## 3.3 Air Quality Resources

This section presents the environmental setting and analysis of impacts on air quality resulting from the Proposed Project. This section includes the existing air quality conditions in the Proposed Project region, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects. Appendix C presents emission calculations and assumptions spreadsheets supporting the air quality analysis in this section.

## 3.3.1 Environmental Setting

#### Air Basin

The Proposed Project area is located within three air basins: San Joaquin Valley Air Basin (SJVAB), Mojave Desert Air Basin (MDAB), and South Coast Air Basin (SCAB), which are under the jurisdictions of the San Joaquin Valley Air Pollution Control District (SJVAPCD), Eastern Kern Air Pollution Control District (EKAPCD), and South Coast Air Quality Management District (SCAQMD), respectively. The portion of the Proposed Project within each air basin and air district's jurisdiction by segment is summarized in Table 3.3-1 and shown in Figure 3.3-1.

Table 3.3-1 Air Basin and Jurisdiction by Proposed Project Segments

Project segment and length	Air basin	Air district
Segment 1 (39 miles)	SJVAB	SJVAPCD
Segment 2 (27 miles)	SJVAB	SJVAPCD
Segment 3 (2 miles)	SJVAB	SJVAPCD
Segment 3 (2 miles)	SCAB	SCAQMD
Segment 4 (6 miles)	SJVAB	SJVAPCD
Segment 4 (6 miles)	MDAB	EKAPCD
Segment 5 (3 miles)	MDAB	EKAPCD

Source: (CARB 2023)

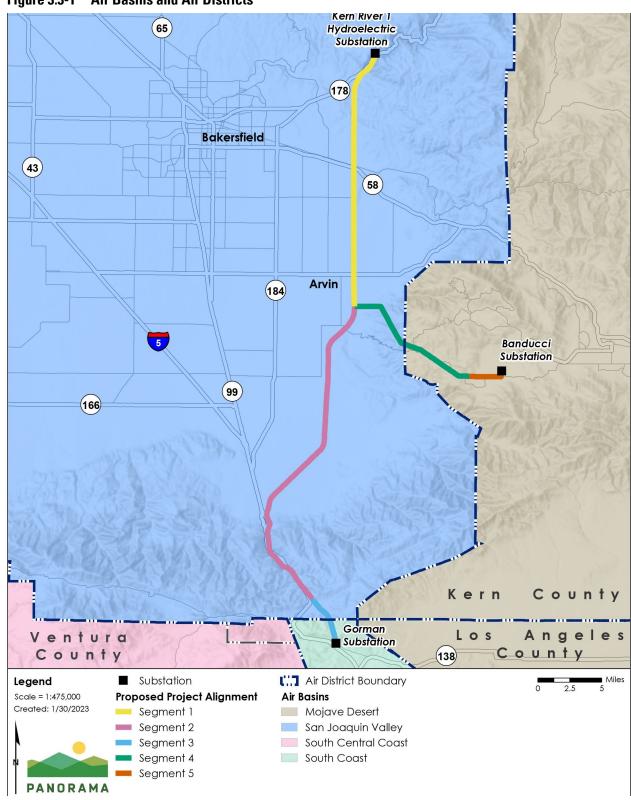


Figure 3.3-1 Air Basins and Air Districts

Source: (CARB) 2023Climate and Meteorology

## **SIVAB**

The SJVAB has unique geographical and meteorological challenges that present significant challenges for air quality. The San Joaquin Valley is an inter-mountain valley comprising nearly 25,000 square miles. The surrounding mountains trap pollution and block air flow, and the mild climate keeps pollutant-scouring winds at bay most the year.

The SJVAB has an "inland Mediterranean" climate that averages over 260 sunny days per year, primarily because semi-permanent high-pressure systems establish themselves over the SJVAB and deflect low-pressure systems that might otherwise bring rain and winds. The average temperature ranges from 45 to 95 degrees Fahrenheit. Precipitation in the SJVAB is confined primarily to the winter months although some precipitation usually occurs in late summer and fall. Average annual rainfall for the valley floor of the SJVAB is 9.25 inches but varies from over 20 inches in the north part of the valley to less than 5 inches in the south.

During the winter, high-pressure systems can cause the atmosphere to become stagnant for longer periods of time as winds are calm and air flow is minimal. These stagnant atmospheric conditions can also cause severe nighttime temperature inversions. Normally, temperature decreases with increasing altitude, but during temperature inversions, the normal temperature gradient is reversed, with temperatures increasing with altitude, causing warmer air to be above cooler air. Temperature inversions are common in the valley throughout the year. Since the inversion is often lower than the height of the surrounding mountain ranges, the valley effectively becomes a bowl capped with a lid that traps emissions near the surface (SJVAPCD 2015).

#### **MDAB**

The MDAB encompasses desert portions of Kern, Los Angeles, Riverside, and San Bernardino counties. Geographically, it is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. The region is characterized by hot, dry summers and cool winters with little precipitation. This region is largely downwind of the Los Angeles basins and the San Joaquin Valley so that various air pollutants are transported through the MDAB through prevailing winds (MDAQMD 2023).

#### **SCAB**

The SCAB is an approximately 10,000-square-mile area and includes all of Orange County and the urban parts of Los Angeles, Riverside, and San Bernardino counties. It is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. The topography and climate of Southern California create conditions that are highly favorable for forming air pollution in the SCAB. Warm air mass frequently descends over a cool and moist marine layer from the interaction between the ocean's surface and the lowest layer of the atmosphere. This warm upper layer forms a cap over the cooler surface layer, which traps the pollutants near the ground. Light winds in the basin also further limit ventilation (SCAQMD 2022).

## **Air Quality**

#### **Air Pollutants**

The U.S. Environmental Protection Agency (EPA) has identified the following criteria air pollutants that are a threat to public health and welfare. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare objectives.

#### Ozone (O<sub>3</sub>)

Ozone (O<sub>3</sub>) is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving volatile organic compounds (VOC) and nitrogen oxides (NO<sub>8</sub>). VOC and NO<sub>8</sub> are known as *precursor compounds* for ozone. Substantial ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources but is formed downwind of sources of VOC and NO<sub>8</sub> under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when long sunny days combine with regional air subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds.

## Sulfur Dioxide (SO<sub>2</sub>)

SO<sub>2</sub> is a colorless, acidic gas with a strong odor. SO<sub>2</sub> is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO<sub>2</sub> is also a precursor to the formation of atmospheric sulfate and particulate matter and contributes to the potential formation of atmospheric sulfuric acid that could precipitate downwind as acid rain. SO<sub>2</sub> can irritate lung tissue and increase the risk of acute and chronic respiratory disease.

#### Carbon Monoxide (CO)

CO is a nonreactive pollutant that is a product of incomplete combustion of organic material and is mostly associated with motor vehicle traffic and, in wintertime, with wood–burning stoves and fireplaces. High CO concentrations develop primarily during winter, when periods of light wind combine with the formation of ground–level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity, resulting in reduced levels of oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia. CO measurements and modeling were important in the early 1980s, when CO levels were regularly exceeded throughout California, but in more recent years, CO measurements and modeling are not a priority in most California air districts

due to the retirement of older vehicles, fewer emissions from new vehicles, and improvements to fuels.

## Nitrogen Dioxide

When combustion temperatures are extremely high, as in aircraft, truck, and automobile engines, atmospheric nitrogen combines with oxygen to form various oxides of nitrogen. Nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>), generally referred to as NO<sub>x</sub>, are the most significant air pollutants. Nitric oxide is a colorless and odorless gas that is relatively harmless to humans, quickly converts to NO<sub>2</sub> and can be measured. Nitrogen dioxide has been found to be a lung irritant capable of producing pulmonary edema. Inhaling NO<sub>2</sub> can lead to respiratory illnesses such as bronchitis and pneumonia.

NO<sub>2</sub> is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO<sub>2</sub>. NO<sub>2</sub> may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

#### Lead

Lead has a range of adverse neurotoxin health effects and was released into the atmosphere via leaded gasoline products. The phase-out of leaded gasoline in California has resulted in dramatically decreased levels of atmospheric lead. The highest concentrations of lead in air are generally found near lead smelters and general aviation airports, where piston aircraft use leaded fuel. Other stationary sources that generate lead emissions include waste incinerators, utilities, and lead-acid battery manufacturers.

## Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)

PM<sub>10</sub> and PM<sub>2.5</sub> consist of airborne particles that measure 10 micrometers or less in diameter and 2.5 micrometers or less in diameter, respectively. PM<sub>10</sub> (coarse particulate) and PM<sub>2.5</sub> (fine particulate) represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects. Particulate matter in the atmosphere results from many kinds of dust and fume producing industrial and agricultural operations, fuel combustion, wood burning stoves and fireplaces, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition, construction activities, and mining are more local in nature while others, such as vehicular traffic and wood burning stoves and fireplaces, have a more regional effect.

Very small particles of certain substances (e.g., sulfates, nitrates) can cause lung damage directly or can contain adsorbed gases (e.g., chlorides, ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility. Dust comprising large particles (diameter greater than 10 micrometers) settles out rapidly and is easily filtered by human breathing passages. This dust is of concern more as a soiling nuisance than as a health hazard. The remaining fractions, PM<sub>10</sub> and PM<sub>2.5</sub>, are a health concern particularly at levels above the federal and California ambient air quality standards. PM<sub>2.5</sub> (including diesel exhaust particles) is thought to have more adverse effects on health because these particles are so small and thus penetrate to the deepest parts of the lungs.

Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, coughing, bronchitis, and respiratory illnesses in children. Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health.

#### **Toxic Air Contaminants**

Toxic air contaminants (TACs) are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects (i.e., injury or illness) even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. TACs include both organic and inorganic chemical substances.

TACs may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including *diesel particulate matter* (DPM) emissions from diesel-fueled engines, which was identified as a TAC by the California Air Resources Board (CARB) in 1998 (CARB 1993; 1998; CARB and Office of Environmental Health Hazard Assessment [OEHHA] 1998).

Federal laws regulate *hazardous air pollutants* (HAPs), which refers to similar types of compounds referred to as TACs under California law, and the two terms encompass essentially the same compounds. Under the 1990 Federal Clean Air Act Amendments, 189 substances were identified as HAPs; the HAPs list has been modified since 1990 through rulemaking, including both removal and additions, to now include 188 substances (EPA 2023).

## **Sensitive Receptors**

California Health and Safety Code section 42705.5(a)(5) states that "[s]ensitive receptor locations may include hospitals, schools, and day care centers, and such other locations as the air district board or CARB may determine." This document utilizes the SJVAPCD definition of sensitive receptor as follows:

Sensitive Receptors: People that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling unit(s). The location of sensitive receptors is needed to assess toxic impacts on public health (SJVAPCD 2015).

Sensitive receptors in the vicinity of the Proposed Project include residences and El Tejon School. There are no hospitals, day care centers, or retirement or nursing home facilities in the vicinity of the Proposed Project. Sensitive receptors are shown in Figure 3.3-2, Figure 3.3-3, and Figure 3.3-4. A total of seven sensitive receptors were analyzed.

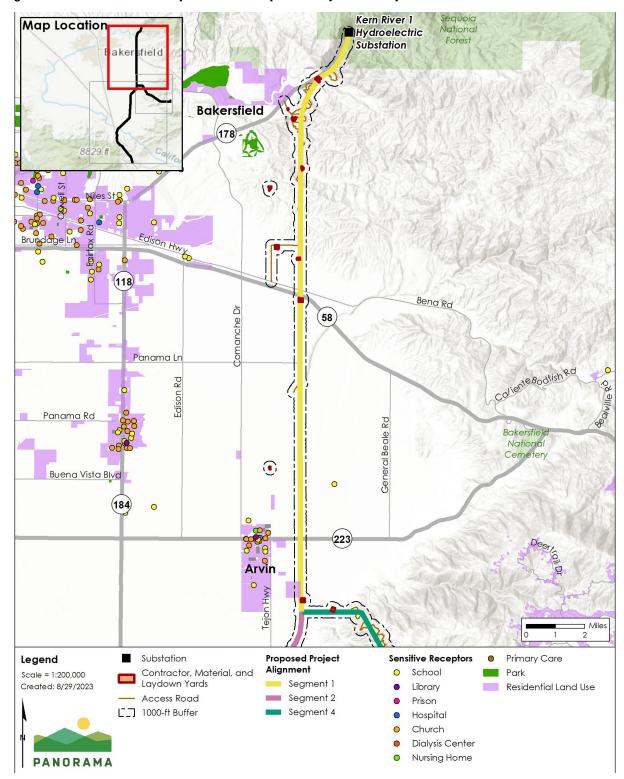


Figure 3.3-2 Sensitive Receptors in the Proposed Project Vicinity

Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; Oak Ridge National Laboratory [ORNL] and National Geospatial-Intelligence Agency [NGA] Homeland Security Infrastructure Program [HSIP] Team 2020)

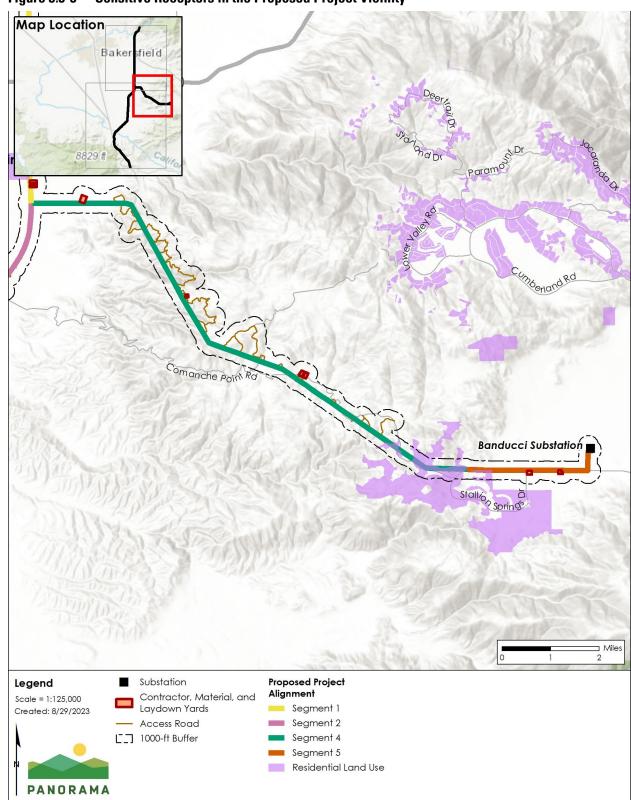


Figure 3.3-3 Sensitive Receptors in the Proposed Project Vicinity

Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; ORNL and NGA HSIP Team 2020)

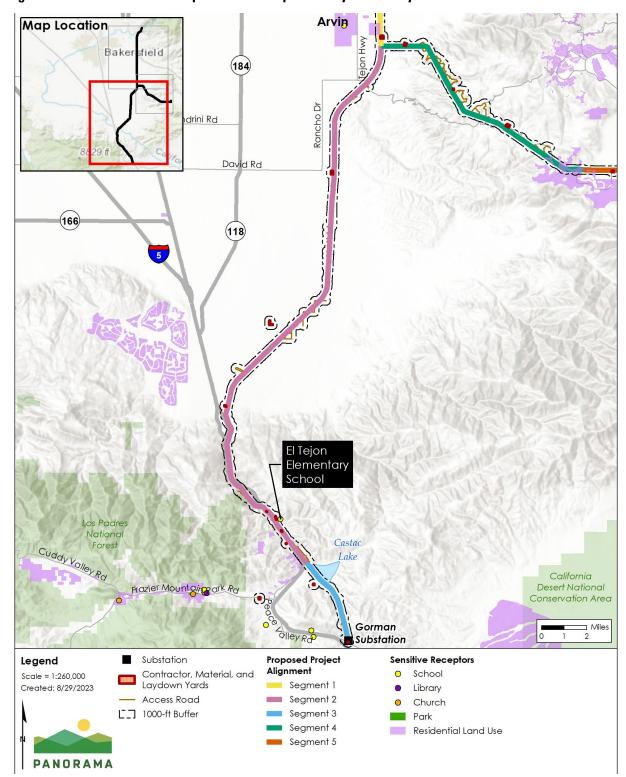


Figure 3.3-4 Sensitive Receptors in the Proposed Project Vicinity

Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; ORNL and NGA HSIP Team 2020)

#### **Odors**

Land use in the Proposed Project area is primarily open space and agriculture, with scattered rural residential and suburbanized areas. There are no stationary odor-producing land uses (e.g., landfills, refineries, confined animal feeding operations) in the Proposed Project area.

## Air Quality Data Summary (2020–2022)

CARB operates an extensive network of air monitoring stations within California. The monitoring station network provides air quality monitoring data, including real-time meteorological data and ambient pollutant levels, as well as historical data. Several air monitoring stations are located near the project site measuring ozone, CO, NO<sub>2</sub>, PM<sub>10</sub>, and/or PM<sub>2.5</sub> (EPA Office of Air and Radiation [OAR] 2015). Table 3.3-2, below, summarizes the most recent three years of data (2020–2022) from the nearby air monitoring stations, reported in *parts per million* (ppm) or *micrograms per cubic meter* (µg/m³). Notably, ambient monitoring stations do not include data for every pollutant. For each pollutant, the ambient monitoring station most representative of the Proposed Project site is summarized.

Table 3.3-2 contains ozone measurements from 19405 Buena Vista Boulevard in Arvin (ID 06-029-5002). The ozone standards were exceeded in 2020 through 2022. PM<sub>10</sub> measurements from 3311 Manor Street in Oildale (ID 06-029-0232) are summarized. The PM<sub>10</sub> standards were exceeded in 2020 through 2022. PM<sub>2.5</sub> measurements from 410 East Planz Road (near the airport) in Bakersfield (ID 06-029-0016) are summarized. The PM<sub>2.5</sub> standards were exceeded in 2020 through 2022. The PM<sub>10</sub> and PM<sub>2.5</sub> measurements may be the result of wildfires. The exceedance of the ambient standards for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> reflect the nonattainment status for the region and Proposed Project site. CO and NO<sub>2</sub> measurements from 2000 South Union Avenue in Bakersfield (ID 06-029-2012) are summarized. CO and NO<sub>2</sub> standards were not exceeded during 2020, 2021, and 2022. There are no SO<sub>2</sub> or lead ambient monitoring stations near the Proposed Project site.

Table 3.3-2 Air Quality Data Summary (2020–2022)

Pollutant/averaging period		Monitoring da	Monitoring data by year	
	Standard (state/federal)	2020	2021	2022
Ozone				
Highest 1-hour (ppm)	0.090/NA	0.133	0.106	0.110
Highest 8-hour (ppm)	0.070/0.070	0.104	0.095	0.091
Particulate matter (PM <sub>10</sub> )				
Highest 24-hour (μg/m³)	50/150	277	421	148
Annual average (μg/m³)	20/NA	54.0	49.0	44.7

Pollutant/averaging period		lata by year		
	Standard (state/federal)	2020	2021	2022
Particulate matter (PM <sub>2.5</sub> )				
Highest 24-hour (μg/m³)	-/35	159	70.5	55.6
Annual average (μg/m³)	12/12	21.1	20.5	16.3
Carbon monoxide (CO)				
Highest 1-hour (ppm)	20/35	1.75	2.89	1.59
Highest 8-hour (ppm)	9/9	1.60	1.30	0.90
Nitrogen dioxide (NO <sub>2</sub> )				
Highest 1-hour(ppm)	0.18/0.10	0.066	0.068	0.059
Annual average (ppm)	0.030/0.053	0.013	0.012	0.013

#### Notes:

Source: (EPA and OAR 2015)

## **Air Quality Standard Attainment Status**

The EPA compares ambient air criteria pollutant measurements with National Ambient Air Quality Standards (NAAQS) to assess the status of air quality of regions within the states. Similarly, the CARB compares air pollutant measurements in California to the California Ambient Air Quality Standards (CAAQS). Based on these comparisons, regions are designated as one of the following categories:

- Attainment: A region is designated as attainment if air quality monitoring data demonstrates ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, areas that have been re-designated from nonattainment to attainment are classified as "maintenance areas" for a 10-year period to ensure that the air quality improvements are sustained.
- Nonattainment: If the air quality monitoring data demonstrates that the NAAQS or CAAQS are exceeded for a criteria pollutant, then the region is designated as nonattainment for that pollutant.
- **Unclassifiable:** An area is designated as unclassifiable if the ambient air quality monitoring data are incomplete and do not support a designation of attainment or nonattainment for a criteria pollutant.
- The standards and attainment status of each CAAQS and NAAQS pollutant are shown for the SJVAB, EKAB, and SCAB Table 3.3-3.

<sup>&</sup>lt;sup>a</sup> Bold values represent exceedance of the ambient air quality standards.

b bµg/m3: micrograms (one-millionth of a gram) per cubic meter

c ppm: parts per million

Portions of the Proposed Project area within SJVAB are classified as nonattainment for ozone, PM<sub>10</sub> and PM<sub>2.5</sub>. Portions of the Proposed Project area within EKAB are classified as nonattainment for ozone and PM<sub>10</sub>. Portions of the Proposed Project area within SCAB are classified as nonattainment for ozone, PM<sub>10</sub>, PM<sub>2.5</sub>, and lead. The Proposed Project area is within either an unclassified or attainment area for all other state and federally regulated air pollutants. Again, these nonattainment statuses are synonymous with the ambient monitoring data near the Proposed Project site.

Table 3.3-3 State and National Ambient Air Quality Standards and Attainment Status

Pollutant		State standard			National standard	d
	SJAPCD	EKAPCD	SCAQMD	SJAPCD	EKAPCD	SCAQMD
Ozone (O <sub>3</sub> )	Nonattainment	Nonattainment	Nonattainment	Nonattainment	Nonattainment	Nonattainment
Particulate matter (PM <sub>10</sub> )	Nonattainment	Nonattainment	Nonattainment	Attainment	Nonattainment	Attainment
Particulate matter (PM <sub>2.5</sub> )	Nonattainment	Attainment	Nonattainment	Nonattainment	Unclassified/ attainment	Nonattainment
Carbon monoxide (CO)	Attainment	Unclassified	Attainment	Unclassified/ attainment	Unclassified/ attainment	Unclassified/ attainment
Nitrogen dioxide (NO <sub>2</sub> )	Attainment	Attainment	Attainment	Unclassified/ attainment	Unclassified/ attainment	Unclassified/ attainment
Sulfur dioxide (SO <sub>2</sub> )	Attainment	Attainment	Attainment	Unclassified/ attainment	Unclassified/ attainment	Unclassified/ attainment
Lead (Pb)	Attainment	Attainment	Attainment	Unclassified/ attainment	Unclassified/ attainment	Nonattainment

Source: (CARB 2022)

## 3.3.2 Applicable Regulations, Policies and Standards

## Federal Regulations, Policies and Standards

The 1970 Federal Clean Air Act (CAA) established ambient air quality standards (AAQS) for six criteria pollutants: ozone, particle matter (PM<sub>10</sub>, PM<sub>2.5</sub>), CO, NO<sub>2</sub>, SO<sub>2</sub>, and lead. The six criteria air pollutants are known to have adverse impacts on human health and the environment. To protect human health and the environment, the EPA has set primary and secondary maximum ambient thresholds for criteria pollutants.

The primary standards were set to protect human health—particularly for children and the elderly as well as for individuals who suffer from chronic lung conditions (e.g., asthma,

emphysema). The secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings. The NAAQS is comprised of the combined primary and secondary standards set by the EPA.

The 1977 CAA Amendments required each state to develop and maintain a State Implementation Plan (SIP) for each criteria pollutant that exceeds the NAAQS for that pollutant. The SIP serves as a tool to reduce pollutants that are known to cause impacts if they exceed ambient thresholds and to achieve compliance with the NAAQS. Table 3.3-2 lists the state and national standards for each pollutant regulated by the EPA.

## State Regulations, Policies and Standards

The California Clean Air Act requires air districts to develop and implement strategies to attain CAAQS. The CAAQS are intended to protect public health, safety, and welfare. CARB is responsible for setting CAAQS under California Health and Safety Code section 39606. Regional air quality management districts are mandated to prepare an air quality plan specifying how federal and state standards would be met.

CARB enforces the CAAQS and works with the State's Office of Environmental Health Hazard Assessment in identifying TACs and enforcing rules related to TACs, including the Air Toxic Hot Spots Information and Assessment Act of 1987 (California Health and Safety Code §§ 44300 et seq.). Enacted to identify TAC hot spots where emissions from specific sources may expose individuals to an elevated risk of adverse health effects, this act requires that businesses or other establishments identified as significant sources of toxic emissions provide the affected population with information about health risks posed by the emissions.

CARB also regulates mobile emission sources in California (e.g., construction equipment, trucks, automobiles) and oversees the air districts. Relevant programs related to the oversight of mobile source emissions include the Off-Road and On-Road Mobile Sources Emission Reduction Programs, the Portable Equipment Registration Program (PERP), and the Airborne Toxic Control Measure for DPM from Portable Engines. The Mobile Sources Emission Reduction programs are aimed at reductions of PM10, CO, NOx, and VOCs. CARB has also adopted specific control measures for the reduction of DPM from off-road, in-use diesel vehicles (rated 25 horsepower and higher) such as backhoes, bulldozers, and earthmovers used in construction projects. Additional DPM control measures are also in place for heavy-duty, onroad diesel trucks operated by public utilities and municipalities. The PERP and Airborne Toxic Control Measure for DPM from Portable Engines provide for statewide registration and control of DPM from portable engines rated 50 horsepower and higher.

## Local Regulations, Policies and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction.

However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

County and regional air quality management districts and air pollution control districts are responsible primarily for regulating stationary sources at industrial and commercial facilities within their geographic areas. These districts are also responsible for preparing the air quality plans that are required under the federal CAA and the California Clean Air Act.

South Coast Air Quality Management District, Eastern Kern Air Pollution Control District, and San Joaquin Valley Air Pollution Control District have jurisdiction over air quality programs in the Proposed Project area. They regulate most air pollution sources in the Proposed Project area, except for motor vehicles, marine vessels, aircraft, agricultural equipment, and other sources regulated by CARB and EPA.

## South Coast Air Quality Management District

In addition to supporting CARB and EPA air quality programs, the SCAQMD also develops plans and implements control measures for regulated pollutants in the South Coast Air Basin. The SCAQMD is required to update plans for improving air quality in the South Coast Air Basin as needed or every three years. The SCAQMD SIPs are developed within the agencies 2022 Air Quality Management Plan (SCAQMD 2022).

On October 1, 2015, the EPA strengthened the NAAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb). The South Coast Air Basin is classified as an "extreme" nonattainment area, and the Coachella Valley is classified as a "severe-15" nonattainment area for the 2015 Ozone NAAQS. The 2022 Air Quality Management Plan was developed to address the requirements for meeting this standard and is focused on attaining the 2015 8-hour ozone standard of 70 ppb (SCAQMD 2022).

The 2022 AQMP also outlines policies and practices intended to achieve attainment levels for criteria pollutants and avoid future levels that exceed applicable standards. The control measures contained in the 2022 AQMP can be categorized as follows:

- Ozone measures: These measures provide for necessary actions to attain the 2015 8-hour ozone NAAQS in 2037, including actions to reduce NO<sub>x</sub> and VOC emissions from both stationary (point and area) and mobile sources, as included in SCAQMD's proposed stationary and mobile source measures, as well as CARB's State Strategy for the State Implementation Plan (SIP). The mobile source measures include actions to be taken by SCAQMD, CARB and the EPA.
- Contingency measures: These measures are to be automatically implemented if the air basin fails to achieve the ozone standard by the latest statutory attainment date or a reasonable further progress requirements.

- Transportation control measures: These measures are generally designed to reduce vehicle miles traveled as included in Southern California Association of Governments 2020 Regional Transportation Plan.
- Some of the control measures achieve emissions reductions by taking advantage of
  existing programs, while some control measures focus on incentives, outreach, and
  education to bring about emissions reductions through voluntary participation
  and behavioral changes needed to complement regulations.

#### **Eastern Kern Air Pollution Control District**

The EKAPCD seeks to attain and maintain NAAQS and CAAQS and to ensure air pollutants do not pose a nuisance or significant health threat through the adoption of their *Reasonably Available Control Technology (RACT) State Implementation Plan for the 2008 and 2015 8-Hour Ozone National Ambient Air Quality Standards (NAAQS)* (2023) and *Ozone Attainment Plan for the 2008 and 2015, 8-Hour Ozone National Air Quality Standards (NAAQS)* (2023) (EKAPCD 2023a; 2023b).

In addition, the EKAPCD has developed and implemented approximately 135 rules and regulations designed to reduce air pollutants being emitted from local source activities. Rule 401 limits discharge into the atmosphere of visible emissions<sup>1</sup>, and Rule 402 prevents, reduces, and mitigates fugitive dust emissions using reasonable available control measures.

## San Joaquin Valley Air Pollution Control District

The SJVAPCD implements air quality programs required by state and federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about their roles in protecting air quality. The SJVAPCD is responsible for managing and permitting existing, new, and modified sources of air emissions within its boundaries and has established rules and regulations to ensure compliance with local, state, and federal air quality regulations.

The SJVAPCD implements air quality plans to attain state and federal standards for the pollutants that it is currently out of attainment with, including ozone and particulate matter. The SJVAPCD air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control methods have worked, and to show how air pollution will be reduced. The following attainment plans apply to SJVAB for criteria pollutants that are in nonattainment status:

## Ozone

The SJVAPCD adopted the 2022 Plan for the 2015 8-Hour Ozone Standard in December 2022 (SJVAPCD 2022). This plan satisfies Clean Air Act requirements and ensures expeditious attainment of the 70 ppb 8-hour ozone standards. The plan satisfies applicable CAA

<sup>&</sup>lt;sup>1</sup> "Visible emissions violations can occur when a source produces uncontrolled smoke, dust, or other particulate matter that reduces visibility and impedes air quality" (SCAQMD, n.d.).

requirements, including reasonable further progress and reasonably available control measures, among other requirements.

Additionally, the 2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard was adopted on June 18, 2020 (SJVAPCD 2020).

#### PM2.5

SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards on November 15, 2018 (SJVAPCD 2018). This plan addresses the EPA federal 1997 annual PM  $_{2.5}$  standard of 15  $\mu$ g/m³ and 24-hour PM $_{2.5}$  standard of 65  $\mu$ g/m³; the 2006 24-hour PM $_{2.5}$  standard of 35  $\mu$ g/m³; and the 2012 annual PM $_{2.5}$  standard of 12  $\mu$ g/m³. This plan demonstrates attainment of the federal PM $_{2.5}$  standards as expeditiously as practicable. In addition to mobile source measures, this plan includes a comprehensive suite of fiscally responsible local measures for stationary and area sources, including measures to further reduce emissions from industrial sources, residential wood burning, and commercial charbroiling.

#### **PM10**

SJVAPCD adopted the 2007 *PM*<sup>10</sup> *Maintenance Plan* in September 2007 to assure the San Joaquin Valley's continued attainment of EPA's PM<sup>10</sup> standard. EPA designated the San Joaquin Valley as an attainment/maintenance area for PM<sup>10</sup> (SJVAPCD 2007). Even though EPA revoked the annual PM<sup>10</sup> standard on December 18, 2006 (71 FR 61144), the 2007 *Maintenance Plan and Request for Redesignation* addresses the annual and 24-hour PM<sup>10</sup> standards since both standards were included in the *Amended* 2003 *PM*<sup>10</sup> *Plan* that EPA approved into the SIP.

## 3.3.3 Applicant Proposed Measures and CPUC Environmental Measures

## **Applicant Proposed Measures**

SCE has proposed measures (i.e., applicant-proposed measures, or APMs) to reduce environmental impacts. The significance of a given impact is considered, and a significance determination made, prior to application of any APMs. The implementation of the APMs is then considered as part of the design of Proposed Project when determining whether impacts would be significant and thus require mitigation. APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any additional imposed mitigation measures. The APMs are included in the MMRP for the Proposed Project (refer to Chapter 4 of this MND), and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the wildfire impact analysis are provided in Table 3.3-4.

#### **CPUC Environmental Measures**

The CPUC has developed additional standard measures to reduce potential impacts from wildfires. The CPUC standard measures will be included in the MMRP for the Proposed Project

and implemented during Proposed Project construction. The CPUC measure applicable for air quality is listed in Table 3.3-5

**Table 3.3-4** Applicant Proposed Measures

APM number	Requirements
AIR-1	<b>Tier 4 Construction Equipment.</b> All construction equipment with rating between 100 and 750 horsepower (hp) will be required to use engines compliant with EPA Tier 4 non-road engine standards. In the event a Tier 4 engine is not available for any off-road construction equipment with rating at or higher than 100 hp, that documentation of the unavailability will be provided.

## **Table 3.3-5 CPUC Environmental Measures**

CPUC Draft Environmental Measure	Requirement
Dust Control During Construction	<ul> <li>The Applicant shall implement measures to control fugitive dust in compliance with all local air district(s) standards. Dust control measures shall include the following at a minimum:</li> <li>All exposed surfaces with the potential of dust-generating shall be watered or covered with coarse rock to reduce the potential for airborne dust from leaving the site.</li> <li>The simultaneous occurrence of more than two ground disturbing construction phases on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.</li> <li>Cover all haul trucks entering/leaving the site and trim their loads as necessary.</li> <li>Use wet power vacuum street sweepers to sweep all paved access road, parking areas, staging areas, and public roads adjacent to project sites on a daily basis (at minimum) during construction. The use of dry power sweeping is prohibited.</li> <li>All trucks and equipment, including their tires, shall be washed off prior to leaving project sites.</li> <li>Apply gravel or non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at project sites.</li> <li>Water and/or cover soil stockpiles daily.</li> <li>Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.</li> <li>All vehicle speeds shall be limited to fifteen (15) miles per hour or less on unpaved areas.</li> <li>Implement dust monitoring in compliance with the standards of the local air district.</li> <li>Halt construction during any periods when wind speeds are in excess of 50 mph.</li> </ul>

## 3.3.4 Environmental Analysis

## **Approach to Impact Analysis**

## **Project-specific Emission Thresholds**

CPUC uses local air quality district thresholds for evaluating air quality impacts under CEQA. The Proposed Project would occur in three different air basins under the jurisdiction of three

different air districts. The follow section describes the significance thresholds established by each air quality district.

## South Coast Air Quality Management District

The SCAQMD provides air quality significance in its SCAQMD Air Quality Significance Thresholds for both construction and operational emissions (SCAQMD 2023). Table 3.3-6, below, shows the thresholds of significance for a project during construction and operation phase within the SCAQMD. SCAQMD significance thresholds are in pounds per day (lbs./day).

The SCAQMD has also identified localized significance thresholds that are dependent on ambient air concentrations, the size of the construction area, and the distance to the nearest sensitive receptor (SCAQMD 2008). The nearest sensitive receptor to the Proposed Project site within the SCAB is approximately 120 feet from the Gorman substation construction area, which falls within source receptor area 15 (SCAQMD 2008). Therefore, the localized significance thresholds for a 5-acre site at a distance of 25 meters in the source receptor area 15 San Gabriel Mountains are listed in Table 3.3-7.

Table 3.3-6 SCAQMD Air Quality Significance Thresholds

Pollutant	Construction (lbs./day)	Operations (lbs./day)
NOx	100	55
ROG	75	55
PM <sub>10</sub>	150	150
PM <sub>2.5</sub>	55	55
SO <sub>x</sub>	150	150
CO	550	550
Lead	3	3

Source: (SCAQMD, 2019)

Table 3.3-7 SCAQMD Air Quality Localized Significance Thresholds

Pollutant	Threshold (lbs./day) <sup>a</sup>
ROG	NA
NO <sub>x</sub>	246
CO	1,644
SO <sub>2</sub>	NA
PM <sub>10</sub>	12
PM <sub>2.5</sub>	6

#### Note:

Source: (SCAQMD 2009)

The SCAQMD health risk significance threshold is 10 in one million for *maximum individual* cancer risk (MICR) and 1.0 for the maximally exposed individual for *hazard index chronic* (HIC) (SCAQMD 2008).

Lastly, the SCAQMD also determines that if a construction project creates an odor nuisance pursuant to South Coast AQMD Rule 402, then the project would have significant air quality impact on the environment.

#### Eastern Kern Air Pollution Control District

The EKAPCD Guidelines for Implementation of CEQA (Kern County Air Pollution Control District [APCD] 1999) provides air quality significance thresholds for operation of a project. Table 3.3-8 shows these thresholds values were used in the absence of construction significance thresholds. EKAPCD significance thresholds are in tons per year (tpy).

A project would have a significant air quality impact on the environment if it would, within the EKAPCD jurisdiction:

- Cause or contribute to an exceedance of any California or National Ambient Air Quality Standard;
- Exceed the District health risk public notification thresholds; or
- Be inconsistent with adopted federal and state Air Quality Attainment Plans.

These thresholds were determined based on the assumption that the Proposed Project construction would occur within the source receptor area 15 San Gabriel Mountains, the Proposed Project construction would be at least 5 acres in area, and the receptors' distance would be approximately 25 meters.

Table 3.3-8 EKAPCD Air Quality Significance Thresholds

Pollutant	Construction emission (tpy)	Operations: permitted and non- permitted activities (typ)
NO <sub>x</sub> /ROG (indirect sources)	NA	137
NO <sub>x</sub> /ROG	NA	25
SO <sub>x</sub>	NA	27
PM <sub>10</sub>	NA	15

Source: (Kern County Air Pollution Control District [APCD] 1999)

The EKAPCD has adopted the SCAQMD health risk significance threshold of 10 in one million for MICR and 1.0 for the maximally exposed individual for HIC.

## San Joaquin Valley Air Pollution Control District

The *SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2015)* provides air quality significance for both construction and operational emissions. Table 3.3-9, below, shows the thresholds of significance for a project during construction and operation phase within the SJVAB. SJVAPCD significance thresholds are in tons per year (tpy).

Table 3.3-9 SJVAPCD Air Quality Significance Thresholds

Pollutant	Construction emission (tpy)	Operations: permitted and non-permitted activities (typ)
CO	100	100
NO <sub>x</sub>	10	10
ROG	10	10
SO <sub>x</sub>	27	27
PM <sub>10</sub>	15	15
PM <sub>2.5</sub>	15	15

Source: (SJVAPCD 2015)

The SJVAPCD health risk significance threshold is 20 in one million for MICR and 1.0 for the maximally exposed individual for HIC (SJVAPCD 2015).

## **Cumulative Impact Thresholds**

Section 15002 of the CEQA Guidelines defines a significant effect on the environment as "a substantial adverse change in the physical condition which exists in the area affected by the proposed project." The impact of a project to air quality is determined by examining the types and levels of emissions generated by the project and its impact on factors that affect air quality. Accordingly, projects should be evaluated in terms of identified air pollution thresholds.

## Methodology and Assumptions

#### Criteria Pollutants

Project-related air quality impacts would fall into two categories: short-term impacts due to construction and long-term impacts due to project operation. First, during construction (short-term), the Proposed Project would affect local particulate concentrations primarily due to fugitive dust sources and diesel exhaust. The Proposed Project would result in replacing the existing conductor and poles associated with the approximately 65-mile subtransmission line. The operation and maintenance activities required for the reconductored power line would not change from those currently required for the existing power line; thus, no operation-related (long-term) impacts would occur. Therefore, the impact analysis is focused on construction activities that are required to install the new conductor and replace existing structures and establish required access and work areas.

SCE provided construction-related air pollutant emissions calculations and estimates for the construction activities that would be associated with the proposed Project. SCE's emission calculations were independently reviewed by the CPUC's consultant, RCH Group (RCH), and were found to be technically adequate. Short-term construction emissions that occur from activities such as removal of structures, site-grading, and construction and long-term air quality impacts related to the operation of the Proposed Project were evaluated. The analysis focuses on daily and annual emissions from construction and operational (i.e., mobile, area, stationary, and fugitive sources) activities. The air quality analysis includes a review of criteria pollutant emissions such as CO, NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Because ozone is formed through chemical reactions in the atmosphere, the ozone precursors NO<sub>x</sub> and VOC as reactive organic gases (ROG) were evaluated. Construction emissions (excluding those from helicopters), emissions from soil disturbance, and emissions from vehicle travel on paved and unpaved roads were estimated using California Emissions Estimator Model Version 2020.4.0 (CalEEMod). Helicopter emissions were estimated manually using emissions factors obtained from the Swiss Federal Office of Civil Aviation (FOCA) (Federal Office Civil Aviation [FOCA] 2015).

#### TACs

SCE also prepared a *health risk assessment* (HRA) to evaluate the risks to nearby sensitive receptors from exposure to TACs associated with the Proposed Project (SCE 2023). The HRA focuses on construction emissions; the primary TAC of concern is considered DPM, which results from diesel-fueled engine combustion. Because of the uncertainty in assessing cancer risk from very short-term exposures, the Office of Environmental Health Hazard Assessment (OEHHA) guidelines do not recommend assessing cancer risk for projects lasting less than two months (OEHHA 2015).

In order to evaluate health risks to sensitive receptors near staging area activities, Tier 2 screening health risk assessments were completed in accordance with the SCAQMD Risk Assessment Procedures (SCAQMD 2017). SCE has compiled a list of staging areas that have sensitive receptors located within 0.25 mile of the staging area, where the duration of activities that could generate air toxics are anticipated to occur for more than 2 months. The distance between a staging area boundary and the nearest receptor fence line was used as a conservative

estimate of receptor distance. If there was no easily identifiable receptor fence line, then the distance to the nearest receptor building or structure was used. The Tier 2 screening risk assessment was used to determine MICR and HIC for each staging area listed in Table 3.3-10. Acute (non-cancer, HIA) health risks were not assessed because there are no published acute inhalation *reference exposure levels* (RELs) for DPM. Appendix C presents supporting assumptions and methodology and detailed results for the HRA.

**Table 3.3-10 Staging Areas Near Sensitive Receptors** 

Staging area location	Number of staging areas	Distance to nearest sensitive receptor (miles)
Gorman substation yard	1	0.039
Lebec-Clear Canyon Rd.	1	0.034
Lebec Road yard and I-5 yard	2	0.093
Banducci Road yard	1	0.035
Bakersfield Tehachapi Hwy yards	2	0.035
Kern Canyon Road yards	3	0.134
Crane Canyon Road yard	1	0.034

Source: (SCE 2023)

The construction emissions modeled using CalEEMod for the staging yards include exhaust and fugitive dust PM<sub>10</sub> and PM<sub>2.5</sub>. As a conservative estimate, DPM was assumed to be represented entirely by exhaust PM<sub>10</sub>, as PM<sub>2.5</sub> is a subset of PM<sub>10</sub>. The CalEEMod output for staging yards indicates 145.2 pounds (lbs.) of exhaust PM<sub>10</sub> per year from activities at staging areas. This calculation assumes a weekly schedule of six days per week, the total annual DPM emissions from all staging areas. To determine DPM emissions from each individual staging area, the HRA assumed that the total emissions were distributed evenly between distinct staging areas by dividing the number of staging areas at that location by the total number of staging areas and applying that percentage to the total DPM emissions.

## **Summary of Impacts**

Table 3.3-11 presents a summary of the CEQA significance criteria and impacts on air quality that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.3-11 Summary of Proposed Project Impacts to Air Quality

Would the Proposed Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			$\boxtimes$	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard?				
c) Expose sensitive receptors to substantial pollutant concentrations?			$\boxtimes$	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			$\boxtimes$	

## **Impact Discussion**

## a) Would the project conflict with or obstruct implementation of the applicable air quality plans?

## Overview

The analysis below considers the consistency of the Proposed Project with measures included in air quality management plans covering the Proposed Project area. The Proposed Project does not include any stationary sources and therefore would not conflict with any stationary source control measures in any air quality plan. The Proposed Project would result in air quality emissions from mobile sources during construction; therefore, the analysis below focuses on the

Proposed Project consistency with applicable mobile source control measures as summarized in Table 3.3-12

#### Construction

## South Coast Air Quality Management District

The 2022 Air Quality Management Plan (AQMP) (SCAQMD 2022) is the applicable air quality plan in the SCAB. EGM-03 is the only measure in the AQMP that is applicable to the Proposed Project. The Proposed Project is consistent with measure EGM-03, as summarized in Table 3.3-12. Because the Proposed Project is consistent with the applicable measure in the AQMP, the impact from conflict with the AQMP would be less than significant.

#### Eastern Kern Air Pollution Control District

The EKAPCD has adopted two air quality control plans, including the *Reasonably Available Control Technology (RACT) State Implementation Plan (SIP)* (2023) and 2023 Ozone Attainment Plan for 2008 & 2015, 8-Hour Zone National Ambient Air Quality Standards (2023) (EKAPCD 2023a; 2023b). The RACT SIP requires best available control technologies for major stationary sources of VOC and NO<sub>x</sub> as defined by EPA. The Proposed Project is not subject to the RACT SIP because it does not include any stationary sources of pollution; therefore, the Proposed Project would not conflict with the RACT SIP, and no impact would occur.

The 2023 Ozone Attainment Plan includes reasonably available control measures (RACM) for stationary sources and mobiles sources. The RACM for mobile sources assumes California's emission standards, fuel specifications, and incentive programs for heavy-duty vehicles represent all measures that are technologically and economically feasible within California. Because the Proposed Project would operate vehicles that meet state standards, the Proposed Project would not conflict with the 2023 Ozone Attainment Plan, and the impact would be less than significant.

Table 3.3-12 Proposed Project Consistency with Applicable Air Quality Plan Measures

## Measure Consistency

#### **SCAQMD 2022 Air Quality Plan**

## EGM-03: Emission Reductions from Clean Construction Policy

This measure proposes to develop a Clean Construction Policy (CCP) with a set of recommended control measures and approaches that can be utilized for reference and voluntary implementation by local municipalities and public agencies.

The proposed approach to the CCP guidelines would consist of a hierarchy that prioritizes direct, on-site emission reductions. These emission reductions should first come from zero emission off-road construction equipment and on-road haul and material delivery trucks. If zero emission off-road and on-road equipment is not available or feasible for implementation, then the next cleanest, commercially available off-road and on-road equipment should be utilized during construction activities. The CCP has not been adopted by County of Los Angeles to date.

The Proposed Project is consistent with the measure because no CCP has been adopted by Los Angeles County. In addition, APM AIR-1 requires use of Tier 4 engine standards for heavy construction equipment, which would be consistent with the proposed control methods in the measure because it would be the cleanest feasible construction equipment.

## SJVAPCD 2007 PM10 Maintenance Plan and Request for Redesignation

# Regulation VIII 8021: Construction, Demolition, Excavation, Extraction, And Other Earthmoving Activities

5.3 Speed Limitations and Posting of Speed Limit Signs on Uncontrolled Unpaved Access/Haul Roads on Construction Sites

6.3 Dust Control Plan - An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity that describes all fugitive dust control measures to be implemented before, during, and after any dust generating activity.

The Proposed Project is consistent with the measure because speed limitation on uncontrol unpaved roads and a dust control plan are required by the CPUC Environmental Measure for Dust Control During Construction.

#### **Regulation VIII 8031 Bulk Materials**

Control Measures for Bulk Materials - which include handling of bulk materials, storage of bulk materials, on-site transporting of bulk materials, off-site transporting of bulk materials, outdoor transport of bulk materials with a chute or conveyor.

The Proposed Project is consistent with the measure because the CPUC Environmental Measure for Dust Control During Construction requires covering of haul trucks.

Measure Consistency

#### **Regulation VIII 8041 Carryout and Trackout**

5.7 Cleanup of carryout and trackout that shall things such as manually sweeping and picking-up or operating a PM10-efficient street sweeper that has a pick-up efficiency of at least 80 percent as defined in Rule 8011 (General Requirements).

5.8 Carryout and trackout shall be prevented and mitigated by installing and maintaining a trackout control device.

The Proposed Project is consistent with the measure because the CPUC Environmental Measure for Dust Control During Construction requires daily street sweeping with a wet vacuum street sweeper and washing of truck tires prior to leaving the site.

## **Regulation VIII 8061 Paved and Unpaved Roads**

5.2 On any unpaved road segment with 26 or more average daily vehicle trips, the owner/operator shall limit visible dust emissions to 20% opacity and comply with the requirements of a stabilized unpaved road by application and/or reapplication/maintenance of at least one of the listed control measures, or shall implement an APCO-approved Fugitive PM10 Management Plan as specified in Rule 8011 (General Requirements): watering; uniform layer of washed gravel; chemical/organic dust stabilizers/suppressants in accordance with the manufacturer's specifications; roadmix; paving; any other method that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road.

The Proposed Project is consistent with the measure because the CPUC Environmental Measure for Dust Control During Construction requires compliance with local air district standards, and that dust be suppressed on unpaved roads and work areas by applying water or other dust suppressants.

## Regulation VIII 8071 Unpaved Vehicle/Equipment Traffic Areas

5.1.1. On any unpaved road segment with 50 or more average daily vehicle trips, the owner/operator shall limit visible dust emissions to 20% opacity and comply with the requirements of a stabilized unpaved road by application and/or reapplication/maintenance of at least one of the following control measures, or shall implement an APCO-approved Fugitive PM10 Management Plan as specified in Rule 8011 (General Requirements): watering; uniform layer of washed gravel; chemical/organic dust stabilizers/suppressants in accordance with the manufacturer's specifications; vegetative materials;; paving; roadmix; any other method that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road.

The Proposed Project is consistent with the measure because the CPUC Environmental Measure for Dust Control During Construction requires compliance with local air district standards, which would include the opacity thresholds and requires that dust be suppressed on unpaved roads and work areas by applying water or other dust suppressants.

## San Joaquin Valley Air Pollution Control District

The 2022 Plan for the 2015 8-Hour Ozone Standard (SJVAPCD 2022), 2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard (SJVAPCD 2020), 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards (SJVAPCD 2018), and the 2007 PM10 Maintenance Plan (SJVAPCD 2007) are the air quality plans applicable to the SJVAB.

The 2022 Plan for the 2015 8-Hour Ozone Standard includes compliance with CARB off-road vehicle standards as well as District Rule 9510 for Indirect Source Review for mobile source control. District Rule 9510 requires emission reductions from construction of development projects but does not apply to utility projects. The Proposed Project would comply with CARB off-road vehicle standards and is a utility project, which is not subject to District Rule 9710. The Proposed Project would therefore not conflict with the 2022 Plan for the 2015 8-Hour Ozone Standard, and the impact would be less than significant.

The 2020 RACT Demonstration for the 2015 8-Hour Ozone Standard requires the adoption of RACT level requirements for major stationary sources of VOC and NO<sub>x</sub> as defined by EPA. The Proposed Project does not include a stationary source of emissions; therefore, the 2020 RACT Demonstration for the 2015 8-Hour Ozone Standard does not apply to the Proposed Project, and no impact would occur.

The 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards requires implementation of state mobile source reduction measures. The Proposed Project would comply with all the applicable state mobile source reduction control measures and therefore would not conflict with or obstruct the 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards. The impact would be less than significant.

The 2007 PM<sub>10</sub> Maintenance Plan is a plan to assure the San Joaquin Valley's continued attainment of EPA PM<sub>10</sub> standard since EPA designated the SJVAB as an attainment/maintenance area for PM<sub>10</sub>. The Proposed Project would comply with all the applicable measures from the 2007 PM<sub>10</sub> Maintenance Plan, including Regulation VIII Rules 8011, 8021, 8031, 8041, 8061, and 8071. The Proposed Project's consistency with Regulation VIII is summarized in Table 3.3-12 The Proposed Project would be consistent with the applicable control measures in the 2007 PM<sub>10</sub> Maintenance Plan with implementation of the CPUC Environmental Measure, Dust Control During Construction; therefore, the impact would be less than significant.

## **Operation and Maintenance**

The subtransmission line is not a source of air pollutant emissions, and operation of the subtransmission line would not generate emissions of criteria air pollutants. Maintenance activities for the Proposed Project would be similar to maintenance of the existing subtransmission lines, but the frequency may be reduced due to replacement of aging infrastructure with new infrastructure. Because the nature and frequency of maintenance activities for the replacement subtransmission lines and infrastructure would be similar to that for the existing subtransmission lines, maintenance of the Proposed Project would not result in

increased emissions of criteria pollutants. Operation and maintenance activities would not involve new development and would not induce population growth. The Proposed Project would, therefore, not conflict with any air quality management plans, and there would be no impact.

Required APMs and MMs: CPUC Environmental Measure Dust Control During Construction.

b) Would the Proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under Federal or State ambient air quality standards?

#### Construction

Construction of the Proposed Project would generate emissions of criteria air pollutants. The entire Proposed Project area is in a nonattainment area for ozone and PM<sub>10</sub>. Portions of the Proposed Project in SJVAB and SCAB are in nonattainment areas for PM<sub>2.5</sub>, and the portion of the Proposed Project in the SCAB is also a nonattainment area for lead. The Proposed Project construction emissions could contribute to existing violations of the ambient air quality standards for ozone, PM<sub>10</sub>, and PM<sub>2.5</sub> because the Proposed Project motor vehicles, helicopters, off-road equipment, and other construction equipment would directly emit criteria air pollutants and the ground disturbance could generate fugitive dust. Construction of the Proposed Project would not generate lead as the Proposed Project materials would not introduce lead to the area. The equipment used to construct the Proposed Project are itemized and detailed in Table 2-8.

Table 3.3-13, Table 3.3-14, and Table 3.3-15 summarize the annual controlled and uncontrolled emissions from construction activities in the SJVAB, EKAB, and SCAB, respectively. Controlled emissions are the estimated emissions from the Proposed Project construction activities with implementation of CPUC Environmental Measure for Dust Control During Construction.

As shown in Table 3.3-13 and Table 3.3-15, the uncontrolled construction emissions within the SJVAB and SCAB would exceed the PM10 thresholds established by the SJVAPCD and SCAQMD, respectively. Both the SJVAB and SCAB are nonattainment areas for PM10, and exceedance of the threshold for PM<sub>10</sub> would represent a cumulatively considerable net increase in generation of a criteria pollutant for which the region is in nonattainment and would thus be a significant impact. CPUC Environmental Measure Dust Control During Construction requires various measures such as watering or covering all exposed surfaces that are potentially dustgenerating, phasing ground disturbing activities to reduce the amount of disturbed surfaces at one time, limiting the speed limit to 15 miles per hour on unpaved roads, and halting construction activities during periods where wind conditions are 50 miles per hour or higher. With implementation of CPUC Environmental Measure Dust Control During Construction, the Proposed Project construction emissions would not exceed SJVAPCD or SCAQMD thresholds, as shown in the controlled emissions in Table 3.3-13 and Table 3.3-15. With implementation of the CPUC Environmental Measure, the Proposed Project would not result in a cumulatively considerable net increase in any criteria pollutant for which the region is in nonattainment, and the impact would be less than significant.

Table 3.3-13 Estimated Construction Annual Air Pollution Emissions (tons/year) within SJVAB

Year/criteria	VOC	NO <sub>x</sub>	CO	<b>\$02</b>	PM <sub>10</sub>	PM <sub>2.5</sub>
Uncontrolled emissions						
2024	0.18	1.72	1.23	0.01	21.6	2.38
2025	0.78	6.42	5.78	0.03	83.7	8.58
2026	1.20	4.64	5.41	0.02	56.7	7.54
SJVAPCD Threshold	10	10	100	27	15	15
Threshold Exceeded?	No	No	No	No	Yes	No
Controlled emissions						
2024	0.18	1.72	1.23	0.01	1.55	0.21
2025	0.78	6.42	5.78	0.03	5.76	0.79
2026	1.20	4.64	5.41	0.02	4.32	0.64
SJVAPCD threshold	10	10	100	27	15	15
Threshold exceeded?	No	No	No	No	No	No

Source: (SCE 2022)

Table 3.3-14 Estimated Construction Annual Air Pollution Emissions (tons/year) within EKAB

Year/criteria	VOC	NO <sub>x</sub>	CO	<b>SO</b> <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
Uncontrolled emission	s					
2024	0.03	0.28	0.20	<0.01	3.47	0.38
2025	0.12	1.03	0.93	<0.01	13.5	1.38
2026	0.19	0.75	0.87	<0.01	9.11	1.21
EKAPCD threshold	25	25	-	27	15	-
Threshold exceeded?	No	No	-	No	No	-
Controlled emissions						
2024	0.03	0.28	0.20	<0.01	0.25	0.03
2025	0.12	1.03	0.93	<0.01	0.93	0.13
2026	0.19	0.75	0.87	<0.01	0.69	0.10

Year/criteria	voc	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
EKAPCD threshold	25	25	-	27	15	-
Threshold exceeded?	No	No	-	No	No	-

Source: (SCE 2022)

Table 3.3-15 Estimated Uncontrolled Construction Annual Air Pollution Emissions (pounds/day) within SCAB

Year/criteria	VOC	NO <sub>x</sub>	CO	<b>SO</b> <sub>2</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	
Uncontrolled emissions							
2024	5.62	83.9	26.6	0.40	98.2	12.0	
2025	8.05	55.5	35.7	0.32	113	13.2	
2026	20.2	46.4	62.8	0.28	193	21.5	
SCAQMD threshold	75	100	550	150	150	55	
Threshold exceeded?	No	No	No	No	Yes	No	
Controlled emiss	sions						
2024	5.62	83.9	26.6	0.40	21.1	4.26	
2025	8.05	55.5	35.7	0.32	22.9	4.21	
2026	20.2	46.4	62.8	0.28	40.9	6.32	
SCAQMD threshold	75	100	550	150	150	55	
Threshold exceeded?	No	No	No	No	No	No	

Source: (SCE 2022)

## **Operation and Maintenance**

The subtransmission line is not a source of air pollutant emissions, and operation of the subtransmission line would not generate emissions of criteria air pollutants for which the region is in non attainment. Maintenance activities for the Proposed Project would be similar to those for maintenance of the existing subtransmisison lines, but the frequency may be reduced due to replacement of aging infrastructure with new infrastructure. Because the nature and frequency of maintenance activities for the replacement subtransmission lines and infrastructure would be similar to that for the existing subtransmission lines, maintenance of the Proposed Project would not result in increased emissions of criteria pollutants. Operation and maintenance activities would, therefore, not result in a cumulatively considerable net increase in criteria air

pollutants for which the region is in nonattainment, and the impact would be less than significant.

Required APMs and MMs: CPUC Environmental Measure Dust Control

## c) Would the Proposed Project expose sensitive receptors to substantial pollutant concentrations?

#### Construction

Construction of the Proposed Project would generate DSM and fugitive dust. Diesel and jet fuel exhaust would be emitted from heavy equipment and helicopters operating at the Proposed Project work areas, and the Proposed Project ground disturbing activities would generate fugitive dust. Health effects from TACs are typically framed in terms of incremental cancer risk. Incremental cancer risk is measured by the likelihood that a person continuously exposed to TACs over a 70-year lifetime would develop cancer. OEHHA guidelines do not recommend assessing TACs for a project lasting less than two months due to the uncertainty in assessing cancer risk from very short-term exposure (OEHHA 2015). Due to the linear nature of the Proposed Project, construction activities would be spread across the approximately 63-milelong alignment and would last between a few days and a few weeks at each construction site. Health risk impacts for construction work occurring linearly is not expected to impact any one sensitive receptor for a duration of more than 2 months; therefore, the HRA did not evaluate the health risks associated with Proposed Project construction associated with the reconductoring and pole replacement along the power line alignment.

The HRA evaluated the potential health risk impacts from the staging yards to nearby sensitive receptors because the staging yards are expected to be used for 23 months during the entirety of construction of the Proposed Project (see Table 3.3-16). The SCAQMD Tier 2 HRA methodology was used to determine MICR and HIC for DPM emissions from the staging areas, as shown in Table 3.3-16. The MICR and HIC levels for each staging yard within 0.25 mile from a sensitive receptor or Proposed Project worker is below the significance threshold of 10 in one million MICR and 1.0 for the maximally exposed individual for HIC for receptors within EKAB and SCAB and the significance threshold of 20 in one million MICR and 1.0 for the maximally exposed individual for HIC for receptors within SJVAB; which is a majority of the Proposed Project area and nearby sensitive receptors. Since the HRA determined that the MICR and HIC levels are below the significance thresholds, the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations and, therefore, the impact would be less than significant.

Table 3.3-16 Staging Areas Near Sensitive Receptors

Staging area	MICR nearby sensitive receptor (per million)	MICR project worker (per million)	Chronic (HIC) nearby sensitive receptor	Chronic (HIC) project worker	MICR/HIC threshold exceedance? <sup>a</sup>
Gorman sub yard	3.48	0.175	0.00203	0.00203	No/No
Lebec-Clear Canyon Road	4.04	0.203	0.00236	0.00236	No/No
Lebec Road Yard and I-5 yard	2.08	0.104	0.00121	0.00121	No/No
Banducci Road yard	3.90	0.196	0.00228	0.00228	No/No
Bakersfield Tehachapi Hwy yards	7.79	0.392	0.00455	0.00455	No/No
Kern Canyon yards	1.03	0.052	0.000604	0.000604	No/No
Crane Canyon yard	4.04	0.203	0.00236	0.00236	No/No

#### Note:

Source: (SCE 2023)

## **Operation and Maintenance**

Operation of the Proposed Project would not generate any air pollutants. Annual inspections and routine maintenance of the Proposed Project would occur at the same intensity, frequency, and duration as the existing inspection and maintenance activities for the existing subtransmission lines; however, maintenance activities could be reduced as aging infrastructure would be replaced with new infrastructure. SCE would continue to use helicopters for annual inspections of transmission lines in areas with no vehicle access or rough terrain. Most vehicles used along the entire alignment would be crew trucks and would not utilize diesel engines. Operation and maintenance activities would not expose sensitive receptors to substantial concentrations of pollutants that result in adverse health impacts because the operation and maintenance activities would not result in additional emissions relative to the current ongoing maintenance of SCE facilities. Impacts would be less than significant. No mitigation is required.

Required APMs and MMs: APM AIR-1

MICR threshold is 10 per million persons, HIC threshold is 1.0 within SCAB and EKAB, and MICR threshold is 20 per million persons within SJVAB.

## d) Would the Proposed Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The Proposed Project would not be a source of odors or other emissions not discussed previously. The Proposed Project site is also generally located in unpopulated areas and is not located in proximity to a substantial number of people, with the exception of the small portion of the Proposed Project in Segment 4 and Segment 5, where a residential community is adjacent the Proposed Project site, as well as where El Tejon School is in proximity to Segment 2 (as shown in Figure 3.3-2, Figure 3.3-3, and Figure 3.3-4). Construction activities would not be a major source of odors from emissions from vehicles and heavy construction equipment. Use of heavy construction equipment and vehicles in proximity to residential receptors and the school would not generate odors or other emissions that would affect a substantial number of people due to the short duration of activities and the disbursement of odors from moving vehicles and equipment. The Proposed Project's impact from generation of emissions adversely affecting a substantial number of people would be less than significant.

Required APMs and MMs: None required.

#### 3.3.3 References

- California Air Resources Board (CARB). 1993. The Identification of Federal Hazardous Air Pollutants as Toxic Air Contaminants. Available:
  - https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.
- ———. 1998a. Executive Summary for the "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant."
- ——. 1998b. "The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-Fueled Engines." Fact sheet.
- https://ww2.arb.ca.gov/sites/default/files/2020-02/factsht1.pdf.
  ———. 2022. "Maps of Current State and Federal Area Designations." 2022.
  - https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.
- ———. 2023. "California Air Districts." Feature Service.
  - $\underline{https://www.arcgis.com/home/item.html?id=d2721065c3824b0cb69928256d6b6fc6}.$
- City of Arvin. 2018. "Arvin Zoning Ordinance Map." Feature Server. Vector digital data. "Sensitive Receptors in the Proposed Project Vicinity" generated by Panorama, Environmental, Inc.: Using Arc GIS (August 29, 2023). <a href="https://services.arcgis.com/jDGuO8tYggdCCnUJ/arcgis/rest/services/Arvin Zoning Ordinance Map/FeatureServer">https://services.arcgis.com/jDGuO8tYggdCCnUJ/arcgis/rest/services/Arvin Zoning Ordinance Map/FeatureServer</a>.
- County of Los Angeles. 2016. "Public Elementary Schools." Map service. Vector digital data. "Sensitive Receptors in the Proposed Project Vicinity" created by Panorama Environmental, Inc.: Using ArcGIS August 28, 2023. https://data.lacounty.gov/datasets/50584b00f5674f989a982821d81c97d3 49/about.
- Eastern Kern Air Pollution Control District (EKAPCD). 2023a. Ozone Attainment Plan for the 2008 and 2015, 8-Hour Ozone National Ambient Air Quality Standards (NAAQS).

Available: <a href="http://www.kernair.org/Main">http://www.kernair.org/Main</a> Pages/Subpages/Rules Sub/CEQA Guidelines.html.

- ——. 2023b. Reasonably Available Control Technology (RACT) State Implementation Plan (SIP) for the 2008 and 2015 8-Hour Ozone National Ambient Air Quality Standards. Available: <a href="http://www.kernair.org/Main\_Pages/Subpages/Info\_Sub/Attainment.html">http://www.kernair.org/Main\_Pages/Subpages/Info\_Sub/Attainment.html</a>.
- ESRI® and U.S. Geological Survey (USGS). 2010. "USA Geographic Names Information System Churches." Shapefile. Geospatial data. Last updated December 27,2023. <a href="https://www.arcgis.com/home/item.html?id=2dc11432d7d94d0db943961e3710c719">https://www.arcgis.com/home/item.html?id=2dc11432d7d94d0db943961e3710c719</a>.
- Federal Office Civil Aviation (FOCA). 2015. Guidance on the Determination of Helicopter Emissions. Edition 2.

  <a href="https://www.bazl.admin.ch/dam/bazl/de/dokumente/Fachleute/Regulationen und Grundlagen/guidance">https://www.bazl.admin.ch/dam/bazl/de/dokumente/Fachleute/Regulationen und Grundlagen/guidance on the determinationofhelicopteremissions.pdf.download.pdf/guidance on the determinationofhelicopteremissions.pdf.</a>
- Kern County Air Pollution Control District (APCD). 1999. Guidelines for Implementation of the California Environmental Quality Act (CEQA) of 1970, as Amended.
- Kern County GIS. 2014. "Kern Schools." "Sensitive Receptors in the Proposed Project Vicinity" generated by Panorama Environmental, Inc.: Using Arc GIS (August 29, 2023). <a href="https://maps.kerncounty.com/H5/index.html?viewer=KCPublic">https://maps.kerncounty.com/H5/index.html?viewer=KCPublic</a>.
- ——. 2018. "Public Libraries." "Sensitive Receptors in the Proposed Project Vicinity" created by Panorama Environmental, Inc.: Using Arc GIS (August 29, 2023).
- Kern County Planning and Natural Resources. 2019. "Kern County General Plan." Feature Service. Geospatial data. "Sensitive Receptors in the Proposed Project Vicinity" generated by Panorama Environmental, Inc.: Using Arc GIS August 29, 2023. <a href="https://geodat-">https://geodat-</a>
  - kernco.opendata.arcgis.com/datasets/575bd48fb01c44899334301c8e6da015\_0/about.
- Mojave Desert Air Quality Management District (MDAQMD). 2023. Federal 70 Ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Area). Victorville, CA.
- Oak Ridge National Laboratory (ORNL) and National Geospatial-Intelligence Agency (NGA) Homeland Security Infrastructure Program (HSIP) Team. 2020. "Prison Points." Feature Service. Vector digital data. "Sensitive Receptors in the Proposed Project Vicinity" generated by Panorama Environmental, Inc.: Using Arc GIS (August 29, 2023). <a href="https://www.arcgis.com/home/item.html?id=2a33288266bd44eabd80e7559474cd23">https://www.arcgis.com/home/item.html?id=2a33288266bd44eabd80e7559474cd23</a>.
- Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments. Air, Community, and Environmental Research Branch Office of Environmental Health Hazard Assessment California Environmental Protection Agency. Available: <a href="https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0">https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0</a>.
- San Joaquin Valley Air Pollution Control District (SJVAPCD). 2007. PM10 Maintenance Plan and Request for Redesignation. Available: <a href="https://ww2.valleyair.org/rules-and-planning/air-quality-plans/">https://ww2.valleyair.org/rules-and-planning/air-quality-plans/</a>.
- ———. 2015. Guidance for Assessing and Mitigating Air Quality Impacts. <a href="http://www.valleyair.org/transportation/GAMAQI.pdf">http://www.valleyair.org/transportation/GAMAQI.pdf</a>.
- ——. 2018. Plan for the 1997, 2006, and 2012 PM2.5 Standards. Available: <a href="https://ww2.valleyair.org/rules-and-planning/air-quality-plans/">https://ww2.valleyair.org/rules-and-planning/air-quality-plans/</a>.

- — . 2020. Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard. <a href="https://www.valleyair.org/Air Quality Plans/docs/2020-RACT-Demonstration.pdf">https://www.valleyair.org/Air Quality Plans/docs/2020-RACT-Demonstration.pdf</a>.
- ——. 2022. Plan for the 2015 8-Hour Ozone Standard. Available:

  <a href="https://ww2.valleyair.org/rules-and-planning/air-quality-plans/ozone-plans/2022-ozone-plan-for-the-san-joaquin-valley/">https://ww2.valleyair.org/rules-and-planning/air-quality-plans/ozone-plans/2022-ozone-plan-for-the-san-joaquin-valley/</a>.
- South Coast Air Quality Management District (SCAQMD). 2008. Final Localized Significance Threshold Methodology. Available: <a href="http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf">http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf</a>.
- ——. 2009. "Appendix C: Mass Rate LST Look-up Table." In Final Localized Significance Threshold Methodology. Available: <a href="http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf">http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf</a>.
- ———. 2017. Risk Assessment Procedures for Rules 1401, 1401.1 and 212. Version 8.1. <a href="http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12">http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12</a>.
- ——. 2022. 2022 Air Quality Management Plan. Available: <a href="http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan">http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan</a>.
- ——. 2023. South Coast AQMD Air Quality Significance Thresholds. Available: <a href="http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook">http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook</a>.
- ——. n.d. "Visible Emissions, Public Nuisance & Fugitive Dust." Accessed October 19, 2023. <a href="https://www.aqmd.gov/home/rules-compliance/compliance/inspection-process/visible-emissions-public-nuisance-fugitive-dust">https://www.aqmd.gov/home/rules-compliance/compliance/inspection-process/visible-emissions-public-nuisance-fugitive-dust</a>.
- Southern California Edison (SCE). 2022. "SCE Deficiency Report 1 GKR Appendix B Emissions Calc AQ Files." XLS. Table.
- ---. 2023. "Health Risk Assessment."
- U.S. Environmental Protection Agency (EPA). 2023. "Initial List of Hazardous Air Pollutants with Modifications." Reports and Assessments. December 7, 2023. <a href="https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications">https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications</a>.
- U.S. Environmental Protection Agency (EPA) Office of Air and Radiation (OAR), Office of Air Quality Planning and Standards. 2015. "Air Quality System (AQS) Monitoring Network." Map service. Using Arc GIS August 25, 2023. Updated weekly. <a href="https://gispub.epa.gov/arcgis/rest/services/OAR">https://gispub.epa.gov/arcgis/rest/services/OAR</a> OAQPS/AQSmonitor\_sites/MapServer.