

C.4 Air Quality

Introduction

This section describes effects associated with air quality that would be caused by implementation of the VSSP. The following discussion addresses existing environmental conditions in the affected area, identifies and analyzes environmental impacts for the proposed Project, and recommends measures to reduce or avoid significant impacts anticipated from Project construction, operation, and maintenance. In addition, existing laws and regulations relevant to air quality are described. In some cases, compliance with these existing laws and regulations would serve to reduce or avoid certain impacts that might otherwise occur with the implementation of the proposed Project.

Scoping Issues Addressed

During the scoping period for the EIR (May 5 through June 8, 2015), written comments were received from agencies, organizations, and the public. These comments identified various substantive issues and concerns relevant to the EIR analysis. The South Coast Air Quality Management District (SCAQMD, 2015a) submitted a scoping comment letter that included comments specific to the air quality analysis. The issues presented in the SCAQMD letter are addressed in this section, and the key issues from the letter are summarized below.

- Recommend using SCAQMD California Environmental Quality Act (CEQA) guidance and requested appropriate analysis of construction and operation air pollutant emissions impacts including localized health impacts.
- Feasible mitigation should be provided to reduce significant adverse air quality impacts, and sources to identify possible mitigation measures were listed.

C.4.1 Environmental Setting

C.4.1.1 Regional Climate and Meteorology

The proposed Project is a linear project located in Riverside County, within the South Coast Air Basin (SCAB) and under the jurisdiction of the SCAQMD. Table C.4-1 presents a summary of monthly climate data for the City of Menifee, which is the available and representative data for the Project area.

The proposed Project site has a Mediterranean climate or Dry-Summer Subtropical climate that is hot, dry summers and cool winters with a small amount of seasonal precipitation that occurs primarily during the winter months. Summers typically have clear skies, warm temperatures, and low humidity. As shown in Table C.4-1, average summer (June to September) high and low temperatures in the study area range from 98°F to 54°F. Average winter (December to March) high and low temperatures range from 70°F to 34°F. The average annual

Month	Temperature (°F)		Precipitation
	High	Low	
January	66	36	2.62
February	68	38	2.86
March	70	41	2.34
April	77	44	0.63
May	83	50	0.33
June	92	54	0.04
July	98	59	0.04
August	98	60	0.25
September	93	57	0.18
October	84	49	0.26
November	74	40	0.76
December	68	34	1.09

Source: Intellicast, 2015.

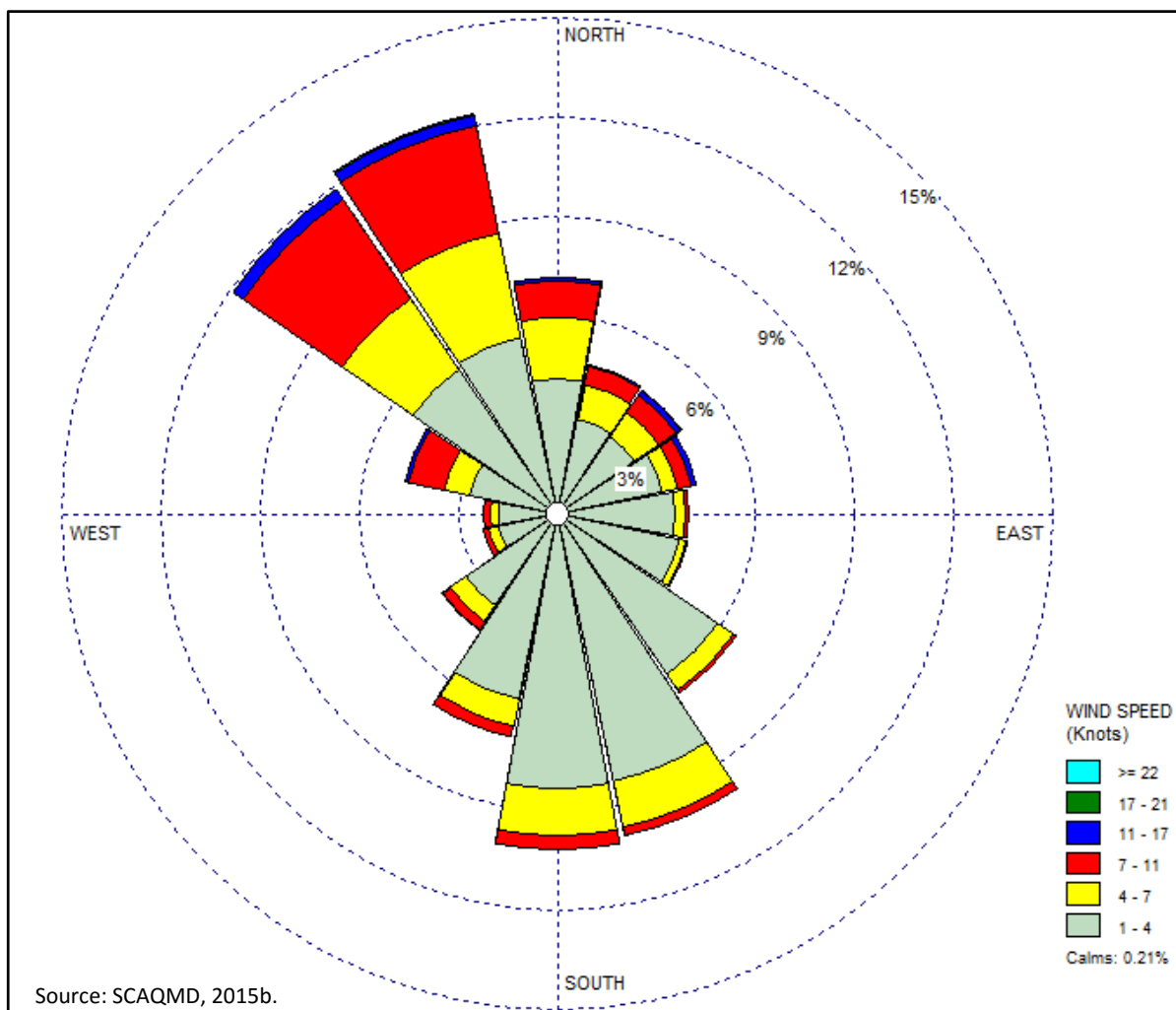


Figure C.4-1 – Wind Rose from Perris Valley Monitoring Station (2007 – 2011)

precipitation is a little over 11 inches with over 90 percent occurring between November and April. Summers are very dry with six straight months starting in May averaging a third of an inch of precipitation or less. Little precipitation occurs during summer because high-pressure cells block migrating storm systems over the eastern Pacific.

The typical wind speeds and directions for the Project area were identified using a wind rose for the nearby Perris Valley air pollutant monitoring station (representative data). Figure C.4-1 presents the wind rose data. As depicted in the figure, the data shows a strong predominant direction either “up or down valley (similar to the direction of the I-215 proximate to the proposed Project route), a large number of low wind speed hours (below 4 miles per hour) and higher wind speed generally from the northwest or north northwest (down valley), but very few calm wind hours (0.21 percent). The wind rose is based on data between 2007 and 2011; the average wind speed during this five-year period was just over 3.4 knots (3.9 miles per hour).

C.4.1.2 Air Pollutants and Monitoring Data

Air pollutants are defined as two general types: (1) “criteria” pollutants, representing six pollutants for which national and state health- and welfare-based ambient air quality standards have been established; and (2) toxic air contaminants (TACs), which may lead to serious illness or increased mortality even when present at relatively low concentrations. An additional air quality-related concern is Valley Fever.

Criteria Pollutants

The United States Environmental Protection Agency (USEPA), California Air Resources Board (CARB), and the local air districts classify an area as attainment, unclassified, or nonattainment depending on whether or not the monitored ambient air quality data shows compliance, insufficient data available, or non-compliance with the ambient air quality standards (AAQS), respectively. Table C.4-2 provides the National and California Ambient Air Quality Standards (NAAQS and CAAQS) relevant to the proposed Project.

Pollutant	Averaging Time	California Standards	National Standards	Health Effects
Ozone (O3)	1-hour	0.09 ppm	--	Breathing difficulties, lung tissue damage
	8-hour	0.070 ppm	0.075 ppm	
Respirable particulate matter (PM10)	24-hour	50 µg/m ³	150 µg/m ³	Increased respiratory disease, lung damage, cancer, premature death
	Annual	20 µg/m ³	--	
Fine particulate matter (PM2.5)	24-hour ^a	--	35 µg/m ³	Increased respiratory disease, lung damage, cancer, premature death
	Annual ^b	12 µg/m ³	12 µg/m ³	
Carbon monoxide (CO)	1-hour	20 ppm	35 ppm	Chest pain in heart patients, headaches, reduced mental alertness
	8-hour	9.0 ppm	9 ppm	
Nitrogen dioxide (NO2)	1-hour	0.18 ppm	0.100 ppm ³	Lung irritation and damage
	Annual	0.030 ppm	0.053 ppm	
Sulfur dioxide (SO2)	1-hour	0.25 ppm	0.075 ppm ^c	Increases lung disease and breathing problems for asthmatics
	3-hour	--	0.5 ppm	
	24-hour	0.04 ppm	--	

Source: CARB, 2001; CARB, 2015a.

Notes:

ppm = parts per million; µg/m³ = micrograms per cubic meter; "--" = no standards

^(a) The federal 24-hour PM2.5 standard is based on the 98th percentile of maximum daily monitored values.

^(b) The federal standard shown is the primary standard, the secondary standard is 15 µg/m³.

^(c) The new federal 1-hour NO2 and SO2 standards are based on the 98th and 99th percentile of daily hourly maximum values, respectively.

Table C.4-3 summarizes the federal and State attainment status of criteria pollutants for the SCAB based on the NAAQS and CAAQS, respectively. For simplification, the table identifies pollutants with unclassifiable/attainment or some similar status as having "attainment" in the table, however this does not apply to pollutants with nonattainment or attainment/maintenance status.

Pollutant	Attainment Status	
	Federal	State
O3	Nonattainment	Nonattainment
PM10	Attainment	Nonattainment
PM2.5	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO2	Attainment	Attainment
SO2	Attainment	Attainment

Source: CARB, 2015b; USEPA, 2015.

Table C.4-4 summarizes the historical air quality data for the Project area collected at the nearest representative air quality monitoring station in Riverside County. The air monitoring station used to provide ozone and PM10 concentrations is the Perris Valley monitoring station located just over five miles northwest of the northernmost part of the proposed Project route. The air monitoring station used to provide CO and NO2 data is the Lake Elsinore monitoring station located a little more than ten miles west of the proposed Project route. Finally, the PM2.5 and SO2 concentrations are from the Riverside Rubidoux monitoring station located over 20 miles to the northwest of the northernmost part of the proposed Project route. Table C.4-4 presents the maximum pollutant levels measured from these monitoring stations from 2011 through 2013.

Table C.4-4. Background Ambient Air Quality Data				
Pollutant	Averaging Time	Maximum Concentration (ppm or µg/m³)^a		
		2011	2012	2013
O3	1-hour	0.125	0.111	0.108
	8-hour	0.112	0.093	0.090
PM10	24-hour	65	62	70
	Annual	29.2	26.5	33.6
PM2.5	24-hour 98 th Percentile	31.0	33.7	34.6
	Annual	13.6	13.5	12.5
NO2	1-hour	0.050	0.048	0.047
	1-hour 98 th Percentile	0.041	0.041	0.040
	Annual	0.010	0.010	0.008
CO	8-hour	0.7	0.7	0.6
SO2	1-hour	0.0513	0.0043	0.0081
	1-hour 99 th Percentile	0.0125	0.002	0.0046

Source: SCAQMD, 2015c.

Notes:

ppm = parts per million; µg/m³ = micrograms per cubic meter; “—” = no data

^(a) Gaseous pollutant (O3, SO2, NO2, and CO) concentrations are shown in ppm and particulate (PM10 and PM2.5) concentrations are shown in µg/m³. The values provided may depict either “state” or “federal” maximum values depending on the AAQS that is applicable, or to provide complete data where otherwise missing the “state” or “federal” values.

The ambient air quality data shown above indicates that in the three years of data shown, the local Project area has experienced exceedances of the federal and State ozone and PM2.5 standards, and the State PM10 standards, but experienced no exceedances of any other federal or State standards.

Toxic Air Contaminants

TACs are compounds that are known or suspected to cause adverse long-term (cancer and chronic) and/or short-term (acute) health effects. The Health and Safety Code defines a TAC as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a present or potential hazard to human health. Individual TACs vary greatly in the health risk they present; at a given level of exposure, one TAC may pose a hazard that is many times greater than another’s. There are almost 200 compounds designated in California regulations as TACs (17 CCR §§ 93000-93001). The list of TACs also includes the substances defined in federal statute as hazardous air pollutants pursuant to Section 112(b) of the federal Clean Air Act (CAA) [42 U.S.C. §7412(b)]. Some of the TACs are groups of compounds that contain many individual substances (e.g., copper compounds, polycyclic aromatic compounds). TACs are emitted from mobile sources, including diesel engines, and industrial processes and stationary sources, such as dry cleaners, gasoline stations, paint and solvent operations, and stationary fossil fuel-burning

combustion. Ambient TACs concentrations tend to be highest in urbanized and industrial areas near major TACs emissions sources or near major mobile TACs emissions sources, such as heavily traveled highways or major airports/seaports. Unlike for criteria pollutants, no regular monitoring and reporting of all ambient TACs concentrations, such as diesel particulate matter (DPM) concentrations, is performed in southwestern Riverside County. Generally, TACs do not have ambient air quality standards. The one TAC that has a federal ambient air quality standard (lead) and the three TACs that have State ambient air quality standards (lead, vinyl chloride, and hydrogen sulfide) are pollutants that are in attainment of these standards in Riverside County and that are not relevant to the emissions sources for this proposed Project.

Valley Fever

Coccidioidomycosis, often referred to as San Joaquin Valley Fever or Valley Fever, is one of the most studied and oldest known fungal infections. Valley Fever most commonly affects people who live in hot dry areas with alkaline soil and varies with the season. This disease, which affects both humans and animals, is caused by inhalation of arthroconidia (spores) of the fungus *Coccidioides immitis* (CI). CI spores are found in the top few inches of soil and the existence of the fungus in most soil areas is temporary. The cocci fungus lives as a saprophyte (an organism, especially a fungus or bacterium, which grows on and derives its nourishment from dead or decaying organic matter) in dry, alkaline soil. When weather and moisture conditions are favorable, the fungus "blooms" and forms many tiny spores that lie dormant in the soil until they are stirred up by wind, vehicles, excavation, or other ground-disturbing activities and become airborne. Agricultural workers, construction workers, and other people who are outdoors and are exposed to wind, dust, and disturbed topsoil are at an elevated risk of contracting Valley Fever (CDPH, 2013).

Most people exposed to the CI spores will not develop the disease and of 100 persons who are infected approximately 60 will have no symptoms, 40 will have some symptoms, and 2 to 4 will have the more serious disseminated forms of the disease. After recovery nearly all, including the asymptomatic, develop a life-long immunity to the disease (Guevara, 2014). African Americans, Asians, Women in the 3rd trimester of pregnancy, and persons whose immunity is compromised are most likely to develop the most severe form of the disease (CDC, 2013). In addition to humans, a total of 70 different species are known to be susceptible to Valley Fever infections, including dogs, cats, and horses; with dogs being the most susceptible (LACPH, 2007).

The proposed Project is located in an area designated as suspected endemic for Valley Fever by the Center for Disease Control (CDC, 2013). Annual case reports for 2000 through 2013 from the California Department of Public Health indicate that Riverside County has reported incident rates for Valley Fever that range from a rate of 1.5 to 3.8 cases per year per 100,000 population (CDPH, 2011; CDPH, 2014). These incidence rates for Riverside County have been below the State average incidence rates and have been well below the worst-case annual rates for other counties within the State during this period. The worst case rate occurred in the San Joaquin Valley where there are over 300 cases per 100,000 population. Given the low incidence rate in Riverside County as a whole, and the fact that the proposed Project would not have large grading or excavation activities, the potential for the Project construction activities to encounter and disperse CI spores and create the potential for additional Valley Fever infections is considered negligible.

Sensitive Receptors

The impact of air emissions on sensitive members of the population is a special concern. Sensitive receptor groups include children and infants, pregnant women, the elderly, and the acutely and chronically ill.

According to SCAQMD guidance (SCAQMD, 2005), sensitive receptor locations include those where persons who are particularly susceptible to health effects due to exposure to an air contaminant can be found. This includes schools, playgrounds, athletic fields, daycare centers, retirement homes, rehabilitation and convalescent centers, hospitals, and residences.

Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Residential areas can also be sensitive to air pollution due to high exposure periods for individual that do not leave their residences often. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public.

The Project route is long and goes through many different land use areas, including open areas, residential areas, commercial/industrial areas, and agricultural areas. The Valley Substation at the northern extent of the proposed Project is in a mixed commercial/industrial and agricultural area with residences about 500 meters to the north and south. There are residences directly adjacent to the proposed route right of way (ROW). The school nearest to the proposed route is the Nicolas Valley Elementary School in Temecula, located approximately a third of a mile west of the Project route near the extreme southernmost part of the route. There are several other schools located within a mile of the Project area. Also, there are several parks located adjacent to or within a mile of the Project route. There are no known hospitals located within a mile of the proposed route, but the Loma Linda University Medical Center is located within a mile of SCE's proposed alternative route. For the purposes of the impact assessment all subtransmission line construction has been assumed to be within 25 meters of a sensitive receptor, while the Project related Valley Substation construction work and undergrounding work located adjacent to the Valley substation has been assumed to be within 500 meters and 460 meters of a sensitive receptor, respectively.

C.4.2 Regulatory Framework

Sources of air emissions in the SCAB are regulated by the USEPA, CARB, and SCAQMD. The role of each regulatory agency is discussed below.

C.4.2.1 Federal

United States Environmental Protection Agency

Federal Clean Air Act

The federal CAA of 1970 and its subsequent amendments form the basis for the nation's air pollution control effort. The USEPA is responsible for implementing most aspects of the CAA. Basic elements of the act include the establishment of NAAQS for criteria air pollutants (see Table C.4-2), hazardous air pollutant standards, attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The CAA allows the delegation of the enforcement of many of the federal air quality regulations to the states. In California, the CARB is responsible for enforcing air pollution regulations. In western Riverside County, the SCAQMD has this responsibility. In addition, the SCAQMD and the CARB are the responsible agencies for providing attainment plans and meeting attainment with the NAAQS; and the USEPA reviews and approves these plans and regulations, which are designed to attain and maintain attainment with the NAAQS.

Specific federal regulations that are applicable to the proposed Project, either directly or indirectly, and that are enforced by federal agencies are listed below.

State Implementation Plan

For areas that do not attain the NAAQS, the CAA requires the preparation of a State Implementation Plan (SIP), detailing how the state will attain and maintain the NAAQS within mandated timeframes. In response to this requirement, the SCAQMD and Southern California Association of Governments (SCAG) have developed air quality management plans (AQMPs). The focus of the 2003 AQMP was to demonstrate attainment of the federal PM10 standard by 2006 and the federal 1-hour O3 standard by 2010, while making expeditious progress toward attainment of state standards (SCAQMD, 2003). The 2003 AQMP also includes an NO2 maintenance plan.

On June 11, 2007, the USEPA re-designated the SCAB from nonattainment to attainment for the CO 1-hour and 8-hour NAAQS. The USEPA also approved a SIP revision for the SCAB nonattainment area, stating that this area meets the CAA requirements for maintenance plans for CO. The USEPA made an adequacy finding and approved motor vehicle emission budgets, which are included in the maintenance plan. The USEPA also approved the California motor vehicle inspection and maintenance (I/M) program as meeting the low enhanced I/M requirements for CO in the South Coast region (USEPA, 2007).

The SCAQMD and SCAG, in cooperation with the ARB and the USEPA, have developed the 2007 AQMP for purposes of demonstrating compliance with the new NAAQS for PM2.5, the NAAQS for PM10, the 8-hour O3 NAAQS, the 1-hour O3 NAAQS, and other air quality planning requirements. The 1-hour O3 standard was revoked by the USEPA, but the SCAQMD is still tracking progress towards attainment of this standard. The SCAQMD Governing Board adopted the Final 2007 AQMP on June 1, 2007 (SCAQMD, 2007).

Since it will be more difficult to achieve the 8-hour O3 NAAQS compared to the 1-hour NAAQS, the 2007 AQMP contains substantially more emission reduction measures compared to the 2003 AQMP. The USEPA approved nearly all elements of the 2007 PM2.5 plan and the 2007 8-hour O3 Plan in 2011. On June 12, 2013, the USEPA provided final approval of SCAQMD's 2009 PM10 Redesignation Request and Maintenance Plan. Later in 2013, USEPA approved the South Coast 1997 PM2.5 NAAQS contingency measures that will terminate the sanctions and Federal Implementation Plan clocks that were triggered by USEPA's partial disapproval of the South Coast's 2007 PM2.5 plan.

During 2012 and 2013, the USEPA determined that the 1-hour ozone plan was inadequate and withdrew approval of the vehicle-miles-traveled (VMT) emissions offset demonstration for the 8-hour Ozone Plan. As a result, the SCAQMD is required to submit new plan elements to demonstrate 1-hour and 8-hour ozone attainment.

The SCAQMD Governing Board approved the 2012 AQMP on December 7, 2012 (SCAQMD, 2012). This plan addresses the 1-hour and 8-hour Ozone Plan inadequacies identified by the USEPA and provides a 24-hour PM2.5 plan. ~~This AQMP has recently been approved by USEPA. However, this AQMP has not yet been approved by the USEPA, so it is not the applicable AQMP for CEQA review.~~

Currently, the 2009 Maintenance Plan is the applicable plan for PM10, and the ~~2007-2012~~ AQMP is the applicable plan for ozone and PM2.5.

Emission Standards for Non-Road Diesel Engines

The USEPA has established a series of cleaner emission standards for new off-road diesel engines culminating in the Tier 4 Final Rule of June 2004 (USEPA, 2004a). The Tier 1, Tier 2, Tier 3, and Tier 4

standards require compliance with progressively more stringent emission standards. Tier 1 standards were phased in from 1996 to 2000 (year of manufacture), depending on the engine horsepower category. Tier 2 standards were phased in from 2001 to 2006, and the Tier 3 standards were phased in from 2006 to 2008.

The Tier 4 standards complement the latest 2007 and later on-road heavy-duty engine standards by requiring 90 percent reductions in DPM and NOx when compared against current emission levels. The Tier 4 standards are currently being phased in starting with smaller engines in 2008 until all but the very largest diesel engines meet NOx and PM standards in 2015.

Non-Road Diesel Fuel Rule

In May 2004, the USEPA set sulfur limits for non-road diesel fuel. Under this rule, sulfur levels in non-road diesel fuel would be limited to 500 ppm starting in 2007 and 15 ppm starting in 2010 (USEPA, 2004b), at which time it would be equivalent to sulfur content restrictions of the California Diesel Fuel Regulations (described below).

Emission Standards for On-Road Trucks

To reduce emissions from on-road, heavy-duty diesel trucks, the USEPA established a series of cleaner emission standards for new engines, starting in 1988. These emission standards regulations have been revised over time. The latest effective regulation, the 2007 Heavy-Duty Highway Rule, provides for reductions in PM, NOx, and non-methane hydrocarbon emissions that were phased in during the model years 2007 through 2010 (USEPA, 2000).

C.4.2.2 State

California Air Resources Board

California Clean Air Act

In California, the CARB is designated as the responsible agency for all air quality regulations. The CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for implementing the requirements of the federal CAA, regulating emissions from motor vehicles and consumer products, and implementing the California Clean Air Act of 1988 (CCAA). The CCAA outlines a program to attain the CAAQS for ozone, NO₂, SO₂, and CO by the earliest practical date. Since the CAAQS are often more stringent than the NAAQS, attainment of the CAAQS will require more emission reductions than what is required to demonstrate attainment of the NAAQS. Similar to the federal requirements, the State requirements and compliance dates are based on the severity of the ambient air quality standard violation within a region. Additional information regarding the CAAQS are provided in Table C.4-2.

Other CARB regulations promulgated under the authority of the CCAA that are relevant, directly or indirectly, to the Project are provided below.

California Diesel Risk Reduction Plan

CARB has adopted several regulations that are meant to reduce the health risk associated with on- and off-road and stationary diesel engine operation. This plan recommends many control measures with the goal of an 85 percent reduction in DPM emissions by 2020. The regulations noted below, which may also serve to significantly reduce other pollutant emissions, are all part of this risk reduction plan.

Emission Standards for On-Road and Off-Road Diesel Engines

The CARB, similar to the USEPA on-road and off-road emissions standards, regulations described above, has established emission standards for new on-road and off-road diesel engines. These regulations have model year based emissions standards for NO_x, hydrocarbons, CO, and particulate matter (PM).

In-Use Off-Road Vehicle Regulation

The State has also enacted a regulation for the reduction of DPM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles (CCR Title 13, Article 4.8, Chapter 9, Section 2449). This regulation provides target emission rates for PM and NO_x emissions from owners of fleets of diesel-fueled off-road vehicles, and applies to off-road equipment fleets of three specific sizes, where the target emission rates are reduced over time. Specific regulation requirements include:

- Limits on idling, requiring a written idling policy, and disclosure when selling vehicles;
- Requires all vehicles to be reported to CARB (using the Diesel Off-Road Online Reporting System, DOORS) and labeled;
- Restricts the adding of older vehicles into fleets starting on January 1, 2014; and
- Requires fleets to reduce their emissions by retiring, replacing, or repowering older engines, or installing Verified Diesel Emission Control Strategies (i.e., exhaust retrofits). (CARB, 2014)

The construction contractor(s) who completes the construction activities for the proposed Project, including the Applicant if they use their own off-road equipment fleet, would have to comply with the requirements of this regulation.

Heavy Duty Diesel Truck Idling Regulation

This CARB rule became effective February 1, 2005, and prohibits heavy-duty diesel trucks from idling for longer than five minutes at a time, unless they are queuing, and provided the queue is located beyond 100 feet from any homes or schools (CARB, 2006).

California Diesel Fuel Regulations

In 2004, the CARB set limits on the sulfur content of diesel fuel sold in California for use in on-road and off-road motor vehicles (Title 13, CCR, Sections 2281-2285 and Title 17, CCR, Section 93114). Under this rule, sulfur content of diesel fuel would be limited to 15 ppm starting in June 2006 (CARB, 2004).

Statewide Portable Equipment Registration Program (PERP)

The PERP establishes a uniform program to regulate portable engines and portable engine-driven equipment units (CARB, 2005). Once registered in the PERP, engines and equipment units may operate throughout California without the need to obtain individual permits from local air districts, as long as the equipment is located at a single location for no more than 12 months.

C.4.2.3 Local

South Coast Air Quality Management District

The SCAQMD is primarily responsible for planning, implementing, and enforcing federal and State ambient standards within this portion of the SCAB. As part of its planning responsibilities, SCAQMD prepares Air Quality Management Plans and Attainment Plans, described above in Section C.4.2.1, as necessary based

on the attainment status of the air basins within its jurisdiction. The SCAQMD is also responsible for permitting and controlling stationary source criteria and air toxic pollutants as delegated by the USEPA.

Through the attainment planning process, the SCAQMD develops the SCAQMD Rules and Regulations to regulate sources of air pollution in the SCAB (SCAQMD, 2015d). This proposed Project would not include any stationary or portable stationary emissions sources that would be subject to SCAQMD air quality permitting regulations. The SCAQMD rules applicable to the proposed Project are listed below.

SCAQMD Rule 401 – Visible Emissions. This rule prohibits discharge of air contaminants or other materials that are as dark or darker in shade as that designated No. 1 on the Ringelmann Chart, or that obscures an observer's view.

SCAQMD Rule 402 – Nuisance. This rule prohibits discharge of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or that endanger the comfort, repose, health, or safety of any such persons or the public; or that cause, or have a natural tendency to cause injury or damage to business or property.

SCAQMD Rule 403 – Fugitive Dust. The purpose of this rule is to control the amount of PM entrained in the atmosphere from man-made sources of fugitive dust. The rule prohibits emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area to be visible beyond the emission source's property line. During Project construction, best available control measures identified in the rule would be required to minimize fugitive dust emissions from proposed earth-moving and grading activities. These measures would include site watering as necessary to maintain sufficient soil moisture content.

Additional Rule 403 requirements apply to large operations, which is defined as active operations on property that contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 5,000 cubic yards or more, three times during the most recent 365-day period. These requirements include submittal of a Large Operation Notification form (or optionally submitting a dust control plan), maintaining dust control records, installing project contact signage, and designating a SCAQMD-certified dust control supervisor. The proposed Project's construction would not have active operations on more than 50 disturbed acres at any one time or come close to exceeding these two earthmoving throughput triggers and so would not be defined as a large operation. Therefore, the Project would not be subject to these additional Rule 403 requirements.

SCAQMD Regulation XI – Source Specific Standards. This regulation is composed of several dozen individual rules, most of which are not applicable to this Project. Specific rules that may be applicable include:

- Rule 1113 – Architectural Coatings. This regulation, which sets Volatile Organic Compound (VOC) content limits to all surface coatings (i.e. paint) used within SCAQMD jurisdictional borders, would apply to any surface coatings used during the proposed Project's construction and O&M.
- Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil. This regulation would only be applicable in the very unlikely event that contaminated soils are discovered during Project excavation work.

Riverside County and Affected Cities

The proposed Project route, including alternative routes and staging areas are within several local jurisdictions, including the County of Riverside, City of Perris, City of Menifee, City of Murrieta, and City of Temecula. These local jurisdictions have general plans with policies related to air quality. However, as noted in Section C.2 (Aesthetics), the CPUC regulates and authorizes the construction of investor-owned public utility facilities, and therefore the CPUC has jurisdiction over the siting and design of the proposed

Project. Investor-owned public utilities are exempt from local regulations and permitting. Although the CPUC is not required to evaluate consistency with local policies, Section C.11 (Land Use and Planning) includes a discussion of applicable local agency policies. In addition, most of the local agency policies would need to address applicable SCAQMD rules and regulations, which are considered in this discussion.

C.4.3 Applicant-Proposed Measures

Table C.4-5 includes the Applicant-Proposed Measures (APMs) applicable to air quality. The air quality analysis has taken into consideration these APMs in the evaluation of anticipated project impacts. Where appropriate and to facilitate implementation of measures, these APMs or aspects of these APMs have been added to the air quality mitigation measures determined to be necessary for the proposed Project. Each of the APMs included in the table includes the mitigation measure number that incorporates a portion of or all of the APM.

APM	APM Description
AIR-1	Construction crew vehicle speeds on non-public unpaved roadways would be restricted to 15 miles per hour. (see MM AQ-1)
AIR-2	Dust suppression would be implemented on all active nonpublic unpaved access roadways (e.g. using water or chemical suppressant). (see MM AQ-1)
AIR-3	Off-road diesel construction equipment with a rating between 100 and 750 horsepower would be required to use engines compliant with U.S. Environmental Protection Agency Tier 3 non-road engine standards. In the event a Tier 3 engine is not available, that engine would be equipped with a Tier 2 engine and documentation would be provided from a local rental company stating that the rental company does not currently have the required diesel-fueled off-road construction equipment or that the vehicle is specialized and is not available to rent. Similarly, if a Tier 2 engine is not available, that engine would be equipped with a Tier 1 engine and documentation would be provided. (see MM AQ-2)

Source: SCE, 2014 (PEA Table 3.13).

C.4.4 Environmental Impacts and Mitigation Measures

The impact analysis included review of the initial construction emissions estimate provided by SCE (SCE, 2014); this initial emissions estimate was modified by SCE to address comments received by the CPUC (SCE, 2015). SCE revised the direct construction emissions estimate to address comments on the inputs for fugitive dust emissions from unpaved road travel and the control assumptions for the public unpaved roads. The revisions also addressed comments on unpaved road silt content, certain vehicle weights assumptions, and the application of water to public unpaved roads. Appendix 23 (Air Quality Emissions Calculations) includes the revised emissions calculations that address all changes requested by the CPUC.

C.4.4.1 Criteria for Determining Significance

The following criteria were used to evaluate the proposed Project’s potential for significant construction and operation impacts to air quality. The discussion below the bullets provide more detail on how the impacts were evaluated within the context of these significance criteria.

- Criterion AQ1: Conflict with or obstruct implementation of the applicable air quality plan.
- Criterion AQ2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Criterion AQ3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

- Criterion AQ4: Expose sensitive receptors to substantial pollutant concentrations.
- Criterion AQ5: Create objectionable odors affecting a substantial number of people.

Table C.4-6 provides the regional thresholds of significance for construction activities that were used in this EIR to determine the significance of Project air quality impacts. However, the table does not include the SCAQMD thresholds for operation emissions because the proposed Project would cause a negligible increase to air quality during operations and maintenance. The construction-related criteria are based on CEQA thresholds recommended by the SCAQMD (SCAQMD, 2015e).

Additionally, the SCAQMD has published localized thresholds of significance (LSTs) that are used to determine impacts on ambient air quality for off-site sensitive receptors (SCAQMD, 2015f). Table C.4-7 presents the published LSTs for construction activities that were used in this EIR to determine the significance of Project air quality impacts to address Criterion AQ4. The emissions impacts of TACs are also evaluated under Criterion AQ4 and the SCAQMD’s construction thresholds for air toxics impacts are presented in Table C.4-7. However, that table does not include SCAQMD LSTs for operation emissions because the proposed Project would cause a negligible increase to air quality during operations and maintenance.

Regional Emissions Significance Thresholds	
Pollutant	Construction
NOx	100 lbs./day
VOC	75 lbs./day
PM10	150 lbs./day
PM2.5	55 lbs./day
SOx	150 lbs./day
CO	550 lbs./day

Source: SCAQMD, 2015e.

According to SCAQMD maps, the proposed Project is located in Source Receptor Areas (SRA) 24 (Perris Valley) and 26 (Temecula Valley) (SCAQMD, 1999). To be conservative, all construction work areas are evaluated using the one-acre LST look-up values provided in SCAQMD CEQA guidance, and the worst-case minimum distance to sensitive receptors is assumed to be 25 meters (82 feet). The exceptions include work performed in and adjacent to the Valley Substation, where the minimum distance to sensitive

Localized Significance Criteria	
Pollutant	Construction
NOx	The localized emissions significance thresholds for these pollutants are provided by SCAQMD in lbs/day values based on the size of the construction area in acres and the distance to sensitive receptor in meters.
CO	
PM10	
PM2.5	
TACs (includes carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk \geq 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas \geq 1 in 1 million) Chronic and Acute Hazard Index \geq 1.0 (project increment)

Source: SCAQMD, 2015e; SCAQMD, 2015f.

receptors is assumed to be approximately 460 meters (1,640 feet) from the undergrounding work areas south and east of the substation, and 500 meters (1,640 feet) from the construction work areas within the substation. LSTs are evaluated based on the worst-case SRA 24 (Perris Valley) values, which is also appropriate for the substation and work adjacent to the substation located within this SRA. The closest distance to a receptor from the currently proposed marshalling yards is unclear and could be as low as 30 meters (98 feet) or as high as 60 meters (197 feet), but since there is the potential for new marshalling yards to be proposed closer to residences, the minimum LST table distance of 25 meters (82 feet) is assumed in the analysis.

C.4.4.2 Impact Analysis – Direct and Indirect Effects

This section describes the direct and indirect impacts of the proposed Project. Cumulative impacts are discussed separately in Section C.4.4.3.

Project operation impacts are limited to minor incremental O&M activities that are comprised of a single annual inspection event for the new distribution lines that includes one vehicle traveling the new distribution route for a visual inspection. No additional O&M is required at the Valley Substation as a result of the Project. These negligible incremental emissions have been estimated and are shown in Appendix 23 (Air Quality Emissions Calculations). These emissions are well below all significance thresholds and would not result in significant cumulative impacts. Additionally, the proposed Project would provide safe and reliable electrical service, maintain or improve system reliability, and provide greater operational flexibility within the Electrical Needs Area, which could result in a small reduction in electrical generation requirements and could reduce emissions from fossil fuel fired power plants within the SCAB. Therefore, all proposed Project operation impacts have been determined to be less than significant and are not discussed further.

Impact AQ-1 (Criterion AQ1): The Project could conflict with or obstruct implementation of the applicable air quality plan. (Class III)

The proposed Project would produce emissions of nonattainment pollutants primarily from diesel-powered mobile on-road and off-road sources during Project construction. The ~~2007-2012~~ AQMP proposes emission reduction measures that are designed to bring the SCAB into attainment of the NAAQS and CAAQS. The attainment strategies in this plan include mobile source control measures and clean fuel programs that are enforced at the federal and state levels on engine manufacturers and petroleum refiners and retailers.

The SCAQMD adopts AQMP control measures into the SCAQMD rules and regulations, which are then used to regulate sources of air pollution in the SCAB. The proposed Project would comply with these regulatory requirements. Therefore, the proposed Project's emissions sources would meet or exceed the emissions control forecasts for all approved AQMP control measures.

The ~~2007-2012~~ AQMP assumes growth that is consistent with the implementation of this Project and is designed in response to existing and projected growth and demand. Therefore, the proposed Project would not exceed the future growth projections in the ~~2007-2012~~ AQMP, and it would not conflict with or obstruct implementation of the SIP. As a result, construction of the proposed Project would conform to the applicable AQMP; thus, impacts would be less than significant and no mitigation is required.

Impact AQ-2 (Criterion AQ2): The Project's construction emission could violate any air quality standard or contribute substantially to an existing or projected air quality violation. (Class III)

The proposed Project's construction air pollutant emissions would occur for a short period, would occur over a very large area, and would be well below the magnitude that would cause air quality standard violations or contribute substantially to existing or projected air quality standard violations. Therefore, impacts would be less than significant (Class III).

Also, please see the regional emissions analysis provided below under Impact AQ-3 and the localized emissions analysis provided under Impact AQ-4.

Impact AQ-3 (Criterion AQ3): The Project’s construction emissions could exceed SCAQMD Regional Emissions Significance Thresholds. (Class II)

The Project’s maximum daily construction emissions estimate considered the construction phase maximum equipment use and throughputs, worst-case construction phase overlap, and application of the APMs for fugitive dust control provided in Table C.4-5. Detailed assumptions for the construction phases, including equipment and on-road vehicle use, are provided in Appendix 23 (Air Quality Emissions Calculations). Table C.4-8 compares the maximum daily construction emissions of the Project with the SCAQMD regional significance thresholds.

Table C.4-8. Maximum Daily Construction Emissions (lbs/day)						
	VOC	CO	NO_x	SO_x	PM10	PM2.5
Total Peak Overlap Daily Construction Emissions	13.74	86.03	96.69	0.29	302.15	24.92
SCAQMD Regional Significance Thresholds	75	550	100	150	150	55
Significant?	NO	NO	NO	NO	YES	NO

Source: Appendix 23, SCE, 2015 (as corrected); SCAQMD, 2015e.

The PM10 estimates shown above exceed the SCAQMD regional significance thresholds. The other estimated maximum daily pollutant emissions during construction would be below these thresholds. The maximum worst-case daily NO_x emissions were determined to be just under the regional threshold, but the emissions estimates used fleet average emissions factors for off-road equipment, not accounting for any emissions reduction that would occur with the application of requiring Tier 3 equipment per APM AIR-3. This was done due to the year of construction and the belief that fleet average emissions factors would essentially be equivalent to Tier 3. A review of the fleet average emissions factors used and potential Tier 3 emissions factors shows that there would be a marginal reduction if Tier 3 emissions factors were applied to off-road equipment above 100 horsepower, and still greater potential if the requirement for Tier 3 engines were extended down to 50 horsepower equipment. Therefore, there is a small additional safety margin for the NO_x emissions considering application of APM AIR-3, but that safety margin could and should be improved to account for the potential for minor differences between the anticipated overlap in construction tasks and the actual overlap in these tasks.

The primary reason the PM10 emissions exceed the threshold is the amount of unpaved road travel that is assumed to occur, on both public and private roads, which are required to access the construction sites. Additional mitigation of this emission source, beyond APM AIR-1 and AIR-2 can be implemented to reduce these emissions.

The emissions estimates already include the emissions control identified in APMs AIR-1 through AIR-3. These measures can be supplemented to provide additional control for NO_x and PM10 emissions. The additions to these measures that would increase emissions mitigation effectiveness would be as follows:

- Reduce the horsepower requirements for Tier 3 engines in AIR-3 from 100 horsepower or greater to 50 horsepower or greater; and
- Include unpaved road mitigation for the public unpaved roads that are traveled by the Project’s vehicles in the form of watering and speed reduction to 25 mph, gravel or pave the Project’s construction marshalling yards, and limit vehicle speeds within the marshalling yards to 10 mph.

Therefore, in order to formalize the APMs and to mitigate the PM10 and NO_x emissions to the maximum extent; the APMs with the adjustments noted above have been used to create fugitive dust control and engine control mitigation measures AQ-1 (Fugitive Dust Control) and AQ-2 (Off-Road Equipment Emissions

Control), respectively. A controlled air pollutant emissions estimate was completed to include these additional controls and Table C.4-9 provides the results of the controlled emissions estimate.

	VOC	CO	NO _x	SO _x	PM10	PM2.5
Total Peak Overlap Daily Construction Emissions	13.74	86.03	96.69	0.29	136.62	14.56
SCAQMD Regional Significance Thresholds	75	550	100	150	150	55
Significant?	NO	NO	NO	NO	NO	NO

Source: Appendix 23, SCE, 2015 (as corrected); SCAQMD, 2015e.

The additional requirements for dust control on public unpaved roads and marshalling yard surfaces as well as vehicle speed identified in Mitigation Measure AQ-1 (Fugitive Dust Control) provide a large additional reduction in the worst-case daily PM10 emissions (over 50 percent). With the implementation of these additional measures, the estimated controlled worst-case daily PM10 emissions would be below the SCAQMD regional threshold. Therefore, proposed Project impacts would be less than significant after mitigation (Class II).

Mitigation Measures for Impact AQ-3

AQ-1 Fugitive Dust Control. A fugitive dust control plan shall be prepared, submitted, and approved by the California Public Utilities Commission prior to initiation of Project construction. The Fugitive Dust Control Plan shall include the following measures or requirements, or others as required or allowed by South Coast Air Quality Management District (SCAQMD) Rule 403, where determined to be more appropriate:

- Vehicle speeds on private unpaved roads shall be limited to 15 miles per hour, with the exception of the marshalling yards on which vehicle speeds shall be limited to 10 miles per hour.
- Vehicle speeds on public unpaved roads shall be limited to 25 miles per hour.
- Marshalling yards shall be paved or graveled.
- Track-out onto paved public roads shall be controlled using wheel washing system, wheel shaker/wheel spreading device, a washed gravel pad that is 30 feet long and 50 feet long, or equivalent means.
- Unpaved roads (including the portions of unpaved public roads in use by Project vehicles) when being used by Project vehicles, active construction areas, storage piles, and other disturbed areas shall be watered or chemical/organic stabilizers/suppressants applied at least three times per day or ~~at a greater frequency as~~ necessary to limit visible dust emissions.
- Vegetation shall be cut but maintained in areas that do not require removal of vegetation and to control dust from disturbed areas.
- When wind speeds exceed 25 miles per hour the sources of visible dust emissions shall temporarily halt operations or additional control measures shall be applied to eliminate the visible dust emissions, and in the case of dust emission from inactive disturbed areas during high winds additional watering or dust suppressants shall be applied to reduce the visible dust emissions.
- Bulk material storage piles shall be covered, or stored in areas with wind barriers and water/dust suppressants applied to reduce dust emissions.
- Bulk materials shall be transported in trucks with covers, or using a minimum freeboard of 12 inches.
- Other mitigation measures as necessary to comply with the requirements of SCAQMD Rule 403 shall be implemented during Project construction.

The ongoing compliance of these control measures shall be ensured by a qualified Construction Mitigation Manager (CMM). The CMM shall have the authority to require the implementation of additional dust control measures if conditions warrant.

AQ-2 Off-Road Equipment Emissions Control. Off-road equipment with engines larger than 50 horsepower shall have engines that meet or exceed US Environmental Protection Agency/California Air Resources Board (CARB) Tier 3 Emissions Standards. Exceptions may be allowed only on a case by case basis for three specific situations: (1) an off-road equipment item that is a specialty, or unique, piece of equipment that cannot be found with a Tier 3 or better engine after a due diligence search; and/or (2) an off-road equipment item that would be used for a total of no more than 5 days; and/or (3) the off-road equipment is registered under CARB’s Statewide Portable Equipment Registration Program. Additionally, all off-road equipment engines shall be maintained in good operating condition and in tune per manufacturers’ specification, and equipment idling shall be limited to no more than five minutes unless needed for proper operation.

Implementation of Mitigation Measure AQ-1 (Fugitive Dust Control) may create additional truck trips for graveling the marshalling areas, and ~~will~~ would increase the water used for dust control during construction. However, the additional truck trips ~~does~~ would not significantly change the results of the air quality analysis discussed in this section and no additional mitigation measures are needed to address this truck traffic. The water used for dust control has been addressed in Section C.10 (Hydrology and Water Quality).

Impact AQ-4 (Criterion AQ4): The Project’s construction emissions could exceed SCAQMD Localized Significance Thresholds. (Class II)

SCAQMD LSTs are used to determine if a project could exceed ambient air quality thresholds for nearby receptors. The LSTs were established by SCAQMD for each SRA within their jurisdiction, and represent on-site emission levels that could cause ambient air quality standard exceedances or substantial contributions to existing exceedances at given distances from the site to nearby receptor locations.

The appropriate LSTs for different Project site construction activities were compared to the assumed reasonably foreseeable maximum localized on-site daily construction emissions, which assume incorporation of the APMs without further mitigation. Table C.4-10 provides this comparison.

Table C.4-10. Maximum Daily Localized Emissions (lbs/day)				
	CO	NOx	PM10	PM2.5
Marshalling Yards	2.38	2.85	6.50	0.45
SCAQMD Localized Significance Thresholds	602	118	4	3
Significant?	NO	NO	YES	NO
Substation Modifications	7.96	9.11	1.84	0.48
SCAQMD Localized Significance Thresholds	17,640	652	178	86
Significant?	NO	NO	NO	NO
Subtransmission Line Construction at Valley Substation	10.72	15.11	3.61	0.81
SCAQMD Localized Significance Thresholds	15,869	610	163	77
Significant?	NO	NO	NO	NO
Subtransmission Line Construction	7.89	15.25	0.64	0.59
SCAQMD Localized Significance Thresholds	602	118	4	3
Significant?	NO	NO	NO	NO

	CO	NOx	PM10	PM2.5
Distribution Relocation	9.66	14.63	0.67	0.51
SCAQMD Localized Significance Thresholds	602	118	4	3
Significant?	NO	NO	NO	NO
Telecommunications Construction	2.32	5.45	0.29	0.25
SCAQMD Localized Significance Thresholds	602	118	4	3
Significant?	NO	NO	NO	NO

source: Appendix 23, SCE, 2015 (as corrected); SCAQMD, 2015e.

The PM10 emissions estimates from the marshalling yards, as shown above, would exceed the SCAQMD localized significance thresholds for PM10. As noted above under Impact AQ-3, the emissions estimates already include the emissions control identified in the APMs. These emissions relate to the Project’s marshalling yards, where the exact location of the yards has not been identified. Therefore, some locations could be within 25 meters of a sensitive receptor. Mitigation Measure AQ-1 (Fugitive Dust Control) includes additional mitigation requirements for marshalling yards. Table C.4-11 presents the revised emissions estimate for marshalling yards after application of these additional measures.

	CO	NOx	PM10	PM2.5
Marshalling Yards	2.38	2.85	2.74	0.26
SCAQMD Localized Significance Thresholds	602	118	4	3
Significant?	NO	NO	NO	NO

source: Appendix 23, SCE, 2015 (as corrected); SCAQMD, 2015e.

As shown in Table C.4-11, Mitigation Measure AQ-1 (Fugitive Dust Control) provides a large reduction in the worst-case daily onsite PM10 emissions for the marshalling yards construction emissions (nearly 60 percent). The estimated controlled worst-case daily PM10 emissions would be below the SCAQMD LST threshold. Therefore, the air quality impacts to sensitive receptors would be less than significant after mitigation (Class II).

Mitigation Measure for Impact AQ-4

AQ-1 Fugitive Dust Control.

Impact AQ-5 (Criterion AQ4): The Project’s construction emissions could exceed SCAQMD Toxic Air Contaminant Health Risk Significance Thresholds. (Class III)

The proposed Project’s TAC emissions and health risk potential are primarily associated with the DPM emissions from the diesel-fueled off-road and on-road engines. The emissions of acutely hazardous pollutants from Project emissions sources are negligible, so the primary potential health risk would be related to the carcinogenic and chronic risks from DPM exposure. However, the construction DPM emissions are low, the Project’s construction duration is short, and the area of the construction emissions is over a long linear construction route, so the construction emissions are not considered to be of concern in relation to the potential long-term health risk impacts from DPM exposure. The Project’s increase in O&M emissions are negligible and would not affect the area’s health risk from air pollutants. Therefore, the proposed Project’s TAC emissions impacts would be well below the SCAQMD significance thresholds shown in Table C.4-76 and so would be less than significant (Class III).

Impact AQ-6 (Criterion AQ4): The Project's construction could cause an increase in the incidence of Valley Fever infections. (Class II)

Valley Fever, or Coccidioidomycosis, is an illness caused by a Southern California endemic fungus, *Coccidiodes immitis* (*C. immitis*). Persons exposed to airborne *C. immitis* arthrospores may become infected with Valley Fever. The resulting infection is most likely to have no symptoms or present with mild cold-like symptoms, but it can cause flu-like symptoms, or in rare cases (one percent) cause a disseminated form of the disease that can cause severe disabling illness or death. Earthmoving and other activities that cause fugitive dust emissions can cause *C. immitis* arthrospores, if present, to become airborne. The proposed Project will not require a large amount earthmoving, but there will be considerable vehicle travel on unpaved roads that will create fugitive dust emissions. Overall, the fugitive dust emission will be well controlled as required by SCAQMD Rule 403 and under Mitigation Measure AQ-1 (Fugitive Dust Control). Also, as noted in the Setting discussion, the Project area has lower than State average rates of infection for Valley Fever, and is not known to be more than mildly endemic for Valley Fever. So, while there may be some limited potential for the *C. immitis* fungus to exist in the Project area, the risk of Project activities causing Valley Fever infection is considered low due to the characteristics of the Project area, the type and amount of construction excavation activities completed at any one location, and the implementation of the fugitive dust mitigation required for SCAQMD Rule 403 compliance and as required under Mitigation Measure AQ-1 (Fugitive Dust Control). Therefore, proposed Project impacts related to Valley Fever exposure are considered less than significant after mitigation (Class II).

Mitigation Measure for Impact AQ-6

AQ-1 Fugitive Dust Control.

Impact AQ-7 (Criterion AQ5): The Project's construction or operation could create objectionable odors affecting a substantial number of people. (Class III)

Some objectionable odors may be temporarily created during construction-related activities, such as from diesel exhaust or limited asphalt paving. However, the use of malodorous substances is not proposed during construction or operation. Additionally, the Project site is in a rural/agricultural setting with very few residences located within 5 miles of the site. Therefore, due to the limited and mild odors created during Project construction and operation and the very low population existing near the Project site, these mild odors would not affect a substantial number of people. Therefore, odor impacts would be less than significant and no mitigation is required (Class III).

C.4.4.3 Cumulative Impacts

Geographic Extent/Context

The geographic area of analysis for cumulative air quality impacts is generally limited to areas within one mile of any work area along the Project route, including immediate truck routes accessing work areas. This maximum area is defined because air quality impacts quickly disperse, or dissipate, over distance from the source of emissions and would not have a substantial additive effect with other emissions sources that are located more than a mile away. Therefore, only projects within one mile of the proposed Project route, as well as projects that could impact traffic during the Project construction are considered projects that could, with the proposed Project, cause cumulative impacts. Additionally, only projects that are scheduled concurrently in the same area as the proposed Project could contribute to cumulative impacts.

Since the proposed Project has very minor direct operating emissions and potentially a net decrease considering indirect emissions from electricity distribution efficiency improvement, the cumulative impact discussion is focused on construction impacts. Construction impacts are localized and of short duration.

Existing Cumulative Conditions

The existing ambient air quality conditions are summarized in Section C.4.1. The proposed Project is located in a portion of the SCAB that is designated as nonattainment of the federal and State ozone, federal and State PM_{2.5} standards, and the State PM₁₀ standard. Air quality has improved over time as various regulations effecting emissions sources, such as the mobile and stationary sources regulations enacted by CARB and SCAQMD, have started to take effect. Concentrations of all criteria pollutants within the SCAB have gone down, even considering significant population growth, since major air quality regulations were enacted in the 1970's. Air quality is forecast to improve slowly within the SCAB as current regulations continue to reduce air pollutant emissions from stationary, mobile, and area emission sources.

Cumulative Impact Analysis

The potential for air quality impacts of the proposed Project (described in Section C.4.4.2) to combine with the effects of other proposed, planned, and reasonably foreseeable future projects is described below for each significance criterion. Table C.1-1 in Section C.1 (Introduction to Environmental Analysis) provides the cumulative projects within the geographic extent of the cumulative analysis.

Criterion AQ1: Conflict with or obstruct implementation of the applicable air quality plan.

This criterion addresses whether a specific project could conflict with or obstruct implementation of an applicable air quality plan. As discussed in Impact AQ-1 above, the proposed Project would not conflict or obstruct implementation of applicable air quality plans. Similarly, the cumulative projects are expected to be developed consistent with air quality plans as the projects would be required to meet local and regional agency plan and permit requirements. Therefore, the proposed Project in combination with cumulative projects would not conflict or obstruct implementation of air quality plans. No cumulative project impacts have been identified for this criterion (Impact AQ-1).

Criterion AQ2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

The proposed Project's short-term emissions are negligible in terms of the regional and basin-wide criteria pollutant emissions. Similarly, the types and emission quantities from the cumulative projects would also be expected to be negligible or low given the type of cumulative projects proposed in the project area (e.g. residential, commercial) and the fact that the projects may not all be constructed on same schedule and some of the projects may not be developed. In addition, the level of criteria pollutant emissions created by the proposed Project in combination with the cumulative projects would not be expected to violate or substantially contribute to existing violations of air quality. Therefore, the cumulative emissions would not be expected to noticeably affect any air quality standard violations, and the proposed Project would have a less-than-significant cumulative impact related to air quality violations (Impact AQ-2).

Criterion AQ3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

The Project was found to have less-than-significant criteria pollutant emissions impacts during construction. The SCAQMD thresholds used for significance determination are project-specific thresholds

and the SCAQMD has not developed separate cumulative emissions thresholds. However, the SCAQMD regional thresholds are often applied to assess cumulative impacts by considering the on-site emissions from nearby projects (typically a one-mile radius). The emissions from the Project, including the worst-case maximum daily emissions overlap would occur over a large area. Some of the cumulative projects listed in Table C.1-1 would either not be active at the same time as the Project's construction or are more than a mile from the Project site. However, some would both be active and within one mile of the Project route. However, given the Project's emissions are low at any one location during the construction of this linear project, and that the emissions from the Project, and any other large cumulative projects would have to comply with SCAQMD rules and regulations, and likely be subject to additional mitigation measures, it is determined that the Project would have less-than-significant cumulative emissions impacts. (Impact AQ-3).

Criterion AQ4: Expose sensitive receptors to substantial pollutant concentrations.

The SCAQMD LST lookup tables used to determine Project significance for criteria pollutants do not apply to cumulative project evaluation; however, the significance criteria is based on downwind pollutant concentrations causing a new exceedance (NO_x and CO) of an air quality standard, substantially increasing current exceedances (PM₁₀ and PM_{2.5}) of an air quality standard, and these general criteria are applicable standards for localized impact cumulative project analysis. For the emissions of any two projects to have the potential for significant cumulative downwind concentrations, they must both be in close proximity to limit the downwind dispersion from one site to the other. None of the known cumulative projects would have large amount of concurrent and adjacent air pollutant emissions to the Project's construction sites. Therefore, it can be assumed that the potential for cumulative impacts to sensitive receptors is the same as the Project impacts to sensitive receptors, so the proposed Project would have less-than-significant cumulative impacts to sensitive receptors from criteria pollutants after mitigation (Impact AQ-4).

Construction activities associated with the Project do not have large amounts of toxic air contaminant emissions, are of short duration, and do not have significant emissions in any single area that could create a significant risk to local populations. Similarly, the cumulative projects construction would not be expected to have significant emissions of TACs, and would not have the potential to cumulatively exceed SCAQMD risk thresholds. Given the temporary nature and low TAC emission level for the proposed Project's and cumulative projects, the proposed Project would have less-than-significant cumulative health risk impacts (Impact AQ-5).

Given the low incidence rates for Valley Fever and the high level of fugitive dust mitigation required for this Project by SCAQMD Rule 403 and by Mitigation Measure AQ-1 (Fugitive Dust Control), and the fact that all nearby projects would also have to comply with SCAQMD Rule 403, the Project would not create significant cumulative Valley Fever impacts (Impact AQ-6).

Criterion AQ5: Create objectionable odors affecting a substantial number of people.

The Project would have minimal odor impacts. None of the identified cumulative projects are known to have significant odor impacts. Odor impacts generally dissipate quickly downwind from their source, so the potential for any two or more non-collated projects to create significant cumulative odor impacts, when none of the projects would have odor impacts by themselves is negligible. Therefore, the Project would not create cumulative odor impacts or substantially contribute to significant odor impacts and so would have less-than-significant cumulative odor impacts (Impact AQ-7).

C.4.4.4 Impact and Mitigation Summary

This section summarizes the conclusions of the impact analysis and associated mitigation measures presented in Section C.4.4.2 for the proposed Project. Table C.4-12 lists each impact identified for the proposed Project, along with the significance of each impact.

Impact	Significance Conclusion	Reason for Conclusion
AQ-1: The Project could conflict with or obstruct implementation of the applicable air quality plan.	Class III	The Project would be constructed and operated in compliance with all SCAQMD rules and regulations, would not otherwise conflict with the implementation of any emission reductions measures, or induce growth or otherwise create conditions beyond assumptions in the applicable AQMPs.
AQ-2: The Project's construction emission could violate any air quality standard or contribute substantially to an existing or projected air quality violation.	Class III	The Project's emission intensity and duration would not cause temporary or long-lasting impacts that could cause new air quality standards violations or substantially contribute to existing violations.
AQ-3: The Project's construction emissions could exceed SCAQMD Regional Emissions Significance Thresholds.	Class II	After implementation of Mitigation Measure AQ-1 (Fugitive Dust Control) and Mitigation Measure AQ-2 (Off-Road Equipment Emissions Control) the Project's maximum daily emissions would be below SCAQMD regional significance thresholds.
AQ-4: The Project's construction emissions could exceed SCAQMD Localized Significance Thresholds.	Class II	After implementation of Mitigation Measure AQ-1 (Fugitive Dust Control) the Project's construction emissions would be below the applicable SCAQMD LSTs.
AQ-5: The Project's construction emissions could exceed SCAQMD Toxic Air Contaminant Health Risk Significance Thresholds.	Class III	The Project's emission of TACs would be minimal, would occur over a large area, and would occur for a limited time so that impacts to any specific receptor location would be well below significance thresholds.
AQ-6: The Project's construction could cause an increase in the incidence of Valley Fever infections.	Class II	The Project site area is not noted as an area that is highly endemic for Valley Fever and Mitigation Measure AQ-1 (Fugitive Dust Control) would reduce the dust emissions that could contain Valley Fever spores.
AQ-7: The Project's construction or operation could create objectionable odors affecting a substantial number of people.	Class III	The Project would not include activities that would create highly objectionable odors or otherwise use malodorous substances.

- Class I:** **Significant impact; cannot be mitigated to a level that is not significant.** A Class I impact is a significant adverse effect that cannot be mitigated below a level of significance through the application of feasible mitigation measures. Class I impacts are significant and unavoidable.
- Class II:** **Significant impact; can be mitigated to a level that is not significant.** A Class II impact is a significant adverse effect that can be reduced to a less than significant level through the application of feasible mitigation measures presented in this EIR.
- Class III:** **Adverse; less than significant.** A Class III impact is a minor change or effect on the environment that does not meet or exceed the criteria established to gauge significance.
- Class IV:** **Beneficial impact.** A Class IV impact represents a beneficial effect that would result from project implementation.