

4.4 Air Quality

This section provides the analysis of the Proposed Project's impacts to air quality. An assessment of the Project's impacts related to greenhouse gas emissions is provided in EIR Section 4.5 (Greenhouse Gas Emissions). EIR Section 4.4.1 (Existing Conditions) provides a description of the Project's existing, or "baseline" air quality conditions, and EIR Section 4.4.2 (San Luis Obispo County Plans and Policies) provides a summary of applicable County plans and policies related to air quality. EIR Section 4.4.3 (Regulatory Setting) provides a description of applicable federal, State, and local regulations regarding the Proposed Project's air quality emissions, and EIR Section 4.4.4 (Environmental Impact Methodology) describes the technical approach to this analysis, including the identification of impact significance criteria. EIR Section 4.4.5 provides the Proposed Project's impacts to air quality for proposed quarry expansion and reclamation.

Scoping Issues Addressed

During the Proposed Project's scoping period, two comment letters related to air quality were received. The first comment letter was submitted by the County's APCD and included details related to the APCD's permit and approval authority, sources of information for the Project's air quality impact evaluation, recommendations for the EIR's use and application of the APCD's CEQA Air Quality Handbook, as well as suggestions for the EIR's analysis of alternatives, cumulative impacts, and potential mitigation measures. These comments are summarized in Table ES-1 and Appendix A. The second letter was received from the County Department of Agriculture/Weights and Measures, which recommended that the Proposed Project's conditions of approval include dust management. These comments are also summarized in Table ES-1.

During the Proposed Project's public scoping meeting held on June 27, 2013 one commenter noted that odors from the two HMA plants located within the boundaries of the existing quarry can be smelled in early morning hours and that they are unpleasant. Please refer to EIR Section 2.5.1 (Existing Quarry Operations) for a description of these HMA plants, and see Appendix B for more information on existing permits and entitlements. Although these HMA plants are located within the quarry's property, they are not considered to be part of the Proposed Project, which is specific to the proposed quarry expansion area and implementation of the Proposed RPA.

4.4.1 Existing Conditions

The Santa Margarita Quarry and all unincorporated areas of the County are within the jurisdiction of the County's APCD, which is part of the South Central Coast Air Basin. The South Central Coast Air Basin also includes the Santa Barbara and Ventura County local air pollution control districts to the south. These local air districts oversee programs to improve air quality in the region.

Meteorology, Topography and Air Pollution Potential

The climate of the Proposed Project area is Mediterranean with mild, wet winters and hot, dry summers. In the summer, average high temperatures reach 90°F or greater, and in the winter, temperatures drop to about 35°F. Average annual precipitation inland of the coastal mountains is about 13 inches, mostly occurring from November through March (WRCC, 2013).

Air pollution potential within the County depends on several factors including the type, amount, location, and dispersion rates of pollutants emitted in the region. Major factors affecting pollutant dispersion are wind speeds and direction, atmospheric stability, temperature, the presence or absence of inversions,

and the topographic and geographic features of the region. The coastal Santa Lucia Range creates a barrier to airflow, which can trap air pollutants in the inland portions of the County.

The Proposed Project area is inland and experiences occasionally unhealthy levels of air pollution due to locally formed as well as transported pollution. Coastal areas with little population generally experience better air quality than inland areas. Air quality east of the Proposed Project area, including the Carrizo Plain, is occasionally influenced by transport of pollutant-laden air from the adjacent Kern County and San Joaquin Valley.

Ambient Air Quality

Ambient air quality is assessed by measuring concentrations of air pollutants in the ambient air. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are planning standards that define the upper limits for airborne concentrations of pollutants. The standards are designed to protect public health and welfare with a reasonable margin of safety. At the national level, the federal Clean Air Act requires the U.S. Environmental Protection Agency (USEPA) to establish NAAQS and designate geographic areas that are either attaining or violating the standards. In California, air quality management and regulation is the shared responsibility of the California Air Resources Board (CARB) and local air quality management and air pollution control districts.

The NAAQS and CAAQS are established for “criteria pollutants.” These are ozone, respirable particulate matter (PM10), fine particulate matter (PM2.5), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead. Ozone is an example of a secondary pollutant that is not emitted directly from a source (e.g., an automobile tailpipe), but it is formed in the atmosphere by chemical and photochemical reactions. Nitrogen oxides (NO_x) and reactive organic gases (ROG), including volatile organic compounds (VOC), are regulated as precursors to ozone formation. The USEPA and CARB both have independent authority to develop and establish ambient air quality standards, and in general, the CAAQS are more stringent than the corresponding NAAQS. The national and California standards are shown in Table 4.4-1.

Table 4.4-1. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards
Ozone	1-hour	0.09 ppm	—
	8-hour	0.070 ppm	0.075 ppm
Respirable Particulate Matter (PM10)	24-hour	50 µg/m ³	150 µg/m ³
	Annual Mean	20 µg/m ³	—
Fine Particulate Matter (PM2.5)	24-hour	—	35 µg/m ³
	Annual Mean	12 µg/m ³	12.0 µg/m ³
Carbon Monoxide (CO)	1-hour	20 ppm	35 ppm
	8-hour	9.0 ppm	9 ppm
Nitrogen Dioxide (NO ₂)	1-hour	0.18 ppm	0.100 ppm
	Annual Mean	0.030 ppm	0.053 ppm
Sulfur Dioxide (SO ₂)	1-hour	0.25 ppm	0.075 ppm
	24-hour	0.04 ppm	0.14 ppm
	Annual Mean	—	0.03 ppm
Lead	30-day Average	1.5 µg/m ³	—
	Calendar Quarter	—	1.5 µg/m ³

Notes: ppm=parts per million; µg/m³= micrograms per cubic meter; “—” =no standard.

Source: CARB Ambient Air Quality Standards Chart, June 2013. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.

Local Ambient Air Quality

The USEPA and local air districts work together to classify areas of the nation as attainment, unclassified, or nonattainment. The classification depends on whether the monitored ambient air quality data show compliance (attainment), insufficient data available (unclassified), or non-compliance (nonattainment) with the ambient air quality standards. Table 4.4-2 provides the attainment status for the national and California ambient air quality standards at the Project Proposed site.

Table 4.4-2. Attainment Status for San Luis Obispo County

Pollutant	State Classification	Federal Classification
Ozone	Nonattainment	Attainment (Western portion of County)
PM10	Nonattainment	Unclassified/Attainment
PM2.5	Attainment	Unclassified/Attainment
CO	Attainment	Unclassified
NO ₂	Attainment	Unclassified
SO ₂	Attainment	Unclassified
Lead	Attainment	No Data

Source: APCD, San Luis Obispo County Attainment Status, 2013.
<http://www.slocleanair.org/air/index.php>

The CARB and APCD monitor ambient concentrations of most criteria pollutants in the Project area at stations in Atascadero and other inland and coastal cities. The only station in the County for monitoring SO₂ is in Nipomo; CO is not monitored in the County. The relevant data from the closest monitoring stations to the Project site are presented in Table 4.4-3.

Ozone. Ambient levels of ozone in the County have generally improved as part of a long-term trend of air quality management, and exceedances of State and federal standards have not occurred in recent years at Atascadero (CARB, 2013). High ozone concentrations are generally attributed to warm temperatures and sunlight, which lead to ozone from high levels of precursor emissions during the summer months. Motor vehicle emissions and stationary source emissions that occur throughout the county contribute to summertime ozone formation and subsequent occasional ozone violations. The highest concentrations of ozone in the Project area occur during transport of pollutants into the County from the east.

Table 4.4-3. Summary of Ambient Air Quality Data, Atascadero Monitoring Station

Pollutant	Most Restrictive Standard	2010	2011	2012
Ozone (1-hour, ppm)	0.09 (CAAQS)	0.077	0.073	0.083
Ozone (8-hour, ppm)	0.070 (CAAQS)	0.067	0.063	0.070
Ozone (days over the 8-hour State standard)	—	0	0	0
PM10 (24-hour, µg/m ³)	50 (CAAQS)	23.0	75.9	62.8
PM10 (annual average, µg/m ³)	20 (CAAQS)	12.2	19.7	17.0
PM10 (days over the 24-hour State standard)	—	0	3	2
PM2.5 (24-hour, µg/m ³)	35 (NAAQS)	21.2	33.1	33.7
PM2.5 (annual average, µg/m ³)	12 (CAAQS)	6.3	7.5	6.1
PM2.5 (days over the 24-hour federal standard)	—	0	0	0
NO ₂ (1-hour, ppm)	0.100 (NAAQS)	0.052	0.042	0.042
NO ₂ (annual average, ppm)	0.030 (CAAQS)	0.006	0.006	0.007
SO ₂ (24-hour, ppm)	0.04 (CAAQS)	0.001	—	—

Notes: ppm=parts per million; µg/m³= micrograms per cubic meter; "—" =not applicable or not available.

Source: CARB Air Quality Data Statistics for Atascadero (Lewis Avenue), except SO₂ for Nipomo (Guadalupe Road), 2013.

Particulate Matter. The highest concentrations of PM₁₀ occur during variable episodes of windblown dust from open land and construction, with occasional contributions from wood burning stoves, fireplaces, and wildfires. Concentrations in Atascadero occasionally exceed the State standards but not the federal standards (CARB, 2013). Mobile sources are a consistent contributor to particulate matter concentrations from brake wear, tire wear, and fuel combustion, a primary source of directly emitted PM₁₀ and PM_{2.5}. Fuel combustion exhaust also contains nitrogen and sulfur compounds that react to form PM_{2.5} in the atmosphere.

Toxic Air Contaminants. Toxic air contaminants (TACs) are air pollutants that may lead to serious illness or increased mortality, even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. There are hundreds of different types of TACs with varying degrees of toxicity. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another's. The APCD monitors the ambient concentrations of TACs and reports that these contaminants cause a population-weighted average incremental health risk of 89 cancer cases per million (APCD, 2012).

TACs are not subject to ambient air quality standards but are regulated by each local air district using a risk-based approach. The APCD uses a health risk assessment in the permitting process to determine what stationary sources warrant additional control as well as the degree of control. The APCD also recommends health risk screening for residential, or other sensitive land uses, proposed in proximity to existing sources of TACs (APCD, 2012). If projected emissions of a specific air toxic compound from a proposed new or stationary modified source suggest a potential public health risk, then the applicant is subject to a health risk assessment for the source in question. Such an assessment also evaluates the chronic and acute hazards and the potential increased cancer risk stemming from exposure to a change in airborne TACs. Mobile sources powered by diesel fuel emit diesel particulate matter (DPM), which is classified as a TAC because many toxic compounds adhere to diesel exhaust particles. Statewide programs for mobile sources and diesel-fired equipment set mandatory exhaust standards for manufacturers of the engines and require equipment owners or operators to register portable equipment.

Naturally occurring asbestos (NOA) is widespread in San Luis Obispo County, and has been identified by the State Air Resources Board as a TAC. Activities that disturb unpaved surfaces or rock in areas of serpentine minerals can create airborne dust and particulate matter containing naturally occurring asbestos. The County APCD maintains a map (APCD, 2012) that indicates the Proposed Project site and RPA area are within a zone requiring site-specific geologic analysis for determining the presence of naturally occurring asbestos.

Sensitive Receptors. Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwellings. The location of sensitive receptors is needed to assess toxic impacts on public health (APCD, 2012). No sensitive land uses are within 1,000 feet of the Proposed Project site or Proposed RPA area boundary.

Existing Quarry Operations

Stationary Sources. The existing quarry includes the aggregate processing facilities within the quarry's Upper Area, and the quarry's Lower Area includes two HMA plants and a portable facility for asphalt and concrete recycling. Each of these sources cause emissions of dust (PM₁₀ and PM_{2.5}) from material handling, and the products of combustion occur as a result of diesel- and gas-fired (propane) heaters and a power generator for material processing. The recycling plant is powered by electricity from the grid.

Emissions vary with the highly variable nature of quarry operations. Aggregate excavation, handling, and processing and the activity of mobile sources on unpaved surfaces are the primary sources of particulate matter dust. For the most recent year of data (2011), the emissions from material processing at the quarry were reported to be 63.6 tons PM10 (Wallace Group, 2013).

The stationary sources were authorized through Permits-to-Operate (PTO) from the County APCD. Table 4.4-4 summarizes these stationary sources.

Table 4.4-4. Summary of Existing Operations, Stationary Sources of Air Pollutants

Existing Stationary Source (Owner)	APCD Permit(s) to Operate	Permitted Units Included (Material Throughput Rate)
Material Processing System (Hanson)	PTO 325-4	Primary Processing System (475 ton/hour, one-month average)
	PTO 325-4	Sub-base System (250 ton/hour, one-month average)
	PTO 325-4	Secondary Processing System (350 ton/hour, one-month average)
Hot Mix Asphalt Plant (Hanson)	PTO 327-2, 326.2	Asphalt Mixer (300 ton/hour)
	PTO 327-2, 326.2	Heaters (2.1 MMBtu/hour)
Hot Mix Asphalt Plant (Papich)	PTO 1747-1	Asphalt Mixer (2,300 ton/day)
	PTO 1747-1	Heaters (49.3 MMBtu/hour)
Asphalt and Concrete Recycling Plant (Hanson)	PTO 1799-1	Electric-Powered Recycling System (300 ton/hour, one-month average)

Source: Applicant's 10/8/2013 responses to data requests AQ-1 to AQ-5.

Off-Road Equipment. The existing quarry uses a fleet of 12 pieces of heavy-duty diesel-powered equipment to extract material from the quarry. The typical equipment is listed in Table 2.5-4 (Typical Equipment Types and Use). The mobile and portable sources used within the existing quarry include:

- Front-end loader, skid-steer loader, bulldozer, excavator, and grader equipment.
- Haul trucks and water trucks.
- Other portable or exempt sources, e.g., diesel power generators under 50 hp, parts cleaners.

Haul Trucks (On-Highway). The existing quarry may load a maximum of 294 trucks per day (294 round-trip truck trips per day) at the maximum daily production rate and up to 76,440 trucks per year at the quarry maximum production limit (700,000 tons). All of these vehicles travel along the east-west access road that intersects with El Camino Real, where the traffic turns either north or south. Other mobile sources that access the site include the on-highway vehicles for deliveries other than the production output and for commuting workers and other visitors to the quarry.

The diesel emissions from haul trucks contribute to the overall health risk burden experienced by people near the access routes. The APCD provides a screening tool to estimate the risk level caused by truck travel (APCD, 2011a). At the average annual production (see Table 2.1-2, Average Annual Production and Maximum Production), fewer than 23,140 round-trip truck trips occur during a typical year, resulting in 46,280 truck passes along the access road. This average level of quarry traffic causes about 6.2 excess cancer cases per million people for locations 25 meters (approximately 82 feet) from the roadway segment. Traffic related to the quarry maximum production limit (700,000 tons annually or 76,440 round-trip trucks per year) causes about 21 excess cancer cases per million people for locations 25 meters from the roadway segment, according to the APCD screening tool. The annual level of traffic from aggregate production varies but is limited by the quarry's annual production limit. These existing incremental cancer risk levels relate only to the risk posed by emissions from the on-highway trucks, and

relatively higher overall existing health risks would be expected due to the combined effects of other existing sources and truck traffic, and risks would be higher at locations closer than 25 meters (approximately 82 feet) from the road.

4.4.2 San Luis Obispo County Plans and Policies

San Luis Obispo County 2001 Clean Air Plan (CAP). The County APCD adopted the CAP in January 1992; it was subsequently updated in 1998, and again in 2001. The current 2001 CAP, adopted in March 2002, is a comprehensive planning document designed to reduce emissions from traditional industrial and commercial sources, as well as from motor vehicle use. The purpose of the CAP is to address the attainment and maintenance of State and federal ambient air quality standards by following a comprehensive set of emission control measures within the Plan. The measures focus on ozone control and do not specifically address mining or mineral processing, except through the general measures implemented in APCD Rule 430 for control of fuel combustion units over 5 million British thermal units per hour (MMBtu/hr). Actions that are consistent with the 2001 CAP and the adopted control measures help to ensure that long-term trends in air quality improvements are not disrupted.

San Luis Obispo County Emissions Inventory. The APCD maintains an air pollution emissions inventory for all categories of sources in the County. The 2001 CAP contained a forward-looking forecast for County emissions in the year 2015 that was based on the 1991 inventory as a reference year with the most up-to-date data available at that time. Because the CAP addressed ozone, only forecasts of ROG and NOx were included in Chapter 7 of the 2001 CAP (APCD, 2001). The APCD has updated the inventory of emissions in recent years. The category of “Industrial Processes,” which includes mineral processes along with chemical processes and the industry of food processing, emits less than 1 percent of the inventory (APCD, 2011b). These APCD emission projections are consistent with data from the CARB, which forecast daily average rates of ROG at 0.01 tons per day and NOx at 0.04 tons per day from “mineral processes” in the County for the years 2015 and 2020 (CARB, 2014). The annual baseline emissions inventory for the County is summarized in Table 4.4-5.

Table 4.4-5. Summary of APCD Emissions Inventory (2009)

Source Category	ROG (ton/yr)	NOx (ton/yr)	PM10 (ton/yr)	PM2.5 (ton/yr)	CO (ton/yr)	SO2 (ton/yr)
Stationary Sources						
Fuel combustion	51	513	22	22	404	100
Waste disposal	13	1	0	0	0	1
Cleaning/surface coating	371	0	1	1	0	0
Petrol. production/marketing	179	3	0	0	3	24
Industrial processes	121	12	54	19	35	6
Area-Wide Sources						
Solvent evaporation	1,286	0	0	0	0	0
Miscellaneous processes	1,408	385	9,013	1,839	6,142	16
Mobile Sources						
On-road motor vehicles	2,229	3,853	165	112	22,241	15
Other mobile	2,058	8,991	732	690	10,646	3,678
Natural Sources	13,199	714	2,306	1,957	22,636	220
Total All Sources	20,916	14,471	12,294	4,640	62,108	4,060

Source: APCD, 2011b.

APCD 2005 Particulate Matter (PM) Report. The California Legislature enacted Senate Bill 656 (Sher) in 2003 to reduce public exposure to particulate matter (PM10 and PM2.5 collectively referred to as PM). SB 656 required the CARB in consultation with local air pollution control districts, to develop and adopt a list of PM reduction strategies. The APCD adopted the PM Report and associated control measures for fugitive dust control on open lands and for control of dust from unpaved and paved roads in July 2005. All activities at the existing quarry are subject to the regulations adopted pursuant to the PM Report.

APCD Regulation II, Permits. Permits are required under APCD Rule 202 for any non-exempt stationary sources associated with existing activities and continued operation of the quarry. Rule 202 and other rules under Regulation II make up the New Source Review program, which establishes control technology requirements and whether emission offsets would be needed to ensure that new stationary sources do not disrupt attainment or maintenance of the ambient air quality standards. Additionally, new sources of toxic air contaminants are subject to APCD Rule 219, which requires risk assessment and installation of emissions controls for air toxics.

The County APCD must issue an Authority to Construct and Permit to Operate for any sources that are not exempt under Regulation II. The County APCD also requires an exemption request to be filed for the determination that naturally occurring asbestos is not present at the site of construction activities.

APCD Regulation IV, Prohibitions. Prohibitions in APCD Regulation IV make all activities at the existing quarry subject to dust control requirements and limitations on visible emissions (APCD Rule 401). Rule 401 prohibits persistent plumes that are dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, which is taken to be no more than 20 percent opacity. Similarly, all sources at the existing quarry are prohibited from causing dust or other emissions at a level that constitutes a nuisance (APCD Rule 402).

APCD CEQA Air Quality Handbook, April 2012. The APCD maintains guidance for lead agencies implementing CEQA. The most recent update to the APCD's CEQA Air Quality Handbook (2012) is used in this analysis as a basis for establishing the analytical approach and significance criteria for the Proposed Project.

4.4.3 Regulatory Setting

Federal Clean Air Act (CAA). The NAAQS were originally established for criteria air pollutants in 1970, with a mandate for periodic updating of the standards (Table 4.4-1). Criteria pollutants are the most prevalent air pollutants known to be hazardous to human health. The federal CAA required states exceeding the standards to prepare air quality plans showing how the standards were to be met by December 1987. The federal CAA Amendments of 1990 reestablished the timelines for attaining the NAAQS, directed the USEPA to set emissions performance standards for toxic air contaminants, and required certain stationary source facilities to sharply reduce emissions. The relevant local air district rules and regulations that enable the demonstration of attaining the standards are incorporated into the State Implementation Plan from the local air quality management plans, including the County's CAP.

Federal New Source Performance Standards (NSPS): Standards of Performance for Nonmetallic Mineral Processing Plants, NSPS Subpart OOO [40 CFR 60.670]. The USEPA sets the minimum performance standards for gravel plants and crushed stone plants with capacities over 25 tons per hour, for crushed and broken stone or gravel processing plants built after 1983. These rules specify the level of control that must be achieved by emissions capture systems that filter particulate matter and by water spray systems that wet the material to reduce dust from crushers, screeners, conveyor belts, and storage bins.

California Clean Air Act. The California CAA requires regions to develop and implement strategies to attain California's Ambient Air Quality Standards (CAAQS). For some pollutants, the California standards are more stringent than the national standards. California also has standards for visibility reducing particles, sulfates, hydrogen sulfide (H₂S), and vinyl chloride.

Each local air district has the responsibility to develop the necessary regional air quality management plan for attaining and maintaining the ambient air quality standards. Each air district also has the authority to issue permits through its rules and regulations by requiring that new stationary sources be subject to New Source Review (NSR). The NSR program ensures that the new stationary sources would not interfere with progress to attain the ambient air quality standards. No new stationary sources would be associated with the Proposed Project or subject to permitting. Emissions from mobile and portable sources and temporary activities (such as construction) are managed through a range of State and federal programs that control mobile sources, motor vehicle emissions, and emissions from equipment powered by diesel engines.

California Air Toxics "Hot Spots" Information and Assessment Act. The Air Toxic "Hot Spots" Information and Assessment Act identifies toxic air contaminant hot spots where emissions from specific stationary source facilities may expose individuals to an elevated risk of adverse health effects. It requires that a business or other establishment identified as a significant source of toxic emissions provide the affected population with information about health risks posed by the emissions.

California Air Resources Board (CARB) Off-Road Mobile Sources Emission Reduction Program. The California CAA mandates CARB to achieve the maximum degree of emission reductions from all off-road mobile sources in order to attain the State ambient air quality standards. Off-road mobile sources include construction and farming equipment. Tier 1, Tier 2, and Tier 3 standards for large compression-ignition engines used in off-road mobile sources went into effect in California in 1996, 2001, and 2006 respectively. Tier 4 or Interim Tier 4 standards apply to all off-road diesel engines model year 2012 or newer. In addition, equipment can be retrofitted to achieve lower emissions using the CARB-verified retrofit technologies. The engine standards and ongoing rulemaking jointly address NO_x emissions and toxic particulate matter from diesel combustion (DPM).

CARB In-Use Off-Road Diesel-Fueled Fleet Regulation. The regulations for in-use off-road diesel equipment are designed to reduce NO_x and DPM from existing fleets of equipment. CARB expects to gradually enforce this rule for large fleets starting in July 2014 and in 2019 for small fleets (as according to CARB Mail-Out #MSCD 13-25, September 2013). Depending on the size of the fleet, the owner would need to ensure that the average emissions performance of the fleet meets certain statewide standards. In lieu of improving the emissions performance of the fleet, electric systems can be installed; for example, a conveyor system can be used to replace diesel equipment in the fleet average calculations. Presently, all equipment owners are subject to a 5-minute idling restriction in the rule (13 California Code of Regulations, Chapter 10, Section 2449).

CARB Portable Equipment Registration Program. This program allows owners or operators of portable engines and associated equipment commonly used for construction or farming to register their units under a statewide portable program that allows them to operate their equipment throughout California without having to obtain individual permits from local air districts.

CARB Airborne Toxic Control Measures (ATCM). Diesel engines on portable equipment and vehicles are subject to various ATCM that dictate how diesel sources must be controlled statewide. For example, the ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling generally limits idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five

consecutive minutes or periods aggregating more than 5 minutes in any one hour (13 California Code of Regulations, Chapter 10, Section 2485). Diesel engines used in portable equipment fleets are also subject to stringent DPM emissions standards, generally requiring use of only newer engines or verified add-on particulate filters (17 California Code of Regulations Section 93116). Certain stationary compression-ignition engines running on diesel fuel, including emergency standby engines, must also control particulate matter emissions by installing verified add-on equipment (17 California Code of Regulations Sections 93115.4 and 93115.6).

CARB Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations. Each local air pollution control district must implement control measures for naturally occurring Asbestos NOA due to quarrying operations in areas known to disturb NOA, serpentine, or ultramafic rock as determined by a quarry owner or the local Air Pollution Control Officer (APCO). The requirements that apply to surface mining and quarrying include asbestos dust control measures, reporting, monitoring, and record keeping requirements; except through coordination with the County APCD, a general exemption applies if a Registered Geologist determines that no serpentine or ultramafic rock is likely to be found (17 California Code of Regulations Section 93105).

4.4.4 Environmental Impact Methodology

Significance Criteria

The following significance criteria were derived from the State CEQA Guidelines (Appendix G, Environmental Checklist Form, Section III) and the County APCD CEQA Air Quality Handbook (2012). The Proposed Project would have a significant impact related to GHG emissions if it would:

- Violate any state or federal ambient air quality standard or exceed emission thresholds established by the APCD.
- Expose any sensitive receptor to substantial air pollutant concentrations.
- Create or subject individuals to objectionable odors.
- Conflict with or obstruct implementation of the APCD's CAP.

Approach to Impact Analysis

The study area includes the regional and on-site emissions sources related to the operations of the quarry and Proposed RPA. The current air quality conditions and emissions from sources related existing quarry operations are used as the "baseline" against which to compare potential impacts of the Proposed Project. The air quality analysis follows the guidelines and methodologies recommended in the APCD's CEQA Air Quality Handbook (APCD, 2012).

Significance Criteria for Construction-Related Emissions. The CEQA Air Quality Handbook provides two tiers of general thresholds for short-term construction activities shown in Table 4.4-6. Implementing Standard Mitigation Measures and Best Available Control Technology (BACT) for construction equipment would be appropriate for construction exceeding a quarterly Tier 1 threshold. If construction of a project exceeds a quarterly Tier 2 threshold, the APCD recommends implementing "Standard Mitigation Measures," BACT for construction equipment, implementation of a Construction Activity Management Plan (CAMP), and off-site mitigation.

Significance Criteria for Operational Emissions. The threshold criteria established by the APCD to determine the significance and appropriate mitigation level for long-term operational emissions from a project are presented in Table 4.4-6.

In addition, a project may also have significant adverse impacts on air quality if it individually or cumulatively would result in:

- emissions of toxic or hazardous air pollutants in close proximity (i.e., 1,000 feet) to sensitive receptors;
- exceedance of a State or federal ambient air quality standard for any criteria pollutant, when modeling is applicable); or
- inconsistency with the emissions reduction projections contained in the 2001 CAP.

Table 4.4-6. Air Quality Thresholds of Significance

Construction Emissions	Daily	Quarterly Tier 1	Quarterly Tier 2	Annual
Ozone precursors (ROG + NOx, combined)	137 lbs	2.5 tons	6.3 tons	—
Diesel particulate matter (DPM)	7 lbs	0.13 tons	0.32 tons	—
Fugitive particulate matter (PM10), dust	—	2.5 tons	—	—
Operational Emissions				
Ozone precursors (ROG + NOx)	25 lbs/day	—	—	25 tons/year
Diesel particulate matter (DPM)	1.25 lbs/day	—	—	—
Fugitive particulate matter (PM10), dust	25 lbs/day	—	—	25 tons/year
CO	550 lbs/day	—	—	—

Source: APCD, 2012.

The primary sources of emissions would be the existing stationary sources summarized in Table 4.4-4. Other types of sources include the off-road heavy-duty diesel equipment, the haul trucks and other on-highway motor vehicles, and dust from material handling and activity on unpaved surfaces. No notable odor sources would be associated with the Proposed Project. Emissions would continue to vary with the highly variable nature of quarry operations, but Proposed Project activities would remain within the production rates shown in EIR Section 4.4.1 (Existing Conditions).

Impacts are categorized per the significance classification system provided in EIR Section 4.1 (Environmental Analysis, Introduction, Impact Significance Classification Scheme).

4.4.5 Project Impacts and Mitigation Measures

Impact AQ-1: Violate any air quality standard or contribute substantially to an existing or projected air quality violation

Excavation

The Proposed Project would not include any new stationary sources. Additionally, the Proposed Project would not cause a new increase in mobile source activity as a result of the traffic that travels to or from the site. The addition of a conveyor system within the quarry would minimize the number of trucks needed for product transportation and potentially reduce emissions from mobile sources operating at the site. The quarry contains two HMA plants that are sources of combustion-related pollutants from the heaters and other gaseous pollutants from asphalt handling, storage and drying, but the HMA plants are

not considered to be part of the Proposed Project, which is specific to the proposed quarry expansion area. For more information on existing entitlements for the HMA plants and expiration dates, see Appendix B. The other sources associated with existing quarry operations would continue to emit pollutants subject to ambient air quality standards, as described in EIR Section 4.4.1 (Existing Conditions).

Ongoing operational emissions from stationary sources are presently authorized in permits from the County APCD, and the mobile sources are not subject to permitting, including off-road equipment and haul trucks (on-highway). The facility-specific emissions inventory quantifies only PM10. Aggregate excavation, handling, and processing and the activity of mobile sources on unpaved surfaces are the primary sources of particulate matter dust. For the most recent year of data (2011), the emissions from material processing at the quarry were reported to be 63.6 tons PM10 (Wallace Group, 2013). Because these emissions exceed the 25 tons per year threshold of significance and also would exceed the daily threshold for operational PM10 (APCD, 2012), the impact of PM10 relative to conditions existing without the Proposed Project would be significant. Mitigation Measure AQ-1 is recommended for the control of fugitive dust and PM10 and to reduce the impact of PM10 emissions to less than significant (Class II).

No change in operational emissions would occur as a result of the Proposed Project. Because no new operational emissions would occur, there would be no change in the potential for the Project to cause a violation of any air quality standard or contribute substantially to an existing or projected violation. The existing operational PM10 emissions exceed the significance thresholds and therefore, PM10 occurs at levels that may cause or contribute to violations. However, because the Proposed Project would not cause a net emissions increase, the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). Therefore, impacts would be less than significant with mitigation incorporated (Class II).

MM AQ-1 Implement a Dust Control Plan. The Applicant shall comply with the following on-site requirements to minimize PM10 fugitive dust emissions:

- a. Reduce the amount of disturbed area where possible by retaining the natural vegetation and soil within each quarry phase until that phase is ready to start.
- b. Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Increased watering frequencies shall be required whenever wind speeds exceed 15 miles per hour (mph) as determined in consultation with the County APCD. Reclaimed (non-potable) water should be used whenever possible.
- c. Spray all soil or product stockpile areas daily as needed, or cover or treat them to minimize windblown dust.
- d. Ensure that the Project access road is complete and paved at all times to minimize dust generated by the operation of heavy trucks.
- e. The locations for stockpiles and material storage areas, along with specifications for dust control measures, shall be shown on all applicable mining and reclamation plans.
- f. The Applicant shall designate a person to monitor the fugitive dust emissions and enhance the implementation of the measures as necessary to minimize dust

complaints, reduce visible emissions below 20% opacity, and to prevent transport of dust off-site. Their duties shall include holidays and weekend periods when work may not be in progress. The name and phone number of such person shall be provided to the County APCD prior to issuance of a Notice to Proceed or other permit to initiate any work associated with the Project's proposed expansion area.

- g. Reclamation and revegetation of all disturbed areas shall occur as soon as practicable in a phased manner consistent with the Project's RPA. Watering or other treatments shall be used on replaced soil material to control windblown dust until vegetation is established.
- h. All disturbed soil areas not subject to revegetation shall be stabilized using approved chemical soil binders, jute netting, or other methods approved in advance by the County APCD.
- i. Vehicle speed for all quarry vehicles and trucks on unpaved portions of the Project site shall not exceed 15 mph.
- j. All trucks hauling dirt, sand, soil, or other loose materials are to be covered and fitted with appropriate seals and splash guards, and must be operated in conformance with California Vehicle Code 23114 related to hauling materials.
- k. Streets shall be swept at the end of each day if visible soil material is carried onto the Project access road. Water sweepers with reclaimed water should be used where feasible.
- l. Prior to commencement of any activity associated with the Project's proposed expansion area (e.g., site preparation, grading or earth disturbing activity) the Applicant shall notify the County Department of Planning and Building and the County APCD, by letter, of the status of the air quality measures required by Mitigation Measure AQ-1. The letter will state the following:
 - 1. The controls that will be implemented;
 - 2. The reasons why any unimplemented measures are considered infeasible and the measures incorporated to substitute for these measures; and
 - 3. When any scheduled activities within the Project's expansion area will be initiated to allow for County APCD inspection of the mitigation measures prescribed in the Project's Final Environmental Impact Report.

Reclamation

The Proposed Project would cause reclamation activities to occur later than currently permitted, with final reclamation completed by the end of 2076. This, in turn, would delay the start of reclamation activities. The nature of reclamation activities and the emissions associated with long-term reclamation would not change, however, as these would occur after quarry operations cease. Because no new sources of air pollutants would occur with implementation of both the proposed expansion and Proposed RPA, the Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. This impact would therefore be less than significant.

Impact AQ-2: Expose sensitive receptors to substantial pollutant concentrations

Excavation

Toxic air contaminants and dust would be emitted as a result of continued mining of crushed aggregate and granite. Air toxics from fuel combustion, primarily diesel particulate matter, would continue to be emitted from the existing stationary sources, the fleet of heavy-duty diesel-powered equipment, and the haul trucks accessing the site, as they are in the existing conditions. Aggregate excavation, handling, and processing and the activity on unpaved surfaces are the primary sources of particulate matter dust. Sensitive receptors near the existing quarry and roads that access the quarry would continue to be exposed to the toxic air contaminants and dust emitted by these sources. The quarry contains two HMA plants that are sources of ROG including air toxics, but the HMA plants are not considered to be part of the Proposed Project, which is specific to the proposed quarry expansion area. The typical equipment used at the quarry is listed in Table 2.5-4 (Typical Equipment Types and Use), and the existing stationary sources are summarized in Table 4.4-4.

The APCD provides a screening tool to estimate the health risk level caused by truck travel (APCD, 2011a). Using the screening tool shows that truck traffic related to the quarry maximum production limit (700,000 tons annually or 76,440 trucks per year) causes about 21 excess cancer cases per million people for locations 25 meters from the access road. Lower levels of truck traffic and health risks occur in the existing conditions, and would continue to occur in future years, as operations during all years must remain below the maximum production limit. The incremental cancer risk related to this truck traffic is below the population-weighted average incremental health risk of 89 cancer cases per million within the County (APCD, 2012).

There is a low risk of quarry operations causing substantial TAC concentrations of NOA. Site specific geologic analysis indicates that there is no ultramafic rock, serpentine or other evidence of NOA exposed in the quarry, or any of the rock materials examined from the Proposed RPA (Golder Associates, 2012). To demonstrate compliance with the CARB Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations (17 California Code of Regulations Section 93105), the County APCD requires that an exemption request be filed for the determination that naturally occurring asbestos is not present at the site of activities. Mitigation Measure AQ-2 would reduce this impact to a less than significant level (Class II).

MM AQ-2 Implement Applicable Controls for Naturally Occurring Asbestos (NOA). Prior to the issuance of the Notice to Proceed or related permit to start any activity associated with the Project's proposed expansion, the Applicant shall submit evidence to the Department of Planning and Building, that either a NOA exemption has been granted by the County APCD, or the provisions of the CARB Airborne Toxic Control Measure related to NOA have been implemented.

The Proposed Project would not be a new stationary source of air toxics or dust, nor would the Proposed Project cause a new increase in the number of trucks that annually pass receptors along the access road or other area roadways. Continued operation of the existing sources would not cause sensitive receptors to be exposed to substantial pollutant concentrations. Impacts would be less than significant.

Reclamation

The Proposed Project would cause reclamation activities to occur later, in potentially completing final reclamation by the end of 2076. This would delay the start of reclamation activities but not the nature

or the activities and emissions associated with long-term reclamation, which must occur under the existing conditions. Because no new sources of toxic air contaminants would occur with the Proposed Project including the Proposed RPA, the Project would not expose sensitive receptors to substantial pollutant concentrations, and this impact would be less than significant (Class III).

Impact AQ-3: Create objectionable odors affecting a substantial number of people

The Proposed Project would continue existing quarry operations that involve combustion of diesel fuel and emissions of dust. Odors present in the diesel exhaust of processing equipment, trucks, and other equipment would be reduced by the use of ultra-low-sulfur fuel as required by law.

The existing quarry contains two HMA plants, which were noted as creating objectionable odors during the Project's public scoping meeting. However, the HMA plants are not considered to be part of the Proposed Project, which is specific to the proposed quarry expansion area and implementation of the Proposed RPA. Additionally, no changes to the HMA plants existing operation are proposed, and their existing operation is considered to be part of "baseline" conditions. Because no new notable odor sources would be associated with the Proposed Project and RPA, this impact would be less than significant (Class III).

Impact AQ-4: Conflict with or obstruct implementation of the applicable air quality plan

The existing entitlements for the quarry predate all of the current air quality management plans. Activities authorized under the 1981 CUP, as amended in 1999, and the 1981 Reclamation Plan were ongoing throughout the time of the County's development and adoption of applicable air quality management plans. As a result, all components of the quarry's existing operations are accounted for within the 2001 CAP (adopted in March 2002) and the APCD 2005 PM Report.

All activities in the County, including the existing mining operations, are subject to the regulations that are implemented under the air pollution control measures of the air quality management plans. Because the APCD enforces the applicable control measures through its regulations and permitting programs, all of the activities associated with the Proposed Project and the Proposed RPA would be consistent with the air pollution control measures established by the 2001 CAP or the 2005 PM Report.

The current air quality planning emissions inventory maintained by the APCD shows all sources in the County at 2009 levels (APCD, 2011b). The currently inventoried emissions appear in Table 4.4-5. Additionally, the CARB maintains and routinely updates the forecasts of all County sources for future years 2015 and 2020 (CARB, 2014). Existing quarry operations fall within the subcategories for mineral processes (industrial) and fugitive windblown dust (area-wide sources), along with fuel combustion and mobile source categories. The future-year inventories maintained by CARB indicate continued emissions from the industrial category of "mineral processes," within which the existing quarry is included. Because the future years of the air quality planning inventory include the continuing emissions from the quarry, the Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. In addition, the Applicant's air quality permits are reviewed and renewed annually by the County APCD, which will inherently require that feasible technological advances for emissions reductions be required and implemented in the future. Therefore, no conflicts or obstructions with the implementation of future applicable air quality plans would be anticipated. No impacts would occur (No Impact).