3.2 AIR QUALITY

INTRODUCTION

This section provides an assessment of the potential for significant air quality impacts from construction and operation of the proposed project. The ambient air quality of the local and regional area is discussed, including a comparison of existing air quality to applicable federal, state, and local air pollutant standards. Criteria air pollutant levels in the vicinity of the project site are identified and discussed. This section also identifies the plans and policies developed in efforts to improve air quality. The evaluation of potential air quality impacts associated with the proposed project is assessed based on the emissions calculations using methodologies recommended by the local air quality agency. Sources utilized in this assessment include the South Coast Air Quality Management District (SCAQMD) *California Environmental Quality Act (CEQA) Air Quality Handbook* (CEQA Handbook), *Air Quality Analysis Guidance Handbook*, and air quality data from the SCAQMD, and data from the California Air Resources Board (CARB) and the United States Environmental Protection Agency (US EPA). The assessment indicates that construction of the proposed project would generate emissions that would be below the SCAQMD thresholds of significance. Construction emissions would also not exceed the localized significance thresholds at nearby sensitive receptors. Operation of the proposed project would generate emissions that would be less than the SCAQMD thresholds of significance and would also not exceed the localized significance thresholds at nearby sensitive receptors. The proposed project would also not conflict with implementation of the applicable air quality management plan and would not expose sensitive receptors to carbon monoxide hotspots, or substantial odors or toxic air contaminants. The proposed project would have a less than significant impact on air quality. Emission calculations and air quality modeling conducted for the proposed project are provided in **Appendix 3.2**.

ENVIRONMENTAL SETTING

Regional Air Quality

The project site is located north of the Pacific Ocean and the Pacific Coast Highway (PCH), west of the City of Santa Monica, east of the City of Oxnard, and south of the City of Calabasas, in the City of Malibu. The project site is bounded on the north by commercial development, on the south by Civic Center Way, on the east by Cross Creek Road, and on the west by vacant land. The proposed project is located in the South Coast Air Basin (Air Basin). The Air Basin consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties. Air quality is affected by both the rate and location of pollutant emissions. Meteorological conditions such as wind speed, wind direction, solar radiation, atmospheric stability,

along with local topography heavily influence air quality by affecting the movement and dispersal of pollutants. Predominant meteorological conditions in the Air Basin are light winds and shallow vertical mixing due to low-altitude temperature inversions. These conditions, when coupled with the surrounding mountain ranges, hinder the regional dispersion of air pollutants. The strength and location of a semi-permanent, high-pressure cell over the northern Pacific Ocean is the primary climatological influence on the Air Basin, as is the ocean, which moderates the local climate by acting like a large heat reservoir. As a result of these influences, warm summers, mild winters, infrequent rainfall, and moderate humidity typify climatic conditions through most of the Air Basin. These meteorological conditions, in combination with regional topography, are conducive to the formation and retention of ozone (O_3) and urban smog.

The SCAQMD operates stations in the Air Basin that monitor meteorological conditions and pollutant concentrations. Predominant winds at the project site are from the southwest and northwest up to approximately 8 miles per hour. The average annual maximum temperature in the region is 80 degrees Fahrenheit (° F) and the average annual minimum is 47° F. The average annual rainfall is 24 inches.[1]

The determination of whether a region's air quality is healthful or unhealthful is made by comparing pollutant levels in ambient air samples to national and state standards. The State of California and the US EPA have established health-based air quality standards for the following criteria air pollutants: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter (PM10), fine particulate matter (PM2.5), and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards, and in the case of PM10 and SO_2, much more stringent. California has also established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. The state and national ambient air quality standards for each of the monitored pollutants and their effects on health are summarized in **Table 3.2-1, Ambient Air Quality Standards**.

1 Western Regional Climate Center, "Canoga Park Pierce Coll, California (041484)," http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca1484; "Topanga Ranger Stn, California (048967)," http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca8967. 2011.

Table 3.2-1
Ambient Air Quality Standards

Air Pollutant	Concentration/Averaging Time: State Standard (CAAQS)	Concentration/Averaging Time: Federal Primary Standard (NAAQS)	Most Relevant Health Effects
Ozone	0.09 ppm, 1-hr. avg. 0.070 ppm, 8-hr avg.	0.075 ppm, 8-hr avg. (3-year average of annual 4th-highest daily maximum)	(a) Pulmonary function decrements and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage
Nitrogen Dioxide	0.18 ppm, 1-hr avg. 0.030 ppm, annual	0.100 ppm, 1-hr avg. (3-year avg. of the 98th percentile of the daily maximum 1-hour avg.) 0.053 ppm, annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extrapulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration
Carbon Monoxide	20 ppm, 1-hr avg. 9.0 ppm, 8-hr avg.	35 ppm, 1-hr avg. (not to be exceeded more than once per year) 9 ppm, 8-hr avg. (not to be exceeded more than once per year)	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses
Sulfur Dioxide	0.25 ppm, 1-hr. avg. 0.04 ppm, 24-hr avg.	0.075 ppm, 1-hr avg. (3-year avg. of the 99th percentile) 0.5 ppm, 3-hr avg. (not to be exceeded more than once per year)	Bronchoconstriction accompanied by symptoms, which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in person with asthma
Respirable Particulate Matter (PM10)	50 μg/m³, 24-hr avg. 20 μg/m³, annual	150 μg/m³, 24-hr avg. (not to be exceeded more than once per year on average over 3 years)	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death
Fine Particulate Matter (PM2.5)	12 μg/m³, annual	35 μg/m³, 24-hr avg. (3-year average of 98th percentile) 15 μg/m³, annual (3-year average)	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; and (c) Increased risk of premature death
Lead (Pb)	1.5 μg/m³, 30-day avg.	0.15 μg/m³, 3-month rolling average	(a) Learning disabilities, and (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount such that the extinction coefficient is greater than 0.23 inverse kilometers at relative humidity less than 70%, 8-hour avg. (10:00 AM–6:00 PM)	None	Visibility impairment on days when relative humidity is less than 70 percent.

Air Pollutant	Concentration/Averaging Time		Most Relevant Health Effects
	State Standard (CAAQS)	Federal Primary Standard (NAAQS)	
Sulfates	25 μg/m³, 24-hr avg.	None	(a) Decrease in ventilatory function, (b) Aggravation of asthmatic symptoms, (c) Aggravation of cardio-pulmonary disease, (d) Vegetation damage, (e) Degradation of visibility, and (f) Property damage
Hydrogen Sulfide	0.03 ppm, 1-hr avg.	None	Odor annoyance
Vinyl Chloride[3]	0.01 ppm, 24-hr avg.	None	Known carcinogen

Source: South Coast Air Quality Management District, Final Program Environmental Impact Report for the 2012 Air Quality Management Plan, 2012 Table 2.1, p. 2-3.
US EPA. National Ambient Air Quality Standards. http://www.epa.gov/air/criteria.html. 2014.
μg/m³ = microgram per cubic meter; ppm = parts per million by volume.
CAAQS = California Ambient Air Quality Standards; NAAQS = National Ambient Air Quality Standards

Generally, the sources for hydrogen sulfide emissions include decomposition of human and animal wastes and industrial activities, such as food processing, coke ovens, paper mills, tanneries, and petroleum refineries. The sources for vinyl chloride emissions include manufacturing of plastic products, hazardous waste sites, and landfills. In addition, according to the SCAQMD's *2012 Air Quality Management Plan*,[2] the sulfate and visibility-reducing particle standards have not been exceeded anywhere in the Air Basin. As a result, there is no need for any further evaluation of the hydrogen sulfide, vinyl chloride, sulfate, or visibility-reducing particle emissions for the proposed project. Although the Los Angeles County portion of the Air Basin is designated as nonattainment for lead, the exceedance is the result of lead emissions from an industrial lead-acid battery recycling facility in the City of Commerce.

In 2013 the US EPA designated a portion of Los Angeles County as nonattainment for the NAAQS lead standard. The higher lead concentrations were recorded downwind from stationary sources. The SCAQMD Source Receptor Areas (SRAs) which monitor lead emissions in more populated areas, show concentrations that do not exceed the revised federal lead standard. The proposed project is not located in the same source receptor area as the lead exceedance. Motor vehicles and paints used to be a source of lead; however, unleaded fuel and unleaded paints have virtually eliminated lead emissions from most land use projects. As a result, there is no need for any further evaluation of lead emissions. Accordingly, this air quality analysis focuses primarily on the criteria air pollutants summarized below.

- **Ozone (O3).** Ozone is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NOX) undergo photochemical reactions in the presence of sunlight. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.

2 South Coast Air Quality Management District, *2012 Air Quality Management Plan*, 2012.

- **Volatile Organic Compounds (VOCs).** VOCs are compounds comprised primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. VOCs themselves are not criteria pollutants; however, they contribute to O_3 formation.

- **Nitrogen Dioxide (NO_2).** NO_2 is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO) and is also a byproduct of fuel combustion. NO_X is primarily emitted in the form of NO, but quickly reacts to form NO_2. NO_X is primarily a mixture of NO and NO_2. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO.

- **Carbon Monoxide (CO).** CO is a colorless, odorless gas produced by the incomplete combustion of fuels. Motor vehicles operating at slow speeds are the primary source of CO. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.

- **Sulfur dioxide (SO_2).** SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high-sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When sulfur dioxide oxidizes in the atmosphere, it forms sulfates (SO_4).

- **Respirable Particulate Matter (PM10).** PM10 consists of small, suspended particles or droplets 10 microns or smaller in diameter. Some sources of PM10, like pollen and windstorms, are naturally occurring. However, in populated areas, most PM10 is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.

- **Fine Particulate Matter (PM2.5).** PM2.5 refers to particulate matter that is 2.5 microns or smaller in size. The sources of PM2.5 include fuel combustion from automobiles, power plants, wood burning, industrial processes, and diesel-powered vehicles.

Local Air Quality Setting

The SCAQMD has divided the Air Basin into Source Receptor Areas (SRAs) in which air quality monitoring stations are operated. The project site is located in SRA 2 (Northwest Los Angeles County Coastal). The monitoring station is located at the West Los Angeles Veterans Affairs Medical Center, approximately 13 miles east of the project site. This station monitors emission levels of O_3, NO_2, and CO. The SCAQMD does not monitor SO_2, PM10, or PM2.5 at this station. As is demonstrated later in this section, the proposed project would not emit substantial amounts of SO_2 and would not cause or contribute to exceedances of the SO_2 standards. With respect to PM10 and PM2.5, the emissions associated with the proposed project are assessed with respect to the SCAQMD emissions threshold of significance and localized significance thresholds. **Table 3.2-2, Ambient Pollutant Concentrations,** lists the ambient pollutant concentrations registered and the exceedances of state and federal standards that have occurred at the abovementioned monitoring station from 2011 through 2013, the most recent years in which data are available from the SCAQMD. As shown, the monitoring station has registered values above state and federal standards for O_3.

Table 3.2-2
Ambient Air Pollutant Concentrations

Pollutant	Standards[1]	Year 2011	2012	2013
OZONE (O_3)				
Maximum 1-hour concentration (ppm)		0.098	0.093	0.088
Maximum 8-hour concentration (ppm)		0.068	0.073	0.075
Number of days exceeding state 1-hour standard	0.09 ppm	2	0	0
Number of days exceeding state 8-hour standard	0.070 ppm	0	1	1
Number of days exceeding federal 8-hour standard	0.075 ppm	0	0	0
NITROGEN DIOXIDE (NO_2)				
Maximum 1-hour concentration (ppm)		0.0813	0.0613	0.0512
Annual average concentration (ppm)		0.0139	0.0137	0.0145
Number of days exceeding state 1-hour standard	0.18 ppm	0	0	0
CARBON MONOXIDE (CO)				
Maximum 1-hour concentration (ppm)		-	-	-
Maximum 8-hour concentration (ppm)		1.3	1.4	1.3
Number of days exceeding 1-hour standard	20 ppm	0	0	0
Number of days exceeding 8-hour standard	9.0 ppm	0	0	

Source: South Coast Air Quality Management District, "Historical Data by Year," http://www.aqmd.gov/smog/historicaldata.htm. 2015.
[1] *Parts by volume per million of air (ppm), micrograms per cubic meter of air ($\mu g/m^3$), or annual arithmetic mean (aam).*

Surrounding Land Uses

The project site is located within the larger Civic Center area of Malibu, which occupies approximately 185 acres extending from PCH in the south to the base of the hillsides in the north. The project site is located adjacent to a vacant parcel to the west, commercial space to the east, a horse training facility to the north, and a commercial center to the south. Single-family residential properties are located further to the north, along the ridgeline overlooking the Civic Center area. Additional land uses in the area include Legacy Park, a passive community park, which includes an element of the City's storm water treatment system, located southwest of the project site, across Civic Center Way. Immediately to the west is the approved La Paz commercial development. The Los Angeles County Civic Center complex, which includes the Los Angeles County Sheriff's Department substation, the Malibu Branch Public Library – Malibu Branch, and the vacated Superior Court offices, is located immediately to the west of the La Paz site. The project site is also within 0.25 mile of eastbound and westbound transit stops on the Malibu Express (Metro Line 534), which provides daily public transportation services.

REGULATORY FRAMEWORK

Federal

The US EPA is responsible for enforcing the federal Clean Air Act (CAA) and the National Ambient Air Quality Standards (NAAQS). The US EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The US EPA also maintains jurisdiction over emissions sources outside state waters (outer continental shelf), and establishes national emissions standards for vehicles. The US EPA formally classifies air basins as attainment or nonattainment based on whether the region meets or exceeds the NAAQS. As part of its enforcement responsibilities, the US EPA requires each state with areas that do not meet the NAAQS to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the period identified in the SIP. The US EPA makes area designations for seven criteria pollutants: O_3, CO, NO_2, SO_2, PM10, PM2.5, and lead. The status of the Los Angeles County portion of the Air Basin with respect to attainment with the NAAQS is summarized in **Table 3.2-3, Attainment Status – South Coast Air Basin (Los Angeles County).**

Table 3.2-3
Attainment Status – South Coast Air Basin (Los Angeles County)

Pollutant	Federal	State
Ozone (O_3), 8-Hour Average	Nonattainment	Nonattainment
Ozone (O_3), 1-Hour Average	—	Non-Attainment
Nitrogen Dioxide (NO_2)	Attainment (Maintenance)	Attainment
Carbon Monoxide (CO)	Attainment (Maintenance)	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Respirable Particulates (PM10)	Nonattainment	Nonattainment
Fine Particulates (PM2.5)	Nonattainment	Nonattainment
Lead (Pb)	Nonattainment	Attainment
Sulfates (SO_4)	—	Attainment
Hydrogen Sulfide (H_2S)	—	Unclassified
Vinyl Chloride	—	Unclassified
Visibility-Reducing Particles	—	Unclassified

Sources:
California Air Resources Board, "Area Designations Maps/State and National," http://www.arb.ca.gov/desig/adm/adm.htm. 2015.
US Environmental Protection Agency, "Air Quality Maps," http://www.epa.gov/region9/air/maps/index.html. 2015.

In response to rapid population growth and the associated rise in motor vehicle operations, the 1990 Clean Air Act Amendments addressed tailpipe emissions from automobiles, heavy-duty engines, and diesel fuel engines. The amendments established more stringent standards for hydrocarbons, NO_X, and CO emissions in order to reduce the levels of these pollutants in heavily populated areas. Under the 1990 Clean Air Act Amendments, new fuels were required to be less volatile, contain less sulfur (regarding diesel fuel), and have higher levels of oxygenates (oxygen-containing substances to improve fuel combustion). Due to the lack of a substantial reduction in hazardous emissions under the 1977 Clean Air Act, the 1990 Clean Air Act Amendments include regulations for reducing impacts from 189 listed hazardous air pollutants (HAPs), which are carcinogenic, mutagenic, and/or reproductive toxicants. The 1990 Clean Air Act Amendments also affects major stationary sources and area emissions sources requiring use of Maximum Achievable Control Technology (MACT) to reduce HAP emissions and their associated health impacts.

State

The California Air Resources Board (CARB) oversees air quality planning and control throughout California. It is primarily responsible for ensuring the implementation of the California Clean Air Act (CCAA), responding to federal CAA requirements, and regulating emissions from motor vehicles and consumer products within the state. In addition, CARB also sets health-based air quality standards and control measures for toxic air contaminants (TACs). Automobile emissions are a major focus of CARB's research as they are the largest contributor to air pollution in California. CARB establishes new standards for vehicles sold in California and for various types of equipment available commercially and sets vehicle fuel specifications to reduce vehicular emissions.

The CCAA established a legal mandate for air basins to achieve the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. These designation criteria provide the basis for CARB to designate areas of the state as attainment, nonattainment, or unclassified according to state standards. CARB makes area designations for 10 criteria pollutants: O_3, NO_2, CO, SO_2, PM10,

PM2.5, lead, sulfates, hydrogen sulfide, and visibility-reducing particles.[3] The status of the Air Basin with respect to attainment with the CAAQS is summarized in **Table 3.2-3.**

In addition to the criteria pollutants discussed above, TACs are another group of pollutants of concern. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset or spill conditions. Health effects of TACs include cancer, birth defects, neurological damage, and premature death. In 1998, CARB identified diesel particulate matter from diesel-fueled engines as a TAC. Mobile sources (including trucks, buses, automobiles, trains, ships, and farm equipment) are by far the largest source of diesel emissions. The exhaust from diesel engines includes hundreds of different gaseous and particulate components, many of which are toxic. Many of these toxic compounds adhere to the particles and, because diesel particles are very small, they penetrate deeply into the lungs.

Before California listed particulate matter from diesel engine exhaust as a TAC, it had already adopted various regulations that would reduce diesel emissions. These regulations include new standards for diesel fuel; exhaust emission standards for new diesel trucks, buses, automobiles, and utility equipment; and inspection and maintenance requirements for heavy-duty vehicles. Since listing diesel exhaust as a TAC, CARB continues to evaluate what additional regulatory action is needed to reduce public exposure. CARB promulgates airborne toxic control measures (ATCMs) for a variety of mobile and stationary sources of air pollutants. Each ATCM is codified in the California Code of Regulations. The following discusses several ATCMs that are relevant to the proposed project.

- **Airborne Toxic Control Measures to Limit Commercial Truck Idling**: In July 2004, CARB adopted an ATCM to limit motor vehicle idling within California.4 The control measure was adopted as part of a program to reduce public exposure to diesel engine particulate matter (DPM). The measure applies to all diesel-fueled vehicles over 10,000 pounds, regardless of the state in which they are registered. Effective 2008, all heavy-duty trucks are prohibited from idling to maintain comfortable sleeper berth conditions. Idling is not permitted in school areas or 100 feet from a restricted area for more than 5 minutes unless the vehicle is engaged in working activities. Consistent with the CARB ATCM, the project applicant shall comply with the measure and shall enforce a maximum idling limit of 5 minutes per truck at the loading dock area on the north side of the building. The loading dock

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3 California Air Resources Board, "Area Designations (Activities and Maps)," http://www.arb.ca.gov/desig/desig.htm. 2010. According to California Health and Safety Code, Section 39608, "state board, in consultation with the districts, shall identify, pursuant to subdivision (e) of Section 39607, and classify each air basin which is in attainment and each air basin which is in nonattainment for any state ambient air quality standard." Section 39607(e) states that the State shall "establish and periodically review criteria for designating an air basin attainment or nonattainment for any state ambient air quality standard set forth in Section 70200 of Title 17 of the California Code of Regulations. California Code of Regulations, Title 17, Section 70200 does not include vinyl chloride; therefore, CARB does not make area designations for vinyl chloride.

4 California Code of Regulations, Title 13, Chapter 10, Division 3, Section 2485, *Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling*, effective February 1, 2005.

area shall have an informational placard or sign indicating a 5-minute idling limit and loading dock personnel shall be properly informed and trained as necessary.

- **Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units and Generator Sets**: The ATCM for in-use diesel-fueled transport refrigeration units (TRUs) and TRU generator sets targets for TRUs.[5] TRUs are trailer-mounted units, powered by small diesel-fueled engines, which provide chilled air to trailers carrying perishable goods (e.g., produce, meats, and prescription drugs). The measure regulates particulate matter emission rates from TRUs powered by diesel internal combustion engines that range from 9 to 36 horsepower. According to the regulation, facilities with over 20 loading dock doors must submit a detailed report specifying the types of models and quantities of TRUs that would operate at the facility. The report is filed by the equipment operator and is submitted electronically to CARB. By July 31, 2009, owners and operators of California-based TRUs are required to submit an application for a CARB identification number as part of the CARB Identification Numbering Requirements. The ATCM also applies to operators and owners of the TRUs on supply trailers whether registered out of state or in California.

The chief control measure is a gradual phase-in of low- and ultra-low-emission standard TRUs. The first phase—performance standards for low-emission TRUs—requires all TRUs that have under 25 horsepower to have an emission rate of 0.3 gram per horsepower-hour (g/hp-hr) of PM10 or less and TRUs 25 horsepower or more to have an emission rate of 0.22 g/hp-hr PM10 or less. This is referred to as the Low Emission TRU (LETRU) emission standard. The compliance schedule for the LETRU standard is as follows:

- December 31, 2008: All TRUs and TRU generator sets model year 2001 and older;
- December 31, 2009/2010/2011: All TRUs and TRU generator sets model year 2002/2003/2004 (e.g., model year 2002 is December 31, 2009; model year 2003 is December 31, 2010; and so forth);
- Model year 2005 and later do not have compliance requirements for the LETRU standard.

The ultra-low performance standard for in-use TRUs (ULETRU) applies to all future models as well as model year 2004 and older TRUs after seven years of compliance with the LETRU standard. Compliance with the ULETRU standard requires engines with 25 horsepower or more to have emission rates of 0.02 g/hp-hr PM10 or less. Compliance with the ULETRU standard for models with 25 horsepower or less must choose another compliance option. The compliance schedule for the ULETRU standard is as follows:

- December 31, 2015/2016/2017/2018: All TRUs and TRU generator sets model year 2001 and older/2002/2003/2004 (e.g., model year 2001 and older is December 31, 2015; model year 2002 is December 31, 2016; and so forth);

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5 California Air Resources Board, "Transportation Refrigeration Unit (Reefer) ATCM," http://www.arb.ca.gov/diesel/tru/tru.htm. 2012.

- December 31, 2012: All TRUs and TRU generator sets model year 2005;
- Model year 2006 and later models shall comply with the ULETRU standard 1 year later than the prior model (e.g., model year 2006 is December 31, 2013; model year 2007 is December 31, 2014; and so forth).

Manufacturers and operators can meet these standards by producing and using engines that have been tested and certified by CARB. TRU operators can also comply by equipping or retrofitting TRU engines with the required level of Verified Diesel Emission Control Strategies.[6] In addition to producing and purchasing cleaner TRU engines, the measure also encourages the use of alternative technologies to diesel-fueled TRUs, such as electric standby power, cryogenic temperature control systems (or a hybrid), alternative-fuel engines, fuel-cell-powered temperature control systems, and more. Whole Foods and any of their vendors using TRUs would comply with these regulations.

Local

South Coast Air Quality Management District

Air Quality Management Plan

The SCAQMD is required to produce air quality management plans (AQMPs) directing how the Air Basin's air quality will be brought into attainment with federal and state standards. The US EPA requires that transportation conformity budgets be established based on the most recent planning assumptions (i.e., within the last five years). Plan updates are necessary to ensure continued progress toward attainment and to avoid a transportation conformity lapse and associated federal funding losses. A multi-level partnership of governmental agencies at the federal, state, regional, and local levels implement the programs contained in these plans. Agencies involved include the US EPA, CARB, the Southern California Association of Governments (SCAG), local governments, and the SCAQMD.

Since 1979, the SCAQMD has prepared a number of AQMPs. The SCAQMD adopted the currently applicable 2012 Air Quality Management Plan (2012 AQMP) on February 1, 2012. CARB approved the 2012 AQMP as the comprehensive SIP component for the Basin on September 27, 2007. The 2012 AQMP for the Basin (and those portions of the Salton Sea Air Basin under the SCAQMD's jurisdiction) sets forth a comprehensive program to lead these areas into compliance with federal and state air quality planning requirements for ozone, PM10, and PM2.5. The 2012 AQMP demonstrates that with implementation of all feasible controls, the 24-hour PM2.5 attainment will be achieved by 2014. In addition, the South Coast Air Basin (SCAB) still exceeds the federal 8-hour ozone standard and is designated as an "extreme"

6 California Air Resources Board, *Regulation for the Verification Procedure for In-use Strategies to Control Emissions from Diesel Engines*, adopted May 16, 2002.

nonattainment area. The rate of ozone reduction has slowed over the last several years. Therefore, a strategy focusing primarily on NOx reductions has been identified as the optimum method to achieve long-term ozone attainment objectives. Additional VOC reductions are still required to achieve ozone reduction.

CEQA Handbook

In 1993, the SCAQMD prepared its *CEQA Air Quality Handbook* (CEQA Handbook) to assist local government agencies and consultants in preparing environmental documents for projects subject to CEQA.[7] The SCAQMD is in the process of developing its *Air Quality Analysis Guidance Handbook* (Guidance Handbook) to replace the CEQA Handbook. The CEQA Handbook and the Guidance Handbook describe the criteria that SCAQMD uses when reviewing and commenting on the adequacy of environmental documents. The Guidance Handbook provides the most up-to-date recommended thresholds of significance in order to determine if a project will have a significant adverse environmental impact. Other important subjects covered in the CEQA Handbook and the Guidance Handbook include methodologies for estimating project emissions and mitigation measures that can be implemented to avoid or reduce air quality impacts. Although the Governing Board of the SCAQMD has adopted the CEQA Handbook, and is in the process of developing the Guidance Handbook, the SCAQMD does not, nor intends to, supersede a local jurisdiction's CEQA procedures.[8]

While the Guidance Handbook is being developed, supplemental information has been adopted by the SCAQMD. These include revisions to the air quality significance thresholds and a procedure referred to as "localized significance thresholds," which has been added as a significance threshold under the *Final Localized Significance Threshold Methodology* (LST Methodology).[9] The LST Methodology provides thresholds of significance for NOx, CO, PM10, and PM2.5 to evaluate localized air quality impacts that could result from the emissions of these pollutants at sensitive receptors in the vicinity of a project. In addition, the SCAQMD has recommended that lead agencies not use the screening tables in the CEQA Handbook's Chapter 6 because the tables were derived using an obsolete version of CARB's mobile source emission factor inventory and are also based on outdated trip generation rates from a prior edition of the Institute of Transportation Engineer's Trip Generation Handbook.[10] The SCAQMD has also

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7 South Coast Air Quality Management District, "Air Quality Analysis Guidance Handbook," http://www.aqmd.gov/CEQA/hdbk.html. 2010.

8 South Coast Air Quality Management District, "Frequently Asked CEQA Questions," http://www.aqmd.gov/ceqa/faq.html. 2010.

9 South Coast Air Quality Management District, *Final Localized Significance Threshold Methodology*, 2008.

10 South Coast Air Quality Management District, "CEQA Air Quality Handbook," http://www.aqmd.gov/ceqa/oldhdbk.html. 2010.

recommended that lead agencies not use the on-road mobile source emission factors in Table A9-5-J1 through A9-5-L as they are obsolete, and instead recommends using on-road mobile source emission factors approved by CARB.[11] The outdated and obsolete information were not used in this analysis. The applicable portions of the CEQA Handbook, the Guidance Handbook, and other revised methodologies were used in preparing the air quality analysis in this section, as discussed and referenced later in this section.

Rules and Regulations

The SCAQMD primarily regulates emissions from stationary sources such as manufacturing and power generation. Mobile sources such as buses, automotive vehicles, trains, and airplanes are largely not within the SCAQMD's jurisdiction and within the regulatory jurisdiction of CARB and the US EPA. In order to achieve air quality standards, the SCAQMD adopts an AQMP that serves as a guideline to bring pollutant concentrations into attainment with federal and state standards. The SCAQMD determines if certain rules and control measures are appropriate for their specific region according to technical feasibility, cost effectiveness, and the severity of nonattainment. Once the SCAQMD has adopted the proper rules, control measures, and permit programs, it is responsible to implement and enforce compliance with those rules, control measures, and programs. These rules not only regulate the emissions of the federal and state criteria pollutants but also TACs and acutely hazardous materials. The rules are also subject to ongoing refinement by the SCAQMD. The SCAQMD rules that may be applicable to the proposed project include, but are not limited, to the following:

- **Rule 402 (Nuisance):** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

- **Rule 403 (Fugitive Dust):** This rule requires 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. SCAQMD Rule 403 is intended to reduce PM10 emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust (see also Rule 1186).

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

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[11] South Coast Air Quality Management District, "EMFAC 2007 (v2.3) Emission Factors (On-Road)," http://www.aqmd.gov/CEQA/handbook/onroad/onroad.html. 2010.

- **Rule 1146 (Emissions of Oxides of Nitrogen from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters):** This rule requires boilers, steam generators, and process heaters of equal to or greater than 5 million Btu per hour rated heat input capacity used in all industrial, institutional, and commercial operations to meet NO_x emissions limits as specified in this rule.

- **Rule 1146.1 (Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters):** This rule requires boilers, steam generators, and process heaters that are greater than 2 million Btu per hour and less than 5 million Btu per hour rated heat input capacity used in any industrial, institutional, or commercial operation to meet NO_x emissions limits as specified in this rule.

- **Rule 1146.2 (Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters):** This rule requires manufacturers, distributors, retailers, refurbishers, installers and operators of new and existing units to reduce NO_x emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.

- **Rule 1186 (PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations):** This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the clean-up of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Stationary emissions sources are regulated through SCAQMD's permitting process. Through this permitting process, SCAQMD monitors the amount of stationary emissions being generated and uses this information in developing AQMPs.

City of Malibu General Plan

The City of Malibu General Plan identifies goals and policies relating to improving the safety and health of the community. In general, the City's General Plan supports the SCAQMD's mission to protect public health and welfare from the adverse effects of air pollution, but it does not list any specific thresholds for assessing the significance of a project's emissions. As such, this analysis relies on the thresholds put forth by the SCAQMD.

ENVIRONMENTAL IMPACTS

Thresholds of Significance

The following thresholds for determining the significance of impacts related to aesthetics are contained in the environmental checklist form contained in Appendix G of the most recent update of the *CEQA Statutes and Guidelines*. Impacts related to air quality are considered significant if the proposed project would:

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

The *State CEQA Guidelines* Section 15064.7 provides that the significance criteria established by the applicable air quality management district or air pollution control district, when available, may be relied upon to make determinations of the significance of a project's emissions. The SCAQMD CEQA Handbook and related guidelines provide thresholds for assessing the significance of criteria air pollutant emissions from construction and operation. An exceedance of the SCAQMD thresholds could result in a potentially significant air quality impact. Therefore, the proposed project would result in a potentially significant impact to air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Generate total criteria pollutant emissions during construction or operation (direct and indirect) in excess of the thresholds given in **Table 3.2-4, SCAQMD Regional Emissions Significance Thresholds**;
- Expose sensitive receptors to substantial pollutant concentrations by:
  - Exceeding the localized significance thresholds (as shown in **Table 3.2-5, SCAQMD Localized Significance Thresholds)**,
  - Causing or contributing to the formation of CO Hotspots, or

- Result in an incremental increase in cancer risk greater than or equal to 10 in 1 million, a cancer burden greater than 0.5 excess cancer cases (in areas where the incremental increase in risk is greater than 1 in 1 million), and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.
- Expose sensitive receptors to objectionable odors affecting a substantial number of people.

Table 3.2-4
SCAQMD Regional Emissions Significance Thresholds

	Pollutant (pounds per day)					
Phase	**VOC**	**NOx**	**CO**	**SOx**	**PM10**	**PM2.5**
Construction	75	100	550	150	150	55
Operational	55	55	550	150	150	55

Source: South Coast Air Quality Management District, Air Quality Significance Thresholds, 2012.

Table 3.2-5
SCAQMD Localized Significance Thresholds

	Pollutant (pounds per day)[1]			
Localized Significance Threshold	**NOx**	**CO**	**PM10**	**PM2.5**
Construction	250	4,383	84	29
Operational	250	4,383	21	7

Source: South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, 2008, Appendix C.
[1] *The LST thresholds contained in the SCAQMD lookup tables are for a 5-acre project site in SRA 2, at 200 meters.*

If the emissions from the proposed project exceed the regional emissions significance thresholds shown in **Table 3.2-4**, the proposed project would also result in a cumulatively considerable contribution to air quality impacts and would be considered cumulatively significant even if the project in general conforms to the applicable AQMP.

Localized significance thresholds are based on the size and location of the proposed project and the distance from the project site to the nearest sensitive receptors. The project site is in SRA 2 and covers just under 6 acres. The nearest sensitive receptor is a residence approximately 240 meters to the northwest of project site. The applicable localized significance thresholds are shown in **Table 3.2-5**. A significant impact would occur during construction or operation if on-site emissions exceed the thresholds shown below.

Methodology

The SCAQMD provides methodologies for evaluating the significance of impacts from a project's construction and operational emissions. The methodologies are described in the SCAQMD CEQA Handbook and Guidance Handbook. The SCAQMD thresholds of significance apply to all sources of air pollutants, including equipment and businesses not directly regulated by the SCAQMD and motor vehicles. Emissions modeling were conducted using the California Emissions Estimator Model (CalEEMod) and information provided in the CalEEMod *User's Guide*.[12] CalEEMod is a program that calculates air pollutant emissions from land use sources and incorporates the CARB on-road and off-road vehicle emissions models. The model also incorporates factors specific to air basins in California, such as vehicle fleet mixes.

Air quality impacts are estimated based on information and estimated activity levels of project construction and operation. Construction of the proposed project would be completed over a period of 16 to 18 months, with full occupancy targeted for 2018. Default assumptions included in CalEEMod were used for the construction fleet makeup and equipment list. The proposed project would not include substantial stationary sources of emissions. Mobile source emissions from vehicles traveling to and from the project site would generate the bulk of the operational emissions. The mobile source emissions are based on the trip rates provided in the traffic report for the proposed project.

The potential for the proposed project to cause health impacts is assessed in accordance with land use planning recommendations described in CARB's *Air Quality and Land Use Handbook*.[13] The purpose of the *Air Quality and Land Use Handbook* is to provide information that helps keep vulnerable populations out of harm's way with respect to nearby sources of air pollution. Other sources of information relied upon are provided as footnote citations where applicable. Emission calculations conducted for the proposed project are contained in **Appendix 3.2**.

Impact Analysis

Threshold 3.2-1 Conflict with or obstruct implementation of the applicable air quality plan.

The 2012 AQMP, discussed previously, was prepared to accommodate growth, to reduce the levels of pollutants within the areas under the jurisdiction of the SCAQMD, to return clean air to the region, and to minimize the impact on the economy. Projects that are determined to be consistent with the AQMP

12 South Coast Air Quality Management District, *California Emissions Estimator Model User's Guide*, 2014. The model and User's Guide may be downloaded from the following website: http://www.caleemod.com.

13 California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, 2005. The document may be downloaded from the following website: http://www.arb.ca.gov/ch/landuse.htm.

would not interfere with attainment because the growth associated with the projects is included in the growth projections utilized in the formulation of the AQMP. Therefore, projects, uses, and activities that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended daily emissions thresholds.

Consistency with the assumptions in the 2012 AQMP is established by demonstrating that the proposed project is consistent with the land use plan that was used to generate the growth forecast used in the development of the 2012 AQMP. The 2012 AQMP based its assumptions on growth forecasts contained in the SCAG *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy* (2012 RTP/SCS).[14] The 2012 RTP/SCS is based on growth assumptions through 2035 developed by each of the cities and counties in the SCAG region. According to the SCAG 2012 RTP growth projection data, the City of Malibu is projected to have an employment population of 8,900 in 2020.[15] Existing employment data from the California Employment Development Department indicates that the City of Malibu has an employment population of approximately 7,500 as of February 2014.[16] The proposed project would add approximately 94 full time equivalent jobs at full occupancy in 2018. The proposed project would not increase the employment population levels above those that have been projected for the City in 2020 and would not exceed the growth assumptions in the AQMP. Thus, the proposed project would be considered consistent with the air quality-related regional plans, and would not have a long-term impact on the region's ability to meet state and federal ambient air quality standards. Accordingly, the proposed project complies with the second consistency criterion. The proposed project would have a less than significant impact.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.

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14 South Coast Air Quality Management District, *Final 2012 Air Quality Management Plan*, 2012.

15 Southern California Association of Governments, *2012-2035 Regional Transportation Plan/Sustainable Communities Strategy*, 2012.

16 California Employment Development Department, http://www.labormarketinfo.edd.ca.gov/cgi/dataanalysis/labForceReport.asp?menuchoice=LABFORCE, 2014.

Threshold 3.2-2 **Generate total criteria pollutant emissions during construction or operation (direct and indirect) in excess of the thresholds given in Table 3.2-4, SCAQMD Regional Emissions Significance Thresholds.**

Construction Emissions

A project's construction emissions are generated as a result of operation of mobile equipment and motor vehicles, disturbance of soil, and application of architectural coatings and asphalt paving. As indicated in **Table 3.2-4**, the SCAQMD has established construction thresholds of significance for VOC, NO_x, CO, SO_x, PM10, and PM2.5. The project site is approximately 6 acres, and is currently undeveloped. It is anticipated the project construction would commence subsequent to completion of the first phase of the Civic Center Wastewater Treatment Facility (CCWTF) and have a duration of 12 to 14 months, with full occupancy targeted for 2018. Construction activities would include grading, paving, building construction, and architectural coating sub-phases. Grading would require the net import of approximately 5,251 cubic yards of fill material. A total of 38,400 square feet of regional shopping center space would be built, anchored by a Whole Foods grocery store and including paved parking for 220 vehicles. The remaining space would be landscaped as a park-like setting with outdoor seating areas, two children's play areas (an accessible playground and a sensory park), and a community garden.

Based on the above information, **Table 3.2-6, Unmitigated Construction Emissions**, presents the estimated maximum daily emissions associated with the proposed project. Construction emissions include all emissions associated with the construction equipment, grading activities including fill material import, worker trips, and on-road diesel trucks. The estimated emissions are considered to be conservative; that is, the emissions presented below in **Table 3.2-6** likely over-predict the actual emissions that would occur during project construction. This is due to the model's worst-case assumption that all construction equipment is operating simultaneously for the entire day during each day of the construction period. In reality, construction equipment often operates only for a portion of the workday, and is not necessarily used every day so that at any given time only some pieces of the total fleet are operating. As indicated below, emissions would not exceed the SCAQMD's significance thresholds during any year of construction.

Table 3.2-6
Unmitigated Construction Emissions

Construction Year	Maximum Emissions in Pounds per Day					
	VOC	NOx	CO	SOx	PM10	PM2.5
2016	6.32	44.72	35.11	0.06	8.44	5.07
2017	36.92	26.98	23.55	0.04	2.46	1.81
SCAQMD Threshold:	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Threshold?	NO	NO	NO	NO	NO	NO

*Source: Impact Sciences, Inc., 2015. Emissions calculations are provided in **Appendix 3.2**.*
Note: Totals in the table may not appear to add exactly due to rounding in the computer model calculations.

Operational Emissions

The proposed project would develop a regional shopping center consisting of five separate buildings totaling approximately 38,400 square feet. The center would be anchored by a Whole Foods grocery store, and would also provide a variety and goods and services, including restaurant space. Operational emissions would be generated by both stationary and mobile sources as a result of normal day-to-day activity on the site after occupation. Stationary emissions would be generated by the consumption of natural gas for space and water heating devices, the operation of landscape maintenance equipment, and from the use of consumer products. Mobile emissions would be generated by motor vehicles traveling to and from the project site. Daily operational emissions were calculated using the data and methodologies identified in the SCAQMD's CEQA Handbook and the CalEEMod program.

Trip generation rates used in CalEEMod were obtained from data contained in the traffic study completed for the proposed project, included in **Appendix 3.13**. For the purposes of the CalEEMod model, the proposed project was assumed to consist entirely of a regional shopping center land use type, which includes a variety of uses consistent with those included in the proposed development. The anticipated operational emissions are based on buildout and occupancy of all land uses associated with the proposed project and are reflected in **Table 3.2-7, Estimated Unmitigated Operational Emissions**. As shown in **Table 3.2-7**, the proposed project at buildout and in full occupancy would not generate emissions that would exceed SCAQMD thresholds. Therefore, daily operational emissions generated by the proposed project would result in a less than significant impact.

Table 3.2-7
Unmitigated Operational Emissions

Emissions Source	Emissions in Pounds per Day					
	VOC	NOx	CO	SOx	PM10	PM2.5
Area /Stationary Sources	2.77	0.00	0.03	0.00	0.00	0.00
Mobile Sources	5.51	12.59	52.92	0.13	9.01	2.53
Total pounds per day:	**8.28**	**12.59**	**52.95**	**0.13**	**9.01**	**2.53**
SCAQMD Threshold:	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Threshold?	NO	NO	NO	NO	NO	NO

Source: Impact Sciences, Inc., 2015. Emissions calculations are provided in ***Appendix 3.2***
Note: Totals in the table are rounded and may be slightly different from the totals in ***Appendix 3.2.***

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.

Threshold 3.2-3 **Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).**

According to the SCAQMD *CEQA Air Quality Handbook*, projects that result in emissions that do not exceed the project-specific SCAQMD thresholds of significance should be considered to have a less than significant impact on a cumulative basis unless there is other pertinent information to the contrary.[17] As noted above, the proposed project would result in construction and operational emissions that are below the applicable thresholds. Therefore, construction and operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment.

Mitigation Measures

No mitigation measures are required.

17 SCAQMD, *CEQA Handbook*, 9–12.

Residual Impacts

Impacts would be less than significant.

Threshold 3.2-4 Expose sensitive receptors to substantial pollutant concentrations.

Localized Significance Thresholds (LSTs)

As indicated above, the SCAQMD recommends that the potential localized impacts on ambient air concentrations due to on-site emissions of NO_X, CO, PM10, and PM2.5 be evaluated. The SCAQMD LST Methodology includes screening tables that can be used to determine the maximum allowable daily emissions that would satisfy the LSTs (i.e., not cause an exceedance of the applicable concentration limits). The allowable emission rates depend on (1) the SRA in which the project is located, (2) the size of the project site, and (3) the distance between the project site and the nearest sensitive receptor (e.g., residences, schools, hospitals).

The project-specific on-site construction emissions are compared to LSTs for SRA 2 (Northwest Coastal LA County) in **Table 3.2-8, Localized Significance Thresholds Analysis during Construction**. The thresholds are based on the proximity of the nearest sensitive receptor to the project site, which is approximately 200 meters.

Table 3.2-8
Localized Significance Thresholds Analysis during Construction

Pollutant	Maximum On-Site Emissions (Pounds per day)	LST Thresholds[1] (Pounds per day)	Exceeds LST?
Nitrogen Oxides (NO_X)	29.95	250	NO
Carbon Monoxide (CO)	19.63	4,383	NO
Respirable Particulate Matter (PM_{10})	4.10	84	NO
Fine Particulate Matter ($PM_{2.5}$)	2.83	29	NO

Source: Impact Sciences, Inc., 2015. Emissions calculations are provided in ***Appendix 3.2.***

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

The LSTs applicable to the operational emissions of the proposed project are shown in **Table 3.2-9, Localized Significance Thresholds Analysis during Operation**. The maximum daily on-site operational emissions are compared to the LST thresholds.

Table 3.2-9
Localized Significance Thresholds Analysis during Operation

Pollutant	Total On-Site Emissions (Pounds per day)	LST Thresholds[1] (Pounds per day)	Exceeds LST?
Nitrogen Oxides (NO_x)	0.00	250	NO
Carbon Monoxide (CO)	0.03	4,383	NO
Respirable Particulate Matter (PM_{10})	0.00	21	NO
Fine Particulate Matter ($PM_{2.5}$)	0.00	7	NO

Source: Impact Sciences, Inc., 2015. Emissions calculations are provided in ***Appendix 3.2****.*

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

As indicated in **Table 3.2-8** and **Table 3.2-9,** on-site construction and operational emissions of NOx, CO, PM10, and PM2.5 would not exceed the SCAQMD LST thresholds for nearby sensitive receptors. The proposed project would have a less than significant impact with respect to this criterion.

CO Hotspots

Motor vehicles are a primary source of pollutants within the project vicinity. Traffic congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO "hotspots." CO is produced in greatest quantities from vehicle combustion and is usually concentrated at or near ground level because it does not readily disperse into the atmosphere. As a result, potential air quality impacts to sensitive receptors are assessed through an analysis of localized CO concentrations. Areas of vehicle congestion have the potential to create CO hotspots that exceed the state ambient air quality 1-hour standard of 20 ppm or the 8-hour standard of 9.0 ppm. The federal levels are less stringent than the state standards and are based on 1- and 8-hour standards of 35 and 9 ppm, respectively. Thus, an exceedance condition would occur based on the state standards prior to exceedance of the federal standard.

The proposed project was evaluated to determine if it would cause a CO hotspot utilizing a simplified CALINE4 screening model developed by the Bay Area Air Quality Management District (BAAQMD). The simplified model is intended as a screening analysis that identifies a potential CO hotspot. If a hotspot is identified, the complete CALINE4 model is then utilized to determine precisely the CO concentrations predicted at the intersections in question. This methodology assumes worst-case conditions (i.e., wind direction is parallel to the primary roadway and 90 degrees to the secondary road, wind speed of less than 1 meter per second and extreme atmospheric stability) and provides a screening of maximum, worst-case, CO concentrations. This method is acceptable to the SCAQMD as long as it is

used consistently with the *BAAQMD Guidelines*. This model is utilized to predict future CO concentrations 0 and 25 feet from the intersections in the study area based on projected traffic volumes from the intersections contained in the project traffic study.[18] Intersections operating at levels of service (LOS) between A through D are determined to not have the potential to create a CO Hotspot and are therefore not included in the analysis. Intersections operating at an LOS of E or F are considered have to have the potential to create a CO hotspot. Post-project maximum future CO concentrations were calculated for peak-hour traffic volumes for both weekday peak hours and Saturday mid-day periods. Traffic volumes during the weekday PM peak hour and Saturday mid-day peak hour were modeled as those volumes would have the highest potential for impacts at affected intersections. The results of these CO concentration calculations are presented in **Table 3.2-10, Carbon Monoxide Concentrations – With Cumulative (2030) and Project Traffic**, to present the worst-case scenario. The determination of significance is based on representative receptors located 0 feet from the intersection. Receptors 25 feet from an intersection would experience lower concentrations and therefore were not calculated.

Table 3.2-10
Carbon Monoxide Concentrations – With Cumulative (2030) and Project Traffic

Intersection[3]	Weekday PM Peak Hour 1-Hour[1]	Saturday Midday 1-Hour[1]	8-Hour[2]
2. Malibu Canyon Road and Pacific Coast Highway	4.6	4.8	3.4
4. Webb Way/Stuart Ranch Road and Civic Center Way	3.0	2.7	2.1
6. Webb Way and Pacific Coast Highway	4.7	4.6	3.3
7. Cross Creek Road and Pacific Coast Highway	5.1	5.1	3.6
Exceeds state 1-hour standard of 20 ppm?	NO	NO	—
Exceeds federal 1-hour standard of 35 ppm?	NO	NO	—
Exceeds state 8-hour standard of 9.0 ppm?	—	—	NO
Exceeds federal 8-hour standard of 9 ppm?	—	—	NO

[1] *State standard is 20 parts per million. Federal standard is 35 parts per million.*
[2] *State standard is 9.0 parts per million. Federal standard is 9 parts per million.*
[3] *The four intersections were chosen based on the intersections in Table 8 from the Traffic study.*
Source: Impact Sciences, Inc., 2015 Emissions calculations are provided in ***Appendix 3.2****.*

As shown, the CALINE4 screening procedure predicts that, under worst-case conditions, future CO concentrations at each intersection would not exceed the state 1-hour and 8-hour standards with the operation of the proposed project. No significant CO hotspot impacts would occur to sensitive receptors

18 Overland Traffic Consultants. *Traffic Impact Analysis Neighborhood Shopping Center Located at Northwest Corner of Civic Center Way and Cross Creek Road in the City of Malibu.* July 2013.

in the vicinity of these intersections. As a result, no significant project-related impacts would occur relative to future carbon monoxide concentrations.

Toxic Air Contaminants

The proposed project does not include any stationary sources of TACs. However, the proposed project would result in increased truck traffic, including transport refrigeration units (TRUs). Diesel-fueled trucks and TRUs are sources of diesel particulate matter (DPM), which is defined as a TAC, and consequently CARB has issued Air Toxic Control Measure (ATCM) bulletins for both diesel-fueled trucks and TRUs. The SCAQMD recommends a detailed health risk assessment be performed for DPM for facilities that are substantial sources of DPM. Examples of such land uses would be truck stops and warehouses, for which CARB assumes a minimum of 100 large truck trips per day. In contrast, the proposed project would have a maximum of two large truck trips per day, with additional small delivery truck trips. As the total number of additional truck trips is very few in comparison to a facility such as a warehouse, the proposed project would not be considered a substantial source of DPM. Additionally, trucks and TRUs operating at the project site would follow the CARB ATCM measures, which include emission limits for engines and caps on idling time that would minimize emissions on- and off-site. There are no other substantial sources of other TACs associated with the proposed project. Therefore, there would be a less than significant impact due to TACs attributed to the proposed project.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.

Threshold 3.2-5 Expose sensitive receptors to objectionable odors affecting a substantial number of people?

The SCAQMD lists land uses primarily associated with odor complaints as waste transfer and recycling stations, wastewater treatment plants, landfills, composting operations, petroleum operations, food and byproduct processes, factories, and agricultural activities, such as livestock operations. The proposed project would not include the development and operation of any of these land uses. Refuse associated with the operation of the proposed project would be contained and disposed of in accordance with local regulations. Therefore, the proposed project would not result in objectionable odors affecting a substantial number of people and would have a less than significant impact.

No on-site wastewater treatment system is included as part of the proposed project. For wastewater disposal, the proposed project would connect to the proposed Civic Center Wastewater Treatment Facility (CCWTF). Refer to **Section 3.14.4 Wastewater** in this EIR for further discussion and analysis. The proposed CCWTF is currently undergoing separate environmental review, including a review of potential odor impacts, as required by CEQA.[19]

Any unforeseen odors associated with this proposed project would be controlled in accordance with SCAQMD Rule 402 (Nuisance). Rule 402 prohibits the discharge of air contaminants that 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." Failure to comply with SCAQMD requirements pursuant to Rule 402 could subject the offending facility to possible fines and/or operational limitations in an approved odor control or odor abatement plan. Adherence to Rule 402, which is required by law, would reduce unforeseen odors to a less than significant impact.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.

Cumulative Impacts

According to the SCAQMD CEQA Handbook, 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. The mass-based regional significance thresholds published by the SCAQMD are designed to ensure compliance with both NAAQS and CAAQS and are based on an inventory of projected emissions in the Air Basin. 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 Air Basin would not be cumulatively considerable. As presented previously in **Table 3.2-6**, construction of the proposed project would not result in daily construction emissions that exceed the thresholds of significance recommended by the SCAQMD. Operation of the proposed project would not exceed the established thresholds of significance as

[19] The City of Malibu Civic Center Wastewater Treatment Facility Project, information website: http://www.malibucity.org/index.aspx?NID=602, June 2014.

presented in **Table 3.2-7**. Therefore, the proposed project would not generate a cumulatively considerable contribution to air pollutant emissions during project construction or operation.

Mitigation Measures

No mitigation measures are required.

Residual Impacts

Impacts would be less than significant.