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6.0
Air Quality

This section of the EIR includes evaluation of proposed project impacts on air quality at a level commensurate with the project description. Unless otherwise noted, the discussion in this section is based upon independent site investigation, information found in the *2005 Report on Attainment of the California Fine Particulate Standard in the Monterey Bay Region - Senate Bill 656 Implementation Plan*, *Monterey Bay Air Resources District 2012-2015 Air Quality Management Plan*, *Monterey Bay Unified Air Pollution Control District CEQA Air Quality Guidelines*, California Emissions Estimator Model results (Appendix C), *County of Monterey General Plan*, *Toro Area Plan*, and the *Las Palmas Ranch Specific Plan.*

During the Draft EIR's NOP review period, some members of the public questioned potential air quality impacts of the proposed project. The county's NOP and comment letters are included in Appendix B.

6.1 Environmental Setting

Regional Climate and Topography

The project site is located in the North Central Coast Air Basin (hereinafter "air basin"), which lies along the central coast of California covering an area of approximately 5,159 square miles. The air basin is comprised of several interconnected valleys: a portion of the Santa Clara Valley, San Benito Valley, Salinas Valley, and Carmel Valley. A semi-permanent high-pressure cell in the eastern Pacific Ocean is the basic controlling factor in the climate of the air basin. In the summer, the high-pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the high-pressure cell forming a stable temperature inversion of hot air over a cool coastal layer of air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. Warmer air aloft acts inhibits vertical air movement.

The generally northwest-southeast orientation of mountain ranges restricts and channels summer on-shore air currents. Surface heating in the interior portion of the Salinas and San Benito valleys creates a weak low pressure, which intensifies on-shore airflows during the afternoon and evening. In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. Airflow is occasionally reversed in a weak offshore movement, and the relatively stationary air mass is held in place by the high-

pressure cell, which allows pollutants to build up over a period of a few days. It is most often during the fall season that the north or east winds develop, which can transport pollutants from either the San Francisco Bay Area or the Central Valley into the air basin.

During the winter, the high-pressure cell generally migrates southward, reducingits influence on the air basin. Air frequently flows in a southeasterly direction out of the Salinas and San Benito valleys, especially during night and morning hours. While northwest winds are nevertheless still dominant in winter, easterly flows are more frequent. The general absence of deep, persistent inversions and the occasional storm systems usually result in good air quality for the basin as a whole in winter and early spring.

Criteria Air Pollutants and their Effects on Human Health

The six most common and widespread air pollutants of concern, or "criteria pollutants," are ground level ozone, nitrogen oxides, particulate matter, carbon monoxide, sulfur dioxide, and lead. In addition, volatile organic compounds are a key contributor to the criteria pollutants because they react with other substances to form ground level ozone. The primary pollutants of concern in Monterey County are ozone, carbon monoxide, and particulate matter 10 and 2.5 microns or less in size. The common properties, sources, and related health and environmental effects of these pollutants are summarized in Table 6-1, Common Air Pollutants. Air-borne lead and sulfur oxides are not significant pollutants of concern in the region (Monterey Bay Unified Air Pollution Control District 2008, 2013).

Ozone. Ground level ozone is produced by chemical reactions, which are triggered by sunlight, involving nitrogen oxides and volatile organic compounds. Since ozone is not directly emitted to the atmosphere, but is formed because of photochemical reactions, it is considered a secondary pollutant. Ozone is a seasonal problem, occurring roughly from April through October.

Ozone is a strong irritant that attacks the respiratory system, leading to the damage of lung tissue. Asthma, bronchitis, and other respiratory ailments, as well as cardiovascular diseases, are aggravated by exposure to ozone. A healthy person exposed to high concentrations of ozone may become nauseated or dizzy, may develop a headache or cough, or may experience a burning sensation in the chest. Research has shown that exposure to ozone damages the alveoli (the individual air sacs in the lungs where the exchange of oxygen and carbon dioxide between the air and blood takes place). Research has also shown that ozone damages vegetation.

Volatile Organic Compounds (Ozone Precursor). Volatile organic compounds are emitted from a variety of sources, including liquid and solid fuel combustion, evaporation of organic solvents, and waste disposal.

Table 6-1 Common Air Pollutants

Pollutant	Properties	Major Sources	Related Health & Environmental Effects
Ozone (O^3)	Created by the chemical reaction between nitrogen oxides and volatile organic compounds in the presence of heat and sunlight. Ground level ozone is the principal component of smog.	▪ Motor vehicle exhaust; ▪ Industrial emissions; ▪ Gasoline vapors; ▪ Chemical solvents.	▪ Reduced lung capacity; Irritation of lung airways and inflammation; ▪ Aggravated asthma; ▪ Increased susceptibility to respiratory illnesses (i.e. bronchitis).
Volatile Organic Compounds (VOC)	Precursor of ground-level ozone.	▪ Petroleum transfer and storage; ▪ Mobile sources; ▪ Organic solvents.	▪ Potential carcinogen (e.g. benzene); ▪ Toxic to plants and animals.
Nitrogen Oxides (NO_X)	Group of highly organic gases containing nitrogen in varying amounts. Many nitrogen oxides are odorless and colorless.	▪ Motor vehicles; ▪ Electric utilities; ▪ Industrial, commercial, and residential sources that burn fuel.	▪ Toxic to plants; ▪ Reduced visibility; ▪ Respiratory irritant.
Suspended and Fine Particulate Matter (PM_{10}) ($PM_{2.5}$)	Describes particles in the air, including dust, soot, smoke, and liquid droplets. Others are so small that they can only be detected with an electron microscope.	▪ Motor vehicles; ▪ Factories; ▪ Construction sites; ▪ Tilled farm fields; ▪ Unpaved roads; ▪ Wood burning.	▪ Aggravated asthma; ▪ Increases in respiratory symptoms; ▪ Decreased lung function; ▪ Premature death; ▪ Reduced visibility.
Carbon Monoxide (CO)	Colorless, odorless gas that is formed when carbon in fuel is not burned completely.	▪ Fuel combustion; ▪ Industrial processes; ▪ Highly congested traffic.	▪ Chest pain for those with heart disease; ▪ Vision problems; ▪ Reduced mental alertness; ▪ Death (at high levels)

SOURCE: Monterey Bay Unified Air Pollution Control District, August 2008, 2013; U.S. Environmental Protection Agency 2016

Nitrogen Oxides (Ozone Precursor). Most nitrogen oxides are created during combustion of fuels. Nitrogen oxides are a major contributor to ozone formation. Nitrogen dioxide is a reddish-brown gas that can irritate the lungs and can cause breathing difficulties at high concentrations. Like ozone, nitrogen dioxide is not directly emitted, but is formed through a reaction between nitric oxides and atmospheric oxygen. Nitrogen dioxide also contributes to the formation of particulate matter (see discussion below). Nitrogen dioxide concentrations

in the air basin have been well below ambient air quality standards; therefore, nitrogen dioxide concentrations from land use projects are not a concern.

Particulate Matter. Particulate matter is comprised of small, suspended particles, primarily composed of dust particles, nitrates, and sulfates. Particulate matter is classified as under 10 microns (suspended particulate matter or PM_{10}) and under 2.5 microns (fine particulate matter or $PM_{2.5}$). Suspended particulate matter is directly emitted to the atmosphere as a byproduct of fuel combustion, wind erosion of soil and unpaved roads, and from construction or agricultural operations. Small particles are also created in the atmosphere through chemical reactions. Approximately 64 percent of fugitive dust is suspended particulate matter. Minimal grading typically generates about 10 pounds per day per acre on average while excavation and earthmoving activities typically generate about 38 pounds per day per acre.

Although particles greater than 10 microns in diameter can cause irritation in the nose, throat, and bronchial tubes, natural mechanisms remove much of these particles. Particles less than 10 microns in diameter, however, are able to pass through the body's natural defenses and the mucous membranes of the upper respiratory tract and enter into the lungs. The particles can damage the alveoli. The particles may also carry carcinogens and other toxic compounds, which can adhere to the particle surfaces and enter the lungs.

Carbon Monoxide. Carbon monoxide is a component of motor vehicle exhaust, which contributes about 56 percent of all carbon monoxide emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all carbon monoxide emissions nationwide. Carbon monoxide can cause harmful health effects by reducing oxygen delivery to the body's organs (like the heart and brain) and tissues. Carbon monoxide also contributes to the formation of ground-level ozone.

Higher levels of carbon monoxide generally occur in areas with heavy traffic congestion. In cities and automobile-dependent urban regions, 85 to 95 percent of all carbon monoxide emissions typically comes from motor vehicle exhaust. Concentration of carbon monoxide is a direct function of vehicle idling time and, thus, traffic flow conditions. Transport of carbon monoxide is extremely limited; it disperses rapidly from the source under normal meteorological conditions. Under certain meteorological conditions, however, carbon monoxide concentrations close to a congested roadway or intersection may reach unhealthy levels, affecting local sensitive receptors (residents, school children, hospital patients, the elderly, etc.). Emissions thresholds established for carbon monoxide apply to both direct or stationary sources.

Typically, high carbon monoxide concentrations are associated with roadways or intersections operating at unacceptable levels of service, particularly during peak commute

times. Thus, congested intersections with high volumes of traffic can result in carbon monoxide "hot spots," where localized high concentrations of carbon monoxide occur.

Toxic Air Contaminants and their Effects on Human Health

Toxic air contaminants are pollutants that may be expected to result in an increase in mortality or serious illness or may pose a present or potential health hazard. Health effects include cancer, birth defects, neurological damage, damage to the body's natural defense system, and diseases that lead to death. Toxic air contaminants can be classified as either carcinogens or non-carcinogens. The air district considers an incremental risk of greater than 10 cases per million, over a 70-year exposure period for the Maximally Exposed Individual to be a significant impact. The 10 excess cases per million equates to the possibility of causing 10 additional cancer cases in a population of one million. This risk level is also used by the Air Toxics "Hot Spots" (AB 2588) program and Proposition 65 as the public notification level for air toxic emissions from existing sources.

Diesel Emissions. Diesel exhaust is the predominant toxic air contaminant in urban air and is estimated to represent about two-thirds of the cancer risk from toxic air contaminants. Diesel engines emit a complex mix of pollutants including nitrogen oxides, particulate matter, and toxic air contaminants. The most visible constituents of diesel exhaust are very small carbon particles or soot, known as diesel particulate matter. Diesel exhaust also contains over 40 cancer-causing substances, most of which are readily adsorbed on the soot particles. Among the toxic air contaminants contained in diesel exhaust are dioxin, lead, polycyclic organic matter, and acrolein. Short-term exposure to diesel particulate matter is associated with variable irritation and inflammatory symptoms. Diesel engine emissions are responsible for a majority of California's estimated cancer risk attributable to air pollution. Diesel particulate matter is a significant fraction of California's particulate pollution (California Air Resources Board 2005, California Office of Environmental Health Hazard Assessment 2001).

Diesel exhaust is especially common during the grading stage of site preparation and construction, when most heavy equipment is used, and adjacent to heavily trafficked roadways where diesel trucks are common. The United States Environmental Protection Agency (EPA) regulates diesel engine design and fuel composition at the federal level, and has implemented a series of measures since 1994 to reduce nitrogen oxides and particulate emissions from off-road and highway diesel equipment. Ultralow sulfur off-road and highway diesel fuels, 15 parts per million (ppm) became the standard in California by 2007, replacing the previous 500 ppm fuel (Clean Diesel Fuel Alliance 2016).

EPA Tier 1 non-road diesel engine standards were introduced in 1996, Tier 2 in 2001, Tier 3 in 2006, and Tier 4 in 2011, with final Tier 4 in 2014 (DieselNet 2016). Table 6-2, Typical Non-

Road Engine Emissions Standards compares emissions standards for NOx and particulate matter from non-road engine Tier 1 through Tier 4 for typical engine sizes. As illustrated in the table, emissions for these pollutants have decreased significantly for construction equipment manufactured over the past 20 years, and especially for construction equipment manufactured in the past two years.

Table 6-2 Typical Non-Road Engine Emissions Standards (g/bhp-hr)

Engine Tier	NOx Emissions			Particulate Emissions		
	100-175 HP	175-300 HP	300-600 HP	100-175 HP	175-300 HP	300-600 HP
Tier 1	6.90	6.90	6.90	--	0.40	0.40
Tier 2	6.90 †	6.90 †	6.90 †	0.22	0.15	0.15
Tier 3	6.90 †	6.90 †	6.90 †	0.22 †	0.15 †	0.15 †
Tier 4	0.30	0.30	0.30	0.015	0.015	0.015

SOURCE: Dieselnet.com/standards/us/nonroad.php accessed November 15, 2016.
† - standard not adopted; standard shown is for prior tier

In California, non-road equipment fleets can retain older equipment, but fleets must meet averaged emissions limits, new equipment must be Tier 3 or better after January 2018 (for large and medium fleets) or January 2023 (for small fleets), and over time the older equipment must be fitted with particulate filters. Large and medium fleets have increasingly strict fleet compliance targets through 2023 and small fleets through 2029. A small fleet is one that has total horse power of 2,500 or less; a medium fleet is one that has total horsepower of between 2,500 and 5,000. All non-road equipment operating in California is registered with the California Air Resources Board (CARB), which issues an equipment identification number (California Air Resources Board 2016).

Asbestos. Asbestos is found in several kinds of building materials and also occurs naturally in serpentine rocks and soils formed from serpentine rocks (California Department of Conservation, Division of Mines and Geology 2000). Asbestos had formerly been mined in southern Monterey County, with one of the largest asbestos mines in California located near the San Benito County/Fresno County lines. This mine closed in 2002 (United States Geological Survey and California Geological Survey 2011). Asbestos is generally not harmful when asbestos-containing materials are left undisturbed, but when soils or materials containing asbestos are disturbed, microscopic fibers can be dislodged and remain in the air for long periods. If asbestos fibers are inhaled they can become lodged in body tissues and pose a serious health threat, especially lung disease. Handling and disposal of asbestos containing materials is regulated by federal and state law. Since the project site is undeveloped it does not contain any buildings or structures that could have asbestos containing materials. The project site's soils are composed of deep alluvial soils and the site

does not contain serpentine rocks, although naturally occurring asbestos has been discovered in some Salinas Valley soils (United States Geological Survey and California Geological Survey 2011).

Construction Emissions

Emissions generated during construction are "short-term" in the sense that they would be limited to the solely to periods of site development and construction. Short-term construction emissions are typically generated by the use of heavy equipment, the transport of materials, and construction employee commute trips. Construction-related emissions consist primarily of reactive organic gasses, nitrogen oxides, suspended particulate matter, and carbon monoxide. Emissions of reactive organic gasses, nitrogen oxides, and carbon monoxide are generated primarily by the operation of gas and diesel-powered motor vehicles, asphalt paving activities, and the application of architectural coatings. Suspended particulate matter emissions are generated by wind erosion of exposed graded surfaces and diesel engines.

Stationary Source Emissions

Stationary sources include factories, boilers, generators, and gasoline dispensing stations, all of which require an operating permit from the Monterey Bay Area Air Resources Board (air district).

Sensitive Receptors

Although air pollution can affect all segments of the population, certain groups are more susceptible to its adverse effects than others. Children, the elderly, and the chronically or acutely ill are the most sensitive population groups. These sensitive receptors are commonly associated with specific land uses such as residential areas, schools, parks, retirement homes, and hospitals. In addition, certain air pollutants, such as carbon monoxide, only have significant effects if they directly affect a sensitive population. Potential sensitive receptors near the project site include residents of the adjacent Toro area, specifically residents of the adjacent Las Palmas subdivision.

Air Basin Attainment Status

In accordance with the Clean Air Act, CARB is required to designate regions of the State as attainment, non-attainment, or unclassified with regard to that region's compliance with criteria air pollutants standards. An "attainment" designation for a region signifies that pollutant concentrations do not violate the standard for a specified pollutant in that region. A "non-attainment" designation indicates that a pollutant concentration violated the standard at least once. An "unclassified" designation signifies that available data does not support either an attainment or non-attainment status. The California Clean Air Act divides designations into moderate, serious, and severe air pollution attainment categories, with

increasingly stringent control requirements mandated for each category. The air basin is in non-attainment with State mandated thresholds for ozone and suspended particulate matter. Table 6-3, North Central Coast Air Basin Attainment Status Designations, identifies the current status within the air basin for each criteria pollutant.

Table 6-3 North Central Coast Air Basin Attainment Status Designations

Pollutant	State	Federal
Ozone (O^3)	Non-Attainment	Attainment
Inhalable Particulates (PM_{10})	Non-Attainment	Attainment
Fine Particulates ($PM_{2.5}$)	Attainment	Attainment
Carbon Monoxide (CO)	Monterey Co. - Attainment	Attainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Lead	Attainment	Attainment

SOURCE: Monterey Bay Air Resources District, March 2017

Ambient Air Quality

Table 6-4, Summary of Ambient Air Quality Data (2013-2015), summarizes the most recent three years of published monitoring data from the district's monitoring station.

According to the air district, there are no known CO "hot spots" or localized areas containing high concentrations of carbon monoxide in Monterey County (Bob Nunes, pers. com., February 24, 2017).

Table 6-4 Summary of Ambient Air Quality Data (2013-2015)

Pollutant and Measurement Standard	2013[1]	2014[1]	2015[1]
Ozone (O_3)			
Maximum concentration, 1-hr/8-hr (ppm)	0.065/0.062	0.066/0.062	0.068/0.061
# days state standard (1-hr/8-hr) exceeded[3]	0/0	0/0	0/0
# days federal standard (8-hr) exceeded[3]	0	0	0
Suspended Particulate Matter (PM_{10})			
Maximum 24-hour concentration ($\mu g/m^3$) [2]	NA	NA	NA
Estimated number of days state standard exceeded[3]	NA[4]	NA[4]	NA[4]
Estimated number of days federal standard exceeded[3]	NA[4]	NA[4]	NA[4]
Fine Particulate Matter ($PM_{2.5}$)			
Maximum 24-hour concentration ($\mu g/m^3$) [2]	19.7	20.2	22.8
Estimated number of days federal standard exceeded [3]	0	0	0

SOURCE: CARB 2017. Aerometric Data Analysis and Measurement System, as found at http://www.arb.ca.gov/adam/

NOTES:
1. Ozone and particulate data obtained from the Salinas #3 monitoring station
2. µg/m3 = Micrograms per Cubic Meter
3. Estimated average number of days per year
4. Not enough data available.

Ambient air pollutant levels are monitored at several monitoring stations in the air basin. Air quality monitoring stations usually measure pollutant concentrations ten feet above-ground level; therefore, air quality is often referred to in terms of ground-level concentrations.

Local ambient air quality in Monterey County is monitored by the air district in Carmel Valley (Ford Road), King City (415 Pearl Street), and Salinas (#3). The air district monitoring station closest to the project site is located near the intersection of East Laurel Drive and Constitution Boulevard in Salinas, approximately six miles northeast of the project site.

6.2 REGULATORY SETTING

Federal

The Federal Clean Air Act, adopted by Congress in 1970 and amended in 1990, provides the basis for Federal air quality standards. The Clean Air Act is implemented by the U.S. EPA. The Clean Air Act established two types of national air standards: primary and secondary. Primary standards set limits to protect public health, including the health of sensitive persons such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

Federal and State Ambient Air Quality Standards

Ambient air quality is described in terms of compliance with State and Federal standards. The State and Federal clean air acts established two types of National Ambient Air Quality Standards for each criteria pollutant. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

In general, criteria pollutants are pervasive constituents, such as those emitted in vast quantities by the combustion of fossil fuels. Both the State and Federal governments have developed ambient air quality standards for the identified criteria pollutants, which include ozone, carbon monoxide, nitrogen oxides, sulfur dioxide, PM_{10}, and $PM_{2.5}$. Table 6-5, Federal and State Ambient Air Quality Standards, lists State and Federal ambient air quality standards for criteria air pollutants. The State standards generally have lower, more strict thresholds than the Federal standards, yet both are applicable to the proposed project. When

thresholds are exceeded at regional monitoring stations, an "attainment plan" must be prepared that outlines how an air quality district will achieve compliance. Generally, these plans must provide for district-wide emission reductions of five percent per year averaged over consecutive three-year periods.

Table 6-5 Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]			
		Concentration		Primary[3,4]		Secondary[3,5]	
		ppm	µg/m³	ppm	µg/m³	ppm	µg/m³
Ozone[6]	1 Hour	0.09	180	-	-	-	-
	8 Hour	0.07	137	0.070	137	0.070	137
PM_{10}[7]	24 Hour	-	50	-	150	-	150
	Annual	-	20	-	-	-	-
$PM_{2.5}$[7]	24 Hour	-	-	-	35	-	35
	Annual	-	12	-	12	-	15
Carbon Monoxide (CO)	8 Hour	9.0	10	9	10	-	-
	1 Hour	20.0	23	35	40	-	-
Nitrogen Dioxide (NO_2)[8]	Annual	0.030	57	0.053	100	0.053	100
	1 Hour	0.18	339	0.100	188	-	-
Sulfur Dioxide (SO_2)[9]	Annual	-	-	0.030	See note[8]	-	-
	24 Hour	0.04	105	0.14	See note[8]	-	-
	3 Hour	-	-	-	-	0.5	1,300
	1 Hour	0.25	655	0.075	196	-	-
Lead[10,11]	30 Day Average		1.5	-	-	-	-
	3 month revolving	-	-	-	0.15	-	0.15
	Calendar Quarter	-	-	See note[11]	1.5	See note[11]	1.5
Visibility Reducing Particles[12]	8 Hour	See note[12]		No Federal Standards			
Sulfates	24 Hour	-	25				
Hydrogen Sulfide	1 Hour	0.03	42				
Vinyl Chloride[10]	24 Hour	0.01	26				

SOURCE: CARB, May 4, 2016. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

NOTES:

1. California standards for ozone, carbon monoxide, sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter—PM10, PM2.5, and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

2. National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact EPA for further clarification and current federal policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
5. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
6. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
7. On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m3 to 12.0 µg/m3. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 µg/m3, as was the annual secondary standard of 15 µg/m3. The existing 24-hour PM10 standards (primary and secondary) of 150 µg/m3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over three years.
8. To attain the 1-hour national standard, the three-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
9. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the three-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
10. CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
12. In 1989, CARB converted the general statewide 10-mile visibility standard to instrumental equivalents, which is "extinction of 0.23 per kilometer" for the statewide standard.

The U.S. EPA has established National Emission Standards for Hazardous Air Pollutants, which are applicable to asbestos, beryllium, mercury, vinyl chloride, benzene, arsenic, and radon/radionuclides, which are regulated by source-specific rules. Examples of regulated sources include asphalt processing, boat manufacturing, chromium electroplating, coke ovens, dry cleaning, leather finishing, plywood manufacturing, polymer and resin manufacturing, and surface coating of various products. The standards for a particular source category require the maximum degree of emission reduction that the EPA determines to be achievable, which is known as the Maximum Achievable Control Technology.

State and Regional

The Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) created California's program to reduce exposure to airborne toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the AB 1807 program, by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Under AB 1807, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In accordance with California Health and Safety Code section 39666(f), CARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community." AB 1807 also requires CARB to use available information gathered from the AB 2588 program to include in the prioritization of compounds.

The Office of Environmental Health Hazard Assessment assists CARB by developing the health assessment part of the toxic air contaminants identification documents; reviews facility risk assessments for the "Hot Spots" Program; is developing new risk assessment guidelines for the "Hot Spots" Program; and is the lead agency for Proposition 65. The Department of Pesticide Regulation regulates toxic air contaminants that are also pesticides. No quantified concentration thresholds are established, because the State has determined there is insufficient available scientific evidence to support the identification of a threshold exposure level. As noted previously, the air district has not identified any “Hot Spots” in Monterey County.

Diesel-powered construction equipment is regulated at both the Federal and State levels by the U.S. EPA and CARB. Beginning in 1996, new diesel equipment engines were required to meet emission standards. EPA Tier 2 diesel engine standards were implemented from 2001 and 2006, Tier 3 standards from 2006-2008, Engines are now in Tier 4 designs, reducing emissions of NOx and PM_{10} significantly since the first requirements were introduced. CARB requires that equipment fleets’ average emissions meet increasingly stringent standards, and requires the phase-in of diesel particulate matter filters on older equipment. With exemptions for certain specialized equipment, CARB restricts engine idling time to five minutes.

California’s Regulation for In-use Off-road Diesel Vehicles establishes a state program to reduce nitrogen oxides and particulate emissions from older construction equipment. Several provisions of the regulation are in force (idling restrictions and reporting), and other provisions are being phased in from 2014 to 2029 (fleet composition). As the regulation is

fully implemented, it will reduce construction equipment emissions over time (California Air Resources Board 2014b). Ultralow sulfur diesel fuel, at 15 parts per million (ppm), has been the standard in California for both on-road and off-road vehicles since 2006 (Clean Diesel Fuel Alliance 2014). California is phasing in the use of particulate matter filters on heavy on-road trucks, beginning in 2014, with all heavy trucks to be compliant by 2020 (California Air Resources Board 2014a). The Tier 4 engines and ultralow sulfur fuels will reduce annual emissions by an estimated 738,000 tons of NOx and 129,000 tons of particulate emissions (DieselNet 2016).

Monterey Bay Air Resources District

The Monterey Bay Air Resources District (air district) is the regional agency with responsibility for monitoring air quality and achieving attainment of State and Federal standards in, Monterey, Santa Cruz and San Benito Counties. The air district exercises its jurisdiction within the air basin. The air district is charged with regulatory authority over stationary sources of air emissions, monitoring air quality within the air basin, providing guidelines for analysis of air quality impacts pursuant to CEQA, and preparing an air quality management plan to maintain or improve air quality in the air basin.

Air Quality Management Plan. The air district is delegated with local responsibility to implement both Federal and State mandates for improving air quality in the air basin through implementation of an air quality plan. The air district adopted the Air Quality Management Plan for the Monterey Bay Region ("Air Quality Management Plan") in 1991 and has completed several updates in subsequent years, most recently in 2017 (see also the 2012-2015 Air Quality Management Plan below). The Air Quality Management Plan presents measures to control emissions of volatile organic compounds from stationary and mobile sources in order to meet the ozone standard mandated by the California Clean Air Act. In 2006, CARB made the ambient air quality standards more stringent by adding an 8-hour ozone average to the standard.

The Air Quality Management Plan outlines the steps that will be taken to come into attainment with the state and federal standards, and also requires measures to further reduce ozone levels in the air. The principal strategies for ozone reduction that are relevant to the proposed project are construction equipment emissions control measures, transportation control measures, and low-NOx gas-fired water heater and furnace requirements. The Air Quality Management Plan transportation control measures reflect relevant projects included in Monterey Bay Metropolitan Transportation Improvement Program.

To achieve and maintain ambient air quality standards, the air district also has adopted various rules and regulations for the control of airborne pollutants. Air district rules and regulations applicable to the proposed project include the following:

Rule 402 (Nuisances). The purpose of this rule is to prohibit emissions that may create a public nuisance. Applies to any source operation that emits or may emit air contaminants or other materials.

Rule 425 (Use of Cutback Asphalt). The purposed of this rule is to limit emissions of vapors of organic compounds from the use of cutback and emulsified asphalt. This rule applies to the manufacture and use of cutback, slow cure, and emulsified asphalt during paving and maintenance operations.

Rule 426 (Architectural Coatings). The purpose of this rule is to limit emissions of volatile organic compounds (ROG, NOx, etc.) from architectural coatings.

Projects related directly to population growth will generate population-related emissions (e.g., motor vehicles, residential heating and cooling emissions). These emissions have been forecast in the Air Quality Management Plan using population forecasts adopted by the Association of Monterey Bay Area Governments (AMBAG). Thus, population-related projects which are consistent with AMBAG regional population forecasts are consistent with the Air Quality Management Plan. For a proposed residential project, or institutional project, such as the proposed care facility, that has a predictably stable onsite resident population, consistency is determined by comparing the project population at the year of project completion with the forecast for the appropriate five-year increment (e.g., if project completion is 2020, the project would be compared with year 2020 forecasts) for the jurisdiction in which the project is located. A proposed residential project is consistent with the Air Quality Management Plan if the population increase resulting from the project will not cause the estimated cumulative population (i.e., existing population plus population from locally-approved and unconstructed projects) to exceed forecasts for the next five-year increment.

Air District 2012-2015 Air Quality Management Plan (2017). This is the seventh update to the original 1991 Air Quality Management Plan. This report is an update to the elements included in the 2008 Air Quality Management Plan based on a review of the time period 2012-2015. It shows that the region continues to make progress toward meeting the state ozone standard. The air district's focus continues to be on achieving the 8-hour component of the ozone standard since the region has attained the 1-hour standard. The primary elements from the 2008 Air Quality Management Plan updated in this revision include the air quality trends analysis, emission inventory, and mobile source programs. The 2012-2015 Air Quality Management Plan incorporates the 2014 Association of Monterey Bay Area Governments population projections.

Air District CEQA Air Quality Guidelines (2008). The purpose of the air district air quality guidelines is to inform public agencies, consultants, project proponents and the general

public of the air district's adopted thresholds of significance and to provide guidance in the review and evaluation of air quality impacts of projects that are subject to CEQA. The air quality guidelines are intended to provide uniform procedures for assessing air quality impacts and preparing the air quality section of environmental documents. They are also intended to help streamline the CEQA review process for project proponents, lead agencies, and the air district.

County

Monterey County General Plan

The following policies in the General Plan are applicable to air quality.

Policies

> **OS-10.2** Mass transit, bicycles, pedestrian modes of transportation, and other transportation alternatives to automobiles shall be encouraged.
>
> **OS-10.7** Use of the best available technology for reducing air pollution emissions shall be encouraged.
>
> **OS-10.9** The County of Monterey shall require that future development implement applicable Monterey Bay Unified Air Pollution Control District control measures.
>
> Applicants for discretionary projects shall work with the Monterey Bay Unified Air Pollution Control District to incorporate feasible measures that assure that health-based standards for diesel particulate emissions are met. The County of Monterey will require that future construction operate and implement MBUAPCD PM_{10} control measures to ensure that construction-related PM_{10} emissions do not exceed the MBUAPCD's daily threshold for PM_{10}. The County shall implement MBUAPCD measures to address off-road mobile source and heavy duty equipment emissions as conditions of approval for future development to ensure that construction-related NOx emissions from non-typical construction equipment do not exceed the MBUAPCD's daily threshold for NOx.

6.3 THRESHOLDS OR STANDARDS OF SIGNIFICANCE

Based on the air quality guidelines (Monterey Bay Unified Air Pollution Control District 2008, p. 5-14), and air district guidance on consistency with the Air Quality Management Plan (Monterey Bay Air Resources District 2017), the project would have a significant air quality impact if it would:

- Conflict with or obstruct implementation of the Air Quality Management Plan:

- Exceed AMBAG population forecasts for the jurisdiction.

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation:
  - Emit 137 pounds per day or more of an ozone precursor air pollutant (volatile organic compounds or nitrogen oxides);
  - Directly emit 550 pounds per day or more of carbon monoxide;
  - Generate traffic that significantly affects levels of service;
  - Emit 82 pounds per day or more of suspended particulate matter on-site, which is equivalent to general construction activity over an area of at least 8.1 acres per day, or grading/excavation over an area of at least 2.2 acres per day;
  - Emit 82 pounds per day or more of suspended particulate matter from vehicle travel on unpaved roads; or
  - Directly emit 150 pounds per day or more of sulfur oxides.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the air basin is non-attainment (ozone/ozone precursors, and suspended particulate matter) under an applicable federal or state ambient air quality standard.
- Expose existing or reasonably foreseeable sensitive receptors to substantial pollutant concentrations:
  - Cause or contribute to an exceedance of a carbon monoxide standard as measured by Level of Service (LOS) degradation at a project-affected intersection and confirmed by dispersion modeling. The air quality guidelines require carbon monoxide hot spot analysis under the following project conditions:
    - Intersections degrading to below LOS D;
    - Volume to capacity ratio increases by 0.05 at LOS E or F intersections;
    - The delay at LOS E or F intersections increases by 10 seconds or more; or
    - Reserve capacity at un-signalized LOS E or F intersections decreases by 50 or more.
  - Cause a violation of suspended particulate matter standard at a sensitive receptor.
  - Expose sensitive receptors or the general public to substantial levels of toxic air contaminants if the source of the contaminants results in an additional cancer risk of ten in one million or greater over a 70-year exposure period, for the maximally exposed individual.
- Create or expose a substantial number of people to objectionable odors.

6.4 ENVIRONMENTAL IMPACT ANALYSIS

Consistency with the 2012-2015 Air Quality Management Plan

The proposed project would not conflict with the 2012-2015 Air Quality Management Plan. Projects related directly to population growth generate population-related emissions (e.g., motor vehicles, residential heating and cooling emissions). Population-related emissions have been estimated in the Air Quality Management Plan using population forecasts adopted by AMBAG. Population-related projects that are consistent with these forecasts are consistent with the 2012-2015 Air Quality Management Plan. For cumulative impacts, the air district recommends that projects be assessed for consistency with the Air Quality Management Plan. The Air Quality Management Plan consistency was determined using the air district's 2011 Consistency Determination Procedure for Residential Development Projects and the AMBAG regional growth forecast data presented in Appendix A of the 2012-2015 Air Quality Management Plan. The 2008 AMBAG regional growth forecast data in the Consistency Determination Procedure spreadsheet was updated with the 2014 AMBAG regional growth forecast data for unincorporated Monterey County. This approach was approved by MBARD (Bob Nunes, pers. com., March 31, 2017).

The proposed project, was evaluated for consistency using an anticipated buildout/occupancy year of 2020. The results of the evaluation process are included as Appendix C. The evaluation determined that the proposed project would be consistent with the Air Quality Management Plan at 2020.

According to the Monterey Bay Area 2014 Regional Growth Forecast (AMBAG 2014), the unincorporated Monterey County population was 101,530 in 2015. The estimated population for 2020 is anticipated to be 102,847. The 2014 AMBAG population projections are based upon an anticipated 0.16 percent annual growth rate. The AMBAG forecast reported that the projected housing unit requirements are expected to be 39,337 in 2020. Recent data from the County indicates existing housing stock consists of approximately 38,683 total housing units (County of Monterey 2015, p.23) with an additional 368 approved housing units (Luke Connolly, pers. com., March 28, 2017).

At project buildout (estimated 2020), the proposed project would provide housing for approximately 128 persons, based on a 90 percent occupancy rate of the total beds (142) available at the proposed facility. The 368 approved housing units in unincorporated Monterey County would provide housing for approximately 960 persons based on the 2020 AMBAG forecast factor of 2.61 persons per dwelling unit. The proposed project and the approved housing units would increase the county's unincorporated population by a total of

1,088 persons. The increase in the county's total population resulting from development of the proposed project and approved housing units would be less (a total of 102,618 persons) than the AMBAG 2020 projections (102,847 persons) upon which the Air Quality Management Plan is based.

The increase in population generated by the proposed project is consistent with air district air quality planning efforts.

Short-term Construction Impacts

The project site is 15.64 acres and initial site preparation and mass grading activities could exceed 2.2 acres per day. Site improvements conducted in later phases also could include grading or other light earth movement exceeding 8.1 acres in a day. According to the air district's CEQA guidelines, a project that includes excavation or grading to that extent would generate dust that would exceed the air district standards (82 lbs per day) for suspended particulate matter (PM_{10}), which also would contribute to the air basin's nonattainment status for PM_{10}.

Mobile and Area Source Emissions

Emissions modeling for the proposed project was conducted using the California emissions estimator model (CalEEMod). The CalEEMod platform estimates both project mobile-source and operational emissions, including vehicular, direct, and indirect emissions. The model also estimates greenhouse gas emissions from land development projects. The model contains default data for vehicular emissions (e.g., meteorology, source inventories, energy and water consumption, emission factors, trip lengths, etc.) provided by various California air districts and approved by CARB, to account for local requirements and conditions. Direct emissions include natural gas combustion associated with the heating of water and space, along with the emissions from use of gas-powered landscape equipment. Indirect emissions include off-site generation of electricity, and off-site processes associated with the land use, such as water treatment and delivery. Vehicular emission rates of volatile organic compounds and nitrogen oxides are sensitive to the year of analysis because emissions rates are decreasing as vehicles with more effective emission controls dominate the fleet mix. Construction of all components, casitas units, assisted living and memory care facitlities, of the proposed project are estimated to be completed in 2020. The anticipated operational year for the analysis performed for the proposed project is the model's default operational date of 2020 (Zulbreti, Andrea. Email message to consultant, 9 April 2017).

Model inputs include air basin information from the air district, and project-related inputs based upon the amount and type of existing and proposed land uses. Detailed CalEEMod results are presented in Appendix C.

The proposed project would result in new sources of mobile and area source emissions. Operational criteria air pollutants emissions are reported as winter and summer emissions. The CalEEMod modeling results for the proposed project (105 dwelling units and related infrastructure) are summarized in Table 6-6, CalEEMod Operational Modeling Results Winter and Summer Emissions (Pounds per Day).

As summarized in Table 6-6, the proposed project would not result in unmitigated or mitigated operational winter or summer emissions that exceed the air district thresholds for ROG, NOx, PM_{10}, or CO. Therefore, the proposed project operations would result in a less-than-significant impact associated with area and mobile source emissions.

Table 6-6 CalEEMod Operational Modeling Results, Winter and Summer Emissions (Pounds per Day)

	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	Suspended Particulate Matter (PM_{10})	Carbon Monoxide (CO)
Winter Emissions				
Unmitigated	4.66	3.91	1.65	17.11
Mitigated	4.66	3.91	1.65	17.11
Percent Reduction	0.00	0.00	0.00	0.00
Summer Emissions				
Unmitigated	4.71	3.70	1.65	16.75
Mitigated	4.71	3.70	1.65	16.75
Air District Thresholds	*137*	*137*	*82*	*550*
Percent Reduction	0.00	0.00	0.00	0.00

SOURCE: Monterey Bay Air Resources Board and EMC Planning Group Inc. 2017

Carbon Monoxide Hot Spots

The proposed project would generate approximately 22 vehicle trips during the AM peak-hour and 33 vehicle trips during the PM peak-hour. The project will add approximately two morning peak hour trips and four evening peak-hour trips to the two-lane section of State Route 68 immediately west of the Toro Park interchange. Project traffic will dissipate along the corridor at the many cross roads including Torero Drive, San Benancio Road, Corral de Tierra Road and Laureles Grade, resulting in less than one morning peak hour trip and about two evening peak hour trips west of Laureles Grade. Project traffic will be at or below one peak-hour trip west of State Route 218. Although Highway 68 has been determined to

currently operate at Level of Service F, project traffic will have no effect on State Route 68 traffic operations. According to the air district, there are no known CO "hot spots" or localized areas containing high concentrations of carbon monoxide anywhere in Monterey County (Bob Nunes, pers. com., February 24, 2017), therefore, modeling for CO emissions along State Route 68 was not conducted. Development and operation of the proposed project could not create or contribute to unacceptable levels of CO at the studied roadways in the site vicinity.

Diesel Exhaust

Diesel exhaust includes air contaminants that can cause adverse health effects. Development of the project site would likely utilize diesel-fueled heavy equipment, which would increase exposures of diesel exhausts to existing residences located in the residential subdivision east of the proposed project site. Diesel-powered trucks and equipment would emit NOx, acrolein, and diesel particulate matter during the construction phase. Construction equipment can emit substantial amounts of NOx that could have a small, but cumulative effect on ozone concentrations.

Calculating ROG and NOx emissions from typical construction equipment is not required by the air district because temporary emissions of these ozone precursors have been accommodated in State- and federally-required air plans (Monterey Bay Unified Air Pollution Control District 2008, p. 7-1). Therefore, the air quality impacts of construction ROG and NOx emissions are less than significant.

Construction activities associated with the proposed project would likely involve use of the heavy-duty off-road equipment and large trucks that use diesel fuel and emissions of diesel particulate matter. CARB's Regulation for In-use Off-road Diesel Vehicles establishes a State program to reduce emissions from older construction equipment. Equipment built to EPA Tier 4 diesel engine standards and utilizing ultralow sulfur fuel would result in diesel emissions that are substantially lower than older equipment. However, older equipment not meeting the Tier 4 standards would result in greater emissions and increased risks of exposure to them, which is a potentially significant air quality impact.

Odors

The proposed project includes the construction of a senior living community and would not result in any objectionable odors during the operational phase. There may be nuisance diesel odors associated with operation of diesel construction equipment on-site (primarily during initial grading phases), but this effect would be localized, sporadic, and short-term in nature. The air district does not regulate odor emissions other than through its nuisance rule. Therefore, temporary impacts from nuisance diesel odors to nearby residential receptors would be a less-than-significant impact.

6.5 IMPACT SUMMARY AND MITIGATION MEASURES

IMPACT Construction Emissions that Contribute to the Air Basin's Non-Attainment Status (Less than Significant Impact with Mitigation)

The proposed project would generate dust and other emissions from construction equipment during site preparation and construction activities, which would contribute to the air basin non-attainment status for PM_{10}. The project's contribution to this cumulative regional effect is considered significant.

The air district has identified the following feasible measures, that when implemented, reduce the impacts of construction dust emissions to a less-than-significant level.

Mitigation Measures

AQ-1 Prior to issuance of any grading or building permits, developers of the project site shall prepare a grading plan subject to review and approval by the Monterey County Resource Management Agency Planning Director. In the event that ground disturbance exceeds 2.2 acres per day for initial site preparation activities that involve extensive earth moving activities (grubbing, excavation, rough grading), and 8.1 acres per day for activities that involve minimal earth moving (e.g. finish grading) these limits, the required grading plans shall include the following dust control measures:

a. Water all active construction sites continuously. Frequency should be based on the type of operation, soil, and wind exposure;
b. Prohibit all grading activities during periods of high wind (over 15 mph);
c. Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days);
d. Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area;
e. Maintain at least 1'-0" of freeboard on haul trucks;
f. Cover inactive storage piles;
g. Sweep streets if visible soil material is carried out from the construction site;
h. Limit the area under construction at any one time.

AQ-2 Prior to commencement of construction activities, the developer and/or contractor shall appoint a construction foreman to act as site monitor to ensure that the dust control measures are implemented. Evidence of implementation shall be submitted in written form to the Monterey County Resource Management Agency Planning Director within three days of commencement of grading, and

monthly thereafter as long as grading occurs. In addition, a publicly-visible sign written in English and Spanish with the telephone number and person to contact regarding dust complaints should be posted and continuously maintained at the project site during grading and construction activities. This person shall respond and take corrective action within 48 hours of receipt of any dust-related complaints. The phone number of the air district shall also be visible to ensure compliance with rule 402 (nuisance).

Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce dust emissions generated by construction activities that could contribute to the air basin non-attainment status. Therefore, with the implementation of these mitigation measures, dust emissions impacts would be reduced to a less than significant level.

IMPACT Exposure of Sensitive Receptors to Construction Dust and Diesel Exhaust Emissions (Less than Significant with Mitigation)

Construction activities associated with the proposed project would likely involve use of heavy-duty off-road equipment and large trucks that use diesel fuel and emissions of diesel particulate matter. The proposed project would expose sensitive receptors to criteria air pollutant emissions from construction dust, off-road equipment, and from trucks hauling debris and delivering materials during construction activities. There are no hospitals, convalescent homes or schools in the immediate vicinity of the project site. However, potential sensitive receptors are located immediately to the east of the site in the existing residential neighborhood, commonly known as Las Palmas Phase 1. During construction activities on the project site, these sensitive receptors could be exposed to substantial PM_{10} and equipment exhaust emissions. This is considered a potentially significant adverse environmental impact. Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce dust emissions generated by construction activities that could affect nearby residences. Implementation of the following mitigation measure would reduce construction equipment exhaust emissions from older equipment and vehicles (NOx and diesel particulate matter) to less than significant.

Mitigation Measure

AQ-3 Prior to the onset of site preparation, grading and construction activities, the project applicant(s) or developer(s) shall require in construction contracts that all off-road construction vehicles and all construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. The developer shall reduce nitrogen oxides exhaust and particulate matter emissions by implementing the following measures prior to the start of construction:

- Contractors shall install temporary electrical service whenever possible to avoid the need for independently-powered equipment (e.g. compressors).

- Signs at the construction site shall be clearly visible to advise that that diesel equipment standing idle for more than two minutes within 200 feet of sensitive receptors shall be turned off. This would include trucks waiting to deliver or receive soil, aggregate, or other bulk materials. Rotating drum concrete trucks may keep their engines running continuously if on-site and staged at least 100 feet away from residential areas.
- Properly tune and maintain equipment for low emissions.
- Stage large diesel powered equipment at least 200 feet from any sensitive land uses (e.g., occupied residences).
- All equipment shall be checked by a certified visible emissions evaluator. All non-road diesel construction equipment shall at a minimum meet Tier 3 emission standards listed in the Code of Federal Regulations Title 40, Part 89, Subpart B, §89.112.

This mitigation measure is consistent with the measures recommended in the air district's air quality guidelines (Table 8-3) that limit the number of vehicles, type of fuel used, hours of daily operation and duration of use. The project applicant(s) or developer(s) shall submit evidence demonstrating compliance with Mitigation Measure AQ-3 to the Monterey County Resources Management Agency Planning Directorfor review and approval. Implementation of Mitigation Measure AQ-3 would reduce and subsequently limit exposure to construction exhaust emissions and ensure that construction emissions are reduced to a less than significant level.

IMPACT Exposures to New Sources of Toxic Air Contaminants (Less than Significant Impact with Mitigation)

The proposed project is a senior living community located adjacent to a residential neighborhood. Diesel exhaust from construction equipment has the potential to emit toxic air contaminants and increase exposures to residents at the adjacent neighborhood.

Mitigation Measure AQ-3 would reduce and limit exposure of toxic air contaminants to nearby residences from construction equipment through implementation of several measures prior to and during construction activities. Implementation of this mitigation measures would ensure that diesel exhaust emissions from construction equipment are reduced to a less than significant level at nearby houses.

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