4.2 AIR QUALITY, GREENHOUSE GASES, AND ENERGY

4.2.1 INTRODUCTION

This Air Quality, Greenhouse Gas Emissions and Energy section of the Draft SEIR evaluates the potential impacts of the proposed project on local and regional air quality, greenhouse gases, and energy. The section includes a discussion of the existing air quality and greenhouse gas (GHG) setting, air quality and energy impacts resulting from changes in the proposed project associated with mining and material processing, grading and equipment emissions, direct and indirect emissions associated with the project, the impacts of these emissions on both the local and regional scale, demand on energy resources, and mitigation measures warranted to reduce or eliminate any identified significant impacts.

Information for this section has been drawn primarily from the Yolo County General Plan[1] and associated EIR,[2] the Cache Creek Area Plan (CCAP) Update FEIR,[3] the 1996 EIR,[4] and the following project-specific reports and documentation:

- Public Health Risk Assessment of Diesel Particulate Matter and Respirable Silica, CEMEX Construction Materials Pacific, Compass Land Group, August 2022 (Appendix J)

- Air and Greenhouse Gas Emissions Study, CEMEX Construction Materials Pacific, Compass Land Group, Revised July 2022 (Appendix I)

- Yolo-Solano Air Quality Management District (YSAQMD), Handbook for Assessing and Mitigating Air Quality Impacts[5]

Government agencies and the public were provided an opportunity to comment on the proposed project in response to the Notice of Preparation (NOP) that provided a preliminary summary of the proposed project. No comments concerning air quality, GHG emissions or energy were received by the County (NOP comment letters are included in Appendix B of this Draft SEIR).

The following subsections describe the existing environmental setting of the County and specifically in the lower Cache Creek area, the applicable regulatory framework, standards of significance used to determine potential environmental effects that may result from implementation of the project, potentially significant impacts associated with relevant substantial changes in the project and/or the circumstances under which the project will be undertaken, and/or new information as defined by CEQA Guidelines Section 15162, and new or different feasible mitigation measures to reduce those impacts to a less-than-significant level, if applicable.

[1] Yolo County. 2030 Countywide General Plan. November 10, 2009.
[2] Yolo County. Yolo County 2030 Countywide General Plan Environmental Impact Report. SCH #2008102034. April 2009.
[3] Yolo County. Cache Creek Area Plan Update Project, Final Environmental Impact Report. SCH #2017052069. December 2019.
[4] Yolo County. 1996. Solano Long-Term Off-Channel Mining Permit Application Final Environmental Impact Report. November.
[5] Yolo-Solano Air Quality Management District. Handbook for Assessing and Mitigating Air Quality Impacts. July 11, 2007. Available at: http://www.ysaqmd.org/documents/CEQAHandbook2007.pdf.

4.2.2 EXISTING ENVIRONMENTAL SETTING

The following setting information provides a brief summary of the conditions described in more detail in the above-referenced documents and includes updated information that has become available since those reports were completed.

General Information and Key Terms

The following terms are used throughout this section and have important bearing upon properly evaluating air quality, GHG emissions, and energy within the context of CEQA. As a result, this section begins by providing definitions of key terms, as follows:

The U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS), respectively, for common pollutants referred to as "criteria air pollutants." The most prevalent criteria air pollutants include ozone, nitrogen dioxide, carbon monoxide (CO), sulfur dioxide, respirable particulate matter (PM10), and fine particulate matter (PM2.5). More information regarding criteria air pollutants is presented in Table 4.2-1.

Ozone is not emitted directly and instead is considered a secondary pollutant, which forms as a result of a complex chemical reaction between reactive organic gases (ROG) and oxides of nitrogen (NOx) emissions in the presence of sunlight. In addition to the criteria air pollutants, toxic air contaminants (TACs) are also a category of environmental concern. TACs are comprised of a wide range of pollutants that pose a risk to public health when inhaled.

GHGs are gases that absorb and emit radiation within the thermal infrared range, trapping heat in the earth's atmosphere. Some GHGs occur naturally and are emitted into the atmosphere through both natural processes and human activities. Other GHGs are created and emitted solely through human activities. The principal GHGs that enter the atmosphere due to human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated carbons. Other common GHGs include water vapor, ozone, and aerosols. Each GHG has a different global warming potential. For instance, CH_4 traps about 34 times more heat per molecule than CO_2. As a result, emissions of GHGs are reported in metric tons of carbon dioxide equivalents (CO_2e), wherein each GHG is weighted by its global warming potential relative to CO_2. The increase in atmospheric concentrations of GHG due to human activities has resulted in more heat being held within the atmosphere, which is the accepted explanation for global climate change.

In the context of this Draft SEIR, the term "energy" is used broadly to refer to any electricity or fossil fuels used during project implementation or under the existing setting. The principal fossil fuel consumed during mining activity is diesel fuel for operation of heavy-duty equipment. Electricity, which is often measures in watts per hour, may either be generated by renewable sources, such as wind turbines, photovoltaic cells, and geothermal sources, or through combustion of fossil fuels, principally natural gas.

Table 4.2-1: State and Federal Criteria Air Pollutant Effects

Pollutant	Principal Health Effects
Ozone	Inhalation causes inflammation and irritation of the tissues lining human airways. Exposure can reduce the volume of air that the lungs breathe in and cause shortness of breath. In sufficient doses increases the permeability of lung cells, rendering them more susceptible to toxins and microorganisms. The occurrence and severity of health effects from ozone exposure vary widely among individuals.
Respirable Particulate Matter (PM10)	Short-term exposures have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease. The effects of long-term exposure are less clear, although several studies suggest a link between long-term PM10 exposure and respiratory mortality.
Fine Particulate Matter (PM2.5)	Short-term exposures have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. Long-term exposure has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children.
Carbon Monoxide (CO)	The most common effects of exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of exposure during pregnancy are at risk of adverse developmental effects.
Nitrogen Dioxide	Exposure can intensify responses to allergens in allergic asthmatics. In addition, epidemiological studies have demonstrated associations between exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, and emergency room visits for asthma
Sulfur Dioxide	Children and adults with asthma are more likely to experience adverse responses with exposure, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Exposure at elevated levels (above 1 ppm) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.
Lead	In children, adverse health effects of lead exposure are often irreversible and include brain damage and mental retardation. Lead poisoning can cause reproductive problems in men and women, high blood pressure, kidney disease, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain. There is also evidence that lead exposure can result in cancer in adults.
Visibility-Reducing Particles	Haze not only impacts visibility, but some haze-causing pollutants have been linked to serious health problems and environmental damage as well (see PM10 and PM2.5 health effects).
Sulfate	Sulfate particles are part of PM2.5, and so they have health effects similar to those from exposure to PM2.5.
Hydrogen Sulfide	The odor is extremely strong and foul, and it can induce tearing of the eyes and symptoms related to overstimulation of the sense of smell, including headache, nausea, or vomiting.
Vinyl Chloride	Short-term exposure to high levels (10 ppm or above) in air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Inhalation exposure to vinyl chloride has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.

Source: CARB, 2022. California Ambient Air Quality Standards, available at: https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards. Accessed August 4.

Description of Regional Environment

The project site is located in the YSAQMD, which includes all of Yolo County and the northeast portion of Solano County. The YSAQMD is located in the southeast portion of the Sacramento Valley Air Basin (SVAB). Air quality in the SVAB is influenced by the regional climate, meteorology, topography, and the presence of existing air pollution sources and ambient conditions. The following discussion provides an overview of the physical and regulatory setting for air pollutants of concern in the SVAB. The information presented in this section is primarily from the YSAQMD's Handbook for Assessing and Mitigating Air Quality Impacts.[6]

Climate Topography, and Meteorology

The SVAB encompasses all portions of eleven counties including all of Shasta, Tehama, Glenn, Colusa, Butte, Sutter, Yuba, Sacramento, and Yolo Counties, the westernmost portion of Placer County, and the northeastern half of Solano County. The SVAB is bounded by the North Coast Ranges on the west and Northern Sierra Nevada Mountains on the east. The project site is located in central Yolo County.

The SVAB has a Mediterranean climate characterized by hot dry summers and mild rainy winters. During the year the temperature may range from 20 to 115 degrees Fahrenheit with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches, and the rainy season generally occurs from November through March. The prevailing winds are moderate in strength and vary from moist clean breezes from the south to dry land flows from the north.

The mountains surrounding the SVAB create a barrier to airflow, which can trap air pollutants under certain meteorological conditions. The highest frequency of air stagnation occurs in the autumn and early winter when large high-pressure cells develop over the Sacramento Valley. The lack of surface wind during these periods and the reduced vertical flow caused by less surface heating due to lower temperatures during autumn and winter reduce the influx of outside air and allow air pollutants to become concentrated in a stable volume of air. The surface concentrations of pollutants are highest when these conditions are combined with temperature inversions that trap pollutants near the ground.

The ozone season (i.e., May through October) in the Sacramento Valley is characterized by stagnant morning air or light winds with the delta sea breeze arriving in the afternoon out of the southwest. Usually, the evening breeze transports the airborne pollutants to the north out of the Sacramento Valley. During about half of the days from July to September, however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing for the prevailing wind patterns to blow north carrying the pollutants out, the Schultz Eddy causes the wind pattern to circle back to the south. Essentially, this phenomenon causes the air pollutants to be blown south toward the YSAQMD. This phenomenon has the effect of exacerbating the pollution levels in the area and increases the likelihood of exceedance of federal or state air quality standards. The eddy normally dissipates around noon when the Delta sea breeze arrives.

[6] YSAQMD, 2007. Handbook for Assessing and Mitigating Air Quality Impacts. 11 July.

Regional Ambient Air Quality

The CAAQS, which are based on meteorological conditions unique to California, are either equal to or more stringent than the NAAQS. Areas in California are classified as either in "attainment" or "non-attainment" for each criteria air pollutant, based on whether or not the NAAQS or CAAQS have been achieved. To assess the regional attainment status, the YSAQMD collects air quality data from two State and Local Air Monitoring Stations (SLAMS). Based on the monitoring data, the YSAQMD is currently designated a "non-attainment" area for the 1-hour state ozone standard, the 8-hour state and federal ozone standards, and the 24-hour and annual state PM10 standards. Yolo County is also designated a "partial non-attainment" area for the 24-hour federal PM2.5 standard. The YSAQMD is designated as an attainment or unclassified area for all other pollutants (Table 4.2-2).

Table 4.2-2: Ambient Air Quality Standards and Attainment Status

Pollutant	Averaging Time	CAAQS		NAAQS	
		Concentration	Status	Concentration	Status
Ozone	1-Hour	0.09 ppm	N	---	---
	8-Hour	0.070 ppm	N	0.070 ppm	N
CO	1-Hour	20 ppm	A	35 ppm	A
	8-Hour	9.0 ppm	A	9 ppm	A
NO2	1-Hour	0.18 ppm	A	0.1 ppm	A
	Annual	0.030 ppm	A	0.053 ppm	A
SO2	1-Hour	0.25 ppm	A	0.075 ppm	A
	24-Hour	0.04 ppm	A	0.14 ppm	A
	Annual	---	---	0.030 ppm	A
PM10	24-Hour	50 µg/m^3	N	150 µg/m^3	U
	Annual	20 µg/m^3	N	---	---
PM2.5	24-Hour	---	---	35 µg/m^3	N
	Annual	12 µg/m^3	U	12.0 µg/m^3	A
Sulfates	24-Hour	25 µg/m^3	A	---	---
Lead	30-Day	1.5 µg/m^3	A	---	---
	Calendar Quarter	---	---	1.5 µg/m^3	A
	3-Month Rolling	---	---	0.15 µg/m^3	A
Hydrogen Sulfide	1-Hour	0.03 ppm	U	---	---
Vinyl Chloride	24-Hour	0.01 ppm	U	---	---
Visibility Reducing Particles	8-Hour	---	U	---	---

Sources YSAQMD, 2022. Ambient Air Quality Standards, available at: http://www.ysaqmd.org/wp-content/uploads/Graphics/Attainment_Status.png. Accessed August 3.
Notes:
A = attainment; N = non-attainment; U = unclassified; ppm = parts per million; µg/m^3 = micrograms per cubic meter; "---" = not applicable

Effects of GHG Emissions

Some of the potential effects of increased GHG emissions and associated climate change may include loss of snowpack (affecting water supply), more frequent extreme weather events, more large forest fires, more drought years, and sea level rise. In addition, climate change may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health.[7]

[7] Bay Area Air Quality Management District (BAAQMD), 2017. Final 2017 Clean Air Plan. April 19.

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) published a special report on potential long-term climate change impacts based on the projected increases in temperature due to global climate change. The IPCC report found that we are already seeing the consequences of global warming due to a 1 degree Celsius (°C) increase in pre-industrial levels, such as extreme weather, rising sea levels, and diminishing Arctic sea ice. Global warming is likely to reach 1.5°C above pre-industrial levels between 2030 and 2050 if it continues to increase at the current rate. Some of the impacts due to ongoing global warming could be avoided by limiting future global warming to 1.5°C compared to 2°C. For example, by limiting global warming to 1.5°C or lower, the likelihood of an Arctic Ocean free of sea ice in summer would be ten times lower compared to the likelihood under the scenario of 2°C increase. Beyond the 1.5°C threshold, there would be significant increases in the risk associated with long-lasting or irreversible changes, such as the loss of ecosystems. The IPCC states that to limit the global warming to 1.5°C, rapid transitions are needed in land, energy, industry, building, transport, and urban sectors to reach the goal of carbon neutrality by 2050, which means that the Earth's anthropogenic GHG emissions each year would be removed completely through carbon offsetting, sequestration, or other means.[8]

Electricity and Natural Gas

Pacific Gas and Electric Company (PG&E) is the primary provider of natural gas and electricity in Yolo County. PG&E produces or buys energy from conventional and renewable sources. In 2021, approximately 93 percent of the electricity came from GHG free resources, including renewables, nuclear, and large hydroelectric power. Approximately 50 percent of the electricity came from renewable resources that qualify under the California Renewable Portfolio Standard.[9]

Transportation Fuels

Transportation accounts for a major portion of California's overall energy consumption. Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. Diesel fuel is the second largest transportation fuel used in California, representing about 17 percent of total fuel sales behind gasoline. Nearly all heavy duty-trucks, delivery vehicles, buses, trains, ships, boats, barges, farm, construction, and heavy-duty military vehicles and equipment have diesel engines.[10]

Description of Local Environment

The predominant land uses in the vicinity of the project site include aggregate mining and processing, agriculture, and open space associated with Cache Creek. To the north, the site is bound by Cache Creek and agricultural lands further north. To the east, the site is bound by agriculture, including various uses allowed within that zone such as farm dwellings and ancillary commercial-type uses. To the south, the site is bound by SR-16, agriculture, and occasional farm dwellings. To the west, the site is bound by generally by I-505. The exception is Phase 7 which is

[8] Intergovernmental Panel on Climate Change (IPCC), 2018. IPCC Press Release, Summary for Policymakers of IPCC Special Report on Global Warning of 1.5°C approved by governments. October 8.

[9] Pacific Gas and Electric, 2022. Exploring Clean Energy Solutions. Available at: https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page, accessed May 30, 2022.

[10] California Energy Commission, 2022. Transportation Energy. Available at: https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy, accessed June 7, 2022.

located west of I-505 and is bound to the west by agriculture and rural residences. The nearest rural residence is greater than 1,000 feet from the proposed surface mining disturbance boundary.

Criteria Air Pollutant Trends

The two SLAMS in the YSAQMD collectively monitor ozone, PM10, and PM2.5, which are the primary pollutants of concern that have resulted in a "non-attainment" air quality status. The nearest monitoring station to the project site is the Woodland-Gibson Road station located approximate 9 miles to the east. Since 2018, the highest annual concentrations of ozone, PM10, and PM2.5 reported from the Woodland air monitoring station are summarized in Table 4.2-3. The numbers of days that ozone, PM10, and PM2.5 exceed the CAAQS or NAAQS over this time period are also summarized in Table 4.2-3. Ozone and PM10 levels measured in the City of Woodland exceeded the CAAQS in 2018 and 2020. Ozone and PM2.5 levels exceeded the NAAQS in 2018, and ozone exceeded the NAAQS in 2020.

Table 4.2-3: Local Air Pollutant Summary at the Woodland-Gibson Road Monitoring Station

Pollutant	Standard	Highest Air Pollutant Concentrations			Days Exceeding Standard		
		2018	2019	2020	2018	2019	2020
Ozone	State 1-Hour	0.095	0.078	0.096	1	0	1
	State 8-Hour	0.085	0.067	0.076	2	0	2
	National 8-Hour	0.084	0.067	0.075	2	0	2
PM10	State 24-Hour	223.9	83.0	224.2	24.5	NR	NR
	State Annual	26.1	NR	NR	---	---	---
PM2.5	National 24-Hour	165.4	27.8	134.0	12.3	NR	NR

Source: CARB, 2022. iADAM Air Quality Data Statistics, available at: http://www.arb.ca.gov/adam/trends/trends1.php. Accessed August 3.
Notes:
"---" = insufficient data; NR = not reported due to insufficient data
Ozone concentrations reported in ppm and PM10 and PM2.5 concentrations reported in $\mu g/m^3$.

Toxic Air Contaminants

Localized air pollutants, such as TACs, generally dissipate with distance from the emission source and can pose a health risk to nearby populations. Unlike emissions of criteria air pollutants, which generally affect regional air quality, TAC emissions are evaluated based on estimations of localized concentrations and risk assessments. The adverse health effects a person may experience following exposure to any chemical depend on several factors, including the amount (dose), duration, chemical form, and any simultaneous exposure to other chemicals.

For risk assessment purposes, TACs are separated into carcinogens and non-carcinogens. Carcinogens are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per 1 million exposed individuals over a lifetime of exposure. Non-carcinogenic substances are generally assumed to have a safe threshold below which health impacts would not occur. Acute and chronic exposure to non-carcinogens is expressed as a hazard index, which is the sum of expected exposure levels divided by the corresponding acceptable exposure levels.

The primary TACs of concern for projects that use diesel-powered off-road equipment and vehicles is diesel particulate matter (DPM) and PM2.5. Emissions of DPM and PM2.5 generated from the exhaust of diesel-powered engines are a complex mixture of soot, ash particulates, metallic abrasion particles, volatile organic compounds, and other components that can penetrate deeply into the lungs and contribute to a range of health problems. In 1998, CARB identified DPM from diesel-powered engines as a TAC based on its potential to cause cancer and other adverse health effects.[11] While diesel exhaust is a complex mixture that includes hundreds of individual constituents, DPM is used as a surrogate measure of exposure, under California regulatory guidelines, for the mixture of chemicals that make up diesel exhaust as a whole. More than 90 percent of DPM is less than 1 micron in diameter and is thus a subset of PM10 and PM2.5.[12]

In addition to concerns regarding DPM, silicon dioxide, commonly referred to as silica or respirable silica, is considered a TAC. Silica is a common mineral that is contained naturally in many types of sand and stone, and, thus, can be found in man-made products such as concrete, mortar, glass, pottery, and bricks. From a health risk perspective, the portion of silica dust that is respirable is of principle concern. Activities such as sawing, grinding, and crushing stones, sand, or other silica containing materials can release respirable silica. Inhalation of respirable silica has been linked with chronic lung disease, specifically silicosis, as well as lung cancer, chronic obstructive pulmonary disease, and kidney disease. Due to the Health risks posed by silica dust, the United States Occupational Safety and Health Administration has established standards for exposure of workers. The proposed mining activities would have the potential to release silica, dust, and, as such, health risks related to the release of silica dust are analyzed within this EIR.

4.2.3 REGULATORY CONTEXT

Since the 1996 EIR was certified, many of the applicable laws and regulations have continued to evolve. The following is a description of the current federal, State, and local environmental laws and policies that are relevant to the review of cultural and tribal cultural resources under the CEQA process.

Federal Regulations

The following are federal regulations relevant to air quality, GHG, and energy.

Federal Clean Air Act (CAA)

The USEPA is responsible for implementing national air quality programs established under the 1977 federal Clean Air Act (CAA). The USEPA is involved with global, international, national, and interstate air pollution issues. Its primary role at the state level is one of oversight of state air quality programs. The USEPA sets federal vehicle and stationary source emission standards and provides research and guidance on air pollution programs.

Under the CAA, the USEPA has established two types of NAAQS: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-

[11] California Air Resources Board (CARB), 1998. Initial Statement of Reasons for Rulemaking; Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant, June.

[12] California Air Resources Board (CARB), 2016. Overview: Diesel Exhaust and Health. Available at: https://www.arb.ca.gov/research/diesel/diesel-health.htm, accessed January 13, 2017. Last updated April 12, 2016

related adverse effects such as visibility reduction. The primary NAAQS are summarized in Table 4.2-2 and are intended to protect, with an adequate margin of safety, those persons most susceptible to respiratory distress, such as people suffering from asthma or other illness, the elderly, very young children, or people engaged in strenuous work or exercise.

The CAA requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). States containing areas that exceed the NAAQS are required to revise their SIPs in order to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emission inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA has responsibility to review all state SIPs to determine if they conform to the mandates of the CAA and will achieve air quality goals when implemented. If the USEPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan for the non-attainment area and may impose additional control measures. Failure to obtain an approved SIP or to implement the plan within mandated timeframes can result in limitations being applied to transportation funding and sanctions being placed on stationary air pollution sources in the air basin.

Federal Climate Action Goals

In 2007, the United States Supreme Court ruled that CO_2 is an air pollutant as defined under the Clean Air Act, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA made two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act.

- Endangerment Finding: The current and projected concentrations of the six key well-mixed GHGs, CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6 in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, these findings were a prerequisite for implementing GHG emissions standards for vehicles. In collaboration with the National Highway Traffic Safety Administration (NHTSA), the USEPA finalized emission standards for light-duty vehicles (2012-2016 model years) in May of 2010 and heavy-duty vehicles (2014-2018 model years) in August of 2011.

Federal Vehicle Emission Regulations

The USEPA has established national GHG emission and fuel economy regulations for vehicles that would achieve substantial GHG emissions reductions along with reductions in other criteria pollutants. Some of the key USEPA regulations related to GHG emissions from vehicles are summarized below:

- In 2010, USEPA in collaboration with the NHTSA finalized updated Corporate Average Fuel Economy (CAFE) and GHG emissions standards for passenger cars and light trucks light-duty vehicles for model years 2012 to 2016.

- In 2012, USEPA and NHTSA extended the CAFE and GHG emissions standards for light-duty vehicles for model years 2017 to 2025. Combined with the 2012 to 2016 standards, the regulation will result in vehicles emitting 50 percent less than 2010 levels in 2025.

- In 2016, USEPA and NHTSA finalized national GHG emission and fuel economy standards for medium- and heavy-duty vehicles that would cover model years 2018 to 2027 for certain trailers and model years 2021 to 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks.

- In 2020, USEPA and NHTSA finalized updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026.

- In 2021, USEPA revised the GHG emissions standards for passenger cars and light trucks for model years 2023 through 2026 to leverage advances in clean car technology.

- In 2022, NHSTA revised the CAFE standards for passenger cars and light trucks for model years 2024 to 2026, which are expected to result in average fuel economy label values of 49 miles per gallon.

National Energy Conservation Policy Act

The National Energy Conservation Policy Act (NECPA) is the foundation for federal-level conservation and efficiency goals and requirements for energy and water, and the use of renewable energy sources. The NECPA was a result of the energy crisis during the mid-1970's and was signed into law in 1978. As passed, the NECPA promoted three major roles for the federal government in energy conservation: 1) setting energy-efficiency standards; 2) disseminating information about energy conservation opportunities; and 3) improving efficiencies of federal buildings.

Energy Policy Act of 2005

The Energy Policy Act addresses energy production in the United States in the following aspects, energy efficiency, renewable energy, oil and gas, coal, tribal energy, nuclear matters and security, vehicles and motor fuels, hydrogen, electricity, energy tax incentives, hydropower and geothermal, and climate change technology. The Energy Policy Act of 2005 granted the Federal Energy Regulatory Commission the responsibilities and the authority to oversee the nation's electricity transmission grid, ensure fair competition in the wholesale power markets, providing rate incentives to promote electric transmission investment, among other duties.

State Regulations

The following are State regulations and policies relevant to air quality, GHG, and energy.

California Clean Air Act (CCAA)

CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing its own air quality legislation, called the California Clean Air Act (CCAA), adopted in 1988. CARB has the primary responsibility in

California for developing and implementing air pollution control plans designed to achieve and maintain the NAAQS established by the USEPA. Whereas CARB has primary responsibility and produces a major part of the SIP for pollution sources that are statewide in scope, it relies on the local air districts to provide additional strategies for sources under their jurisdiction. CARB combines its data with all local district data and submits the completed SIP to the USEPA. The SIP consists of the emissions standards for vehicular sources and consumer products set by CARB, and attainment plans adopted by the air districts and approved by CARB.

In-Use Off-Road Diesel Vehicle Regulation

In 2007, CARB adopted a regulation to reduce DPM and NOx emissions from in-use (existing), off-road, heavy-duty diesel vehicles in California. The regulation is designed to reduce harmful emissions from vehicles by subjecting fleet owners to retrofit or accelerated replacement/repower requirements, and imposing idling limitations on owners, operators, renters, or lessees of off-road diesel vehicles. The idling limits require operators of applicable off-road vehicles to limit idling to less than five minutes. The idling requirements are specific in Title 13 of the California Code of Regulations.

California Climate Action Goals

California has established the following long-term climate action goals:

- Assembly Bill (AB) 32: Reduce GHG emissions to 1990 levels by 2020.
- Senate Bill (SB) 32: Reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Executive Order B-55-18: Carbon neutrality as soon as possible, but no later than 2045.
- Executive Order S-3-05: Reduce GHG emissions to 80 percent below 1990 levels by 2050.

It should be noted that executive orders are legally binding only on State agencies and have no direct effect on local government or the private sector.

California Vehicle Emission Regulations

California has established statewide GHG emission and fuel economy regulations for vehicles that align with or supersede the national standards. The key State regulations related to GHG emissions from vehicles are summarized below:

- The Pavley Regulations (AB 1493), as amended in 2009, required a 30 percent reduction in state GHG emissions from new passenger vehicles from 2009 through 2016.
- The Advanced Clean Cars Program extends the Pavley Regulations beyond 2016 and established a technology mandate for zero-emission vehicles.
- The Low-Carbon Fuel Standard (Executive Order S-1-07), as amended in 2019, requires a 20 percent reduction in the carbon intensity of California's transportation fuels by 2030.

- SB 375 establishes regional GHG reduction targets from passenger vehicles for the years 2020 and 2035 by requiring metropolitan planning organizations to develop and implement Sustainable Communities Strategies that align regional transportation planning efforts with regional housing allocation needs.

California Energy Efficiency Regulations

California has established statewide energy efficiency regulations, including programs that increase the statewide procurement of renewable energy. The key State regulations related to GHG emissions from energy use are summarized below:

- The Renewable Portfolio Standard Program, as updated in 2018 (SB 100), requires the State to procure 60 percent of its electricity from renewable sources by 2030 and 100 percent from carbon-free sources by 2045.

- Title 24 Building Efficiency Standards are updated every three years with the long-term vision to support zero-net energy for all new single-family and low-rise residential buildings by 2020 and new high-rise residential and nonresidential buildings by 2030.

- Title 24 California Green Building Standards, referred to as the CALGreen Code, aim to improve public health, safety, and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) planning and design; (2) energy efficiency; (3) water efficiency and conservation; (4) material conservation and resource efficiency; and (5) environmental air quality.

California Cap-and-Trade Program

The Cap-and-Trade Program is a key element of California's strategy to reduce GHG emissions from covered entities that are responsible for about 85 percent of California's GHG emissions. The program establishes a declining limit on major sources of GHG emissions throughout California, and it creates a powerful economic incentive for significant investment in cleaner and more efficient technologies. CARB creates allowances equal to the total amount of permissible GHG emissions (i.e., the "cap"). Each year, fewer allowances are created and the annual cap declines. As a result, the annual auction reserve price for allowances increases which creates a steady and sustained carbon price signal to incentivize actions to reduce GHG emissions and enable a smooth transition to a cleaner economy.

California's Climate Change Scoping Plan

In December 2008, CARB adopted the Climate Change Scoping Plan to identify how the State can achieve its 2020 climate action goal under AB 32. In 2017, CARB updated the Scoping Plan to identify how the State can achieve its 2030 climate action goal under SB 32, and substantially advance toward its 2050 climate action goal under Executive Order S-3-05. The 2017 Scoping Plan includes the regulatory programs identified above, such as the Advanced Clean Cars Program, Low-Carbon Fuel Standard, Renewable Portfolio Standard Program, energy efficiency standards, and Cap-and-Trade Program.

California Environmental Quality Act and SB 97

In 2007, under SB 97, the State acknowledged that climate change is a prominent environmental issue requiring analysis under the California Environmental Quality Act (CEQA). SB 97 directed the Governor's Office of Planning and Research to prepare, develop, and transmit to the California Natural Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA. In 2009, the Natural Resources Agency adopted the State CEQA Guidelines amendments, which provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The amendments became effective in March 2010. The amendments added Sections 15126.4(c) and 15064.4 (discussed further below) to the CEQA Guidelines, which specifically pertain to the significance of GHG emissions, and provide guidance on measures to mitigate GHG emissions when such emissions are found to be significant.

Warren-Alquist Act

The Warren-Alquist Act of 1975 is the legislation that created the California Energy Commission. The Act enables the California Energy Commission to formulate and adopt the nation's first-ever energy conservation standards for buildings constructed and appliances sold in California. The CEC was also directed to create a research and development program with a focus on fostering non-conventional energy sources.

California Energy Action Plan

California's 2008 Energy Action Plan Update updates the 2005 Energy Action Plan II, which is the State's principal energy planning and policy document. The plan maintains the goals of the original Energy Action Plan, describes a coordinated implementation plan for State energy policies, and identifies specific action areas to ensure that California's energy is adequate, affordable, technologically advanced, and environmentally sound. First-priority actions to address California's increasing energy demands are to promote energy efficiency, demand response (i.e., reducing customer energy usage during peak periods to address power system reliability and support the best use of energy infrastructure), and use of renewable power sources. To the extent that these strategies are unable to satisfy increasing energy and capacity needs, the plan supports clean and efficient fossil-fuel fired generation.

Local Regulations

The following are regulatory agencies, regulations, and policies relevant to air quality, GHG, and energy.

Yolo-Solano Air Quality Management District (YSAQMD)

The YSAQMD was established in 1971 by a joint powers agreement between the Yolo and Solano County Boards of Supervisors. The YSAQMD is governed by a Board of Directors composed of representatives from both the county boards of supervisors and city council members from the cities within the YSAQMD. The YSAQMD has jurisdiction over all of Yolo County and the northeast portion of Solano County, from Vacaville on the west, to Rio Vista on the South. The YSQAMD recommends that impacts to climate change be evaluated for every CEQA project; however,

YSQAMD has not developed specific guidance to evaluate the potential significance of GHG emissions from new projects.[13]

The YSQAMD is tasked with achieving and maintaining healthful air quality for its residents. This is accomplished by establishing programs, plans, and regulations enforcing air pollution control rules in order to attain all state and federal ambient air quality standards and minimize public exposure to airborne toxins and nuisance odors. YSAQMD has adopted the following attainment plans to achieve state and federal air quality standards and comply with CAA and CCAA requirements:

- The 1992 Yolo-Solano Air Quality Attainment Plan (AQAP);
- The 1994 Sacramento Area Regional Ozone Attainment Plan;
- The 2013 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan;
- The 2017 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan;
- The 2010 PM10 Implementation/Maintenance Plan and Redesignation Request for Sacramento County; and
- The 2013 PM2.5 Implementation/Maintenance Plan and Redesignation Request for Sacramento PM2.5 Nonattainment Area.

In May 1992, the YSAQMD adopted the AQAP that identifies feasible emission control measures to reduce emissions of ozone and attain state ozone standards (the CCAA does not require attainment plans for PM). The AQAP control measures focus on emission sources under YSAQMD's authority; specifically, stationary emission sources and some area-wide sources. The AQAP is generally updated every three years based on an evaluation of existing emissions and projections of population, industry, and vehicle-related emissions growth. The AQAP was most recently updated in accordance with the 2019 Triennial Assessment and Plan Update.

The 1994 Sacramento Area Regional Ozone Attainment Plan was the original element of the California State Implementation Plan (SIP) for the YSAQMD, which set out stationary source control programs and statewide mobile source control programs for attainment of the national 1-hour ozone standard. In 2005, the national 1-hour ozone standard was revoked by the USEPA; however, a court decision found that areas that were subject to certain planning requirements based on their 1-hour ozone non-attainment designation were still obligated to meet those requirements even though the standard had been revoked. The 2013 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan continues the strategies found in the 1-hour ozone SIP. On November 16, 2017, CARB adopted the 2017 Sacramento Regional

[13] YSAQMD, 2007. Handbook for Assessing and Mitigating Air Quality Impacts. 11 July.

2008 NAAQS 8-Hour Ozone Attainment and Further Reasonable Progress Plan and submitted it to USEPA as a revision to the California SIP on December 18, 2017.

The 2010 PM10 Implementation/Maintenance Plan is the current PM10 SIP for the YSAQMD. The purpose of this plan is to demonstrate maintenance of the PM10 NAAQS in the jurisdiction and to request formal redesignation to attainment. Similarly, the 2013 PM2.5 Implementation/ Maintenance Plan serves the purpose for demonstrating that the region will remain below the PM2.5 standard for 10 years.

YSAQMD continuously monitors its progress in implementing attainment plans and must periodically report to CARB and USEPA. The YSAQMD, in partnership with the five air districts in the Sacramento Metropolitan Area, CARB, and the Sacramento Area Council of Governments, periodically revises its attainment plans to reflect new conditions and requirements in accordance with schedules mandated by the CAA and CCAA.

In addition, the following rules adopted by the YSAQMD are applicable to the proposed project:

> **Rule 2.5** Nuisance. A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such persons or the public or which cause to have a natural tendency to cause injury or damage to business or property.
>
> **Rule 2.11** Particulate Matter Concentration. A person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain per cubic foot of gas at dry standard conditions.

2030 Countywide General Plan

The 2030 Countywide General Plan contains the following goals and policies related to air quality, GHG emissions, and energy use that are relevant to the proposed project:

Goal CI-4: Environmental Impacts. Minimize environmental impacts caused by transportation.

Policy CI-4.4: Support and encourage low emission or non-polluting forms of transportation.

Goal CO-6: Air Quality. Improve air quality to reduce the health impacts caused by harmful emissions.

Policy CO-6.6: Encourage implementation of YSAQMD Best Management Practices, such as those listed below, to reduce emissions and control dust during construction activities:

- Water all active construction areas at least twice daily.
- Haul trucks shall maintain at least two feet of freeboard.

- Cover all trucks hauling soil, sand, and other loose materials.
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut-and-fill operations and hydroseed area.
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
- Sweep streets if visible soil material is carried out from the construction site.
- Treat accesses to a distance of 100 feet from the paved road with a 6 to 12 inch layer of wood chips or mulch.
- Treat accesses to a distance of 100 feet from the paved road with a 6-inch layer of gravel.

Goal CO-8: Climate Change. Reduce greenhouse gas emissions and plan for adaptation to the future consequences of global climate change.

Policy CO-8.2: Use the development review process to achieve measurable reductions in greenhouse gas emissions.

Policy CO-8.4: Encourage all businesses to take the following actions, where feasible: replace high mileage fleet vehicles with hybrid and/or alternative fuel vehicles; increase the energy efficiency of facilities; transition toward the use of renewable energy instead of non-renewable energy sources; adopt purchasing practices that promote emissions reductions and reusable materials; and increase recycling.

Policy CO-8.5: Promote GHG emission reductions by supporting carbon efficient farming methods (e.g. methane capture systems, no-till farming, crop rotation, cover cropping); installation of renewable energy technologies; protection of grasslands, open space, oak woodlands, riparian forest and farmlands from conversion to other uses; and development of energy-efficient structures.

Goal ED-5.4: Economic Sustainability. Support sustainable economic development. Encourage local industry to adapt to the expected effects of climate change and minimize greenhouse gases and other emissions.

Policy ED-5.4: Encourage businesses to exceed clean air standards, whenever possible.

Goal CC-4: Project Design. Require project design that incorporates "smart growth" planning principles and "green" building standards that reflect the County's commitment to sustainable development.

Policy CC-4.10: Encourage construction and other heavy equipment vehicles (e.g. mining, agriculture, etc.) to use retrofit emission control devices.

Off-Channel Surface Mining Ordinance

Title 10, Chapter 4 of the Yolo County Code contains the Off-Channel Surface Mining Ordinance (Mining Ordinance), which includes the following sections related to air quality, GHG emissions and energy.

Section 10-4.407. Conveyor Systems.

Wherever practical and economically feasible, portable or movable conveyor systems shall be used to transport raw materials and overburden.

Section 10-4.414. Dust Control.

Unless superseded by newer more effective standards, the following measures shall be implemented in order to control fugitive dust:

(a) All stockpiled soils shall be enclosed, covered, or have sufficient moisture to control fugitive dust at all times. Inactive soil stockpiles should be vegetated or adequately watered to create an erosion-resistant outer crust.

(b) During operating hours, all disturbed soil and unpaved roads shall be adequately watered to keep soil moist.

(c) All disturbed but inactive portions of the site shall either be seeded or watered until vegetation is grown or shall be stabilized using methods such as chemical soil binders, jute netting, or other Yolo-Solano Air Quality Management District approved methods.

Section 10-4.414.1. Energy.

Wherever practical and feasible, aggregate facilities shall use clean electric energy from the grid or install alternative on-site electricity generation systems to replace diesel equipment and reduce criteria pollutant emissions.

Section 10-4.415. Equipment maintenance.

All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuel. No vehicles or equipment shall be left idling for a period of longer than is required by law, recommended by the Air District, or ten (10) minutes, whichever is shorter.

Fueling and maintenance activities of heavy equipment (except draglines and floating suction dredges) are prohibited within one-hundred (100) feet of open bodies of water during mining and reclamation. All Storm Water Pollution Prevention Plans shall include provisions for releases of fuels during fueling activities for draglines and floating suction dredges.

Section 10-4.429. Setbacks. [excerpt]

All off-channel surface mining operations shall comply with the following setbacks:

(a) New processing plants and material stockpiles shall be located a minimum of one-thousand (1,000) feet from public rights-of-way, public recreation areas, and/or off-site residences, unless alternate measures to reduce potential noise, dust, and aesthetic impacts are developed and implemented…

Section 10-4.433. Soil stockpiles.

Topsoil, subsoil, and subgrade materials in stockpiles shall not exceed forty (40) feet in height, with slopes no steeper than 2:1 (horizontal:vertical). Stockpiles, other than aggregate stockpiles, shall be seeded with a native vegetative cover to prevent erosion and leaching. The use of topsoil for purposes other than reclamation shall not be allowed without the prior approval of the Director.

Slopes on stockpiled soils shall be graded to 2:1 (horizontal:vertical) for long-term storage to prevent use by bank swallows. At no time during the active breeding season (May 1 through July 31) shall slopes on stockpiles exceed a slope of 1:1, even on a temporary basis. Stockpiles shall be graded to a minimum 1:1 slope at the end of each work day where stockpiles have been disturbed during the active breeding season.

Yolo County Climate Action Plan

To fulfill General Plan Action CO-A117, Yolo County prepared a Climate Action Plan (CAP) in 2011. The County's CAP includes an inventory of GHG emissions from unincorporated areas in the County during the years 1990 and 2008 as well as projections of emissions for the years 2020, 2030, 2040, and 2050. With regard to the emissions inventory, the sectors of energy, transportation, agriculture, solid waste, stationary sources, wastewater treatment, as well as construction and mining. Emissions projections for future years were limited to those sources over which the County maintains jurisdiction; thus, the sectors of mining and construction equipment, as well as stationary sources, were excluded from emissions projections.[14] Due to the exclusion of the foregoing sectors, the County's CAP did not include reduction measures specifically related to mining or mining equipment; rather the County relied on State imposed measures for that sector given state authority. These are discussed further below. Although the County's CAP did not include measures specifically related to construction or mining equipment, the County's CAP does

[14] Yolo County. Yolo County Climate Action Plan: A Strategy for Smart Growth Implementation, Greenhouse Gas Reduction, and Adaptation to Global Climate Change [pgs. 14-15]. March 15, 2011.

contain measures that would affect GHG emissions related to energy generation and consumption throughout the County as well as measures related to reducing emissions from agricultural activities.

Following the proposed reclamation of the CEMEX project site, agricultural activities would be anticipated to resume within the site. The County's CAP includes six specific measures, as well as multiple supporting measures to reduce direct emissions from agricultural activities within the County and increase carbon sequestration. Implementation of the County's CAP measures during future agricultural activity within the CEMEX site would contribute to the GHG emissions reductions identified within the County's CAP.

The County's CAP acknowledges that even in the sectors where the County does not have direct control, such as emissions from construction and mining equipment, actions of other entities would contribute to GHG emissions reductions. For instance, the County's CAP notes that YSAQMD has jurisdiction over stationary sources, and YSAQMD is charged with implementing statewide emissions reductions programs including those programs intended to reduce GHG emissions. Furthermore, CARB has implemented various rules and regulations, such as the Advanced Clean Cars Program, Low-Carbon Fuel Standard, Renewable Portfolio Standard Program, energy efficiency standards, and the Cap-and-Trade Program, which would result in reductions of GHG emissions. Compliance with the rules and regulations implemented by YSAQMD and the CARB would contribute to emissions reductions that would aid attainment of the GHG reductions goals presented in the County's CAP.

4.2.4 IMPACTS AND MITIGATION MEASURES

The following section describes the standards of significance and methods used to analyze and determine the changes in the proposed project's potential impacts related to air quality, GHG emissions, and energy. A discussion of the project's impacts, as well as mitigation measures where necessary, are also presented.

Standards of Significance

The significance criteria used for this analysis were developed from Appendix G of the CEQA Guidelines, and applicable policies and regulations of Yolo County. An impact to air quality, GHG emissions, and energy resources is considered significant if the proposed project would:

a) Conflict with or obstruct implementation of the applicable air quality plan.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

c) Expose sensitive receptors to substantial pollutant concentrations.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

e) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

f) Fundamentally conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

g) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

h) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

i) Cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating impacts to air quality, GHG emissions or energy.

Thresholds of Significance for Criteria Air Pollutants, TACs, and Odors

The YSAQMD has established significance thresholds for criteria pollutants to assist Lead Agencies in determining whether a proposed project may have a significant air quality impact. These thresholds, contained within Section 3.0 of the YSAQMD Handbook are presented in Table 4.2-4, below. These thresholds apply to both construction and operational impacts.

Table 4.2-4: YSAQMD Project-Level Thresholds of Significance for Criteria Air Pollutants of Concern

Pollutant	Thresholds of Significance
ROG	10 tons/year
NOx	10 tons/year
PM10	80 lbs/day[1]
CO	Violation of a state ambient air quality standard[2] for CO

Source: YSAQMD, 2007
Notes:
[1] Includes both exhaust PM_{10} and dust PM_{10}.
[2] California Ambient Air Quality Standard is 20 parts per million for 1-hour average CO concentrations and 9 parts per million for 8-hour average CO concentrations.

The YSAQMD has also adopted thresholds for TACs, odors, and cumulative impacts. Proposed development projects that have the potential to expose the public to TACs from stationary sources in excess of the following thresholds would be considered to have a significant air quality impact:

- Probability of contracting cancer for the Maximally Exposed Individual (MEI) equals to 10 in one million or more.

- Ground-level concentrations of non-carcinogenic toxic air contaminants would result in a Hazard Index equal to 1 for the MEI or greater.

Off-road mining equipment and haul trucks used for the proposed project would be considered potential sources of TAC emissions. Although the YSAQMD threshold for TAC exposure was specified for stationary sources, it is a common industry practice to apply these thresholds to other sources of TAC emissions. Accordingly, this analysis uses the YSAQMD stationary source TAC emissions thresholds listed above for the purposes of determining health risks to sensitive receptors exposed to TAC emissions from project operations involving off-road mining equipment and haul trucks.

Regarding odors, the YSAQMD suggests that a project may reasonably be expected to have a significant adverse odor impact where it "generates odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which may endanger the comfort, repose, health, or safety of any such person or the public, or which may cause, or have a natural tendency to cause, injury or damage to business or property."

Regarding cumulative impacts, the YSAQMD suggests that an air quality analysis should address a project's cumulative impact on ozone and localized pollutants. Any proposed project that would individually have a significant air quality impact would also be considered to have a significant cumulative impact. CO impacts are cumulatively significant when modeling shows that the combined emissions from the project and other existing and planned projects (i.e., background concentration) will exceed air quality standards. The cumulative impact should be evaluated using the screening criteria mentioned in the project level thresholds to determine if cumulative development could cause a violation of the CAAQS.

Thresholds of Significance for GHG Emissions

The YSAQMD has not adopted a GHG-related threshold of significance for use in CEQA analysis. Although YSAQMD has not adopted a formal threshold, the Bay Area Air Quality Management District (BAAQMD) has published quantitative thresholds that can be applied to this project. This approach is permissible per CEQA Guidelines Section 15064.4, which states that lead agencies are granted discretion to establish their own significance thresholds, including looking to thresholds developed by other public agencies, so long as the threshold chosen is supported by substantial evidence (CEQA Guidelines Section 15064.7(c)). This approach is also supported by the recent court case, *Center for Biological Diversity v. Department of Fish and Wildlife and Newhall Land and Farming* (2015) 62 Cal.4th 204, whereby the Court explained that an agency may rely on existing numerical thresholds of significance for GHG emissions developed by another air district.

BAAQMD's bright line operational threshold is 10,000 metric tons per year (MT/year) for CO_2e emissions, which was adopted to achieve AB 32's goal of reducing GHG emissions to 1990 levels by year 2020. A project-specific threshold could be linearly scaled by applying SB 32's reduction target of 40 percent below 1990 GHG emissions level by 2030 to the 10,000 $MTCO_2e$/year bright-line threshold, which would bring the threshold of significance for operational GHG emissions to 6,000 $MTCO_2e$/year. It is not the intent of this document to propose the adoption of this threshold as a mass emissions limit or CEQA GHG threshold for general use. Rather, this scaling approach can put the project-generated GHG emissions in the appropriate statewide context so that the magnitude of the project-related emissions is understood and its relative significance may be determined.

The County's recently certified CCAP Update Final EIR conservatively considered any net increase in GHG emissions occurring as a result of the CCAP to constitute a significant impact. Under this conservative approach, if the project would result in a net increase in GHG emissions as compared to the baseline conditions, then the project would be considered to result in a significant impact. The County has applied this approach to other mining projects, including the

Teichert Shifler Mining and Reclamation Project (2021) and previously the Granite Esparto Mining and Reclamation Project (2010).

Although a 6,000 $MTCO_2e$/year threshold could be used to assess project GHG impacts, to be consistent with the CCAP Update FEIR, the analysis presented in this Draft SEIR will assume that any net increase in project GHG emissions would be potentially significant.

Thresholds of Significance for Energy Resources

Quantitative thresholds for the analysis of energy related impacts have not been adopted by the County or any other local, regional, or statewide agency. Therefore, the analysis of potential impacts related to energy presented in this Draft SEIR is primarily qualitative. Nonetheless, where estimates of existing and future energy demand exist, the quantified level of energy demand is presented and analyzed in this Draft SEIR.

Thresholds of Significance from the 1996 EIR

The standards of significance presented in the 1996 EIR have been updated by the criteria listed above. For each standard below, there is notation (in italics) to show how each of the standards from the 1996 EIR are addressed by the 2022 standards above. As the relevant State and local requirements were not in effect at the time, the 1996 EIR did not address GHG emissions or energy. The 1996 EIR considered that the project would have a significant effect on air quality if it would:

- Exceed the following quantitative thresholds:
    - ROG: 82 pounds/day (15 tons/year)
    - NOx: 82 pounds/day (15 tons/year)
    - PM10: 82 pounds/day (15 tons/year)
    - CO: 550 pounds/day (100 tons/year)

    Impacts associated with the exceedance of established thresholds are addressed and evaluated under significance criterion "b" using the more conservative thresholds of significance currently recommend by YSAQMD.

- Affect the following qualitative thresholds:
    - Affect the attainment of Federal or State ambient air quality standards by either violating or contributing to an existing or projected air quality violation.
    - Generate vehicle trips that cause a CO hot spot.
    - Subject sensitive receptors within 0.25 mile to toxic air contaminant emissions or elevated CO emissions.

- Result in the production or disposal of a material that poses a health hazard, and subject sensitive receptors to toxic air emissions.

- Create or subject sensitive receptors to an objectionable odor.

Impacts associated with the qualitative thresholds identified above are addressed and evaluated by significance criteria "a," "b," "c", and "d" above.

The 1996 EIR did not considered environmental impacts associated with GHG emissions or energy resources.

Approach to Analysis

A detailed analysis of air quality, GHG emissions, and energy resources is documented in the Air and Greenhouse Gas Emissions Study prepared by Compass Land Group (Appendix G) and peer reviewed by Baseline Environmental Consulting. The approach to analysis documented in the study is provided.

Air Pollutant and GHG Emissions

The project's air quality and GHG emissions evaluation accounts for stripping and mining related emissions, processing plant emissions, vehicle traffic, indirect GHG emissions from electricity use, off-road heavy equipment, and on-road mobile source emissions. The net change in air quality and GHG emissions associated with implementation of the proposed project was estimated based on CEMEX's existing operations at the Cache Creek facility. The net emissions changes from the proposed project are then compared against thresholds of significance summarized above.

The net emissions were calculated by comparing the change in emissions under the maximum production scenario for the project to the baseline condition. The CEQA baseline condition used for purposes of this analysis is based on review of historical production information and consultation with the County. CEMEX's existing facility activities include mining, conveyor transport, aggregate processing, ready-mix concrete processing, and construction materials recycle processing, with associated off-road and on-road mobile equipment use.

For the baseline condition of the mining operation and aggregate plant, the 2021 actual production rate with the applicable 2021 emissions factors was utilized to provide a representative estimate of baseline emissions during the CEQA Notice of Preparation year. Based on a review of historical trends, the 2021 production rate is consistent with the 10-year average production rate, within 1.5 percent. Averages were also determined for both plant raw feed tons (to account for all particulate matter emissions associated with the production process) and for tons sold (to account for mobile source emissions associated with truck hauling).

For the baseline condition of the ready-mix concrete plant and recycle plant, each plant's production for the 10-year period between 2012 and 2021 was reviewed. Unlike for the aggregate plant, the production years 2021 for ready-mix concrete and 2021 and 2019 for recycling had either zero or atypically low production compared to the 10-year average. The ten-years of tonnage data for each (ready-mix concrete and recycling) show that 2021 was not representative

of typical production levels at either plant. Conversely, the ten-year average is a representative range and therefore better represents actual conditions.

No recycling occurred in 2019 and 2021 because CEMEX was not able to source concrete and asphalt rubble as other recycle locations were closer to the jobs that generated the source materials. There is no specific limitation in the current permit on the amount of recycling. Recycling relies on imported material and is not included in the max aggregate production tonnage numbers. The County's mining program encourages recycling. Recycling impacts are indirect impacts of the mining operation. Annual impacts are not expected to change as a result of the project. Potential cumulative impacts from the 20-year extension of the existing operations are analyzed below and in Chapter 6.0.

Ready-mix production was minimal in 2021 due to the location of customer's jobs in relation to the CEMEX and other ready-mix sites. CEMEX only operated the plant a few times when the volume for a particular job warranted opening the plant for production. In general, CEMEX has indicated that it does not make economic sense to operate the plant when the quantities requested by customers are low. Overall, the 10-year averaging period represents a baseline that captures economic changes resulting from fluctuating market demand. There is no specific limitation in the current permit on production at the ready-mix plant and ready-mix production relies on rock already included in the max allowed aggregate production tonnage. In other words, the max tonnage is a "throttle" on the amount of concrete produced and importation of aggregate material does not occur. The concrete batch plant process involves adding other raw materials (e.g., cement and fly ash) to rock and sand from the mining site to make concrete which is a different product with a different market, different customers, and different trucks from the aggregate market. Ready-mix impacts are indirect impacts of the mining operation. While impacts annually are not expected to change as a result of the project, the proposal will allow for 20 more years of those impacts, and to the extent cumulative impacts are relevant, the cumulative impacts will also change.

At the time of study, the latest version of the California Emissions Estimator Model (CalEEMod), version 2020.4.0, was used to estimate stripping and mining related emissions. CalEEMod is a widely accepted modeling tool maintained by the California Air Pollution Control Officers Association. CalEEMod incorporates state and locally approved emission factors and methodologies for estimating both the daily maximum and annual average emissions levels for criteria pollutants and GHG emissions associated with land development projects, including industrial activities. The USEPA AP-42 emission factors were used to estimate processing plant and conveyor transport related emissions. CARB's 2021 EMFAC model was used to estimate mobile source emissions.

For both baseline and project conditions, mobile source emissions were evaluated using estimates of vehicle miles travelled (VMT) based on the average annual production and employee workforce. Trip distances for raw material imports to the existing ready-mix plant and finish product deliveries from the project site to customers were provided by CEMEX. For raw material imports, the actual average trip distance of 33 miles from the CEMEX cement terminal at the Port of West Sacramento was used. For finish product deliveries, an average trip distance of 31 miles was used based on a full year of truck trip delivery information provided by CEMEX, which is

higher than the EMFAC model estimate of six miles for a haul truck. On-road mobile source emissions were then estimated by multiplying the VMT estimates for each trip type by the applicable EMFAC emissions factor. For GHG emissions, emission factors from "2021 The Climate Registry for PG&E" were used to estimate CO_2 emissions, and emissions factors from CalEEMod were used to estimate CH_4 and N_2O emissions. Additional assumptions used for CalEEMod are documented in Appendix G.

Local Carbon Monoxide Emissions

For evaluation of local CO emissions, the YSAQMD's preliminary screening approach was used to estimate whether or not the project's traffic impact would cause a potential CO hotspot at any given intersection. Section 4.1.2 of the YSAQMD's Handbook for Assessing and Mitigating Air Quality Impacts presents the following screening approach for CO emissions:

- If either of the following criteria is true of any intersection affected by the project traffic, then the project can be said to have the potential to create a violation of the CO standard (in the absence of project specific modeling that suggests otherwise):
    - A traffic study for the project indicates that the peak-hour Level of Service (LOS) on one or more streets or at one or more intersections in the project vicinity will be reduced to an unacceptable LOS (typically LOS E or F); or
    - A traffic study indicates that the project will substantially worsen an already existing peak-hour LOS F on one or more streets or at one or more intersections in the project vicinity. "Substantially worsen" includes situations where delay would increase by 10 seconds or more when project-generated traffic is included.

Health Risk Assessment for TAC Emissions

A detailed assessment was prepared examining public health risk from exposure to diesel particulate matter and respirable silica resulting from the proposed project. This results are documented in Health Risk Assessment (HRA) prepared by Compass Land Group (Appendix J). The Project will involve the continuation of stripping, mining, concurrent reclamation, and ancillary aggregate, ready-mix concrete, and recycle processing operations. Each of these activities has the potential to emit toxic air contaminants (TACs), fugitive dust in the form of fine particulate matter (PM 2.5), and respirable silica. These exposures can lead to various health impacts:

1. Cancer risk (reported as a probability)
2. Acute non-cancer risk (reported as a hazard index)
3. Chronic non-cancer risk (reported as a hazard index)

The preparation of health risk assessments is a three-step process. The first step is to identify the potential contaminants that may contribute to public health risks. The second step is to assess the amount of contaminants that may reach the public (exposure assessment). The third and last step is to calculate the magnitude of the health risk as a result of exposure to harmful

contaminants on the basis of the toxicology of the contaminants. Dispersion modeling was performed using the latest version (at the time of the study) of AERMOD View (version 10.2.1) developed by Lakes Software. The Hotspots Analysis and Reporting Program Air Dispersion Modeling and Risk Tool (HARP2), dated May 1, 2019, developed by the CARB and Office of Environmental Health Hazard Assessment (OEHHA), was used to calculate Project health risks.

Odors

For consideration of odors, YSAQMD recommends screening of potential odor impacts for the following two situations:

- Projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- Residential or other sensitive receptor projects or other projects that may attract people locating near existing odor sources.

Further, the YSAQMD Handbook states that for odor sources locating near existing receptors, the determination of significance should be based on whether odor complaints from the public have occurred in the vicinity of a similar facility at a similar distance.

Impacts Identified in the 1996 EIR

The impacts and mitigation measures and COAs identified in the 1996 EIR are summarized in Table 4.2-5**.** The table provides a discussion of the status of each mitigation measure.

Table 4.2-5: 1996 EIR Impact Statements, Mitigation Measures, and Discussion

Impact No.	Impact Statement from 1996 EIR	Mitigation Measures/Discussion
4.7-1	The proposed project would result in increases in PM10 emissions. This is considered to be a significant and unavoidable impact.	Mitigation Measure 4.7-1a/Condition of Approval No. 63)[a] requires: "Implement the performance standard included in Section 10-4.407 of the County Off-Channel Surface Mining Ordinance." This section requires conveyors which were installed and operational as of October 2002. See Condition of Approval No. 28.3. The operator has satisfied this condition.
4.7-2	The project would result in an increase in emissions of ozone precursors. This is considered to be a significant and unavoidable impact.	Mitigation Measure 4.7-2a/Condition of Approval No. 64)[a] requires: "Implement the performance standards included in Sections 10-4.407 and 10-4.415 of the Off-Channel Surface Mining Ordinance." As noted above, the operator utilizes electric conveyors as required by Section 10-4.407. Section 10-4.415 requires equipment maintenance, restricts engine idling, and prohibits refueling near water bodies. The operator must ensure compliance with both

		sections, and specifically address compliance in their annual compliance reports.
4.7-3	The project would affect the attainment of local or regional air quality goals. This is considered to be a significant and unavoidable impact.	Mitigation Measure 4.7-3a/Condition of Approval No. 65)[a] requires: "Implement Mitigation Measures 4.7-1a and 4.7-2a of the Final EIR for the proposed project." As noted above, the operator utilizes electric conveyors as required by Section 10-4.407. Section 10-4.415 requires equipment maintenance, restricts engine idling, and prohibits refueling near water bodies. The operator must ensure compliance with both sections, and specifically address compliance in their annual compliance reports. Condition of Approval No. 65.1[a] requires: The operators are encouraged to use cleaner vehicles and equipment and retrofit existing vehicles and equipment with diesel particulate filters (DPFs). Pursuant to Section 10-4.414.1 (Energy) of the Mining Ordinance, wherever practical and feasible, aggregate facilities shall use clean electric energy from the grid or install alternative on-site electricity generation systems to replace diesel equipment and reduce criteria pollutant emissions. CEMEX installed a wind turbine energy system in 2012 which supplies renewable energy for 20% to 30% of the energy demand at their plant facility.

Source: Baseline Environmental Consulting, 2021.

[a] County of Yolo, 2021. Conditions of Approval Mining Permit and Reclamation Plan No. ZF #95-093 CEMEX Mining and Reclamation Project. 2020 Ten-Year Permit Review. As modified through February 11, 2021.

Impacts and Mitigation Measures for the Proposed Project

The discussion below examines relevant substantial changes in the project, substantial changes in the circumstances under which the project will be undertaken, and/or new information of substantial importance as defined by CEQA Guidelines Section 15162. As necessary, this document updates or expands upon impact discussions in the 1996 EIR to evaluate changes associated with the proposed project and describes whether new or revised mitigation is required.

Pursuant to Section 15162 of the CEQA Guidelines, a subsequent EIR is required where proposed changes in the project or changes in the circumstances of the project would require revisions of the previous EIR due to new significant environmental effects or a substantial increase in the severity of previously identified effects. Additionally, a subsequent EIR is required where there is new information that identifies significant effects not previously discussed, significant effects examined in the prior EIR that will be substantially more severe than previously

shown, or mitigation measures or alternatives that are now feasible after previously being found infeasible or are considerably different from those previously analyzed, that would substantially reduce significant effects but the applicant declines to adopt. Each impact is analyzed to determine whether any of the requirements for a subsequent EIR are met and, if so, additional environmental analysis is provided to evaluate the impacts, mitigation measures, and alternatives, as appropriate.

Impact 4.2-1: The proposed project would conflict with or obstruct implementation of the applicable air quality plan. The impact would be *less than significant*.

The project proposes to continue mining and reclamation activities as described and evaluated in the 1996 EIR. Potential impacts related to air quality emissions would be substantially similar under the proposed project and the conditions evaluated in the 1996 EIR and would remain less than significant.

Yolo County is currently in non-attainment for PM10 and ozone. Because the proposed project would result in activities that emit criteria air pollutants that would contribute to the regional emission burden of PM10 and ozone precursors, the proposed project could potentially contribute to difficulties implementing the applicable air quality plans which are the 1992 Yolo-Solano Air Quality Attainment Plan and the Sacramento Area Regional Ozone Attainment Plan.[15]

As shown in Table 4.2-6, the proposed project's net increase in emissions of ozone precursors (ROG and NOx) and PM10 would not exceed the YSAQMD's thresholds of significance, which means the project would not result in a cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment. In addition, the proposed project is required to continue complying with State and local regulations that would reduce emissions of criteria air pollutants, including the YSAQMD rules on limiting the discharge of air contaminants and particulate matter and the following Mining Ordinance requirements:

- Section 10-4.407 for the use of electric conveyor systems rather than diesel when feasible;
- Section 10-4.414 for dust control on access roads and stockpiles;
- Section 10-4.415 for equipment tuning and limits on idling time;
- Section 10-4.433 for managing stockpiles.

Therefore, the project would not conflict with or obstruct implementation of the applicable air quality plans and this impact would be less than significant.

[15] This includes the 2013 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan, the 2013 PM2.5 Maintenance Plan and Redesignation Request, and the 2010 PM10 Implementation/Maintenance Plan and Redesignation Request for the Sacramento County.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None required.

Impact 4.2-2: The proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. The impact would be *less than significant*.

The existing operations generate criteria air pollutant emissions primarily from mining (and associated stripping and grading operations), transport of mined materials by a combination of truck and conveyor, processing plant operations, and on-road passenger vehicle and truck trips. A complete summary of the project's emissions, including the modeling inputs, assumptions, and results, is included in Appendix G. Table 4.2-6 presents the criteria air pollutants and ozone precursor emissions analysis for the existing operation and proposed project in comparison to YSAQMD's project-level thresholds, which support compliance with the CAAQS and NAAQS.

As shown in Table 4.2-6, the project would result in a net increase in emissions of ROG, NOx, and PM10 from the mining operation and aggregate plant due to the proposed increase in mining production rates compared to baseline production rates. The project would also result in a net increase in PM10 emissions from the ready-mix concrete plant due to the anticipated increase in concrete production that would correspond with the increased mining of aggregate materials, but the exhaust emissions of ROG and NOx would generally remain the same as the baseline emissions due to improvements in fleetwide vehicle emissions overtime (i.e., cleaner engine technologies). The project scenario reflects a net decrease in ROG, NOx, and PM10 emissions from the recycle plant because the amount of recycling is not expected to change under the project, but emissions from heavy-equipment and vehicles would improve over time. Overall, the modeling results indicate that the net increase in project criteria pollutant emissions are well below applicable YSAQMD thresholds of significance for CEQA. Therefore, the project would not result

in a cumulatively considerable net increase in criteria air pollutants for which the region is in nonattainment and this impact would be less-than-significant.

Table 4.2-6: Criteria Air Pollutants Emissions Analysis

Emissions Category	ROG (tons/year)	NOx (tons/year)	PM10 (lbs/day)
Baseline [2012-2021 Conditions*]			
Mining	0.41	4.90	102.98
Dredge and Aggregate Plant	0.91	8.37	94.96
Ready-Mix Plant	0.03	0.28	15.32
Recycle Plant	0.03	0.23	60.28
On-Road Mobile Sources	0.14	6.02	1.02
Total	**1.52**	**19.8**	**274.56**
Proposed Project			
Mining	0.49	6.07	110.92
Dredge and Aggregate Plant	0.91	8.38	108.70
Ready-Mix Plant	0.03	0.28	19.41
Recycle Plant	0.02	0.15	59.41
On-Road Mobile Sources	0.13	6.57	0.74
Total	**1.58**	**21.45**	**299.18**
Net Change (Project – Baseline)	**0.06**	**1.65**	**24.62**
Threshold	10	10	80
Exceed Threshold?	No	No	No

Source: Compass Land Group, 2022 (Appendix G).
Notes: lbs = pounds
Minor differences in totals due to rounding. See Appendix G for additional details.
* As described in the *Approach to Analysis* above, the baseline condition for mining, dredge and aggregate plant, and on-road mobile emissions was based on the year 2021 and the baseline condition for read-mix plant and recycle plant emissions was based on a 10-year average between 2012 and 2021.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None Required.

Impact 4.2-3: The proposed project would expose sensitive receptors to substantial pollutant concentrations. The impact would be *less than significant*.

Exposure to Toxic Air Contaminants

Table 4.2-7 below summarizes the project health risks in comparison to YSAQMD significance thresholds:

Table 4.2-7: Summary of Project Health Risks

Risk Metric	Maximum Off-Site Value	Significance Threshold	Significant?
Residential Cancer Risk per Million (30-year exposure)	8.1 at private residence south of Project site along Hwy 16	10	No
Worker Cancer Risk (25-year exposure)	0.6 at private agricultural business north of Hwy 16	10	No
Cancer Risk per Million at Discrete Sensitive Receptors	2.9 at Madison Community High School 4.4 at Madison Migrant Child Development Center	10	No
Chronic Hazard Index	Residential 0.01 Worker 0.02	1.0	No
Acute Hazard Index	Residential 0.00 Worker 0.00	1.0	No

Source: Public Health Risk Assessment of Diesel Particulate Matter and Respirable Silica, CEMEX Construction, Compass Land Group, Table 2, page 5, August 2022 (Appendix J).

The risk assessment process contains numerous, conservative assumptions to ensure that public health risks are not underestimated. As a result, the modeling assumptions may overstate the Project's contribution and the public's exposure to health risks. The analysis demonstrates that the potential health risk impact in terms of excess cancer risk and noncancer hazards associated with implementation of the proposed project does not meet any of the applicable significance thresholds, and is therefore less than significant.

Exposure to Carbon Monoxide

CO concentrations in YSAQMD's jurisdiction and the Sacramento Valley Air Basin as a whole currently meet all NAAQS and CAAQS for CO (see Table 4.2-2). The State standards, which have been adopted as part of YSAQMD's operational thresholds of significance, are more restrictive than the NAAQS at 9 parts per million (ppm) for the maximum 8-hour concentration and 20 ppm for the maximum 1-hour concentration. For context, CO measurements taken at the Sacramento-Bercut Drive air monitoring station adjacent to I-5 for the full calendar year 2020 indicate a maximum daily CO concentration of 1.6 ppm occurring on only three days in September and October 2020, which is well below the CAAQS (see Appendix G for more details).

As demonstrated in project Traffic Operations Memorandum (Appendix K), the proposed project would maintain an LOS standard of C or better during the AM and PM peak hours for most of the nearby intersections, except for SR 16/County Road 96 (CR 96). The minor street (CR 96)

approach to the intersection operates at LOS F during the busy months. This indicates that drivers in busy months are waiting over 50 seconds before accessing SR 16. This existing LOS deficiency cannot be reasonably or feasibly resolved by the proposed project because the required reduction in trips to achieve the target LOS would likely exceed the proposed project's entire trip contribution during AM and PM peak hours. However, most of the truck traffic accessing the proposed project would be from I-505 to the west of the project site, which would not affect the SR 16/CR 96 intersection to the east of the project site. Furthermore, any truck traffic generated by the proposed project that would travel east of the project site along SR 16 would not be expected to turn onto CR 96 and cause a substantial increase in delays (10 seconds or more) during the AM and PM peak hours. As a result, the proposed project would not meet the YSAQMD's screening criteria for creating a potential CO hotspot. Therefore, the proposed project would have a less-than-significant impact related to the exposure of sensitive receptors to substantial CO concentrations.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None required.

Impact 4.2-4: The proposed project would result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. The impact would be *less than significant*.

Project activities are not expected to introduce significant sources of odors. The proposed project does not involve odor-generating sources aside from direct exhaust emissions associated with operation of construction, off-road, and mobile equipment that generally dissipate rapidly into the atmosphere as distance increases from the source. The proposed project is not located near a substantial number of existing sensitive receptors or places where people are expected to congregate, and does not propose any residential or other land uses that would introduce sensitive receptors to the existing facility.

The YSAQMD CEQA Handbook presents a list of common types of facilities that are known to produce odors, such as landfills, composting facilities, rendering plants, and asphalt concrete batch plants. While Vulcan Materials operates an existing asphalt concrete plant on the CEMEX property, the asphalt plant operation is separately permitted and not subject to any modifications proposed by the project. Therefore, the project activities do not propose or fall under any of the land use categories for which odors would typically be a concern. Furthermore, the YSAQMD CEQA Handbook states that for projects locating near a source of odors where there is currently no nearby development and for odor sources locating near existing receptors, the determination of significance should be based on whether odor complaints from the public have occurred in the vicinity of a similar facility at a similar distance. YSAQMD has recorded zero odor complaints for CEMEX's or Vulcan's existing Cache Creek facilities.

The proposed project's potential odor impacts would be less-than-significant based on the nature of the project (i.e., the continuation of a fully permitted mining and processing facility), YSAQMD's odor screening criteria, and YSAQMD's record of zero odor complaints for the existing facilities.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)
None required.

Impact 4.2-5: The proposed project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. The impact would be *significant*.

The proposed project would generate additional GHG emissions primarily from mining (and associated stripping and grading operations), transport of mined materials by a combination of truck and conveyor, processing plant operations, and on-road passenger vehicle and truck trips. A complete summary of the project's emissions, including the modeling inputs, assumptions, and results, is included in Appendix G.

As described above, this analysis assumes that any net increase in GHG emissions generated by the proposed project would be considered potentially significant. However, to put the proposed project into statewide context, GHG emissions are also presented in relation to an operational threshold of 6,000 $MTCO_2e$/year, which is intended to demonstrate how an industrial project would meet the statewide GHG reduction target for 2030 under SB 32.

As shown in Table 4.2-8, the proposed project's GHG emissions would be well below an operational threshold of 6,000 $MTCO_2e$/year. However, the project would still result in a net increase 1,038 $MTCO_2e$/year relative to existing baseline conditions. Because County policy finds a net increase in GHG emissions to be potentially significant, the GHG emissions impact associated with implementation of the proposed project is considered potentially significant.

Table 4.2-8: Greenhouse Gas Emissions Analysis

Emissions Category	$MTCO_2e$/Year
Baseline Emissions	5,668
Project Emissions	6,706
Net Change (Project – Baseline)	**1,038**
BAAQMD-Based Threshold (for context only)[1]	6,000
CEQA Significance Threshold[2]	0
Exceed Threshold?	Yes

Source: Compass Land Group, 2022 (Appendix G).
Notes: $MTCO_2e$/year = metric tons of carbon dioxide equivalents per year
1. BAAQMD's operational threshold for GHG emissions is 10,000 $MTCO_2e$/year. This threshold could be interpolated to 6,000 $MTCO_2e$/year to achieve the 40% reduction target of SB 32.
2. Per County guidance, any net increase in project GHG emissions would be potentially significant.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

As presented above, there is new information related to regulation and management of GHG emissions that was not previously known at the time of the 1996 EIR that will result in a new significant impact. Specifically, the project will result in a net increase of 1,038 MTCO2e/year relative to existing baseline conditions.

Implementation of Mitigation Measure 4.2-5 would reduce this impact to a less-than-significant level.

Mitigation Measure 4.2-5

Prior to the August 11, 2027 (the original date of expiration of the 1996 entitlements), the operator shall submit for review and approval, a Greenhouse Gas Reduction Plan (GHGRP) to the Yolo County Department of Community Services. In order to demonstrate that implementation of the proposed project would not result in a net increase in GHG emissions from baseline conditions, the GHGRP shall demonstrate how annual operational emissions of the proposed project would be reduced to or below the annual baseline emissions of 5,668 $MTCO_2e$. Strategies to achieve emissions reductions may include, but are not limited to, the following:

a. *Replacement of existing fossil fueled equipment with hybrid or electrically powered equipment;*

b. *Purchase of an increased proportion of electricity from renewable sources;*

c. *Installation of on-site renewable energy systems (Note: The operator has an existing wind turbine that provides renewable energy and was accounted for in the impact analysis. This measure would allow for installation of additional renewable energy systems.);*

d. *Use of a blend of renewable diesel and biodiesel (80/20 mix) to power mobile equipment;*

e. *Installation of electric vehicle (EV) charging stations in parking areas for passenger automobiles;*

f. *Purchase of verified carbon credits. Credits purchased as part of this mitigation option shall be real, quantifiable, permanent, verifiable, enforceable, and consistent with the standards set forth in Health and Safety Code section 38562, subdivisions (d)(1) and (d)(2). Such credits shall be based on protocols that are consistent with the criteria set forth in subdivision (a) of Section 95972 of Title 17 of the California Code of Regulations, and shall not allow the use of offset projects originating outside of California, except to the extent that the quality of the offsets, and their sufficiency under the standards set forth herein, can be verified by the County and/or the YSAQMD. The credits must be purchased through one of the following: 1) a CARB-approved registry, such as the Climate Action Reserve, the American Carbon Registry, and the Verified Carbon Standard; 2) any registry approved by CARB to act as a registry under the California Cap and Trade Program; or 3) through the CAPCOA GHG Reduction Exchange.*

Significance After Mitigation:

With implementation of mitigation measures identified above, the impact is considered less-than-significant.

Impact 4.2-6: The proposed project would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The impact would be *less than significant*.

The CAP is the main plan adopted for the Yolo County for the purpose of reducing GHG emissions and addressing climate change. GHG emission inventories for the unincorporated Yolo County were prepared as a part of the benchmarking process for the following sectors: Agriculture, Transportation, Energy, Solid Waste, Wastewater, Stationary Sources, and Mining and Construction. GHG emissions from the mining and construction sector include emissions associated with on-site use of heavy-duty equipment. However, GHG emissions from transportation energy use associated with the mining land use are captured in other relevant sectors and are not included in the mining and energy sector. Because the County lacks jurisdictional control over the heavy equipment used in the construction and mining sector, this sector was only included in the historical emission inventories for 1990 and 2008, and was excluded from the CAP projections for future years. Historically, heavy duty equipment used in mining and construction made up about 2 percent and 4 percent of total emissions in 1990 and 2008, respectively. The heavy equipment used for mining under the CCAP was not included in the CAP emission inventory projections because the County determined that they did not have the jurisdiction to control or regulate these types of GHG emissions, and thus relied on State programs for emissions control of this source. The mining industry, like other industries throughout the State must comply with applicable statewide emissions controls for heavy equipment. Therefore, operation of heavy equipment associated with the proposed project would not conflict with the CAP.

Electricity use under the proposed project would be consistent with the relevant CAP measures for the energy sector. The CAP encourages the development and use of cleaner sources of electricity, which would be available to the mining operators. In 2012, CEMEX installed a wind turbine energy system which supplies renewable energy for 20 to 30 percent of the energy demand at their plant facility (see additional discussion under Impact 4.2-7). The remainder of the energy use is supplied by PG&E. In 2021, approximately 93 percent of the electricity generated by PG&E came from GHG free resources, including renewables, nuclear, and large hydroelectric power. Therefore, electricity use for the proposed project would not conflict with the CAP.

The Transportation and Land Use Chapter of the Yolo County CAP requires the reduction of vehicle miles traveled in new development, but is not applicable to the mining land use. Therefore, transportation associated with the proposed project would not conflict with the CAP. In conclusion, the proposed project would not conflict with the applicable plans, policies, and regulations related to GHG emissions. This impact is less than significant.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously

identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None required.

Impact 4.2-7: The proposed project would result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources, during project construction or operation. The impact would be *less than significant.*

CEMEX's existing facility consumes energy in the forms of fossil fuels and electricity as part of the ongoing mining and construction materials processing operations. These operations include offroad heavy equipment use, conveyor transport, truck transport, aggregate processing, and ready-mix concrete processing operations. The main sources of energy consumption are electricity and diesel fuel, as well as gasoline fuel for worker and other passenger vehicle trips.

Under existing baseline conditions, CEMEX's operations consume an estimated 3,543 megawatts of electricity, 537,084 gallons of diesel fuel, and 20,033 gallons of gasoline per year. In order to meet its existing demands for electricity, CEMEX partnered with Foundation Windpower to install a wind turbine on the property, which is fully operational. CEMEX was the first aggregate producer in Yolo County to do so. Foundation Windpower owns and operates the wind turbine and the electricity generated by the turbine is fed into the grid to off-set a portion of the electricity used by existing operations.

The proposed project would increase electricity, diesel, and gasoline consumption relative to the existing baseline conditions in order to achieve the currently permitted levels of mining and aggregate throughput production. This comparison is done pursuant to the analytical requirements of CEQA, but does not mean that the proposed project would result in the wasteful, inefficient or unnecessary consumption of energy resources. The proposed project does not propose any energy consumption beyond what is typical for this type of operation. Consumption of energy represents an ongoing cost to CEMEX, which creates an incentive for CEMEX to minimize the use of energy on-site through efficient means and operations. Further, while a comparison of the proposed project to baseline conditions reflects a net increase in energy consumption, CEMEX's Existing Entitlements already allow for the consumption of energy as necessary to achieve the currently permitted 1,000,000 tons per year sold limit of aggregate production at the facility.

Table 4.2-9 summarizes the estimated energy consumption of the proposed project relative to the existing conditions baseline. A complete report of baseline and project energy consumption can

be found in Appendix G. The proposed project would increase diesel fuel consumption by 19%, decrease gasoline consumption by 2%, and increase electricity consumption by 47% relative to the CEQA baseline, consistent with the modeled increase in production levels up to the currently permitted limits for the facility as applicable.

The proposed project's gasoline and diesel consumption would also be subject to State and federal regulations regarding fuel efficiency standards for on-road vehicles and off-road equipment. For example, the off-road equipment operated as part of the proposed project would be subject to the In-Use Off-Road Diesel Vehicle Regulations, which require strict emissions reductions into the future. Emissions reductions are often achieved through engine retrofits to a higher tier, which emit fewer emissions, partially through increased fuel efficiency. Accordingly, operational energy demand would decrease into the future as off-road equipment is upgraded to meet increasingly stringent emissions standards. The modeling results summarized in Table 4.2-9 do not account for these future reductions beyond the year 2022.

Based on the foregoing, the proposed project would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. This impact would be less-than-significant.

Table 4.2-9: Energy Consumption Summary

Energy Type	Energy Consumption	Units
Baseline (2012-2021 Conditions*)		
Electricity	3,543,082	kWh / year
Diesel	537,084	gal / year
Gasoline	20,033	gal / year
Proposed Project		
Electricity	5,224,579	kWh / year
Diesel	638,729	gal / year
Gasoline	19,687	gal / year
Net Change (Project – Baseline)		
Electricity	1,681,497	kWh / year
Diesel	101,645	gal / year
Gasoline	-346	gal / year

Source: Compass Land Group, 2022 (Appendix G).
Notes: kWh/year = kilowatt-hours per year; gal/year = gallons per year
* As described in the *Approach to Analysis* above, the baseline condition for the mining, dredge and aggregate plant, and on-road mobile operations was based on the year 2021 and the baseline condition for the ready-mix plant and recycle plant operations was based on a 10-year average between 2012 and 2021.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None required.

Impact 4.2-8: The proposed project would conflict with or obstruct a state or local plan for renewable energy or energy efficiency. The impact would be *less than significant.*

Yolo County has not adopted an energy conservation plan. However, as discussed under Impact 4.2-7, the proposed project would not conflict with measures related to renewable energy or energy efficiency in the Yolo County CAP. The effects of the proposed project on local and regional energy supplies and on requirements for additional capacity would be minimal.

The proposed project would not conflict with any state or local plans for renewable energy or energy efficiency. The impact is less than significant.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None required.

Impact 4.2-9: The proposed project would cause a significant environmental impact due to a conflict with applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating impacts to air quality, GHG emissions, or energy. The impact would be *less than significant.*

Table 4.2-10 below provides an analysis of consistency of the proposed project with applicable policies and regulations that have been adopted for the purpose of avoiding or mitigating environmental effects related to air quality, GHG emissions, and energy. The policies and regulations identified in the table are those that have been revised or put into effect since the 1996 EIR, as the underlying CEMEX mining project has been determined to be consistent with County program policies and regulations.

Conclusion

There are no proposed changes in the project that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There are no changes in the circumstances under which the project would be undertaken that would result in new significant impacts or substantial increase in the severity of previously identified significant impacts, and therefore no revisions to the analysis in the 1996 EIR are required related to this area of impact.

There is no new important information relevant to this area of impact that was not previously known at the time of the 1996 EIR. There are no related new significant impacts, more substantial increase in the severity of previously identified significant impacts, previously dismissed mitigation that is now feasible, previously dismissed alternatives that are now feasible, or different more effective alternatives that have emerged or become known.

Mitigation Measure(s)

None required.

Table 4.2-10: Consistency with Applicable Plans, Policies, and Regulations

Policy/Regulation	Consistency Discussion
Yolo County General Plan	
Policy CI-4.4 Support and encourage low emission or nonpolluting forms of transportation.	Mitigation Measure 4.2-5 requires preparation and implementation of a Greenhouse Gas Reduction Plan, which would consider installation of electric vehicle (EV) charging stations in parking areas for passenger automobiles. Furthermore, the proposed project would not conflict with CARB's 2017 Scoping Plan, which supports statewide vehicle emissions regulations such as the Advanced Clean Cars Program and Low-Carbon Fuel Standard. Therefore, the proposed project would be consistent with this policy.
Policy CO-6.6 Encourage implementation of YSAQMD Best Management Practices, such as those listed	Section 10-4.414 of the Mining Ordinance requires mining and reclamation projects to implement dust

below, to reduce emissions and control dust during construction activities: • Water all active construction areas at least twice daily. • Haul trucks shall maintain at least two feet of freeboard. • Cover all trucks hauling soil, sand, and other loose materials. • Apply non-toxic binders (e.g. latex acrylic copolymer) to exposed areas after cut and fill operations and hydroseed area. • Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). • Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land. • Plant vegetative ground cover in disturbed areas as soon as possible. • Cover inactive storage piles • Sweep streets if visible soil material is carried out from the construction site • Treat accesses to a distance of 100 feet from the paved road with a 6- to 12-inch layer of wood chips or mulch. • Treat accesses to a distance of 100 feet from the paved road with a 6-inch layer of gravel.	control measures. Therefore, the proposed project would be consistent with this policy.
Policy CO-8.2 Use the development review process to achieve measurable reductions in greenhouse gas emissions.	Mitigation Measure 4.2-5 requires preparation and implementation of a Greenhouse Gas Reduction Plan to reduce the reduce the project's operational emissions by at least 1,038 $MTCO_2e$/year. The inclusion of Mitigation Measure 4.2-5 within this Draft SEIR would result in a measurable reduction in GHG emissions, thus fulfilling this policy.
Policy CO-8.4 Encourage all businesses to take the following actions, where feasible: replace high mileage fleet vehicles with hybrid and/or alternative fuel vehicles; increase the energy efficiency of facilities; transition toward the use of renewable energy instead of non-renewable energy sources; adopt purchasing practices that promote emissions reductions and reusable materials; and increase recycling.	Mitigation Measure 4.2-5 requires preparation and implementation of a Greenhouse Gas Reduction Plan, which would consider installation of electric vehicle (EV) charging stations in parking areas for passenger automobiles. CEMEX installed a wind turbine energy system which supplies renewable energy for 20 to 30 percent of the energy demand at their plant facility. The remainder of the energy use is supplied by PG&E, which generates approximately 93 percent of its electricity from GHG free resources, including renewables. The fleet of off-road equipment operated within the project site is subject to statewide regulations such as the In-Use Off-Road Diesel Vehicle Regulation, which required off-road equipment fleets to meet stringent emissions standards. Accordingly, the proposed project would comply with this policy.
Policy CO-8.5 Promote GHG emission reductions by supporting carbon efficient farming methods (e.g. methane capture systems, no-till farming, crop rotation, cover cropping); installation of renewable energy technologies; protection of grasslands, open	CEMEX installed a wind turbine energy system which supplies renewable energy for 20 to 30 percent of the energy demand at their plant facility. Reclamation activities would allow for agricultural activities to resume on 438.6 acres of the project site, following the cessation of mining activities. The

space, oak woodlands, riparian forest and farmlands from conversion to other uses; and development of energy-efficient structures	remaining portions of the site would be reclaimed as an open water lake, habitat, and riparian vegetation. Therefore, the project would comply with this policy.
Policy ED-5.4 Encourage businesses to exceed clean air standards, whenever possible.	See Impact 4.2-2. The proposed project emissions of ROG, NOx, and PM10 would be well below the the YSAQMD's project-level thresholds, which support compliance with the CAAQS and NAAQS. In addition, the proposed project would implement Dust Control requirements in the Mining Ordinance would reduce PM10 emissions to the greatest feasible extent. Therefore, the project would comply with this policy.
Policy CC-4.10 Encourage construction and other heavy equipment vehicles (e.g., mining, agriculture, etc.) to use retrofit emission control devices.	Off-road equipment used during implementation of the proposed project would be required to comply with the In-Use Off-Road Diesel Vehicle Regulation, which includes restrictions on idling time as well as standards for retrofitting and replacing equipment. Therefore, the project would comply with this policy.
Off-Channel Mining Plan	
None applicable.	
Off-Channel Surface Mining Ordinance	
Section 10-4.407 Wherever practical and economically feasible, portable or movable conveyor systems shall be used to transport raw materials and overburden.	Existing on-site conveyor systems would continue to be operated under the proposed project. Therefore, the project would comply with this requirement.
Section 10-4.414 Unless superseded by newer more effective standards, the following measures shall be implemented in order to control fugitive dust: (a) All stockpiled soils shall be enclosed, covered, or have sufficient moisture to control fugitive dust at all times. Inactive soil stockpiles should be vegetated or adequately watered to create an erosion-resistant outer crust. (b) During operating hours, all disturbed soil and unpaved roads shall be adequately watered to keep soil moist. (c) All disturbed but inactive portions of the site shall either be seeded or watered until vegetation is grown or shall be stabilized using methods such as chemical soil binders, jute netting, or other Yolo-Solano Air Quality Management District approved methods.	Existing operations at the CEMEX facility comply with the applicable dust control measures, and implementation of the proposed project would involve continued implementation of all such measures. Therefore, the proposed project would be consistent with this measure.
Section 10-4.414.1 Wherever practical and feasible, aggregate facilities shall use clean electric energy from the grid or install alternative on-site electricity generation systems to replace diesel equipment and reduce criteria pollutant emissions.	CEMEX installed a wind turbine energy system which supplies renewable energy for 20 to 30 percent of the energy demand at their plant facility. The remainder of the energy use is supplied by PG&E, which generates approximately 93 percent of its electricity from GHG free resources, including renewables. The fleet of off-road equipment operated within the project site is subject to statewide regulations such as the In-Use Off-Road Diesel Vehicle Regulation, which required off-road equipment fleets to meet stringent emissions standards. Accordingly, the proposed project would comply with this measure.

Section 10-4.415 All internal combustion engine driven equipment and vehicles shall be kept tuned according to the manufacturer's specifications and properly maintained to minimize the leakage of oils and fuel. No vehicles or equipment shall be left idling for a period of longer than is required by law, recommended by the Air District, or ten (10) minutes, whichever is shorter.	Off-road equipment used during implementation of the proposed project would be required to comply with the In-Use Off-Road Diesel Vehicle Regulation, which includes restrictions on idling time as well as standards for reducing emissions from off-road equipment. One means of reducing emissions is to keep equipment tuned according to the manufacturer's specification. Thus, the project would comply with this measure.
Section 10-4.429 All off-channel surface mining operations shall comply with the following setbacks: (a) New processing plants and material stockpiles shall be located a minimum of one-thousand (1,000) feet from public rights-of-way, public recreation areas, and/or off-site residences, unless alternate measures to reduce potential noise, dust, and aesthetic impacts are developed and implemented.	Based on submitted plans for the project, all processing plants and material stockpiles would be located in compliance with the requirements. Therefore, the project would comply with this measure.
Section 10-4.433 Topsoil, subsoil, and subgrade materials in stockpiles shall not exceed forty (40) feet in height, with slopes no steeper than 2:1 (horizontal:vertical). Stockpiles, other than aggregate stockpiles, shall be seeded with a native vegetative cover to prevent erosion and leaching. The use of topsoil for purposes other than reclamation shall not be allowed without the prior approval of the Director. Slopes on stockpiled soils shall be graded to 2:1 (horizontal:vertical) for long-term storage to prevent use by bank swallows. At no time during the active breeding season (May 1 through July 31) shall slopes on stockpiles exceed a slope of 1:1, even on a temporary basis. Stockpiles shall be graded to a minimum 1:1 slope at the end of each work day where stockpiles have been disturbed during the active breeding season.	The applicant must comply with these requirements as a standard condition of approval. Compliance with this section would reduce the potential for windborne erosion of stockpiled material, which would be considered a source of PM emissions. Therefore, the project would comply with this measure.

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