3.2 AIR QUALITY

This section describes the environmental and regulatory setting for air quality. It also describes existing conditions and potential impacts related to air quality that would result from implementation of the Project, and mitigation for potentially significant impacts, where feasible.

SUMMARY OF IMPACTS

The Project would conflict with SCAQMD's 2022 AQMP. Even with implementation of Mitigation Measures AQ-1 and AQ-2, the Project would be considered significant and unavoidable.

The Project would exceed SCAQMD thresholds and could result in a cumulatively considerable net increase of a criteria air pollutant for which the project region is in non-attainment. Even with implementation of Mitigation Measures AQ-1 and AQ-2, the Project would be considered significant and unavoidable.

The Project could expose sensitive receptors to substantial pollutant concentrations during construction and operation. Even with implementation of Mitigation Measures AQ-1, AQ-2, and AQ-3 the Project would be considered significant and unavoidable.

The Project would not result in other emissions, such as odor, that would affect a substantial number of people. The impacts are considered less than significant.

The residential component of the ORCC Specific Plan Project were considered within the emissions calculations, health risk, and odor analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

3.2.1 Environmental Setting

The Project is located within the City of Seal Beach in Orange County, which is within the South Coast Air Basin (SCAB). SCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Regulatory oversight authority regarding air quality rests at the local, state, and federal levels with the SCAQMD, California Air Resources Board (CARB), and U.S. Environmental Protection Agency (USEPA), respectively.

The existing air quality setting is described further below.

Climate and Meteorology

The SCAB covers approximately 12,000 square miles, consisting of Orange County and the urbanized areas of San Bernardino, Riverside, and Los Angeles counties. The distinctive climate of the SCAB is determined by its terrain and geographic location. The SCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around the

perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. The SCAB is classified as a dry-hot desert climate (SCAQMD 1993).

Criteria Air Pollutants

Criteria air pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (measured both in units of smaller than 2.5 microns in diameter [$PM_{2.5}$] and in units of particulate matter smaller than 10 microns in diameter [PM_{10}]), and lead (Pb).

Ozone. Most ground-level ozone is formed as a result of complex photochemical reactions in the atmosphere between reactive organic gases (ROG), nitrogen oxides (NOx), and oxygen. ROG and NOx are considered precursors to the formation of ozone, a highly reactive gas that can damage lung tissue and affect respiratory function. While ozone in the lower atmosphere is considered a damaging air pollutant, ozone in the upper atmosphere is beneficial, as it protects the Earth from harmful ultraviolet radiation. However, atmospheric processes preclude ground-level ozone from reaching the upper atmosphere (USEPA 2023).

Carbon Monoxide. CO is a colorless, odorless, poisonous gas produced by the incomplete combustion of fossil fuels. Elevated levels of CO can result in harmful health effects, especially for the young and elderly, and can also contribute to global climate change (USEPA 2023).

Nitrogen Dioxide. NO_2 is a brownish, highly reactive gas primarily produced as a result of the burning of fossil fuels. NO_2 can also lead to the formation of ozone in the lower atmosphere. NO_2 can cause respiratory ailments, especially in the young and elderly, and can lead to degradations in the health of aquatic and terrestrial ecosystems (USEPA 2023).

Sulfur Dioxide. SO_2 is primarily emitted from the combustion of coal and oil by steel mills, pulp and paper mills, and non-ferrous smelters. High concentrations of SO_2 can aggravate existing respiratory and cardiovascular diseases in asthmatics and others who suffer from emphysema or bronchitis. SO_2 also contributes to acid rain, which in turn, can lead to the acidification of lakes and streams (USEPA 2023).

Particulate Matter. Airborne PM is not a single pollutant, but rather is a mixture of many chemical species. PM is a complex mixture of solids and aerosols composed of small droplets of liquid, dry solid fragments, and solid cores with liquid coatings. Particles vary widely in size, shape, and chemical composition, and may contain inorganic ions, metallic compounds, elemental carbon, organic compounds, and compounds from the earth's crust. Particles are defined by their diameter for air quality regulatory purposes. Those with a diameter of 10 microns or less (PM_{10}) are inhalable into the lungs and can induce adverse health effects. Fine particulate matter is defined as particles that are 2.5 microns or less in diameter ($PM_{2.5}$). Therefore, $PM_{2.5}$ compromises a portion of PM_{10}. Emissions from combustion of gasoline, oil, diesel fuel or wood produce much of the $PM_{2.5}$ pollution found in outdoor air, as well as significant proportion of PM_{10}. PM_{10} also includes dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, wind-blown dust from open lands, pollen, and fragments of bacteria.

PM may be either directly emitted from sources (primarily particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO_2, NOx, and certain organic compounds (USEPA 2023).

Lead. Sources of Pb include pipes, fuel, and paint, although the use of Pb in these materials has declined dramatically over the years. Historically, a main source of Pb was automobile emissions. Pb can be inhaled directly or ingested by consuming Pb-contaminated food, water, or dust. Fetuses and children are most susceptible to Pb poisoning, which can result in heart disease and nervous system damage (USEPA 2024a). Through regulations, USEPA has gradually reduced the Pb content of gasoline. This program has essentially eliminated violations of the Pb standard in urban areas except those areas with Pb point sources.

Attainment Status

The USEPA and CARB designate air basins where ambient air quality standards are exceeded as "non-attainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National non-attainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Attainment status is based on the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring value exceeds the threshold per year. In contrast, the federal annual standard for $PM_{2.5}$ is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The Federal Clean Air Act (FCAA) identifies two types of NAAQS. Primary standards provide public health protection, including protecting the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings (USEPA 2023). The CAAQS are equal to or more stringent than the NAAQS and include pollutants for which national standards do not exist. Table 3.2-1 presents the applicable CAAQS and NAAQS.

Table 3.2-1: California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards1	National Standards2	
			Primary	Secondary
Ozone (O_3)	8-hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary Standards
	1-hour	0.09 ppm (180 µg/m^3)	--	
	8-hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	--

Pollutant	Averaging Time	California Standards1	National Standards2	
			Primary	Secondary
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	
Nitrogen dioxide (NO_2)	Annual arithmetic mean	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard
	1-hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	
Sulfur dioxide (SO_2)	Annual arithmetic mean	--	0.030 ppm (80 µg/m^3)	--
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (80 µg/m^3)	--
	3-hour	--	--	0.5 ppm (1300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	--	--
Respirable Particulate Matter Smaller than 10 Microns in Diameter (PM_{10})	Annual arithmetic mean	20 µg/m^3	--	Same as Primary Standards
	24-hour	50 µg/m^3	150 µg/m^3	
Respirable Particulate Matter Smaller than 2.5 Microns in Diameter ($PM_{2.5}$)[3]	Annual arithmetic mean	12 µg/m^3	9.0 µg/m^3	15 µg/m^3
	24-hour	No separate standard	35 µg/m^3	Same as Primary Standards
Sulfates	24-hour	25 µg/m^3	--	--
Lead (Pb)	30-day average	1.5 µg/m^3	--	--
	Calendar quarter	--	1.5 µg/m^3	Same as Primary Standard
	Rolling 3-month average	--	0.15 µg/m^3	
Hydrogen sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	--	--
Vinyl chloride (chloroethene)	24-hour	0.01 ppm (26 µg/m^3)	--	--
Visibility reducing particles	8-hour	In 1989, the Air Resources Board converted the general statewide 10-mile visibility standard to instrumental	--	--

Pollutant	Averaging Time	California Standards1	National Standards2	
			Primary	Secondary
		equivalents, which are extinction of 0.23 per kilometer.		

Notes:
1. CO, SO_2 (1- and 24-hour), NO_2, O_3, PM_{10}, and visibility reducing particles standards are not to be exceeded.
2. Not to be exceeded more than once a year except for annual standards.
3. On February 7, 2024, the USEPA issued a pre-publication version of the Final Rule to lower the primary annual NAAQS for $PM_{2.5}$ from 12.0 µg/m^3 to 9.0 µg/m^3.
-- = no standard established
µg/m^3 = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
ppm = parts per million
Source: CARB 2016.

Table 3.2-2 presents the federal and state attainment status for the SCAB, in which the Project is located. The Project is in an area designated non-attainment for both the federal and state standards for O_3 and $PM_{2.5}$, the state standard for PM_{10}, and the federal standard for lead (SCAQMD 2016a).

Table 3.2-2: Attainment Status of the South Coast Air Basin

Pollutant	Federal Designation	State Designation
Ozone (O_3) – 1-Hour and 8-Hour	Non-Attainment (Extreme)	Non-Attainment
Carbon Monoxide (CO) – 1-Hour and 8-Hour	Attainment/Maintenance	Attainment
Nitrogen Dioxide (NO_2) – 1-Hour and Annual	Attainment	Attainment
Sulfur Dioxide (SO_2) – Annual	Unclassifiable/Attainment	*
Particulate Matter (PM_{10}) – 24-Hour	Attainment/Maintenance	Non-Attainment
Particulate Matter ($PM_{2.5}$) – Annual	Non-Attainment (Serious)	Non-Attainment
Lead (Pb) – 3-Month Rolling	Non-Attainment	*
Hydrogen Sulfide (H_2S) – 1-Hour	*	Attainment
Sulfates – 24-Hour	*	Attainment
Vinyl Chloride – 24-Hour	*	Attainment

Note: * = Not Applicable/No Standards.
Source: SCAQMD 2016a.

Ambient Air Quality

The nearest air quality monitoring station to the Project sites is the Anaheim Monitoring Station located at 1630 West Pampas Lane. Table 3.2-3 includes a summary of the air quality monitoring data for the years

2021 through 2023. The table shows the number of times the station recorded pollutant concentrations above federal and state air quality standards and the highest annual reading for each pollutant.

Table 3.2-3: Anaheim Monitoring Station Data (2021-2023)

Pollutant	Air Pollutant, Averaging Time (Units)	2021	2022	2023
Ozone (ppm)	Maximum 1-hour measurement	0.089	0.102	0.089
	Number of days over National 1-hour standard	0	0	0
	Number of days over California 1-hour standard	0	1	0
	Maximum 8-hour measurement	0.068	0.076	0.076
	Number of days over National 8-hour standard	0	1	2
	Number of days over California 8-hour standard	0	1	2
Nitrogen Dioxide (ppb)	Maximum 1-hour measurement	67.1	53.0	50.9
	Annual average	12	11	10
	Number of days over National 1-hour standard	0	0	0
	Number of days over California 1-hour standard	0	0	0
$PM_{2.5}$ ($\mu g/m^3$)	Maximum 24-hour measurement	54.4	33.1	45.6
	Annual average	11.6	9.9	*
	Number of days over National 24-hour standard	10	0	1
PM_{10} ($\mu g/m^3$)	Maximum 24-hour measurement	63.6	67.0	97.8
	Annual average	23.4	20.9	20.6
	Number of days over National 24-hour standard	0	0	0
	Number of days over California 24-hour standard	1	1	1

Notes: ppm = parts per million; ppb = parts per billion; $\mu g/m^3$ = micrograms per liter; * means there was insufficient data to determine the value.

Source: CARB 2024a.

Odors

Typically, odors are regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e., irritation, anger, or anxiety) to the physiological (i.e., circulatory and respiratory effects, nausea, vomiting, and headache).

The ability to detect odors varies considerably among the population and is subjective. Some individuals can smell very minute quantities of specific substances; others have varying sensitivities to odors; and people may have different reactions to the same odor (e.g., bakery, gasoline). It is important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience (e.g., a description of flowery or sweet). Intensity refers to the strength of the odor and depends on the odorant concentration in the air. When an odorous sample is progressively diluted,

the odorant concentration decreases, the odor intensity weakens, and it eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant drops below a human's detection threshold.

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air but, due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards. TACs, therefore, are not considered "criteria pollutants" under either the FCAA or the California Clean Air Act (CCAA) and are not subject to NAAQS or CAAQS ambient air quality standards. Instead, USEPA and CARB regulate hazardous air pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with SCAQMD rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national level, USEPA has established national emission standards for hazardous air pollutants (NESHAPs) in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based, source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. The following provides a summary of the primary TACs of concern within the State of California and related health effects.

Diesel Particulate Matter

Diesel particulate matter (DPM) was identified as a TAC by the CARB in August 1998. DPM is emitted from both mobile and stationary sources. In California, on-road diesel-fueled vehicles contribute approximately 42 percent of the statewide total, with an additional 55 percent attributed to other mobile sources such as construction and mining equipment, agricultural equipment, and transport refrigeration units. Stationary sources, contributing about three percent of emissions, include shipyards, warehouses, heavy equipment repair yards, and oil and gas production operations. Emissions from these sources are from diesel-fueled internal combustion engines. Stationary sources that report DPM emissions also include heavy construction, manufacturers of asphalt paving materials and blocks, and diesel-fueled electrical generation facilities (CARB 2024b).

In October 2000, CARB issued a report entitled *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*, which is commonly referred to as the Diesel Risk Reduction Plan (DRRP). The DRRP provides a mechanism for combating the DPM problem. The goal of the DRRP is to reduce concentrations of DPM. The key elements of the DRRP are to clean up existing engines through engine retrofit emission control devices, to adopt stringent standards for new diesel

engines, and to lower the sulfur content of diesel fuel through advanced technology emission control devices on diesel engines. When fully implemented, the DRRP will significantly reduce emissions from both old and new diesel-fueled motor vehicles and from stationary sources that burn diesel fuel. In addition to these strategies, CARB continues to promote the use of alternative fuels and electrification. As a result of these actions, DPM concentrations and associated health risks in future years are projected to decline (CARB 2024b). In comparison to year 2010 inventory of statewide DPM emissions, CARB estimates that emissions of DPM in 2035 will be reduced by more than 50 percent.

DPM is typically composed of carbon particles (also called “soot” or “black carbon”) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. Diesel exhaust also contains gaseous pollutants, including volatile organic compounds and NOx. NOx emissions from diesel engines are important because they can undergo chemical reactions in the atmosphere leading to formation of $PM_{2.5}$ and O_3.

In California, diesel exhaust particles have been identified as a carcinogen accounting for an estimated 70 percent of the total known cancer risks in California. DPM is estimated to increase statewide cancer risk by 520 cancer occurrences per million residents exposed over an estimated 70-year lifetime. Non-cancer health effects associated with exposure to DPM include premature death, exacerbated chronic heart and lung disease, including asthma, and decreased lung function in children. Short-term exposure to diesel exhaust can also have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks (CARB 2024b).

Individuals most vulnerable to non-cancer health effects of DPM are children whose lungs are still developing and the elderly who often have chronic health problems. The elderly and people with emphysema, asthma, and chronic heart and lung disease are especially sensitive to DPM (CARB 2024b). In addition to its health effects, DPM significantly contributes to haze and reduced visibility.

Valley Fever

Valley fever is an infection caused by a fungus that lives in the soil. The fungus that causes Valley fever, Coccidiodes immitis (*C. immitis*), is found in the southwestern United States, parts of Mexico and Central America, and parts of South America. The fungus grows naturally and is endemic in many areas within California. People can get this infection by breathing in fungal spores from the air, especially when the wind blows the soil with the fungal spores into the air, or the dirt is moved by human activity. About 10,000 cases in the United States are reported each year, mostly from Arizona and California. Valley fever can be misdiagnosed because its symptoms are like those of other illnesses. For most people, the symptoms of Valley fever will go away within a few months without any treatment. Some people may develop a more severe infection, especially those with compromised immune systems (Centers for Disease Control and Prevention 2020).

In California, the number of reported Valley fever cases has greatly increased in recent years. Since 2000, the number of reported cases from increased from 1,000 to more than 9,000 cases reported in 2019 (California Department of Public Health 2021). In 2022, 297 cases of Valley fever were recorded within Orange County (California Department of Public Health 2024).

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals with useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings constructed prior to 1977 when it was banned for use in buildings. Exposure to naturally occurring asbestos can occur during soil disturbing activities in areas with deposits present (USEPA 2024b).

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiovascular diseases. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. The Project sites contain and are located adjacent to various sensitive uses, primarily single- and multi-family residences.

3.2.2 Regulatory Setting

Air quality within the Project area is regulated by several jurisdictions, including the USEPA, CARB, and SCAQMD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although USEPA regulations may not be superseded, both state and local regulations may be more stringent.

Federal

U.S. Environmental Protection Agency

At the federal level, the USEPA has been charged with implementing national air quality programs. The USEPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act

The FCAA required the USEPA to establish NAAQS, and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary

standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in Table 3.2-1.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the FCAA of 1970, the USEPA established the NESHAPs. These are technology-based source-specific regulations that limit allowable emissions of HAPs. Among these sources include asbestos-containing building materials (ACBMs). NESHAPs include requirements pertaining to the inspection, notification, handling, and disposal of ACBMs associated with the demolition and renovation of structures.

Non-Road Diesel Rule

The USEPA has established a series of increasingly strict emissions standards for new off-road diesel equipment, on-road diesel trucks, and locomotives. New construction equipment used for the Project, including heavy-duty trucks and off-road construction equipment, would be required to comply with the emissions standards.

State

California Air Resources Board

The CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the CCAA of 1988. Other CARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts), establishing CAAQS, which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used. The CAAQS are summarized in Table 3.2-1.

California Clean Air Act

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for O_3, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) (1983) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets

forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC.

Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

Assembly Bill 617

In response to AB 617 (2017), the CARB established the Community Air Protection Program. The Community Air Protection Program includes community air monitoring and community emissions reduction program's focus is to reduce exposure in communities most impacted by air pollution. The Legislature has appropriated funding to support early actions to address localized air pollution through targeted incentive funding to deploy cleaner technologies in these communities, as well as grants to support community participation in the AB 617 process. AB 617 also includes new requirements for accelerated retrofit of pollution controls on industrial sources, increased penalty fees, and greater transparency and availability of air quality and emissions data, which will help advance air pollution control efforts throughout the state.

Regulatory Attainment Designations

Under the CCAA, CARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O_3, CO, and NO_2 as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, CARB terminology of attainment, nonattainment, and unclassified is more frequently used. The USEPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, USEPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

As noted previously, the Project is in an area designated non-attainment for both the federal and state standards for O_3 and $PM_{2.5}$, the state standard for PM_{10}, and the federal standard for lead (SCAQMD 2016a).

Low-Emission Vehicle Program

The CARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the state's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan (SIP). In 2012, CARB adopted the LEV III amendments to California's LEV regulations. These amendments include more stringent emission standards for both criteria pollutants and greenhouse gases for new passenger vehicles.

On-Road Heavy-Duty Vehicle Program

The CARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. CARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others.

In addition, the CARB's Truck and Bus regulation was established to meet federal attainment standards. This regulation requires heavy-duty diesel vehicles that operate in California to reduce TAC emissions from their exhaust. Diesel exhaust is responsible for 70 percent of the cancer risk from airborne toxics. Therefore, as of January 1, 2023, nearly all trucks and buses were required to have 2010 or newer model year engines to reduce PM and NOx emissions. To help ensure that the benefits of this regulation are achieved, starting in 2020, only vehicles compliant with this regulation were registered by the California Department of Motor Vehicles.

Regional

SCAG Regional Transportation Plan/Sustainable Communities Strategy

The SCAG is the designated Metropolitan Planning Organization for the following six counties: Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The SCAG develops long-range regional transportation plans, including sustainable communities strategies pursuant to SB 375, growth forecast components, regional transportation improvement programs, regional housing needs allocations, and a portion of the SCAQMD air quality plans (SCAG 2023). In April 2024, the SCAG Regional Council approved the 2024-2050 RTP/SCS, which is entitled Connect SoCal 2024. Connect SoCal 2024 is a long-range visioning plan that builds upon and expands land use and transportation strategies to increase

mobility options and achieve a more sustainable growth pattern (SCAG 2024). The 2024 RTP/SCS supersedes the previous RTP/SCS that was adopted in 2020.

South Coast Air Quality Management District

The SCAQMD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded, and the air quality conditions are maintained in the SCAB. Responsibilities of SCAQMD include, but not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the FCAA and the CCAA.

SCAQMD 2022 Air Quality Management Plan

SCAB is designated as non-attainment for both federal and state standards for O_3 and $PM_{2.5}$, the state standard for PM_{10}, and the federal standard for lead. Because the SCAB currently exceeds these NAAQS and CAAQS, the SCAQMD is required to implement strategies to reduce pollutant levels to recognized acceptable standards. The most recent air plan is the 2022 Air Quality Management Plan (AQMP), created in conjunction with the SCAG, CARB, and USEPA to meet federal ozone and $PM_{2.5}$ standards.

The 2022 AQMP accounts for projected population growth and predicted future emissions in energy and transportation demand, and determined control strategies for the eventual achievement of the NAAQS attainment designations. These control strategies are either organized into the SCAQMD rules and regulations, or otherwise set forth as formal SCAQMD recommendations to other agencies. The 2022 AQMP includes policies that are consistent with the SCAQMD and specify review according to the recommendations of SCAQMD guidelines. Other policies are aimed at reducing transportation emissions and emissions from major stationary sources (SCAQMD 2022).

SCAQMD Rules and Regulations

The SCAQMD rules are regulations that may apply to the Project include, but are not limited to, the following:

- **Rule 201: Permit to Construct.** This rule requires that projects shall obtain a permit to construct from the SCAQMD prior to initiating construction activities.
- **Rule 401: Visible Emissions.** This rule prohibits discharges of visible air contaminants from any single source.
- **Rule 402: Nuisance.** This rule prohibits the discharge from any source such quantities of air contaminants or other materials 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.

- **Rule 403: Fugitive Dust.** The purpose of this rule is to reduce the amount of particulate matter in the ambient air as a result of anthropogenic fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions.
- **Rule 1113: Architectural Coatings.** This rule is intended to limit the volatile organic compounds (VOC) content on architectural coatings used within the SCAQMD.
- **Rule 1403: Asbestos Emissions from Demolition/Renovation Activities:** This rule specifies work practices to limit asbestos emissions from building demolition and renovation activities.

Local

City of Seal Beach General Plan

The City's General Plan is a comprehensive long-range general plan for the physical development of the City of Seal Beach. The City of Seal Beach prepared their General Plan in September 2003 in order to plan for the City's development. The 2013-2021 Housing Element as well as the updated Housing Element include the following goals to promote energy efficiency which would in turn reduce air quality emissions (City of Seal Beach 2003, City of Seal Beach 2024).

Housing Element Update

The Housing Element Update contains the following goals and policies related to air quality that apply to the Project:

Goal 6: Encourage more efficient energy use in residential developments.

- **Policy 6a:** Promote energy conservation through "green building" techniques that reduce water consumption, improve energy efficiency and lessen a building's overall environmental impact.
- **Policy 6b:** Promote "smart growth" principles by encouraging compact development in locations that provide opportunities for reduced vehicle trips.

3.2.3 Environmental Impacts

This section analyzes the Project's potential to result in significant air quality impacts. When an impact is determined to be significant, mitigation measures are identified that would reduce or avoid impacts.

Methodology and Modeling Parameters

The California Emissions Estimator Model (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod Version 2022.1.1.28 was used to estimate construction and operational impacts of the Project.

Construction

Construction emissions were estimated for the most emissions-intensive future development under the Project, which is expected to be buildout of Housing Opportunity Site 4 as this site could accommodate the most dwelling units. At maximum buildout, Housing Opportunity Site 4 can accommodate 552 high-density dwelling units at a density of 46 dwelling units per acre. Daily emissions were quantified for the construction of Housing Opportunity Site 4 and assessed in comparison to the SCAQMD significance thresholds. In addition, a qualitative assessment of construction of all Housing Opportunity Sites and Main Street Program is included in the analysis. Detailed model assumptions and inputs for these calculations can be found in Appendix B.

Operations

Operational emissions associated with the Project were estimated for the year 2029, estimated buildout of the Project, using CalEEMod and compared to the SCAQMD thresholds of significance. The trip generation rate for each land use was updated to be consistent with the Project-specific VMT Assessment prepared by Stantec Consulting Services, and the trip lengths and purposes were left as CalEEMod defaults. Detailed model assumptions and inputs for these calculations can be found in Appendix B.

Thresholds of Significance

Pursuant to Section 15064(b) of the CEQA Guidelines, the final determination of whether a project is significant is within the purview of the Lead Agency. The SCAQMD has adopted mass daily thresholds of significance for NOx, VOC, PM_{10}, $PM_{2.5}$, SOx, CO, and Pb to determine the significance of a project's potential air quality impacts. In developing thresholds of significance for air pollutants, SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. Therefore, if a project's emissions exceed thresholds of significance, then the Project would be expected to result in a cumulatively considered net increase of any criteria air pollutant. Table 3.24, below, presents the mass daily thresholds applied to the Project and used for purposes of this analysis.

Table 3.2-4: SCAQMD Air Quality Significance Thresholds

Mass Emissions Thresholds	Emissions (lbs/day)						
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$	Pb
Construction	75	100	550	150	150	55	3
Operation	55	55	550	150	150	55	3

Notes: N/A = not applicable
Source: SCAQMD 1993.

In accordance with the current CEQA Guidelines Appendix G Environmental Checklist, the following questions were analyzed and evaluated to determine whether air quality impacts are significant.

Would the Project:

- *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 non-attainment under an applicable federal or state ambient air quality standard?*
- *Expose sensitive receptors to substantial pollutant concentrations?*
- *Result in other emissions (such as those leading to odors) affecting a substantial number of people?*

Impact Analysis and Mitigation Measures

Air Quality Plan

Impact AQ-1	**The Project would conflict with or obstruct implementation of the applicable air quality plan.**

Impact Analysis

Air districts are required to prepare air quality plans to identify strategies to bring regional emissions into compliance with federal and state air quality standards. As noted previously, the SCAB is designated as a non-attainment area for both the federal and state standards for O_3 and $PM_{2.5}$, the state standard for PM_{10}, and the federal standard for lead (SCAQMD 2016a). Accordingly, SCAQMD, in collaboration with CARB and SCAG, has prepared air quality plans, including the 2022 AQMP, to achieve attainment of the applicable ozone and PM standards. The SCAG's RTP/SCS, Connect SoCal 2024, is also considered an applicable air quality plan. Project consistency with Connect SoCal 2024 is evaluated in Section 3.7, Greenhouse Gas Emissions, of this EIR.

The 2022 AQMP was adopted in December 2022 and represents the most updated regional blueprint for achieving the federal air quality standards and minimizing public health concerns related to air quality. The 2022 AQMP particularly focuses on attainment of the 2015 8-hour ozone NAAQS. The Project would be considered to conflict with the 2022 AQMP if it would:

1. Contribute to exceedances and/or delay attainment of the ozone standards;
2. Result in an exceedance of the planned growth within the project area; or
3. Interfere with implementation of the ozone reduction measures established in the AQMP.

With regard to Item 1, air districts establish emissions thresholds to demonstrate the point at which a project would be considered to increase the regional air quality violations. As described in further detail under Impact AIR-2, construction and operations of the residential development facilitated by the Project is anticipated to exceed the threshold of significance established by the SCAQMD for VOC emissions even with implementation of Mitigation Measures AQ-1 and AQ-2. VOC is an ozone precursor and, by exceeding the VOC threshold of significance, cumulative buildout of the Project may delay attainment of the ozone AAQS.

With regard to Item 2, the population projections in the SCAQMD's 2022 AQMP are based on the regional growth projections included in the SCAG's 2020 RTP/SCS (SCAQMD 2022). According to the

Demographics and Growth Forecast Technical Report prepared for the 2020 RTP/SCS, the City of Seal Beach housing stock is projected to grow from 13,100 households in 2016 to 13,300 households in 2045 (SCAG 2020). The City's household growth projected in the 2020 RTP/SCS (200 households), and therefore in the 2022 AQMP, is less than what is planned in the Housing Element Update, which plan for up to 1,339 new dwelling units by 2029 to accommodate its RHNA allocation of 1,243 units. However, the assumed residential development potential of the Housing Element Update is developed using conservative assumptions that would develop the Housing Opportunity Sites at below the maximum allowable density. For the purposes of analysis contained in this Draft EIR, the City wishes to analyze a more intense level of development so that potential impacts resulting from projects that might propose maximum developable densities are considered as part of this EIR. Therefore, the analysis contained herein assumed buildout under the Project (Housing Opportunity Sites and Main Street Program) and the residential component of the ORCC Specific Plan Project to result in the potential for 1,773 new dwelling units. Implementation of the Project would result in household and population growth that exceeds the projections in the 2022 AQMP and, as a result, the Project is expected to result in emissions that are higher than what was planned for the City in the 2022 AQMP.

With regard to Item 3, the 2022 AQMP notes that attaining the 2015 8-hour ozone standard by 2037 will require both continuation and acceleration of existing ozone reduction strategies, as well as deployment of new strategies. Proposed measures to reduce ozone include stationary and mobile source NOx reduction strategies, supplemented by strategic VOC emission reductions. The following ozone reduction measures identified in the 2022 AQMP are relevant to residential land uses:

- R-CMB-01: Emission Reductions from Replacement with Zero Emission or Low NOx Appliances – Residential Water Heating
- R-CMB-02: Emission Reductions from Replacement with Zero Emission or Low NOx Appliances – Residential Space Heating
- R-CMB-03: Emissions Reductions from Residential Cooking Devices
- R-CMB-04: Emission Reductions from Replacement with Zero Emission or Low NOx Appliances – Residential Other Combustion Sources
- CTS-01: Further Emission Reductions from Coatings, Solvents, Adhesives, and Lubricants

Each of the foregoing measures are intended for implementation at the local or regional government level, rather than the project level. For example, the 2022 AQMP notes that each measure shall be implemented by (1) adopting a new rule to require compliance and (2) offering incentive funds to facilitate adoption of low-emissions technologies. Because the measures are not directly applicable to the Project, development facilitated under the Project would not interfere with implementation of the air quality improvement strategies established in the AQMP.

This EIR includes a discussion of the residential component of the ORCC Specific Plan Project based on the site location and proposed buildout of the 167 dwelling units that are included within the City's site inventory to meet its RHNA requirements. The residential components of the ORCC Specific Plan Project

would increase the total dwelling units to 1,773 and would further increase the Project's household and population growth that exceeds the projections in the 2022 AQMP. Additionally, the impacts from construction of a larger residential development were evaluated within Table 3.2-5 below. Additionally, operational impacts from the total 1,773 units were evaluated within Table 3.2-6 and 3.2-7. Emissions were found to exceed thresholds and therefore, the 167 dwelling units proposed under the ORCC Specific Plan Project were considered within the analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

Conclusion

Because the Project could contribute to a delay in attainment of the ozone AAQS and would result in an exceedance of the planned growth within the City, the Project could conflict with or obstruct implementation of the applicable air quality plan. Even with the implementation of mitigation, the impact remains significant and unavoidable.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

MM AQ-1: **Quantify Construction Criteria Pollutant Emissions.** Prior to discretionary approval by the City for development projects subject to California Environmental Quality Act (CEQA) review, project applicants shall prepare and submit a technical air quality assessment estimating project construction-related criteria pollutant emissions to the City for review and approval. The evaluation shall be prepared in accordance with South Coast Air Quality Management District (SCAQMD) guidance. If construction-related criteria pollutant emissions are determined to have the potential to exceed the SCAQMD regional and localized thresholds of significance, emission reduction measures shall be incorporated into the project to the maximum extent feasible, subject to the discretion of the City. Acceptable options for reducing emissions may include:

- Using construction equipment rated by the United States Environmental Protection Agency as having Tier 4 emission limits for engines above 50 horsepower.
- Require all paints and architectural coatings to be super-compliant volatile organic compounds (VOC) content (0 grams/Liter [g/L] to 10 g/L). If VOC emissions still exceed thresholds, then the applicant may elect to prohibit architectural coating activities during summer months (June, July, and August) when ozone formation peaks.

Regardless of the results of the emissions modeling, the following best practices shall be implemented throughout the duration of all construction activity:

- All off-road equipment operating at the construction site must be maintained in proper working condition according to manufacturers' specifications.

- Idling shall be limited to 5 minutes or less in accordance with the Off-Road Diesel Fueled Fleet Regulation as required by California Air Resources Board (CARB).
- Clear Signage regarding idling restrictions shall be placed at the entrances to the construction site.
- Portable equipment over 50 horsepower must have either a valid SCAQMD Permit to Operate (PTO) or a valid statewide Portable Equipment Registration Program (PERP) placard and sticker issued by CARB.
- Water all active construction areas at least three times daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Pave, apply water three times daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.

MM AQ-2: **Quantify Operational Criteria Pollutant Emissions.** Prior to discretionary approval by the City for development projects subject to California Environmental Quality Act (CEQA) review, project applicants shall prepare and submit a technical air quality assessment estimating project operational-related criteria pollutant emissions to the City for review and approval. The evaluation shall be prepared in accordance with South Coast Air Quality Management District (SCAQMD) guidance. If operational-related criteria pollutant emissions are determined to have the potential to exceed the SCAQMD thresholds of significance, emission reduction measures shall be incorporated into the project to the maximum extent feasible, subject to the discretion of the City. Acceptable options for reducing operational emissions may include, but are not limited to, the following:

- Prohibition of natural gas hearths.
- Installation of solar water heaters or tankless water heaters.
- Exceeding Title 24 energy standards.
- Constructing Level 2 electric vehicle (EV) charging stations for multi-family developments and pre-wiring to allow for Level 2 EV charging stations in single-family residential garages.
- Require all paints and architectural coatings to be super-compliant volatile organic compound (VOC) content (0 to 10 g/L).

Level of Significance After Mitigation
Significant and Unavoidable Impact.

Criteria Pollutants

Impact AQ-2	**The Project would 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.**

Impact Analysis

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If an individual project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. As noted previously, the Project does not propose any individual development projects at this time but, rather, would facilitate the future development of up to 1,773 dwelling units as outlined in Section 2.0, Project Description, of this Draft EIR.

Construction Emissions

Construction activities facilitated by the Project would result in emissions of criteria pollutants due to the use of off-road equipment, heavy-duty haul trucks, and employee commutes to and from the construction sites. In addition, fugitive dust would be generated from earth-moving activities. Emissions from construction-related activities are generally short-term in duration but may still cause adverse air quality impacts.

Specific buildout details of each Housing Opportunity Sites and Main Street Program area are not available at this time; accordingly, this analysis presents estimated construction emissions associated with the most emissions-intensive future development project under the Project, which entails buildout of Housing Opportunity Site 4. Housing Opportunity Site 4 totals 27 acres, 12 acres of which can be developed, and was modeled to accommodate 552 multi-family units, based on the maximum allowable buildout. The estimated criteria pollutant emissions associated with construction of Housing Opportunity Site 4 are presented in Table 3.2-5.

Table 3.2-5: Construction of Housing Opportunity Site 4 – Criteria Pollutant Emissions

	Emissions (lbs/day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Construction of Housing Opportunity Site 4	166.23	13.78	36.26	0.04	6.14	1.77
SCAQMD Threshold of Significance	**75**	**100**	**550**	**150**	**150**	**55**
Exceed Threshold?	***Yes***	***No***	***No***	***No***	***No***	***No***

Source: Appendix B.

As shown above, buildout of Housing Opportunity Site 4, which is expected to be the most emissions-intensive buildout out of the eight identified Housing Opportunity Sites and Main Street Program, may

generate construction emissions that exceed SCAQMD mass daily thresholds for VOC. These emission calculations are based on CalEEMod default factors based on land use type and size which are generally more conservative than project-specific inputs. However, performing more specific emissions calculations for any of the Housing Opportunity Sites or the Main Street Program area to determine significance on a project site by project site basis would be speculative.

Future developments facilitated by the Project would be subject to discretionary permits and future CEQA review. However, since the largest Housing Opportunity site exceeds SCAQMD thresholds, other sites may result in potentially significant emissions due to a more intensive construction timeline, additional demolition and grading, or additional construction trips. Under Mitigation Measure AQ-1, each future development project facilitated by the Project would be required to quantify construction emissions and, if emissions exceed the applicable thresholds, the future development project would reduce emissions to the maximum extent feasible, including through the use of super-compliant VOC coatings. While Mitigation Measure AQ-1 would reduce construction exhaust emissions, potential future development projects accommodated under the Project, both individually and cumulatively, could still exceed the SCAQMD significance thresholds for construction. As a result, the cumulative impact from construction of the Project remains significant and unavoidable.

Operational Emissions

For the purposes of the analysis contained in this Draft EIR, implementation of the Project and the residential components of the ORCC Specific Plan Project would result in future development of up to 1,773 new dwelling units. Emissions during operation of the Project would be generated primarily from resident vehicle trips to and from the sites (mobile sources). In addition, the buildout facilitated by the Project would generate emissions from area sources, which include the use of fireplaces, consumer products, landscaping equipment, and others. Estimated operational emissions from cumulative Project buildout are presented in Table 3.2-6.

Table 3.2-6: Project Operations – Criteria Pollutant Emissions (Unmitigated)

Source	Emissions (lbs/day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Mobile	28.4	22.3	253	0.70	71.0	18.3
Area	50.0	0.00	101	<0.005	0.05	0.04
Energy	0.36	6.08	2.59	0.04	0.49	0.49
Total[1]	*79.0*	*28.3*	*356*	*0.75*	*71.5*	*18.8*
SCAQMD Threshold of Significance	**55**	**55**	**550**	**150**	**150**	**55**
Exceed Threshold?	***Yes***	***No***	***No***	***No***	***No***	***No***

[1] Totals may not appear to sum due to rounding.
Source: Appendix B.

As shown in the table, full buildout of the dwelling units facilitated by the Project would result in VOC emissions that exceed the applicable SCAQMD threshold. Therefore, Mitigation Measure AQ-2 is required.

As required by Mitigation Measure AQ-2, each future development project facilitated by the Project would be required to quantify their individual operational emissions and, if emissions exceed the applicable thresholds, the future development project would reduce emissions to the maximum extent feasible. For this example, architectural coatings were limited to those with a VOC content less than 10 grams per liter. The emissions that would occur from operations with the implementation of mitigation are presented in Table 3.2-7.

Table 3.2-7: Project Operations – Criteria Pollutant Emissions (Mitigated)

Source	Emissions (lbs/day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Mobile	28.6	22.3	253	0.70	71.0	18.3
Area	40.7	0.00	0.00	0.00	0.00	0.00
Energy	0.33	5.61	2.39	0.04	0.45	0.45
Total	*69.6*	*27.9*	*255*	*0.74*	*71.45*	*18.7*
SCAQMD Threshold of Significance	**55**	**55**	**550**	**150**	**150**	**55**
Exceed Threshold?	***Yes***	***No***	***No***	***No***	***No***	***No***

Source: Appendix B.

As shown above, even with mitigation, operational emissions of VOC would exceed the threshold of significance. While Mitigation Measure AQ-2 would reduce operational emissions, cumulative future development projects accommodated under the Project could still exceed the SCAQMD significance thresholds. As a result, the cumulative impact from operations of the Project remains significant and unavoidable.

This EIR includes a discussion of the residential component of the ORCC Specific Plan Project based on the site location and proposed buildout of the 167 dwelling units that are included within the City's site inventory to meet its RHNA requirements. The impacts from construction of a larger residential development were evaluated within Table 3.2-5. Additionally, operational impacts from the total 1,773 units were evaluated within Tables 3.2-6 and 3.2-7. Therefore, the 167 dwelling units proposed under the ORCC Specific Plan Project were considered within the analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

Conclusion

As shown in Table 3.2-5, construction emissions of the most intensive future development project under the Project, which entails buildout of Housing Opportunity Site 4, would exceed the applicable threshold of significance for VOC emissions. Even with implementation of Mitigation Measure AQ-1, a significant impact may occur. Additionally, as presented in Table 3.2-7, even with implementation of Mitigation Measure AQ-2, operational criteria pollutant emissions could exceed the applicable thresholds of significance. Therefore, the Project could result in a cumulatively considerable net increase of any criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard, and the impact would be significant and unavoidable.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures
Mitigation Measures AQ-1 and AQ-2 are required.

Level of Significance After Mitigation
Significant and Unavoidable Impact.

Sensitive Receptors

Impact AQ-3	**The Project would expose sensitive receptors to substantial pollutant concentrations.**

Impact Analysis

As discussed above, the Project itself does not propose any development; however, the Project would facilitate future development of up to 1,773 dwelling units throughout the City as outlined in Section 2.0, Project Description, of this Draft EIR. The eight Housing Opportunity Sites, the Main Street Program, and the residential components of the ORCC Specific Plan Project were evaluated at a programmatic level, and no air modeling was conducted for this analysis.

This discussion qualitatively addresses whether implementation of the Project would expose sensitive receptors to construction-generated fugitive dust (PM_{10}), Valley fever spores, naturally occurring asbestos (NOA), construction-generated DPM, or operational related TACs.

According to CARB, some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Heightened sensitivity may be caused by health problems, proximity to the emissions source, or duration of exposure to air pollutants. Children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered to be sensitive receptors include residences, schools, childcare centers, playgrounds, retirement homes, convalescent homes, hospitals, and medical clinics. As noted previously in Section 3.2.1, Environmental Setting, the eight Housing Opportunity Sites, the area within the Main Street Program, and the residential component of the ORCC Specific Plan contain and are located adjacent to various sensitive uses, primarily single- and multi-family residences.

Construction Emissions

During construction associated with the Project, the potential exists for emissions of fugitive dust, Valley fever, NOA, and DPM to be released. Each TAC is discussed separately below.

Fugitive Dust and Valley Fever

Fugitive dust would be generated during construction facilitated by the Project. As noted previously, Valley fever is an infection caused by inhalation of the spores of a fungus, *C. immitis*, that lives in soil.

Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

Most of the fugitive dust generated during construction activities would remain localized and would be deposited near each construction site. Additionally, SCAQMD Rule 403, Fugitive Dust, limits the discharge of PM emissions and establishes Best Available Control Measures that are applicable to all construction activities (SCAQMD 2005). Consistent with the SCAQMD Best Available Control Measures, construction of each future development project facilitated by the Project would be required to use water trucks to stabilize soils. In addition, the City of Seal Beach is generally built out; therefore, much of the development facilitated by the Project would occur in urban areas where conditions are generally not dry, dusty, or windy. Furthermore, as required by Mitigation Measure AQ-1, development of each future development projects subject to discretionary approval shall evaluate their individual construction emissions. If the future development project is determined to result in PM emissions that exceed the SCAQMD thresholds, then minimization measures would be incorporated to reduce PM emissions to the maximum extent feasible. Overall, construction activities associated with future developments facilitated by the Project would not result in sensitive receptor exposure to substantial concentrations of fugitive dust, including dust that may contain *C. immitis* spores.

Asbestos

Construction in areas of rock formations that contain NOA could release asbestos to the air and pose a health hazard. A review of the map with areas more likely to have rock formations containing NOA in California indicates that there is no known asbestos in the City of Seal Beach (USGS 2011). Therefore, construction of the Project would not expose sensitive receptors to NOA.

Many of the future development projects on Housing Opportunity Sites and within the Main Steet Program facilitated by the Project would entail demolition of existing structures in order to accommodate new housing. For buildings constructed prior to 1980, the Code of Federal Regulations (29 CFR 1926.1101) states that all thermal system insulation and surface materials must be designated as “presumed asbestos containing material” unless proven otherwise. ACBMs could include, but are not limited to, plaster, ceiling tiles, thermal systems insulation, floor tiles, vinyl sheet flooring, adhesives, and roofing materials. Compliance with SCAQMD Rule 1403, Asbestos Emissions from Demolition/Renovation Activities, would ensure that any ACBMs encountered during construction activities are handled appropriately, and risks to existing sensitive receptors would not occur.

Localized Significance Thresholds

SCAQMD has established localized significance thresholds for NOx, CO, PM_{10}, and $PM_{2.5}$ to determine the risk of elevated levels of ozone precursors and particulate matter at nearby receptors. Thresholds were established based on an individual project’s size, location, and distance to receptors. However, SCAQMD established in the PEIR for the 2016 AQMP that the LST screening methodology is not applicable to regional projects such as local general plans, specific plans, or air quality plans since the individual project plans are typically not known at plan adoption (SCAQMD 2016b). Therefore, since the analysis is evaluating the buildout of the Housing Element Update, a localized construction analysis would be speculative for individual projects. However, with implementation of Mitigation Measure AQ-1,

the Project would be required to quantify the individual construction emissions and reduce as feasible below SCAQMD thresholds.

Diesel Particulate Matter

Exposure to DPM from diesel vehicles and off-road construction equipment can result in health risks to nearby sensitive receptors. Pollutant concentrations are typically highest near sources of emissions and dissipate with distance. Thus, the sensitive receptors in and adjacent to each of the Housing Opportunity Sites would be the most susceptible to adverse health effects resulting from construction-related DPM emissions. The actual level of risk would depend on a variety of factors that can only be determined once the specifics of a project are known. Since the details regarding future construction activities are not known at this time, including phasing of future individual projects, construction duration and phasing, and preliminary construction equipment, preparation of a meaningful health risk assessment (HRA) is not possible at the plan level. Rather, Mitigation Measure AQ-3 is required to assess the potential impact associated with exposing sensitive receptors to substantial concentration of DPM. Since health risks are a factor of duration of exposure, source emission rates, and distance of the receptor, an individual's health risks during construction may still be significant and unavoidable.

Operational Emissions

The greatest potential for exposure to TACs during long-term operations is from the use of heavy-duty diesel trucks and stationary generators that use diesel fuel. The Project would facilitate development of up to 1,773 dwelling units throughout the City. The majority of vehicle trips associated with the Project would be from residents and, as a result, future developments associated with the Project would result in very few diesel truck trips. Additionally, the dwelling units developed under the Project are not expected to include any stationary generators. Should a generator be proposed as part of a future development under the Project, the project would be required by SCAQMD to evaluate the impacts of the generator as part of obtaining a Permit to Operate. For these reasons, once operational, the Project would not be expected to expose nearby sensitive receptors to substantial amounts of TACs.

During operations, dust emissions would be negligible because most of the Project area would be occupied by buildings, pavement, and landscaped areas. This would preclude the possibility of Project operations resulting in exposure to fugitive dust emissions and *C. immitis* spores that may result in Valley fever infection.

As noted above, SCAQMD has established localized significance thresholds for NOx, CO, PM_{10}, and $PM_{2.5}$ to determine the risk of elevated levels of ozone precursors and particulate matter at nearby receptors. A localized operational analysis would be speculative for individual projects. However, with implementation of Mitigation Measure AQ-2, the Project would be required to quantify the individual operational emissions and reduce as feasible below SCAQMD thresholds.

This EIR includes a discussion of the residential component of the ORCC Specific Plan Project based on the site location and proposed buildout of the 167 dwelling units that are included within the City's site inventory to meet its RHNA requirements. The impacts from construction and operation of the residential component of the ORCC Specific Plan Project may result in impacts to health risks. Construction of the

residential component of the ORCC Specific Plan Project would still be required to comply with all SCAQMD applicable rules and regulations pertaining to dust control and permitting and therefore, the 167 dwelling units proposed under the ORCC Specific Plan Project were considered within the analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

Conclusion

Based on the analysis above, during construction, the Project could expose sensitive receptors to substantial pollutant concentrations. With implementation of Mitigation Measure AQ-3, the impact would be reduced to the maximum extent feasible. However, the impact may remain significant and unavoidable.

Level of Significance Before Mitigation
Potentially Significant Impact.

Mitigation Measures

Mitigation Measures AQ-1 and AQ-2 are required.

MM AQ-3: **Construction Health Risk Assessment.** Prior to future discretionary project approval for any future development project that would involve construction lasting more than two months and within 1,000 feet of sensitive receptors, the project applicant shall submit a construction health risk assessment (HRA) to the City for review and approval. The level of detail required for the HRA is described below:

A quantitative health risk assessment shall be prepared in accordance with South Coast Air Quality Management District (SCAQMD) and Office of Environmental Health Hazard Assessment (OEHHA) guidance to identify the potential for increased cancer and non-cancer health risks. If the health risks do not exceed the applicable thresholds, further mitigation is not necessary. If the resultant health risks are determined to exceed SCAQMD thresholds of significance, the applicant shall implement measures to reduce diesel particulate matter (DPM) exhaust emissions and associated risks to below the applicable thresholds. Methods may include requiring the use of off-road equipment engines that meet or exceed California Air Resources Board's Tier 4 Final engine emissions standards for off-road equipment exceeding 50 horsepower (hp).

Any emissions reduction measures identified in the HRA shall be incorporated into the site development plan as a component of the project. Prior to issuance of any construction permit, the construction contractor shall ensure that all construction plans submitted to the Community Development Department clearly show incorporation of all applicable mitigation measures.

Level of Significance After Mitigation
Significant and Unavoidable Impact.

Odors

Impact AQ-4	**The Project would not result in other emissions (such as those leading to odors) affecting a substantial number of people.**

Impact Analysis

While offensive odors rarely cause any physical harm, they can still be unpleasant, leading to distress among the public and often generating citizen complaints. The occurrence and severity of odor impacts depends on numerous factors, including nature, frequency, and intensity of the source, the wind speed and direction, and the sensitivity of the receptor.

Construction activities facilitated by the Project could result in short-term odorous emissions from diesel exhaust associated with diesel-fueled equipment. However, these emissions would be intermittent and would dissipate rapidly from the source. Construction of all future developments facilitated by the Project would also be required to comply with all applicable SCAQMD rules and regulations, particularly associated with permitting of air pollutant sources. Compliance with the aforementioned regulations would help to minimize emissions, including emissions leading to odors.

The SCAQMD has identified land uses commonly subject to odor complaints. These land uses include agriculture (farming and livestock), wastewater treatment, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). The Project entails development of residential uses and would not involve any of the land uses identified to result in odor complaints nor involve any components with the potential to create objectionable odors affecting a substantial number of people.

Finally, SCAQMD regulates objectionable odors through Rule 402, Nuisance (SCAQMD 1976). Thus, although not anticipated, if odor complaints are made during implementation of the Project, the SCAQMD would ensure that such odors are addressed, and any potential odor effects are minimized or eliminated.

This EIR includes a discussion of the residential component of the ORCC Specific Plan Project based on the site location and proposed buildout of the 167 dwelling units that are included within the City's site inventory to meet its RHNA requirements. Residential developments are not land uses commonly subject to odor complaints and all developments within SCAQMD would be subject to rules and regulations pertaining to odor. Therefore, the 167 dwelling units proposed under the ORCC Specific Plan Project were considered within the analysis of this Project. Specific impact findings associated with the development of the ORCC Specific Plan Project are being evaluated in a standalone EIR.

Conclusion

The Project would not result in other emissions, such as those leading to odors, affecting a substantial number of people. Therefore, the impact would be less than significant.

Level of Significance Before Mitigation
Less Than Significant Impact.

Mitigation Measures
No mitigation measures are necessary.

Level of Significance After Mitigation
Less Than Significant Impact.

3.2.4 Cumulative Impacts

CEQA requires that EIRs evaluate the potential cumulative impacts of a project. A project's environmental impacts are "cumulatively considerable" if the "incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (CEQA Guidelines Section 15065(a)(3)). The geographic scope for cumulative air quality impacts is the extent of the air district.

As discussed in Section 3.0, Environmental Analysis, CEQA Guidelines Section 15130 requires cumulative impact analysis in EIRs to consider a list of planned and pending projects that may contribute to the cumulative impacts of a project. Section 3.0, Table 3.0-3 identifies all past, present, and probable future residential projects in the City and surrounding areas that may impact the Project. Table 3.2-8 identifies the cumulative past, present, and probable future projects from Table 3.0-3 that may drive a potential cumulative impact related to air quality and therefore were analyzed in this cumulative discussion.

Table 3.2-8: Cumulative Projects Related to Air Quality

#	Project Name	Location	Project Characteristics	Status	Total Dwelling Units
1	Old Ranch Country Club Project	Old Ranch Country Club, City of Seal Beach	Construction of a 116-unit, 4-level (188,500 square feet) multi-family housing development; a 51-unit, 3-level senior housing complex; medical office facility; overnight accommodation, including a bar and lounge and specialty restaurant	Preparation of EIR	167
2	Naval Weapons Station	Pacific Coast Hwy & Seal Beach Boulevard	Potential future housing developments proposed within the Naval Weapons Station	Anticipated	150

#	Project Name	Location	Project Characteristics	Status	Total Dwelling Units
3	Water Storage Site	Within the Naval Weapons Station, approximately 1,000 feet east of Seal Beach Boulevard, near the housing community off Anchor Way	Potential future housing developments proposed within the Naval Weapons Station	Anticipated	65
4	Lampson Project	4665 Lampson Avenue, City of Los Alamitos	Redevelopment of existing office building with a residential development consisting of cluster homes, townhomes, and apartments totaling 246 units	Approved (By City of Los Alamitos)	246
5	Onni Marina Shores	6500-6670 E. Pacific Coast Hwy, City of Long Beach (7242011013)	Two, 5-story buildings with a total of 563,529 square feet containing 600 residential units and 4,000 square-feet of ground-level restaurant space	Approved (By City of Long Beach)	600
6	Carmel Partners	6615 E. Pacific Coast Hwy, City of Long Beach (7237020050)	Construction of a six-story mixed-use project consisting of 390 residential dwelling units and 5,351 square feet of commercial/retail space	Approved (By City of Long Beach)	380
7	Holland Partners	6700 E. Pacific Coast Hwy, City of Long Beach (7242012006)	Construction of a new mixed-use project consisting of 281 residential dwelling units, 3,100 square feet of commercial/retail space in a building with	Approved (By City of Long Beach)	281

#	Project Name	Location	Project Characteristics	Status	Total Dwelling Units
			592,100 square feet of area		
8	Long Beach Housing Element Site	6695 E. Pacific Coast Hwy (7237020040); 6411 E. Pacific Coast Hwy (7237020051); No address (7237020904)	Candidate site identified in the City of Long Beach's Housing Element as a site for potential future residential development	Proposed in Housing Element Update (By City of Long Beach)	940
9	Long Beach Housing Element Site	1000 N Studebaker Rd (7238015021)	Candidate site identified in the City of Long Beach's Housing Element as a site for potential future residential development	Proposed in Housing Element Update (By City of Long Beach)	115
10	Orange County Housing Element Sites	11061 Los Alamitos Blvd (086-521-47); 11031 Los Alamitos Blvd (086-521-46); 3352 Katella Ave (086-521-19); 11131 Los Alamitos Blvd (086-521-23); 11088 Wallingsford Rd (086-521-11); 11171 Los Alamitos Blvd (086-521-24)	Candidate site identified in the County of Orange's Housing Element as a site for potential future residential development	Proposed in Housing Element Update (By Orange County)	619
11	Westminster Housing Element Sites	13251 Springdale Street (203-073-04); Dorothy Lane /Melanie Lane (203-073-05); Dorothy Lane/Lee Drive (203-073-01 and 203-073-03)	Candidate site identified in the City of Westminster's Housing Element as a site for potential future residential development	Proposed in Housing Element Update (By City of Westminster)	122

Development under the Project in combination with cumulative development identified in Table 3.2-8 could increase air quality impacts within the air basin.

Implementation of the Project, including future developments on the eight Housing Opportunity Sites, the ORCC Specific Plan pipeline site, and within the Main Street Program area facilitated by the Housing Element Update, in conjunction with cumulative development in the City, would result in emissions of pollutants from construction and operations. Additionally, the SCAB has been designated as a non-attainment area for both the federal and state standards for O_3 and $PM_{2.5}$, the state standard for PM_{10}, and the federal standard for lead. The existing non-attainment status of the SCAB is the result of cumulative emissions from all sources of these air pollutants and their precursors within the SCAB as well as pollutant transport from surrounding areas.

Potential land use impacts are site-specific and would require evaluation of future housing development on a case-by-case basis. Unless exempt, each cumulative discretionary project would require separate approval and evaluation under CEQA, which would address potential air quality impacts and identify necessary mitigation measures, where appropriate. While some future development projects may not result in a significant impact, as discussed above, other future development projects would result in emissions that are considered significant. Consequently, future developments facilitated by the Project could result in significant environmental impacts from pollutant emissions and may conflict with or obstruct a state or local plan, ordinance, or standards aimed at avoiding or minimizing pollutant emissions. Therefore, the Project, including future developments facilitated by the Project, could result a cumulatively considerable air quality impact.

3.2.5 References

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