfaces three times daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to Appendix A for Model Data Outputs.
2. Mitigation includes the incorporation of MM AQ-1 and MM AQ-2. MM AQ-1 requires off-road equipment 50 horsepower or greater to meet CARB Tier 4 Final standards. MM AQ-2 requires the use of "Super-Compliant" low VOC paints.

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. SCAQMD Rules 402 and 403 (prohibition of nuisances, watering of inactive and perimeter areas, track out requirements, etc.), are applicable to the Project and were applied in CalEEMod to minimize fugitive dust emissions. Standard Condition (SC) AQ-1 requires the implementation of Rule 402 and 403 dust control techniques to minimize PM_{10} and $PM_{2.5}$ concentrations. While impacts would be considered less than significant, the Project would be subject to SCAQMD Rules for reducing fugitive dust, described in the Regulatory Framework subsection above and identified in Standard Conditions SC AQ-1.

Table 4.2-8 shows that unmitigated construction emissions would exceed the SCAQMD threshold for the ozone precursors NO_X and ROG (VOC). The majority of NO_X emissions occur from construction equipment exhaust and the majority of ROG emissions are generated during the architectural coatings phase of construction. MM AQ-1 requires the off-road construction equipment greater than 50 horsepower to meet CARB Tier 4 Final emissions standards in order to reduce diesel exhaust construction emissions. MM AQ-2 requires the Project to use "Super-Compliant" low VOC paints. Implementation of MM AQ-1 and MM AQ-2 would reduce construction impacts to below the SCAQMD's thresholds. Impacts would be less than significant with mitigation.

Phase 2 Construction

Phase 2 construction is anticipated to begin in early 2026 and be completed in mid to late 2027. Construction-generated emissions associated with Phase 2 the Project were calculated using the

CARB-approved CalEEMod computer program. See **Appendix A, Air Quality Assessment**, for more information regarding the construction assumptions used in this analysis. Predicted maximum daily construction-generated emissions for the Phase 2 are summarized in **Table 4.2-9, Phase 2 Construction-Related Emissions**.

Table 4.2-9: Phase 2 Construction-Related Emissions

Construction Year	Maximum Pounds Per Day					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Unmitigated Emissions[1]						
Year 2023	2.96	27.98	26.93	0.06	8.94	4.99
Year 2024	**75.38**	15.85	23.65	0.06	3.45	1.31
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Threshold?	**Yes**	**No**	**No**	**No**	**No**	**No**
Mitigated Emissions[2]						
Year 2023	1.11	5.68	26.93	0.06	7.91	4.05
Year 2024	7.67	5.62	23.65	0.06	2.96	0.86
SCAQMD Threshold	*75*	*100*	*550*	*150*	*150*	*55*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

1. SCAQMD Rule 403 Fugitive Dust applied. The Rule 403 reduction/credits include the following: properly maintain mobile and other construction equipment; water exposed surfaces three times daily; and limit speeds on unpaved roads to 15 miles per hour. Reductions percentages from the SCAQMD CEQA Handbook (Tables XI-A through XI-E) were applied. No mitigation was applied to construction equipment. Refer to Appendix A for Model Data Outputs.
2. Mitigation includes the incorporation of MM AQ-1 and MM AQ-2. MM AQ-1 requires off-road equipment 50 horsepower or greater to meet CARB Tier 4 Final standards. MM AQ-2 requires the use of "Super-Compliant" low VOC paints.

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

Table 4.2-9 shows that unmitigated construction emissions would exceed the SCAQMD threshold for ROG (VOC). The majority of ROG emissions are generated during the architectural coatings phase of construction. MM AQ-2 requires the Project to use "Super-Compliant" low VOC paints. Implementation of MM AQ-1 and MM AQ-2 would reduce construction impacts to below the SCAQMD's thresholds. Impacts would be less than significant with mitigation.

Operational Emissions

Phase 1 Unmitigated Operation Emissions

Project-generated emissions would be primarily associated with motor vehicle use and area sources, such as the use of landscape maintenance equipment and architectural coatings. Long-term operational emissions attributable to Phase 1 of the Project are summarized in **Table 4.2-10, Unmitigated Phase 1 Operational Emissions**. **Table 4.2-10** shows that Project emissions would exceed SCAQMD thresholds for ROG and NO_X. Therefore, regional operations emissions would result in a potentially significant long-term regional air quality impact.

Table 4.2-10: Unmitigated Phase 1 Operational Emissions

Source	Maximum Pounds Per Day					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Area Source Emissions	57.75	0.00	0.45	0.00	0.01	0.00
Energy Emissions	0.15	1.40	1.18	0.01	0.11	0.11
Mobile–Trucks	1.45	60.58	13.11	0.50	15.23	4.70
Mobile–Passenger Cars	5.86	5.33	118.81	0.32	28.96	7.29
Off-Road Emissions[1]	8.26	70.30	144.13	0.20	3.96	3.64
Emergency Generators	5.06	14.14	12.90	0.02	0.74	0.74
Total Emissions	**78.53**	**151.75**	**290.58**	**1.05**	**49.01**	**16.48**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**Yes**	**Yes**	**No**	**No**	**No**	**No**

1. Although the PDFs require all electrically powered off-road equipment, "unmitigated" emissions from diesel equipment are conservatively shown for informational purposes.

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

Operational emissions from Phase 1 of the Project would be associated with area sources, energy sources, mobile sources (i.e., motor vehicle use), and off-road emissions. Emissions from these categories are discussed below.

- **Area Source Emissions.** Area source emissions would be generated due to consumer products, on-site equipment, architectural coating, and landscaping that were previously not present on the site.

  The default area source VOC emission factor developed for CalEEMod is based on a statewide factor and is not applicable to the Project. The entire Project would not use consumer products as specified by CalEEMod user guide. The warehouses may have small kitchen areas and bathrooms that would use cleaning products, however the majority of the square footage for the Project would be used for warehousing/distribution. Negligible quantities of personal care products, home, lawn, and garden products, disinfectants, sanitizers, polishes, cosmetics, and floor finishes would be used. Therefore, to estimate VOC emissions from the Project, the emission factor is reduced to 50 percent of its original value, to 9.9E-6 pounds VOC per day per square foot

- **Energy Source Emissions.** Energy source emissions would be generated due to electricity and natural gas usage associated with the Project. Primary uses of electricity and natural gas by the Project would be for miscellaneous warehouse equipment, space heating and cooling, water heating, ventilation, lighting, appliances, and electronics.

- **Mobile Source.** Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern. NO_X and ROG react with sunlight to form O_3, known as photochemical smog. Additionally, wind currents readily transport PM_{10} and $PM_{2.5}$. However, CO tends to be a localized pollutant, dispersing rapidly at the source.

- Project-generated vehicle emissions are based on the trip generation within the Project Traffic Impact Study and incorporated into CalEEMod as recommended by the SCAQMD. Per the Project Trip Generation and Vehicle Miles Traveled Analyses, the Phase 1 of the Project would generate 10,050 daily trips, which includes 5,522 passenger car trips, 3,906 van delivery trips, and 622 truck trips. Employee commute trip lengths use CalEEMod default lengths for projects in Riverside County, delivery van trip lengths are assumed to be 60 miles round trip, truck trip lengths are assumed to be 33.2 miles one way.
- **Off-Road Equipment.** Operational off-road emissions would be generated by off-road equipment used during operational activities. For this project it was assumed that the warehouse would employ 51 forklifts and 2 off-highway trucks for loading and unloading goods.

Phase 1 Mitigated Operation Emissions

As noted above, **Table 4.2-10** shows that unmitigated Phase 1 operational emission would exceed the SCAQMD thresholds for ROG and NO_X. The majority of ROG emissions are from area and mobile sources and the majority of NO_X emissions are from mobile sources. Mitigation measures would be required to reduce emissions to the maximum extent feasible; however, emissions of motor vehicles are controlled by State and Federal standards and the Project has no control over these standards. CARB is addressing emissions from heavy duty vehicles through various regulatory programs including lower emission standards, restrictions on idling, the use of post-combustion filter and catalyst equipment, and retrofits for diesel truck fleets. These programs are expected to result in significant reductions in ROG, NO_X, PM_{10}, $PM_{2.5}$, and CO emissions as they are fully implemented by 2023. Federal and State agencies regulate and enforce vehicle emission standards. It is not feasible for the City of Beaumont to effectively enforce a prohibition on trucks from entering the property that are otherwise permitted to operate in California and access other properties in the City, region, and State. Even if the City were to apply such a restriction, it would cause e-commerce operators using older truck fleets to travel to other facilities in the SCAB where the restriction does not apply, thereby resulting in no improvement to regional air quality. Based on data from CARB, most heavy-duty trucks entering the Project site will meet or exceed 2010 model year emission standards when the Project becomes fully operational in 2024 as all trucks are required meet or exceed such standards by 2023. Specifically, according to CARB EMFAC inventories, approximately 50 percent of all instate heavy-heavy duty trucks met the 2010 engine standard in 2019, 59 percent in 2020, 62 percent in 2021. Additionally, 65 percent and 90 percent of trucks are projected to meet the 2010 engine standard in 2022 and 2023 respectively.[11]

The Project includes numerous PDFs that would minimize emissions. For example, the Project would not include cold storage, which would reduce emissions from transport refrigeration units (TRUs). All cargo handling equipment (forklifts, yard trucks, etc.) is required to be electrically powered to reduce on-site criteria pollutant emissions. All heavy-duty vehicles registered in California and entering or operated on the Project site shall be model year 2010 or later. In order to promote the use of alternative fuels and clean fleets and facilitate future installation of electric vehicle supply equipment, the Project would install 30 electric light-duty vehicle charging stations, install conduit for 59 electric light-duty vehicle charging stations, and designate 119 parking spaces for clean air/electric vehicle/vanpool parking. Additionally, the

[11] California Air Resources Board, *EMFAC2017, An Update to California On-Road Mobile Source Emissions Inventory*, November 9, 2017. Available at: https://ww3.arb.ca.gov/msei/downloads/emfac2017_workshop_11_09_2017_final.pdf, accessed April 29, 2021.

Project would require future tenants to attend CARB training for record keeping and ensuring vehicles comply with CARB regulations and are in good condition, enroll in the EPA's SmartWay program, provide information on CARB's Carl Moyer Voucher Incentive Program to upgrade fleets, include signage for truck routes and locate check-in points to ensure truck queues do not occur outside of the facility. Furthermore, the Project includes photocatalytic pavements as a PDF that would naturally decompose NO_X. Although studies have shown that photocatalytic pavements can reduce pollution by 40 percent or more, to be conservative, no reduction credits from this PDF are applied.

MM AQ-3 through MM AQ-6 have been identified to reduce operational emissions. MM AQ-3 requires the implementation of a Transportation Demand Management (TDM) program to reduce single occupant vehicle trips and encourage transit. MM AQ-4 requires the buildings to be designed to accommodate electric vehicle (EV) infrastructure, and MM AQ-5 prohibits idling when engines are not in use. Additionally, given the state's clean truck rules and regulations aiming to accelerate the utilization and market penetration of ZE and NZE trucks, MM AQ-6 is required to incentivize the use of cleaner operating trucks to reduce air quality emissions with a goal of achieving ZE trucks beginning in 2030. MM AQ-6 requires the Project Applicant to provide $1.00 per square foot in funding for fleet upgrade financing to incentivize the use of cleaner operating trucks to reduce future emissions. It should be noted that as the nature, timing, and extent of the incorporation of ZE and NZE vehicles cannot be determined at this time, conservatively no emissions reduction credits from MM AQ-6 are applied.

Furthermore, Standard Conditions (SC) AQ-9 through SC AQ-11 would provide designated parking to promote the use of alternative fuels and clean fleets, facilitate future installation of electric vehicle supply equipment, and limit idling times. **Table 4.2-11, Mitigated Phase 1 Operational Emissions** shows that despite the implementation of MM AQ-3 through MM AQ-6, operational emissions would remain above the SCAQMD's thresholds, therefore impacts would be significant and unavoidable.

Table 4.2-11: Mitigated Phase 1 Operational Emissions

Source	Maximum Pounds Per Day					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Area Source Emissions	51.76	0.01	0.26	0.00	0.00	0.00
Energy Emissions	0.10	0.92	0.77	0.01	0.07	0.07
Mobile – Truck	1.45	60.58	13.11	0.50	15.23	4.70
Mobile – Passenger Cars[1]	5.81	5.13	113.33	0.31	27.43	6.91
-60 EV Trips[2]	-0.12	-0.11	-2.35	-0.01	-0.01	-0.01
Off-Road Emissions[3]	0.00	0.00	0.00	0.00	0.00	0.00
Emergency Generators	5.06	14.14	12.9	0.02	0.74	0.74
Total Emissions	**64.18**	**80.67**	**138.02**	**0.83**	**43.46**	**12.41**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**Yes**	**Yes**	**No**	**No**	**No**	**No**

1. Incorporates implementation of a Transportation Demand Management (TDM) program pursuant to MM AQ-3.
2. The Project would provide a grant program for the purchase of 30 electric passenger cars for on-site employees per PDF AQ-16. Emissions reductions from PDF AQ-16 are provided for informational purposes.
3. Per the PDFs, operational off-road cargo handling equipment would be electrically powered.

Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

In addition, Rule 2305 requires the Project operator to directly reduce NO_X and particulate matter emissions or to otherwise facilitate emission and exposure reductions of these pollutants in nearby communities. Alternatively, e-commerce operators can choose to pay a mitigation fee. Funds from the mitigation fee will be used to incentivize the purchase of cleaner trucks and charging/fueling infrastructure in communities nearby.

E-commerce owners and operators are required to earn Warehouse Actions and Investments to Reduce Emissions (WAIRE) Points each year. WAIRE points are a menu-based system earned by emission reduction measures. E-commerce operators are required to submit an annual WAIRE Report which includes truck trip data and emission reduction measures. WAIRE points can be earned by completing actions from a menu that can include acquiring and using natural gas, Near-Zero Emissions and/or Zero-Emissions on-road trucks, zero-emission cargo handling equipment, solar panels or zero-emission charging and fueling infrastructure, or other options.

A preliminary WAIRE calculation has been conducted for the proposed Project. The Project would include rooftop solar (refer to **MM GHG-1** in the Project's Greenhouse Gas Emissions Assessment) and nine zero emission yard trucks that would operate for approximately 8 hours per day, 365 days per year. Based on the SCAQMD WAIRE User Calculator the Project would have a WPCO of 1,122 and would earn 9,283 points. As a result, the Project would more than fulfill its WPCO and would bank 8,161 points[12].

Phase 2 Unmitigated Operation Emissions

Project-generated emissions would be primarily associated with motor vehicle use and area sources, such as the use of landscape maintenance equipment and architectural coatings. Long-term operational emissions attributable to Phase 1 of the Project are summarized in **Table 4.2-12, Unmitigated Phase 2 Operational Emissions. Table 4.2-12** shows that Project emissions would not exceed SCAQMD thresholds. Therefore, regional operations emissions for Phase 2 would result in a less than significant long-term regional air quality impact.

Similar to Phase 1, operational emissions from Phase 2 of the Project would be associated with area sources, energy sources, and mobile sources (i.e., motor vehicle use), and off-road emissions. Emissions from these categories are described above. Phase 2 Project-generated vehicle emissions are based on the trip generation within the Project Traffic Impact Study and incorporated into CalEEMod as recommended by the SCAQMD. Per the Project Trip Generation and Vehicle Miles Traveled Analyses, the Phase 2 of the Project would generate 485 daily trips, which include employee commutes to work, retail customers, and delivery trips. CalEEMod default trips lengths and vehicle fleet mix for projects in Riverside County were used in the analysis of Phase 2 mobile source emissions.

[12] Note that this calculation is preliminary and provided for informational purposes. The WAIRE Points Compliance Obligation is determined by the actual number of truck trips to the facility based on logs of truck trips submitted on January 1 after the first year of operation. The trip rates that SCAQMD uses in the WAIRE User Calculator would be slightly different than what is used in the Project's Traffic Study.

Table 4.2-12: Unmitigated Phase 2 Operational Emissions

Source	Maximum Pounds Per Day					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Area Source Emissions	3.53	0.01	0.07	0.00	0.01	0.01
Energy Emissions	0.37	3.44	2.89	0.02	0.26	0.26
Mobile Emissions	25.19	28.28	208.84	2.62	54.18	18.46
Total Emissions	**29.10**	**31.72**	**211.80**	**2.64**	**54.44**	**18.72**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	No	No	No	No	No	No
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.						

Overlapping Emissions (Phase 1 Operations + Phase 2 Construction)

As the Project would be constructed in phases, Phase 1 has the potential to be operational during Phase 2 construction. The overlapping emissions of Phase 1 operations and Phase 2 construction are shown in **Table 4.2-13, Project Overlapping Emissions**. **Table 4.2-13** shows that total overlapping emissions would exceed SCAQMD thresholds for ROG and NO_X. The majority of the Project's emission exceedances are from mobile sources that cannot feasibly be reduced below the SCAQMD threshold. Emissions from motor vehicles are controlled by State and Federal standards and the Project has no control over these standards. However, numerous PDFs and mitigation measures have been included to reduce emissions to the maximum extent feasible and are discussed in detail below.

Table 4.2-13: Project Overlapping Emissions

Source	Maximum Pounds Per Day					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Unmitigated Emissions						
Phase 1 Operations[1]	78.53	151.75	290.58	1.05	49.01	16.48
Phase 2 Construction[2]	75.38	27.98	26.93	0.06	8.94	4.99
Total Unmitigated Overlapping Emissions	**153.91**	**179.73**	**317.51**	**1.11**	**57.95**	**21.47**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**Yes**	**Yes**	**No**	**No**	**No**	**No**
Mitigated Emissions						
Phase 1 Operations[3]	64.18	80.67	138.02	0.83	43.46	12.41
Phase 2 Construction[2]	7.67	5.68	26.93	0.06	7.91	4.05
Total Mitigated Overlapping Emissions	**71.85**	**86.35**	**164.95**	**0.89**	**51.37**	**16.46**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**Yes**	**Yes**	**No**	**No**	**No**	**No**
1. Refer to Table 11 (Unmitigated Phase 1 Operation Emissions). 2. Refer to Table 10 (Phase 2 Construction-Related Emissions). Note that Phase 2 construction would occur in 2026 and 2027. This table provides the maximum daily emissions from each year. 3. Refer to Table 12 (Mitigated Phase 1 Operational Emissions).						
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.						

Project Buildout (Phase 1 + Phase 2)

Long-term operational emissions attributable to the total Project are summarized in **Table 4.2-14, Project Buildout Mitigated Operational Emissions**.

Table 4.2-14: Project Buildout Mitigated Operational Emissions

Source	Maximum Pounds Per Day					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Sulfur Dioxide (SO_2)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Area Source Emissions	55.29	0.02	0.33	0.00	0.01	0.01
Energy Emissions	0.47	4.36	3.66	0.03	0.33	0.33
Mobile Emissions	32.48	**93.99**	**335.28**	3.43	**96.84**	30.07
Off-Road Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Emergency Generators	5.06	14.14	12.90	0.02	0.74	0.74
Total Emissions	**93.27**	**112.51**	**352.17**	**3.48**	**97.92**	**31.15**
SCAQMD Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Exceeds Threshold?	**Yes**	**Yes**	**No**	**No**	**No**	**No**
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.						

As indicated in **Table 4.2-14**, total operational emissions for the Project at buildout would exceed SCAQMD thresholds for ROG and NO_X. The majority of the Project's emission exceedances are from mobile sources that cannot feasibly be reduced below the SCAQMD threshold. Emissions from motor vehicles are controlled by State and Federal standards and the Project has no control over these standards. However, numerous PDFs and mitigation measures have been included to reduce emissions to the maximum extent feasible.

MM AQ-3 through **MM AQ-7** have been identified to reduce operational emissions from mobile sources. **MM AQ-3** requires the implementation of a Transportation Demand Management (TDM) program to reduce single-occupant vehicle trips and encourage public transit. **MM AQ-4** requires charging stations and infrastructure to support future electric vehicle demand to reduce mobile emissions. **MM AQ-5** prohibits idling when engines are not in use and includes signage to report violations and **MM AQ-6** is required to incentivize the use of cleaner operating trucks to reduce air quality emissions and would facilitate compliance with SCAQMD Rule 2035. **Table 4.2-14** shows that despite numerous PDFs that would minimize emissions and the implementation of MM AQ-3 through MM AQ-6, for VOC (ROG) and NO_X emissions would remain above the SCAQMD's thresholds; therefore, impacts would be significant and unavoidable.

Cumulative Short-Term Emissions

The SCAB is designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards and nonattainment for O_3 and $PM_{2.5}$ for Federal standards. Appendix D of the SCAQMD White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (2003) notes that projects that result in emissions that do not exceed the project-specific SCAQMD regional thresholds of significance should result in a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary. Therefore, if a project is estimated to result in emissions that do not exceed the thresholds,

the project's contribution to the cumulative impact on air quality in the SCAB would not be cumulatively considerable. As shown in **Table 4.2-8** and **Table 4.2-9** above, construction of Phase 1 of the Project would exceed the SCAQMD significance thresholds for ROG and NO_X while construction of Phase 2 would exceed the construction-related emissions threshold for ROG. However, with the implementation of **MM AQ-1** and **MM AQ-2** construction impacts would be reduced to less than significant levels. Therefore, the proposed Project would not generate a cumulatively considerable contribution to air pollutant emissions during construction.

Cumulative Long-Term Impacts

The SCAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, individual project emissions contribute to existing cumulatively significant adverse air quality impacts. The SCAQMD developed the operational thresholds of significance based on the level above which individual project emissions would result in a cumulatively considerable contribution to the SCAB's existing air quality conditions. Therefore, a project that exceeds the SCAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As shown in **Table 4.2-11, Table 4.2-13, and Table 4.2-14**, the Project operational emissions (primarily mobile source emissions) would exceed the SCAQMD threshold for ROG and NO_X despite the implementation of mitigation. As a result, operational emissions associated with the Project would result in a cumulatively considerable contribution to significant cumulative air quality impacts. Emissions of motor vehicles are controlled by State and Federal standards and the Project has no control over these standards. PDFs, Standard Conditions, and implementation of operational **MM AQ-3** through **MM AQ-6** would reduce emissions by reducing the number of employee vehicles onsite, facilitating EV infrastructure, requiring electric hookups at all loading bays, and reducing the amount of time trucks spend idling. While the Project has some control over mobile source efficiencies, the majority of the mobile source emissions are beyond the Project's control. Therefore, no additional feasible mitigation measures beyond **MMs AQ-3** through **AQ-6** are available to further reduce emissions, and impacts would remain significant.

Furthermore, compliance with SCAQMD Rule 2305 (Warehouse Indirect Source Rule) is required for all existing and proposed warehouses greater than 100,000 square feet. Warehouse operators are required to implement additional emission reduction strategies or pay mitigation fee to reduce emissions. As noted above, a preliminary WAIRE calculation has been conducted for the proposed Project and the Project would more than fulfill its WPCO and would bank 8,161 points with implementation of **MM GHG-1** (refer to **Section 4.7, Greenhouse Gas Emissions**) requiring rooftop solar and PDF AQ-2 requiring ZE yard trucks.

Standard Conditions and Requirements:

Standard Conditions are existing requirements and standard conditions that are based on local, state, or federal regulations or laws that are frequently required independently of CEQA review. Typical standard conditions and requirements include compliance with the provisions of the Building Code, SCAQMD Rules, etc. The City may impose additional conditions during the approval process, as appropriate. Because

Standard Conditions are neither Project specific nor a result of development of the Project, they are not considered to be either PDFs or Mitigation Measures.

SC AQ-1 Prior to the issuance of grading permits, the City Engineer shall confirm that the Grading Plan, Building Plans and Specifications require all construction contractors to comply with South Coast Air Quality Management District's (SCAQMD's) Rules 402 and 403 to minimize construction emissions of dust and particulates. The measures include, but are not limited to, the following:

- Portions of a construction site to remain inactive longer than a period of three months will be seeded and watered until grass cover is grown or otherwise stabilized.
- All on-site roads will be paved as soon as feasible or watered periodically or chemically stabilized.
- All material transported off-site will be either sufficiently watered or securely covered to prevent excessive amounts of dust.
- The area disturbed by clearing, grading, earthmoving, or excavation operations will be minimized at all times.
- Where vehicles leave a construction site and enter adjacent public streets, the streets will be swept daily or washed down at the end of the work day to remove soil tracked onto the paved surface.

SC AQ-2 Pursuant to SCAQMD Rule 1113, the Project Applicant shall require by contract specifications that the interior and exterior architectural coatings (paint and primer including parking lot paint) products used would have a volatile organic compound rating of 50 grams per liter or less.

SC AQ-3 Require construction equipment to turn off when not in use per Title 13 of the California Code of Regulations, Section 2449.

SC AQ-4 In accordance with California Title 24 Standards, buildings will be designed to have 15 percent of the roof area "solar ready" that will structurally accommodate later installation of rooftop solar panels. If future building operators pursue providing rooftop solar panels, they will submit plans for solar panels prior to occupancy.

SC AQ-5 Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls and sensors for landscaping according to the City's Water Efficient Landscape Requirements (Section 17.06.030 of the City's Municipal Code).

SC AQ-6 Design buildings to be water-efficient. Install water-efficient fixtures in accordance with Section 5.303 of the California Green Building Standards Code Part 11.

SC AQ-7 Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1 of the California Green Building Standards Code Part 11.

SC AQ-8 Provide storage areas for recyclables and green waste and adequate recycling containers located in readily accessible areas in accordance with Section 5.410.1 of the California Green Building Standards Code Part 11.

SC AQ-9 Provide designated parking for any combination of low-emitting, fuel efficient and carpool/van pool vehicles. At least eight percent of the total parking spaces are required to be designated in accordance with Section 5.106.5.2, Designated Parking for Clean Air Vehicles, of the California Green Building Standards Code Part 11.

SC AQ-10 Provide at least six percent of the total parking spaces to facilitate future installation of electric vehicle supply equipment in accordance with Section 5.106.5.3.2, Multiple Charging Space Requirements, of the California Green Building Standards Code Part 11.

SC AQ-11 Limit idling time for commercial vehicles to no more than five minutes per Title 13 of the California Code of Regulations, Section 2485.

Mitigation Measures

MM AQ-1 Prior to issuance of Phase 1 and Phase 2 grading permits, the applicant shall prepare and submit documentation to the City of Beaumont to demonstrate the following:

- All off-road diesel-powered construction equipment greater than 50 horsepower meets California Air Resources Board Tier 4 Final off-road emissions standards. Requirements for Tier 4 Final equipment shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's Best Available Control Technology (BACT) documentation (certified tier specification or model year specification), and CARB or SCAQMD operating permit (if applicable) shall be provided to the City at the time of mobilization of each applicable unit of equipment.
- Construction equipment shall be properly maintained according to manufacturer specifications.
- All construction equipment and delivery vehicles shall be turned off when not in use, or limit on-site idling for no more than 5 minutes in any 1 hour.
- On-site electrical hook ups to a power grid shall be provided for electric construction tools including saws, drills, and compressors, where feasible, to reduce the need for diesel powered electric generators.

MM AQ-2 The Project shall utilize "Super-Compliant" low VOC paints which have been reformulated to exceed the regulatory VOC limits (i.e., have a lower VOC content than what is required) put forth by SCAQMD's Rule 1113 for all architectural coatings.

Super-Compliant low VOC paints shall be no more than 10g/L of VOC. Prior to issuance of Phase 1 and Phase 2 building permits, the Beaumont Building and Safety Department shall confirm the plans include the following specifications:

- All architectural coatings will be super-compliant low VOC paints.
- Recycle leftover paint. Take any leftover paint to a household hazardous waste center; do not mix leftover water-based and oil-based paints.
- Keep lids closed on all paint containers when not in use to prevent VOC emissions and excessive odors.
- For water-based paints, clean up with water only. Whenever possible, do not rinse the cleanup water down the drain or pour it directly into the ground or the storm drain. Set aside the can of cleanup water and take it to the hazardous waste center (www.cleanup.org).
- Use compliant low-VOC cleaning solvents to clean paint application equipment.
- Keep all paint- and solvent-laden rags in sealed containers to prevent VOC emissions.
- Contractors shall construct/build with materials that do not require painting and use pre-painted construction materials to the extent practicable.
- Use high-pressure/low-volume paint applicators with a minimum transfer efficiency of at least 50 percent or other application techniques with equivalent or higher transfer efficiency.

MM AQ-3 Prior to issuance of Phase 1 and Phase 2 occupancy permits (unless otherwise specified), the Project operator shall prepare and submit a Transportation Demand Management (TDM) program detailing strategies that would reduce the use of single occupant vehicles by employees by increasing the number of trips by walking, bicycle, carpool, vanpool and transit. The TDM shall include, but is not limited to the following:

- Provide a transportation information center and on-site TDM coordinator to educate residents, employers, employees, and visitors of surrounding transportation options.
- Promote bicycling and walking through design features such as showers for employees, self-service bicycle repair area, etc. around the project site (Phase 1 only).
- Each building shall provide secure bicycle storage space equivalent to two percent of the automobile parking spaces provided (Phase 1 only).
- Each building shall provide a minimum of two shower and changing facilities within 200 yards of a building entrance (Phase 1 only).

- Provide on-site car share amenities for employees who make only occasional use of a vehicle, as well as others who would like occasional access to a vehicle of a different type than they use day-to-day.
- Promote and support carpool/vanpool/rideshare use through parking incentives and administrative support, such as ride-matching service.
- Incorporate incentives for using alternative travel modes, such as preferential load/unload areas or convenient designated parking spaces for carpool/vanpool users.
- Provide meal options onsite or shuttles between the facility and nearby meal destinations.
- Each building shall provide preferred parking for electric, low-emitting and fuel-efficient vehicles equivalent to at least eight percent of the required number of parking spaces.

MM AQ-4 Prior to the issuance of Phase 1 building permits, the Planning Department shall confirm that the Project is designed to include the following:

- The buildings' electrical room shall be sufficiently sized to hold additional panels that may be needed to supply power for the future installation of electric vehicle (EV) truck charging stations on the site. Conduit should be installed from the electrical room to tractor trailer parking spaces in a logical location(s) on the site determined by the Project Applicant during construction document plan check, for the purpose of accommodating the future installation of EV truck charging stations at such time this technology becomes commercially available and the buildings are being served by trucks with electric-powered engines.
- The buildings' electrical room shall be sufficiently sized to hold additional panels that may be needed in the future to supply power to trailers with transport refrigeration units (TRUs) during the loading/unloading of refrigerated goods. Conduit should be installed from the electrical room to the loading docks determined by the Project Applicant during construction document plan check as the logical location(s) to receive trailers with TRUs.

MM AQ-5 Prior to the issuance of occupancy permits for Phase 1, the Planning Department shall confirm that all truck access gates and loading docks within the project site shall have a sign posted that states:

- Truck drivers shall turn off engines when not in use.
- For non-essential idling, truck drivers shall shut down the engine after five minutes of continuous idling operation (pursuant to Title 13 of the California Code of Regulations, Section 2485). Once the vehicle is stopped, the transmission is set to "neutral" or "park," and the parking brake is engaged.

- Telephone numbers of the building facilities manager and CARB to report violations.
- Signs shall also inform truck drivers about the health effects of diesel particulates, the California Air Resources Board diesel idling regulations, and the importance of being a good neighbor by not parking in residential areas.

MM AQ-6 Prior to the issuance of Phase 1 occupancy permits, the Planning Department shall confirm that tenant lease agreements require the Project Applicant to provide $1.00 per square foot in funding for fleet upgrade financing to be used over the term of their lease on Zero Emissions (ZE) and Near Zero Emissions (NZE) delivery vans or trucks. This requirement shall apply to new leases only (not renewals) and for the first 10 years of the Project's life. The funding shall be provided in the form of lease allowance/concession. The allowance shall be a reimbursement once ZE or NZE medium/heavy duty vehicles are purchased and can be used at any time during the lease term (i.e., the landlord shall reimburse the tenant once the tenant provides receipt of paid invoice for the order). If a tenant leases their fleet, this allowance shall also cover the cost to lease ZE or NZE trucks. This measure would also facilitate compliance with SCAQMD Rule 2305.

Level of Significance

Significant and unavoidable impact. Construction emissions for Phase 1 and Phase 2 have been reduced to less than significant with the incorporation of **MM AQ-1** and **MM AQ-2**. However, operational impacts from mobile sources remain significant for Phase 1 and Project Buildout even after the incorporation of **MM AQ-3** through **MM AQ-6**. No additional feasible mitigation measures are available that can reduce mobile emission impacts to less than significant.

Impact 4.2-3 *Would the proposed project, expose sensitive receptors to substantial pollutant concentrations?*

Level of Significance: Less than Significant Impact With Mitigation

Localized Construction Significance Analysis

The Project will be constructed in two phases. Phase 1 includes industrial uses and would begin construction in the second quarter of 2023 and be operational by the third quarter 2024. The nearest sensitive receptor to the Phase 1 construction site is a residential building located approximately 365 feet (111 meters) to the east of the Project site. Phase 2 of the Project is located in the northeastern portion of the Project site and would include retail uses. Phase 2 is anticipated to begin construction in early 2026 and be operational by 2027. The nearest sensitive receptor to the Phase 2 construction site is a residential building located 67 feet (20 meters) to the east of the Project site.

To identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology*

(dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with Project-specific emissions.

Since CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment, **Table 4.2-15, Equipment-Specific Grading Rates** is used to determine the maximum daily disturbed acreage for comparison to LSTs. The appropriate SRA for the localized significance thresholds is the Banning Airport (SRA 29) since this area includes the Project. LSTs apply to NO_2, CO, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects that disturb areas less than or equal to 5 acres in size. CalEEMod construction modeling for Phase 1 and Phase 2 anticipates that both phases will use similar equipment. Project construction is anticipated to disturb a maximum of 4.0 acres in a single day. As the LST guidance provides thresholds for projects disturbing 1-, 2-, and 5-acres in size and the thresholds increase with size of the site, the LSTs for a 4.0-acre threshold were interpolated and utilized for this analysis.

Table 4.2-15: Equipment-Specific Grading Rates

Construction Phase	Equipment Type	Equipment Quantity	Acres Graded per 8-Hour Day	Operating Hours per Day	Acres Graded per Day
Phase 1 Grading	Tractors	2	0.5	8	1.0
	Graders	1	0.5	8	0.5
	Dozers	1	0.5	8	0.5
	Scrapers	2	1	8	2
				Total Acres Graded per Day	**4.0**
Phase 2 Grading	Tractors	2	0.5	8	1.0
	Graders	1	0.5	8	0.5
	Dozers	1	0.5	8	0.5
	Scrapers	2	1	8	2.0
				Total Acres Graded per Day	**4.0**

Source: CalEEMod version 2016.3.2. Refer to Appendix A for model outputs.

Phase 1 Construction Emissions

The SCAQMD's methodology states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs." Therefore, only emissions included in the CalEEMod "on-site" emissions outputs were considered. The nearest sensitive receptor to the Phase 1 construction area is a residential building located approximately 365 feet (111 meters) to the east of the Project site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, LSTs for receptors located at 111 meters were interpolated and utilized in this analysis. **Table 4.2-16, Localized Significance of Phase 1 Construction Emissions** presents the results of localized emissions during each construction activity during Phase 1 after incorporating mitigation measures required under Impact 4.2-2. In addition, building construction, paving, and architectural coating emissions were also combined since these phases of construction are anticipated to overlap. **Table 4.2-16** shows that emissions of these pollutants on the peak day of Phase 1 construction would not result in significant concentrations of pollutants at nearby sensitive receptors.

Table 4.2-16: Localized Significance of Phase 1 Construction Emissions

Construction Activity	Maximum Pounds Per Day			
	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Demolition	2.00	23.28	29.31	4.49
Site Preparation	2.02	20.87	7.73	4.00
Grading	3.30	33.00	4.01	1.58
Building Construction	2.23	17.46	0.04	0.04
Paving	9.52	14.63	0.47	0.43
Architectural Coating	0.13	1.83	0.01	0.01
Combined Building Construction, Paving, and Architectural Coating	11.88	33.92	0.52	0.48
SCAQMD Localized Screening Threshold (adjusted for 4.0 acres at 111 meters)	*311*	*5,342*	*102*	*25*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.				

Phase 2 Construction Emissions

The nearest sensitive receptor to the Phase 2 construction area is a residential building located approximately 67 feet (20 meters) to the east of the Project site. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. Therefore, LSTs for receptors located at 25 meters or less were utilized in this analysis. **Table 4.2-17, Localized Significance of Phase 2 Construction Emissions** presents the results of localized emissions during each construction activity during Phase 2 after incorporating mitigation measures required under Impact 4.2-2. In addition, building construction, paving, and architectural coating emissions were also combined since these phases of construction are anticipated to overlap. **Table 4.2-17** shows that emissions of these pollutants on the peak day of Phase 2 construction would not result in significant concentrations of pollutants at nearby sensitive receptors.

Table 4.2-17: Localized Significance of Phase 2 Construction Emissions

Construction Activity	Maximum Pounds Per Day			
	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Demolition	2.00	23.28	0.06	0.06
Site Preparation	2.02	20.87	7.73	4.00
Grading	3.30	33.00	3.69	1.53
Building Construction	2.23	17.46	0.04	0.04
Paving	1.22	17.30	0.04	0.04
Architectural Coating	0.13	1.83	0.01	0.01
Combined Building Construction, Paving, and Architectural Coating	3.58	36.59	0.09	0.09
SCAQMD Localized Screening Threshold (adjusted for 4.0 acres at 25 meters)	*207*	*2,392*	*17*	*9*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.				

As Shown in **Table 4.2-16** and **Table 4.2-17**, construction emissions for Phase 1 and Phase 2 of the Project are below SCAQMD LST. Significant impacts would not occur concerning LSTs during construction.

Localized Operational Significance Analysis

According to the SCAQMD LST methodology, LSTs would apply to the operational phase of a project only if it includes stationary sources or attracts mobile sources that may spend long periods queuing and idling at the site (e.g., warehouse or transfer facilities). Since the Project includes warehouses, the operational phase LST protocol is conservatively applied to both the area source and a portion of the mobile source emissions for both Phase 1 operations and Phase 2 operations.

Phase 1 Operations

LSTs thresholds for receptors located at 111 meters in SRA 29 were utilized in this analysis of Phase 1 operations because the closest receptors to the Phase 1 area is located approximately 365 feet (111 meters) to the east. Although the Phase 1 area of the Project site is approximately 142 acres, the 5-acre LST threshold was conservatively used for the Project, as the LSTs increase with the size of the site.

The LST analysis only includes on-site sources. However, the CalEEMod model outputs do not separate on- and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in **Table 4.2-18, Localized Significance of Phase 1 Operational Emissions** conservatively include all on-site Project-related stationary sources, on-site off-road equipment (forklifts and yard trucks) and three percent of the Phase 1-related mobile sources, since a portion of mobile sources could include trucks idling on-site. **Table 4.2-18** shows that the maximum daily emissions of these pollutants during Phase 1 operations would not result in significant concentrations of pollutants at nearby sensitive receptors.

In addition, SCAQMD's Rule 2305 will require the Project to directly reduce NO_X and particulate matter emissions, or to otherwise facilitate emissions and exposure reductions of these pollutants in nearby communities. The Project operator may be required to implement additional emission reduction strategies. Conservatively, this analysis is not taking credit for these potential reductions. Compliance with Rule 2305 would reduce emissions below what is currently analyzed.

Table 4.2-18: Localized Significance of Phase 1 Operational Emissions

Activity	Maximum Pounds Per Day			
	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
On-Site and Mobile Source Emissions[1]	2.90	4.82	1.35	0.42
SCAQMD Localized Screening Threshold (adjusted for 5 acres at 111 meters)	*344*	*5,342*	*27*	*7*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**

1. Includes all on-site and three percent of warehouse mobile source emissions.
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.

Phase 2 Operations

LSTs thresholds for receptors located at 25 meters in SRA 29 were utilized in this analysis of Phase 2 operations because the closest receptors to the Phase 2 area is located approximately 67 feet (20 meters)

to the east. Although the Phase 3 area of the Project site is approximately 13 acres, the 5-acre LST threshold was conservatively used for the Project, as the LSTs increase with the size of the site.

For a worst-case scenario assessment, the emissions shown in **Table 4.2-19, Localized Significance of Phase 2 Operational Emissions** conservatively include all on-site Project-related stationary sources and three percent of the Phase 2-related mobile sources after incorporating mitigation measures required under Impact 4.2-2. **Table 4.2-19** shows that the maximum daily emissions of these pollutants during Phase 2 operations would not result in significant concentrations of pollutants at nearby sensitive receptors.

In addition, SCAQMD's Rule 2305 will require the Project to directly reduce NO_X and particulate matter emissions, or to otherwise facilitate emissions and exposure reductions of these pollutants in nearby communities. The Project operator may be required to implement additional emission reduction strategies. Conservatively, this analysis is not taking credit for these potential reductions. Compliance with Rule 2305 would reduce emissions below what is currently analyzed.

Table 4.2-19: Localized Significance of Phase 2 Operational Emissions

Activity	Maximum Pounds Per Day			
	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
On-Site Emissions	3.45	2.96	0.27	0.27
SCAQMD Localized Screening Threshold (adjusted for 5 acres at 25 meters)	*236*	*2,817*	*6*	*3*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.				

Project Buildout (Phase 1 and Phase 2 Emissions Combined)

Table 4.2-18 and **Table 4.2-19** show that emissions for Phase 1 and Phase 2 individually do not exceed operational LSTs. **Table 4.2-20, Localized Significance of Operational Emissions at Project Buildout** shows the combined operation emissions of the entire Project. For Project Buildout, the nearest receptor is the residential building located 67 feet (20 meters) from the Phase 2 boundary. In addition, although the entire Project site is approximately 188 acres, the 5-acre LST threshold was used for the entire Project site. LSTs increase with the size of the site, therefore applying a 5-acre LST threshold is an extremely conservative approach.

Table 4.2-20: Localized Significance of Operational Emissions at Project Buildout

Activity	Maximum Pounds Per Day			
	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
On-Site and Mobile Source Emissions[1]	6.35	7.78	1.62	0.69
SCAQMD Localized Screening Threshold (adjusted for 5 acres at 25 meters)	*236*	*2,817*	*6*	*3*
Exceed SCAQMD Threshold?	**No**	**No**	**No**	**No**
1. Includes all on-site and three percent of warehouse mobile source emissions. Source: CalEEMod version 2020.4.0. Refer to Appendix A for model outputs.				

As shown in **Table 4.2-20**, emissions generated onsite by the Project would not exceed the LST at the sensitive receptor located approximately 67 feet (20 meters) to the east of the site. Therefore, significant impacts would not occur concerning LSTs during operational activities.

In addition, SCAQMD's Rule 2305 will require the Project to directly reduce NO_X and particulate matter emissions, or to otherwise facilitate emissions and exposure reductions of these pollutants in nearby communities. The Project operator may be required to implement additional emission reduction strategies. As noted above, a preliminary WAIRE calculation has been conducted for the proposed Project and the Project would more than fulfill its WPCO and would bank 8,161 points with implementation of **MM GHG-1** (refer to **Section 4.7, Greenhouse Gas Emissions**) requiring rooftop solar and PDF AQ-2 requiring ZE yard trucks.

Criteria Pollutant Health Impacts

On December 24, 2018, the California Supreme Court issued an opinion identifying the need to provide sufficient information connecting a project's air emissions to health impacts or explain why such information could not be ascertained (*Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502). The SCAQMD has set its CEQA significance thresholds based on the FCAA, which defines a major stationary source (in extreme O_3 nonattainment areas such as the SCAB) as emitting 10 tons per year. The thresholds correlate with the trigger levels for the federal New Source Review (NSR) Program and SCAQMD Rule 1303 for new or modified sources. The NSR Program[13] was created by the FCAA to ensure that stationary sources of air pollution are constructed or modified in a manner that is consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, projects that do not exceed the SCAQMD's LSTs and mass emissions thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts.

NO_X and ROG are precursor emissions that form O_3 in the atmosphere in the presence of sunlight where the pollutants undergo complex chemical reactions. It takes time and the influence of meteorological conditions for these reactions to occur, so O_3 may be formed at a distance downwind from the sources. Breathing ground-level O_3 can result in health effects that include reduced lung function, inflammation of airways, throat irritation, pain, burning, or discomfort in the chest when taking a deep breath, chest tightness, wheezing, or shortness of breath. In addition to these effects, evidence from observational studies strongly indicates that higher daily O_3 concentrations are associated with increased asthma attacks, increased hospital admissions, increased daily mortality, and other markers of morbidity. The consistency and coherence of the evidence for effects upon asthmatics suggests that O_3 can make asthma symptoms worse and can increase sensitivity to asthma triggers.

According the SCAQMD's 2016 AQMP, O_3, NO_X, and ROG have been decreasing in the SCAB since 1975 and are projected to continue to decrease in the future. Although vehicle miles traveled in the SCAB continue to increase, NO_X and ROG levels are decreasing because of the mandated controls on motor

[13] Code of Federal Regulation (CFR) [i.e. PSD (40 CFR 52.21, 40 CFR 51.166, 40 CFR 51.165 (b)), Non-attainment NSR (40 CFR 52.24, 40 CFR 51.165, 40 CFR part 51, Appendix S)

vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_X emissions from electric utilities have also decreased due to the use of cleaner fuels and renewable energy. The 2016 AQMP demonstrates how the SCAQMD's control strategy to meet the 8-hour O_3 standard in 2023 would lead to sufficient NO_X emission reductions to attain the 1-hour O_3 standard by 2022. In addition, since NO_X emissions also lead to the formation of $PM_{2.5}$, the NO_X reductions needed to meet the O_3 standards will likewise lead to improvement of $PM_{2.5}$ levels and attainment of $PM_{2.5}$ standards.

The SCAQMD's air quality modeling demonstrates that NO_X reductions prove to be much more effective in reducing O_3 levels and will also lead to significant improvement in $PM_{2.5}$ concentrations. NO_X-emitting stationary sources regulated by the SCAQMD include Regional Clean Air Incentives Market (RECLAIM) facilities (e.g., refineries, power plants, etc.), natural gas combustion equipment (e.g., boilers, heaters, engines, burners, flares) and other combustion sources that burn wood or propane. The 2016 AQMP identifies robust NO_X reductions from new regulations on RECLAIM facilities, non-refinery flares, commercial cooking, and residential and commercial appliances. Such combustion sources are already heavily regulated with the lowest NO_X emissions levels achievable but there are opportunities to require and accelerate replacement with cleaner zero-emission alternatives, such as residential and commercial furnaces, pool heaters, and backup power equipment. The AQMD plans to achieve such replacements through a combination of regulations and incentives. Technology-forcing regulations can drive development and commercialization of clean technologies, with future year requirements for new or existing equipment. Incentives can then accelerate deployment and enhance public acceptability of new technologies.

The 2016 AQMP also emphasizes that beginning in 2012, continued implementation of previously adopted regulations will lead to NO_X emission reductions of 68 percent by 2023 and 80 percent by 2031. With the addition of 2016 AQMP proposed regulatory measures, a 30 percent reduction of NO_X from stationary sources is expected in the 15-year period between 2008 and 2023. This is in addition to significant NO_X reductions from stationary sources achieved in the decades prior to 2008.

There are significant challenges with correlating specific health effects that will occur as a result of a project's significant criteria air pollutant emissions. Generally, models that correlate criteria air pollutant concentrations with specific health effects focus on regulatory decision-making that will apply throughout an entire air basin or region. These models focus on the region-wide health effects of pollutants so that regulators can assess the costs and benefits of adopting a proposed regulation that applies to an entire category of air pollutant sources, rather than the health effects related to emissions from a specific proposed project or source. Because of the scale of these analyses, any one project is likely to have only very small incremental effects which may be difficult to differentiate from the effects of air pollutant concentrations in an entire air basin. In addition, such modeling efforts are costly, and the value of a project-specific analysis may be modest in relation to that cost. Furthermore, the results, while costly to produce, may not be particularly useful. For regional pollutants, it is difficult to trace a particular project's criteria air pollutant emissions to a specific health effect. Moreover, the modeled results may be misleading because the margin of error in such modeling is large enough that, even if the modeled results report a given health effect, the model is sufficiently imprecise that the actual effect may differ from the

reported results; that is, the modeled results suggest precision, when in fact available models cannot be that precise on a project level.

As discussed above, the mass emissions thresholds developed by SCAQMD and used by CEQA lead agencies throughout southern California to determine potential significance of project-related regional changes in the environment are not directly indicative of exceedances of applicable ambient air standards. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of O_3 or PM. The effects on ground-level ambient concentrations of pollutants that may be breathed by people are also influenced by the spatial and temporal patterns of the emission sources. In other words, the effect on O_3 and PM concentrations from a given mass of pollutants emitted in one location may vary from the effect if that same mass of pollutants was emitted in an entirely different location in the SCAB. The same effect may be observed when the daily and seasonal variation of emissions is taken into account. Regional-scale photochemical modeling, typically performed only for NAAQS attainment demonstration and rule promulgation, account for these changes in the spatial, temporal, and chemical nature of regional emissions.

Emissions from the construction and operation of the proposed Project would vary by time of day, month, and season, and the majority of Project-related emissions, being generated by mobile sources (cars and trucks) driving to and from the site, would be emitted throughout a wide area defined by the origins and destinations of people traveling to and from the proposed Project. As SCAQMD has stated "it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region."[14]

Specifically, for extremely large regional projects, the SCAQMD states that it has been able to correlate potential health outcomes for very large emissions sources – as part of their rulemaking activity, specifically 6,620 pounds per day of NO_X and 89,180 pounds per day of VOC were expected to result in approximately 20 premature deaths per year and 89,947 school absences due to O_3. Based on its recent experiences applying regional scale models to relatively small increase in emissions, SCAQMD stated in its Amicus Brief in the Sierra Club v. County of Fresno case: "[A] project emitting only 10 tons per year of NO_X or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels."[15] The Brief makes it clear that SCAQMD does not believe that there must be a quantification of a project's health risks in CEQA documents prepared for individual projects. Any attempt to quantify the proposed Project's health risks would be considered unreliable and misleading. Also, the Project does not generate anywhere near 6,620 pounds per day of NO_X or 89,190 pounds per day of ROG (VOC) emissions, which SCAQMD stated was a large enough emission to quantify O_3-related health impacts. Therefore, the Project's emissions are not sufficiently high enough to use a regional modeling program to correlate health effects on a basin-wide level.

As previously discussed, localized effects of on-site Project emissions on nearby receptors for the Project would be less than significant (refer to **Table 4.2-16** and **Table 4.2-17**). The LSTs represent the maximum

[14] South Coast Air Quality Management District, *Amicus Brief in Support of Neither Party, Sierra Club v. County of Fresno*, 2015.
[15] South Coast Air Quality Management District, *Amicus Brief in Support of Neither Party, Sierra Club v. County of Fresno*, 2015. p. 1

emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable state or federal ambient air quality standard. The LSTs were developed by the SCAQMD based on the ambient concentrations of that pollutant for each SRA and distance to the nearest sensitive receptor. The ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect public health, including protecting the health of sensitive populations. However, as discussed above, neither the SCAQMD nor any other air district currently have methodologies that would provide Lead Agencies and CEQA practitioners with a consistent, reliable, and meaningful analysis to correlate specific health impacts that may result from a proposed project's mass emissions. Information on health impacts related to exposure to ozone and particulate matter emissions published by the U.S. EPA and CARB have been summarized above and discussed in the Regulatory Framework section. Health studies are used by these agencies to set the NAAQS and CAAQS.

Although it may be misleading and unreliable to attempt to specifically and numerically quantify the Project's health risks, this analysis provides extensive information concerning the Project's potential health risks. While the Project is expected to exceed the SCAQMD's numeric regional mass daily thresholds for ROG and NO_X, this does not in itself constitute a significant health impact to the population adjacent to the Project and within the SCAB. The reason for this is that the mass daily thresholds are in pounds per day emitted into the air whereas health effects are determined based on the concentration of emissions in the air at particular receptor (e.g., parts per million by volume of air, or micrograms per cubic meter of air).

The NAAQS and CAAQS were developed to protect the most susceptible population groups from adverse health effects and were established in terms of parts per million or micrograms per cubic meter for the applicable emissions. As stated earlier, the mass emission thresholds were established primarily in conjunction with federal permitting "major source" thresholds. If emissions were below these "de minimis" emission rates, then the proposed Project is presumed to conform with the NAAQS.[16] While based on the status of an air basin level of attainment of the health-based NAAQS, emissions in excess of the mass emission thresholds from one project does not mean the air basin would experience measurably higher ground level concentrations, or more frequent occurrences of ground level concentrations in exceedance of standards, or delay timely attainment of a particular NAAQS.

Ozone concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the NAAQS and CAAQS, none of the health-related information can be directly correlated to the pounds/day or tons/year of emissions estimated from a single, proposed project. It should also be noted that this analysis identifies health concerns related to particulate matter, CO, O_3, and NO_2. **Table 4.2-1** includes a list of criteria pollutants and summarizes common sources and effects. Thus, this analysis is reasonable and intended to foster informed decision making. Due to the uncertainty in the relationship between project-level mass emissions and regional ozone formation as well as limitations with currently available technical tools, the resulting health effects associated with the Project

[16] U.S. Environmental Protection Agency. Frequent Questions about General Conformity. Available: https://www.epa.gov/general-conformity/frequent-questions-about-general-conformity. Accessed July 2019.

cannot be identified. Given this is speculative, no meaningful conclusion can be drawn with respect to potential health effects from the criteria pollutant emissions of the proposed Project.

Carbon Monoxide Hotspots

An analysis of CO "hot spots" is needed to determine whether the change in the level of service of an intersection resulting from the Project would have the potential to result in exceedances of the CAAQS or NAAQS. It has long been recognized that CO exceedances are caused by vehicular emissions, primarily when vehicles are idling at intersections. Vehicle emissions standards have become increasingly stringent in the last 20 years. Currently, the CO standard in California is a maximum of 3.4 grams per mile for passenger cars (requirements for certain vehicles are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations have steadily declined. Accordingly, with the steadily decreasing CO emissions from vehicles, even very busy intersections do not result in exceedances of the CO standard.

The SCAB was re-designated as attainment in 2007 and is no longer addressed in the SCAQMD's AQMP. The 2003 AQMP is the most recent version that addresses CO concentrations. As part of the SCAQMD *CO Hotspot Analysis*, the Wilshire Boulevard and Veteran Avenue intersection, one of the most congested intersections in Southern California with an average daily traffic (ADT) volume of approximately 100,000 vehicles per day, was modeled for CO concentrations. This modeling effort identified a CO concentration high of 4.6 ppm, which is well below the 35-ppm Federal standard. The Project considered herein would not produce the volume of traffic required to generate a CO hot spot in the context of SCAQMD's *CO Hotspot Analysis*. As the CO hotspots were not experienced at the Wilshire Boulevard and Veteran Avenue intersection even as it accommodates 100,000 vehicles daily, it can be reasonably inferred that CO hotspots would not be experienced at any vicinity intersections resulting from 18,993 additional vehicle trips attributable to the Project. Therefore, impacts would be less than significant.

Phase 1 and Phase 2 Construction-Related Diesel Particulate Matter

The Project would be developed in two phases. Construction of the Project would result in the generation of DPM emissions from the use of required off-road diesel equipment required. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer.

The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment dissipates rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. The California Office of Environmental Health Hazard Assessment (OEHHA) has not identified short-term health effects from DPM. Construction is temporary and would be transient throughout the site (i.e., move from location to location) and would not generate emissions in a fixed location for extended periods of time which would limit the exposure of any proximate individual sensitive receptor to TACs.

Additionally, construction is subject to and would comply with California regulations (e.g., California Code of Regulations, Title 13, Sections 2485 and 2449), which reduce diesel PM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. These regulations would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Given the temporary and intermittent nature of construction activities likely to occur within specific locations in the Project site (i.e., construction is not likely to occur in any one location for an extended time), the dose of DPM any one receptor is exposed to would be limited. Therefore, considering the relatively short duration of DPM-emitting construction activity at any one location, and the highly dispersive properties of DPM, sensitive receptors would not be exposed to substantial concentrations of construction-related TAC emissions.

A Health Risk Assessment (HRA) was conducted based on the SCAQMD's Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis and the SCAQMD Risk Assessment Procedures and the guidance from OEHHA. Construction-related activities would result in Project-generated emissions of DPM from the exhaust of off-road, heavy-duty diesel equipment for demolition; site preparation (e.g., clearing, grading); building construction; paving; application of architectural coatings; on-road truck travel; and other miscellaneous activities. For construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors.

PM_{10} exhaust construction emissions rates in grams per second were calculated from the total annual on-site exhaust emissions reported in CalEEMod during construction. Maximum (worst case) PM_{10} exhaust construction emissions over the entire construction period were used in AERMOD, a U.S. EPA-approved dispersion model, to approximate construction DPM emissions. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Uniform Cartesian receptors were used to evaluate the locations of the maximally exposed sensitive receptors. Surface and upper air meteorological data from the Banning Monitoring Station provided by the SCAQMD was selected as being the most representative meteorology. In addition, National Elevation Dataset (NED) terrain data was imported into AERMOD for the Project. The modeling and analysis were prepared in accordance with the SCAQMD Modeling Guidance for AERMOD.[17]

Risk levels were calculated based on the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, *Air Toxics Hot Spots Program Risk Assessment Guidelines* (February 2015). SCAQMD's threshold for cancer risk is ten in-one-million and the acute or chronic noncancer hazard index is one. Projects that do not exceed these thresholds would not result in a significant impact.

[17] South Coast Air Quality Management District, *SCAQMD Modeling Guidance for AERMOD*, http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance, accessed October 2021.

The construction phase HRA was conducted for Phase 1 and Phase 2 of the Project (see **Appendix B, Health Risk Assessment** for HRA modeling results). The surrounding land use is a mix of vacant land, residential, and retail. Using AERMOD, residential properties and potential worker locations with high emission concentrations were identified.

Phase 1 Construction HRA Results. Results of the assessment indicate that without implementation of MM AQ-1, Phase 1 construction would result in a cancer risk of approximately 1.75 in one million for residents and 0.21 in one million for workers which is below SCAQMD's threshold of 10 in one million. Non-cancer hazards for DPM would also be below the SCAQMD threshold of 1.0, with a chronic hazard index computed at 0.001 and an acute hazard index of 0.12 for residents and with a chronic hazard index computed at 0.002 and an acute hazard index of 0.16 for offsite workers. Although the risk assessment shows that unmitigated Phase 1 construction emissions are below SCAQMD thresholds, **MM AQ-1** which requires construction equipment to meet CARB Tier 4 Final emissions standards to reduce NO_X emissions, which would also DPM emissions. Therefore, although unmitigated Phase 1 construction does not exceed thresholds, for informational purposes the reductions attributed to MM AQ-1 were calculated. With the implementation of MM AQ-1, the maximum cancer risk from Project construction would decrease to 0.12 per million for residents and 0.01 per million for workers. Additionally, chronic and acute hazards would be lowered to 0.0001 and 0.008 for residents and 0.0001 and 0.011 for workers respectively.

Phase 2 Construction HRA Results. Phase 2 construction would be located closer to sensitive receptors than Phase 1. The Project HRA (Appendix B) indicates that the unmitigated concentrations of DPM during Phase 2 construction would result in a maximum cancer risk of approximately 22.6 in one million for residents which exceeds the SCAQMD threshold of 10 in a million and 0.11 in one million for workers which is below the threshold. Non-cancer hazards for DPM would be below the SCAQMD threshold of 1.0, with a chronic hazard index computed at 0.01 and an acute hazard index of 0.85 for residents and with a chronic hazard index computed at 0.001 and an acute hazard index of 0.55 for workers. As discussed under Phase 1 construction, **MM AQ-1** would require construction equipment to meet CARB Tier 4 Final emissions standards which would reduce DPM emissions. With the implementation of **MM AQ-1** the maximum cancer risk from Project construction would decrease to 1.21 per million for residents and 0.006 per million for workers. Additionally, chronic and acute hazards would be lowered to 0.0007 and 0.05 for residents and 0.0001 and 0.03 for workers respectively. Therefore, construction risk levels would be less than SCAQMD thresholds and impacts would be less than significant with implementation of **MM AQ-1**.

Phase 1 and Phase 2 Operational Diesel Particulate Matter

An operational phase HRA was also conducted for this Project (see **Appendix B: Health Risk Assessment**). Analysis included both on-site and off-site impacts from the diesel trucks accessing the warehouse development on nearby residential and worker receptors. Phase 1 of the Project includes warehouse land uses that are anticipated to generate 659 daily truck trips. Phase 2 involves commercial development and would not include TAC sources during operations.

Truck DPM emissions were estimated using PM_{10} exhaust emission factors generated with CARB's On-Road Motor Vehicle Emission Inventory Model (EMFAC) 2021. EMFAC is a mathematical model that was developed to calculate emission rates from motor vehicles that operate on highways, freeways, and

local roads in California and is commonly used by CARB to project changes in future emissions from on-road mobile sources. EMFAC, incorporates regional motor vehicle data, information and estimates regarding the distribution of vehicle miles traveled (VMT) by speed, and number of starts per day.

For this Project, annual average PM_{10} emission factors were generated by running EMFAC for vehicles in the SCAQMD within the South Coast portion of Riverside County. EMFAC generates emission factors in terms of grams of pollutant emitted per vehicle activity and can calculate a matrix of emission factors at specific values of vehicle speed, temperature, and relative humidity. Truck emissions were based on the first possible year of operations for a fleet mix of various aged vehicles, as opposed to average emissions over a 30-year window. Trucks were assumed to travel at a speed of 55 miles per hour (mph) along Cherry Valley Boulevard and 15 mph for on-site truck travel.

As with the evaluation of construction risk, air dispersion modeling for operations was performed using the U.S. EPA AERMOD dispersion model. The modeling and analysis were prepared in accordance with the SCAQMD Modeling Guidance for AERMOD.[18]

Idling emissions were represented in the model via line volume sources along each loading dock and 15 minutes of idling[19] for each truck was assumed. Truck travel emissions were represented in the model via line volume sources along local roads and inside the facility where the trucks are expected to travel. Trucking routes were determined per the traffic impact analysis conducted for the proposed Project.

Note that the concentration estimate developed using this methodology is conservative and is not a specific prediction of the actual concentrations that would occur at the Project site any one point in time. Actual 1-hour and annual average concentrations are dependent on many variables, particularly the number and type of vehicles and equipment operating at specific distances during time periods of adverse meteorology.

A health risk computation was performed to determine the risk of developing an excess cancer risk calculated on a 30-year exposure scenario using the approach described in the OEHHA *Air Toxics Program Guidance Manual for the Preparation of Health Risk Assessments* (February 2015) and the daily breathing rates, age sensitivity factors, exposure duration, and fraction of time at home specified in the SCAQMD, Permit Application Package "N" Risk Assessment Procedures for Rules 1401, 1401.1, and 212 Version 8.1; refer to Appendix B for a full discussion of modeling assumptions and calculations. The pollutant concentrations are then used to estimate the long-term cancer health risk to an individual as well as the non-cancer chronic health index. SCAQMD's threshold for cancer risk is ten in-one-million and the acute or chronic noncancer hazard index is one. Projects that do not exceed these thresholds would not result in a significant impact.

[18] South Coast Air Quality Management District, *SCAQMD Modeling Guidance for AERMOD*, http://www.aqmd.gov/home/air-quality/meteorological-data/modeling-guidance, accessed October 2021.

[19] An idling time of 15 minutes per truck has been used per SCAQMD recommendations. Although the Project is required to comply with CARB's idling limit of 5 minutes, the SCAQMD recommends the on-site idling emissions should be estimated for 15 minutes of truck idling, which would take into account on-site idling that occurs while the trucks are waiting to pull up to the truck bays, idling at the bays, idling at check-in and check-out, etc.

The cancer and chronic health risks are based on the annual average concentration of PM_{10} (used as a proxy for DPM). As DPM does not have short-term toxicity values, acute risks were conservatively evaluated using hourly PM_{10} concentrations and the REL for acrolein. The chronic and carcinogenic health risk calculations are based on the standardized equations contained in the U.S. EPA *Human Health Evaluation Manual* (1991) and the OEHHA Guidance Manual (2015).

As discussed previously, the Project includes PDF AQ-2, which requires all outdoor cargo handling equipment shall be powered by electricity. Although it is not considered mitigation, diesel equipment was modeled for the unmitigated scenario and electric equipment was modeled for the mitigated scenario to demonstrate the effectiveness of PDF AQ-2. In addition to these sources, emission would also be generated by backup generator associated with each warehouse building.

As discussed in the Project HRA (see **Appendix B, Health Risk Assessment**), operations without PDF AQ-2 at the closest residence would result in a maximum cancer risk of 103.0 in one million, which would exceed the SCAQMD threshold of 10 in one million. The maximum worker cancer risk would be 65.9 in one million, which also exceeds the SCAQMD threshold of 10 in one million. Implementation of PDF AQ-2 would reduce the maximum cancer risk at a residence to 1.41 in one million and 0.82 in a million for workers, both of which below the SCAQMD threshold of 10 in one million. Therefore, impacts related to cancer risk would be less than significant at nearby sensitive receptors with the implementation of PDF AQ-2. The calculations conservatively assume no cleaner technology with lower emissions in future years. As such, the carcinogenic risk would not exceed 10 in one million and impacts related to cancer risk would be less than significant.

Acute and chronic impacts were also evaluated in the HRA. An acute or chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the acute or chronic exposure by the reference exposure level. The highest maximum chronic and acute hazard index associated with the Project would be 0.05 and 0.34, respectively. As a result, non-carcinogenic hazards are calculated to be within acceptable limits. Therefore, impacts would be less than significant.

Combined Construction and Operational Diesel Particulate Matter

The project HRA also calculated the combined risk of construction and operational exhaust emissions. Based on OEHHA *Risk Assessment Guidelines*, the exposure duration for a resident is 30 years, beginning with the third trimester. Based on the Project schedule, Phase 1 construction would begin in 2023 and be completed in 2024. Following construction, the three warehouses in Phase 1 are assumed to be fully operational and generating emissions. Phase 2 construction will begin in 2026 and be completed in 2027, during this time Phase 1 operational emissions from the warehouses would overlap with the Phase 2 construction emissions. Following the completion of Phase 2, emissions would only be generated by Phase 1 because Phase 2 operations does not include any TAC sources. The maximum unmitigated combined cancer risk for residents with 30 years of exposure is 63 per million, which exceeds the SCAQMD threshold of 10 in million. With MM AQ-1 and PDF AQ-2 incorporated, the cancer risk would be reduced to 0.98 in one million which is below the SCAQMD threshold and would result in a less than significant impact.

The combined unmitigated worker cancer risk would also exceed SCAQMD's 10 in one million threshold. Based on OEHHA methodology worker exposure begins at age 16 and includes eight hours per day five days per week for 25 years. As discussed previously, Phase 1 would begin construction in 2023 and operations will begin in 2024. During Phase 2 construction, both construction emissions and Phase 1 operation emissions would be combined. Following completion of Phase 2 construction, the emissions for Phase 1 operations would continue. The unmitigated cancer risk for workers would be 60.9 per million, with mitigation and PDFs, the cancer risk would be reduced to 0.77 per million and impacts would be less than significant.

It should be noted that carcinogenic risks are calculated as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to a potential carcinogen and are calculated using conservative modeling approaches that overestimate risk at the low exposure range predicted by the model. The oral and inhalation cancer slope factors are used to calculate the theoretical increased risk of an individual developing cancer based on the estimated daily exposure or dose, averaged over a lifetime. As shown in the Project HRA, the impacts related to cancer risk would be less than significant at nearby residential communities and surrounding businesses.

The maximum unmitigated chronic and acute hazard index for residents would be 0.03 and 0.97, respectively and the hazard index for workers would be 0.05 and 0.62. Therefore, unmitigated non-carcinogenic hazards are calculated to be within acceptable limits and a less than significant impact would occur. With implementation of MM AQ-1 and PDF AQ-2, the chronic and acute hazard index would be further reduced to 0.0009 and 0.08 for residents and 0.0007 and 0.07 for workers respectively. Non-carcinogenic hazards related to the Project would be less than significant.

Mitigation Measures

Refer to MM AQ-1 through MM AQ-6.

Level of Significance

Less than significant impact with mitigation.

Impact 4.2-4 ***Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?***

Level of Significance: No Impact

Construction

Odors that could be generated by construction activities are required to follow SCAQMD Rule 402 to prevent odor nuisances on sensitive land uses. SCAQMD Rule 402, Nuisance, states:

> *A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.*

During construction, emissions from construction equipment, such as diesel exhaust, and volatile organic compounds from architectural coatings and paving activities may generate odors. However, these odors would be temporary, are not expected to affect a substantial number of people and would disperse rapidly. Therefore, impacts related to odors associated with the Project's construction-related activities would be less than significant.

Operations

The SCAQMD *CEQA Air Quality Handbook* identifies certain land uses as sources of odors. These land uses include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of the land uses that have been identified by the SCAQMD as odor sources. Therefore, the Project would not create objectionable odors.

Mitigation Measures

No mitigation is required.

Level of Significance

No Impact.

4.2.6 Cumulative Impacts

Regional

In accordance with SCAQMD's methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Cumulative projects in the local area include new development and general growth in the project area. The greatest source of emissions in the SCAB is mobile sources. Due to the extent of the area potentially impacted from cumulative project emissions (i.e., the SCAB), SCAQMD considers a project cumulatively significant when project-related emissions exceed the SCAQMD regional emissions thresholds.

Construction

The SCAB is designated nonattainment for O_3 and $PM_{2.5}$ under both the California and federal standards and nonattainment for PM_{10} and lead (Los Angeles County only) under the federal standards. Ozone is created by chemical reactions between NO_X and VOCs; thus, NO_X and VOCs are precursor to O_3. Construction of cumulative projects will further degrade the regional and local air quality. The project would not make a cumulative considerable contribution to $PM_{2.5}$ or PM_{10}, but air quality from VOCs would potentially be impacted during construction activities. However, as discussed under Impact 4.2-2, implementation of MM AQ-1 and MM AQ-2 would reduce project-related construction emissions to below the SCAQMD regional significance thresholds on a project and cumulative basis. Therefore, the proposed project's contribution to cumulative air quality impacts would not be cumulatively considerable with incorporation of mitigation.

Operation

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values is not considered by SCAQMD to be a substantial source of air pollution and does not add significantly to a cumulative impact. Operation of the Project, after incorporation of mitigation would still result in emissions in excess of the SCAQMD regional emissions thresholds for ROG and NO_X Therefore, the air pollutant emissions associated with the proposed Project would be cumulatively considerable and therefore significant.

Localized

Under SCAQMD guidance, projects that exceed the project-specific significance threshold of 10 in a million are considered to be cumulatively considerable (SCAQMD 2003). Per the MATES V study, the proposed project is in an area that has an estimated cancer risk of about 286 in a million.[20] Project related construction and operation of the proposed project would not exceed the SCAQMD's 10 in a million threshold. As a result, the project would not cumulatively contribute to the overall elevated levels of DPM in the SCAB. Therefore, the Project's contribution to health risk impacts in the SCAB is less than significant with mitigation incorporated.

4.2.7 Significant Unavoidable Impacts

Even with implementation of regulatory requirements, standard conditions of approval and implementation of reasonable and feasible mitigation measures, the Project would result in unavoidable significant impacts with respect to air quality plan consistency (Impact 4.2-1) and operational emissions (Impact 4.2-2).

4.2.8 References

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