4.3 Air Quality

This section identifies existing air quality standards within the Project Study Area and assesses potential air quality impacts that may result from construction and operation of the Proposed Project and Alternative Project. Also included in this section is a summary of Federal, State, and local laws and regulations associated with the protection and management of air quality. For purposes of this section, the Project Study Area includes the Proposed Project locations where work described in Chapter 3.0, Project Description, would be performed. No additional Project Study Area buffer was considered because emissions are based on vehicle and equipment exhaust and disturbance activities as described in Chapter 3.0, Project Description.

4.3.1 Environmental Setting

The Project Study Area is located within the cities of Banning, Beaumont, Calimesa, Colton, Grand Terrace, Loma Linda, Palm Springs, Rancho Cucamonga, Redlands, San Bernardino, and Yucaipa, and unincorporated areas of Riverside and San Bernardino counties. The Proposed Project component in the City of Rancho Cucamonga is limited to improvements within the mechanical electrical equipment room (MEER) at Etiwanda Substation; the extent of this work within an existing facility would not have the potential to affect air quality in the City of Rancho Cucamonga; therefore, the City of Rancho Cucamonga is not included for further discussion.

The setting includes both the Salton Sea Air Basin (SSAB) and the South Coast Air Basin (SCAB). The SCAB and the part of the SSAB that encompasses the Project Study Area are currently under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Therefore, the impact analysis contained in this section was prepared in accordance with the methodologies provided by the SCAQMD in its 1993 *California Environmental Quality Act (CEQA) Air Quality Handbook* and its associated updates.

4.3.1.1 South Coast Air Basin

Air quality in the SCAB is not only affected by various emission sources (mobile, industry, etc.), but also by atmospheric conditions such as wind speed, wind direction, temperature, rainfall, etc. The annual average temperature varies little throughout the SCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The majority of annual rainfall in the SCAB occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the SCAB and along the coastal side of the mountains.

The SCAB experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high, a semi-permanent, subtropical area of high pressure located northeast of Hawaii in the North Pacific Ocean. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground.

As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days, when lower layer smog appears to clear up suddenly. Winter inversions frequently break by mid-morning.

Winds in the vicinity of the Project Study Area blow predominantly from the south-southwest, with relatively low velocities in certain areas. Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the SCAB. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana wind conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino counties. In the winter, the greatest pollution problems are carbon monoxide (CO) and oxides of nitrogen (NO_X) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

4.3.1.2 Salton Sea Air Basin

The SSAB portion of Riverside County is separated from the SCAB region by the San Jacinto Mountains and from the Mojave Desert Air Basin (MDAB) region by the Little San Bernardino Mountains.

During the summer, the SSAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The Pacific Subtropical High is a significant belt of high pressure characterized by mostly calm winds. The SSAB is rarely influenced by cold air masses moving south from Canada and Alaska, because these frontal systems are weak and diffuse by the time they reach the desert. Most desert moisture arrives from infrequent warm, moist, and unstable air masses from the south. The SSAB averages between three and seven inches of precipitation per year.

The majority of annual rainfall in this portion of the SSAB occurs between December and March. Summer rainfall is minimal and generally limited to scattered thundershowers along the coastal side of the mountains.

4.3.1.3 Pollutants Contributing to Nonattainment Designations

The California Air Resources Board (CARB) coordinates and oversees both State and Federal air pollution control programs in California. The CARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the United States Environmental Protection Agency (EPA) and local air districts. The CARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by the CARB and EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent three calendar years compared with the ambient air quality standards. Nonattainment areas must comply with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards.

In the SCAB, there are currently two Federal standards for criteria pollutants (8-hour ozone [O_3] and particulate matter smaller than 2.5 microns in diameter [$PM_{2.5}$]) that are in nonattainment status. On July 12, 2013, the EPA approved redesignating the SCAB to attainment for the Federal 24-hour standard for particulate matter smaller than 10 microns in diameter (PM_{10}).[1] In addition, under the State standards, the 1-hour O_3 is in nonattainment and nitrogen dioxide (NO_2) has been redesignated as being in nonattainment in the SCAB. In the SSAB, there are currently two Federal standards for criteria pollutants (8-hour O_3 and PM_{10}) that are in nonattainment status. In addition, under the State standards, the 1-hour O_3 is in nonattainment status in the SSAB.

Table 4.3-1, Ambient Air Quality Standards, lists the Federal and State ambient air quality standards. Table 4.3-2, Attainment Status of Criteria Pollutants in the South Coast Air Basin, lists the attainment status for the criteria pollutants in the SCAB, and Table 4.3-3, Attainment Status of Criteria Pollutants in the Salton Sea Air Basin, lists the attainment status for the criteria pollutants in the SSAB.

The following pollutants are subject to emission reduction measures adopted by Federal, State, and local agencies.

Ozone

Ozone (smog) is formed by photochemical reactions between oxides of nitrogen and volatile organic compounds (VOCs, also known as reactive organic gases [ROGs]) rather than being directly emitted. Ozone is a pungent, colorless gas typical of southern California smog. Elevated O_3 concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. Ozone levels peak during summer and early fall.

[1] Approval of South Coast Air Basin PM_{10} Maintenance Plan and Redesignation to Attainment for the PM_{10} Standard, 78 Fed. Reg. 38,223 (June 26, 2013). The decision took effect on July 26, 2013.

Carbon Monoxide

Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions.

Nitrogen Oxides

Nitrogen dioxide, a reddish-brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_X. NO_X is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition (e.g., acid rain). NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Particulate Matter

Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (all particles less than or equal to 10 micrometers in diameter, or PM_{10}) derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and resultant exhaust from power plants and diesel buses and trucks are primarily responsible for fine particle (less than 2.5 microns in diameter, or $PM_{2.5}$) levels. Fine particles can also be formed in the atmosphere through chemical reactions. Coarse particles can accumulate in the respiratory system and aggravate health problems such as asthma. The EPA's scientific review concluded that $PM_{2.5}$, which penetrate deeply into the lungs, are more likely than coarse particles to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms.

Volatile Organic Compounds

Volatile organic compounds (VOCs) are formed from the combustion of fuels and the evaporation of organic solvents. Volatile organic compounds are not defined as criteria pollutants, but are a prime component of the photochemical smog reaction. Consequently,

VOCs accumulate in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower.

Table 4.3-1: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		—		
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	No Separate State Standard		35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	15.0 µg/m^3		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m^3)		35 ppm(40 mg/m^3)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—	—	—
Nitrogen Dioxide (NO_2)[8]	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	1-Hour	0.18 ppm (339 µg/m^3)		100 ppb (188 µg/m^3)	None	
Sulfur Dioxide (SO_2)[9]	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (for certain areas)[9]		Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	24-Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[9]	—	
	3-Hour	—		—	0.5 ppm (1300 µg/m^3)	
	1-Hour	0.25 ppm (655 µg/m^3)		75 ppb (196 µg/m^3)	—	
Lead[10,11]	30 Day Average	1.5 µg/m^3	Atomic Absorption	—	—	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3	Same as Primary Standard	
	Rolling 3-Month Average[11]	—		0.15 µg/m^3		
Visibility-Reducing Particles[12]	8-Hour	See footnote 12	Beta Attenuation and Transmittance through Filter Tape	**No Federal Standards**		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[10]	24-Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Source: California Air Resources Board, Ambient Air Quality Standards, (June 4, 2013, http://www.arb.ca.gov/research/aaqs/aaqs2.pdf).
The footnotes for this table are provided on the following page.

Footnotes for Table 4.3-1, Ambient Air Quality Standards:

[1] California standards for ozone; carbon monoxide (except Lake Tahoe); sulfur dioxide (1- and 24-hour); nitrogen dioxide; suspended particulate matter - PM_{10}, $PM_{2.5}$ and visibility reducing particles, are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth-highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than 1. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the EPA for further clarification and current Federal policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Any equivalent procedure which can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

[8] To attain the 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb. Note that the national 1-hour standards are in units of ppb. California standards are in units of ppm. To directly compare the national 1-hour standards to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.

[9] On June 2, 2010, the new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of ppb. California standards are in units of ppm. To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

[10] The CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[11] The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.

[12] In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basins, respectively.

°C = degrees Celsius
CARB = California Air Resources Board
EPA = United States Environmental Protection Agency
µg/m^3 = micrograms per cubic meter
mg/m^3 = milligrams per cubic meter
ppm = parts per million
ppb = parts per billion

Table 4.3-2: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1-hour	Nonattainment	Not Applicable
O_3 8-hour	Nonattainment	Extreme Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Nonattainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment[1]	Attainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: California Air Resources Board 2013 (http://www.arb.ca.gov/desig/desig.htm).
[1] Except Los Angeles County

CO = carbon monoxide
NO_2 = nitrogen dioxide
O_3 = ozone
$PM_{2.5}$ = particulate matte less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter
SO_2 = sulfur dioxide

Table 4.3-3: Attainment Status of Criteria Pollutants in the Salton Sea Air Basin

Pollutant	State	Federal
O_3: 1-hour	Extreme Nonattainment	Not Applicable
O_3: 8-hour	Nonattainment	Nonattainment
CO	Attainment	Attainment/Unclassified
NO_2	Attainment	Attainment/Unclassified
SO_2	Attainment	Unclassified
Lead	Attainment	Not Applicable
PM_{10}	Nonattainment	Nonattainment
$PM_{2.5}$	Unclassified	Attainment/Unclassified
All others	Attainment/Unclassified	Attainment/Unclassified

Source: California Air Resources Board 2013 (http://www.arb.ca.gov/desig/desig.htm).

CO = carbon monoxide
NO_2 = nitrogen dioxide
O_3 = ozone
$PM_{2.5}$ = particulate matte less than 2.5 microns in diameter
PM_{10} = particulate matter less than 10 microns in diameter
SO_2 = sulfur dioxide

4.3.2 Regulatory Setting

4.3.2.1 Federal Regulatory Setting

Federal Clean Air Act

The Federal Clean Air Act (CAA) provides the EPA with the authority to set national ambient air quality standards (NAAQS) and grants a waiver for California to set stricter standards. As a result, California has adopted its own set of more stringent standards, known as the California ambient air quality standards (CAAQS). The EPA also requires that each state adopt a State Implementation Plan (SIP) that outlines the regulations and programs that will be implemented to demonstrate how a state will attain or maintain the ambient air quality standards within a given period of time.

General Conformity

The General Conformity Rule was established under the CAA (Section 176(c)(4)) to ensure that actions taken by Federal agencies in nonattainment and maintenance areas do not interfere with a state's plans to meet national standards for air quality. The rule was first promulgated in 1993, with the most recent revisions adopted in March 2010.

The General Conformity Rule requires that Federal actions that may result in direct and indirect emissions of criteria pollutants for which the action area is designated nonattainment or maintenance, conduct an air quality conformity determination to ensure that the action would not interfere with the applicable SIP. However, in order to limit the need to conduct conformity determinations for actions with minimal emission increases, the General Conformity Rule also provides de minimis emissions levels for criteria pollutants and precursor pollutants such as VOCs and NO_X. If the project's annual emissions are below the applicable de minimis levels, the project is not subject to a general conformity determination.

4.3.2.2 State Regulatory Setting

California Clean Air Act

The California Clean Air Act authorizes the CARB to develop ambient air quality standards for the State and prepare the SIP. The CARB is also responsible for setting vehicle emission standards and fuel specifications, and for regulating emissions from other sources such as consumer products and certain types of mobile equipment (e.g., industrial forklifts). The CARB also implements the Off-Road Mobile Sources Emission Reduction Program to reduce emissions from off-road equipment, and the Portable Equipment Registration Program, a program that evaluates portable equipment and provides a registry for qualifying equipment to be exempt from obtaining separate air quality permits to operate within each individual air basin.

4.3.2.3 Local Regulatory Setting

The California Public Utilities Commission (CPUC) has jurisdiction over the siting and design of the Proposed Project because the CPUC regulates and authorizes the construction of investor-owned public utility (IOU) facilities. Although such projects are exempt from local land use and zoning regulations and permitting, General Order (GO) No. 131-D, Section III.C requires "the utility to communicate with, and obtain the input of, local authorities regarding land-use matters and obtain any nondiscretionary local permits." As part of its environmental review process, SCE considered air quality policies from the County of Riverside General Plan, the County of San Bernardino General Plan, and the General Plans from the municipalities applicable to the Proposed Project (Banning, Beaumont, Calimesa, Colton, Grand Terrace, Loma Linda, Redlands, and San Bernardino).

South Coast Air Quality Management District

The SCAQMD and the Southern California Association of Governments (SCAG) are responsible for formulating and implementing the air quality management plan (AQMP) for the SCAB. Every 3 years, the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The SCAQMD adopted the 2003 AQMP in August 2003 and the 2007 AQMP in June 2007.

The SCAQMD adopted the 2012 AQMP on December 7, 2012. The AQMP has been developed in partnership with the CARB, EPA, SCAG, and stakeholders throughout the region, including input from local government, health and environmental organizations, and the business community. The AQMP is the legally enforceable blueprint for how to meet and maintain State and Federal air quality standards.

Estimated NO_X emissions associated with the Proposed Project are described in the 2012 AQMP as follows:

> "Southern California Edison (SCE) is currently in the process of, or has plans to construct six linear transmission line projects which would traverse federal lands within the jurisdiction of the [SCAQMD]. The projects are: (1) Devers-Palo Verde No. 2 Transmission Project (DPV2); (2) Tehachapi Renewable Transmission Project (TRTP); (3) Falcon Ridge Substation Project (Falcon Ridge); (4) Path 42 Upgrade Project (Path 42); (5) West of Devers Interim Project (WOD Interim); and (6) West of Devers Upgrade Project (WOD Upgrade). SCE submitted to the District the NO_X emissions estimates expected to be generated during the construction of these transmission lines from 2012 and 2022. The total estimated NO_X emissions from these six projects within the South Coast Air Basin are 95 tons per year for 2012; 55 tons per year for year 2013; 10 tons per year for year 2014; 20 tons per year for 2015; 50 tons per year for 2016 and 2017; and 20 tons per year for 2018 through 2022. These emissions have been accounted for in the general conformity set aside account for NO_X." (SCAQMD 2012:III-2-53)

In the SSAB, Coachella Valley and SCAQMD adopted the Coachella Valley PM_{10} State Implementation Plan (CVSIP) to ensure healthful air for local residents and tourists. These efforts are summarized in the 1996 Coachella Valley PM_{10} Redesignation Request and Maintenance Plan (1996 CV Plan).

SCAQMD Rule 403 and Rule 403.1

SCAQMD Rules 403 and 403.1 require that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source or create a nuisance off-site. Implementation of the dust suppression techniques outlined in Rules 403 and 403.1 would reduce the fugitive dust generation (PM_{10} and $PM_{2.5}$). Compliance with these rules would reduce impacts on nearby sensitive receptors.

Local General Plans

The Project Study Area includes the cities of Banning, Beaumont, Calimesa, Colton, Grand Terrace, Loma Linda, Palm Springs, Redlands, San Bernardino, and Yucaipa, and unincorporated areas of Riverside and San Bernardino counties. Table 4.3-4, Local Land Use Documents Applicable to Air Quality, summarizes key policies in local land use plans applicable to air quality for informational purposes.

Table 4.3-4: Local Land Use Documents Applicable to Air Quality

Document	Plans, Policies, Program
City of Banning General Plan, Air Quality Element	**Goal:** To preserve and enhance local and regional air quality for the protection of the health and welfare of the community.
City of Beaumont General Plan, Resource Management Element	**Goal 3:** The City of Beaumont will cooperate in regional efforts to improve air quality.
City of Calimesa General Plan, Air Quality Element, Energy Consumption	**Goal 4:** Reduce emission associated with energy consumption.
City of Colton General Plan, Model Air Quality	**Policy 1.5:** Support Innovative Approaches: Advocate and support innovative strategies to improve air quality. **Goal 5:** Reduce particulate emissions from roads, parking lots construction sites, and agricultural lands. **Policy 5.1:** Control Dust: Reduce particulate emission from roads, parking lots, construction sites and agricultural lands.
City of Grand Terrace General Plan, Open Space and Conservation Element	**Policy 4.7.6:** The City shall implement policies and procedures designed to reduce emissions generated by construction activities including enforcement of SCAQMD Rule 403.
City of Loma Linda General Plan, Conservation and Open Space Element, Air Quality	**Guiding Policy 9.3.6:** Minimize air pollutant emissions within the Loma Linda Planning Area so as to assist in achieving State and Federal air quality standards and seek to attain or exceed the more stringent of Federal or State Ambient Air Quality Standards for each measured pollutant.
City of Palm Springs General Plan, Air Quality Element	**Goal AQ1:** Improve regional air quality to protect the health of the community. **Policy AQ1.1:** Work to attain ozone, nitrogen dioxide, carbon monoxide, lead, particulate matter, and sulfate standards as enforced by SCAQMD. **Goal AQ2:** Control suspended particulate matter emissions from human activity or from erosion of soil by wind. **Policy AQ2.2:** Encourage the use of landscaping, vegetation, and other natural materials to trap particulate matter or control other pollutants. Establish windbreaks immediately downwind of large open spaces. Tree species used for windbreaks should be drought tolerant. **Goal AQ3:** Protect people and land uses that are sensitive to air contaminants from sources of air pollution to the greatest extent possible.
City of Redlands General Plan, Health and Safety Element, Air Quality and Energy Use	**Policy 8.16b:** Reduce energy consumption through conservation improvements and requirements

Table 4.3-4: Local Land Use Documents Applicable to Air Quality

Document	Plans, Policies, Program
City of San Bernardino General Plan, Natural Resources and Conservation Element	**Goal 12.5** Promote air quality that is compatible with the health, well-being, and enjoyment of life. ***Policies:*** **12.5.1** Reduce the emission of pollutants including carbon monoxide, oxides of nitrogen, photochemical smog, and sulfate in accordance with South Coast Air Quality Management District (SCAQMD) standards. **12.5.3** Require dust abatement measures during grading and construction operations. (LU-1)
City of Yucaipa General Plan, Air Quality Element	**Goal AQ-2:** Encourage both new and existing developments to decrease emission releases. **Goal AQ-4:** Strive for the attainment of Federal air quality standards through the land use review process. **44(a): Goal:** A pattern of land uses which can be efficiently served by a diversified transportation and land development projects which directly and indirectly generate the minimum feasible amount of air pollutants. **4(b): Policy i:** Manage Growth: Because congestion resulting from increased growth is expected to result in a significant increase in the air quality degradation of the air basin, the City may manage growth by insuring the timely provision of infrastructure to serve new development. **4(b): Policy iii:** Protect Sensitive Receptors: Because some land uses support populations that are especially sensitive to air contaminants (such as schools and hospitals), the City shall support a regional approach to regulating the location and design of land uses which are especially sensitive to air pollution. **Goal 5(a): Particulate Emissions:** The minimum practicable amount of particulate emissions from the construction and operation of roads and buildings. **Policy 5(b) (i): Control Dust:** Because particulate emissions exceed federal and state standards in the air basin, the City shall reduce particulate emissions from roads… construction sites… **Goal 6(a): Energy Conservation:** Reduced emissions through reduced energy consumption. **Policy 6 (b) (i): Conserve Energy:** Because energy sources produce significant amounts of air pollution, the City shall reduce energy consumption through conservation improvements and requirements. **Goal AQ-7:** Review and incorporate appropriate policies contained in the Regional Air Quality Element.
County of Riverside General Plan	**Air Quality Element, Multijurisdictional Cooperation Policy AQ 1.1:** Promote and participate with regional and local agencies, both public and private, to protect and improve air quality. (AI 111) **Air Quality Element, Multijurisdictional Cooperation Policy AQ 2.3:** Encourage the use of pollution control measures such as landscaping, vegetation and other materials, which trap particulate matter or control pollution. (AI 114) **Air Quality Element, Multijurisdictional Cooperation Policy AQ 4.8:**

Table 4.3-4: Local Land Use Documents Applicable to Air Quality

Document	Plans, Policies, Program
	Expand, as appropriate, measures contained in the County's Fugitive Dust Reduction Program for the Coachella Valley to the entire County. **Air Quality Element, Multijurisdictional Cooperation Policy AQ 4.9:** Require compliance with SCAQMD Rules 403 and 403.1, and support appropriate future measures to reduce fugitive dust emanating from construction sites. **Air Quality Element, Particulate Matter, Control Measures Policy AQ 17.1:** Reduce particulate matter from agriculture, construction, demolition, debris hauling, street cleaning, utility maintenance, railroad rights-of way, and off-road vehicles to the extent possible. (AI 123) **Reche Canyon/Badlands Area Plan, Local Land Use Policies:** No applicable air quality policies. **The Pass Area Plan, Policy Areas:** No applicable air quality policies.
County of San Bernardino General Plan, Conservation Element, Air Quality	**Goal CO 4:** The County will ensure good air quality for its residents, businesses, and visitors to reduce impacts on human health and the economy. **Policy CO 4.2:** Coordinate air quality improvement technologies with the SCAQMD and the MDAQMD to improve air quality through reductions in pollutants from the region.

Morongo Reservation

The Proposed Project will traverse approximately 8 miles of the tribal trust lands of the Morongo Indian Reservation east of Banning, California. Except for approximately two miles of new corridor between Malki Road and the western boundary of the Reservation, the Proposed Project will utilize the transmission corridor that has been used by existing SCE 220 kV transmission lines starting in 1945, and as subsequently expanded. Matters concerning the use of the Reservation's trust lands are subject to approval by the Morongo Band's General Membership, which consists of all enrolled adult voting members. With limited exceptions, the Morongo Band does not release its internal ordinances and other laws to the public.

The Morongo Band's General Membership has voted to approve the Bureau of Indian Affairs' grants to SCE of the rights of way and easements necessary for SCE to continue operating its existing 220 kV facilities on the Morongo Reservation and to replace and upgrade those facilities with the WOD Project. The Morongo Band's approval of these grants of rights of way and easements includes relocating approximately two miles of the corridor west of Malki Road into a new corridor depicted on Figure 2-3, Proposed and Alternative Transmission Line Routes, as either the Proposed Project (Alternative 1) or the Alternative Project (1X). The existing corridor, plus either Alternative 1 or 1X, thus would be consistent with all applicable tribal laws, and are the only corridors approved by the Morongo Band for the continued operation and eventual replacement of SCE's 220 kV facilities on and across the trust lands of the Morongo Indian Reservation.

4.3.3 Significance Criteria

4.3.3.1 CEQA Significance Criteria

The significance criteria for assessing the impacts to air quality come from the California Environmental Quality Act (CEQA) Environmental Checklist. According to the CEQA Checklist, a project causes a potentially significant impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people.

Thresholds for Construction Emissions

The following CEQA significance thresholds for construction emissions have been established within SCAQMD's jurisdiction:

- 75 pounds per day (lbs/day) of volatile organic compounds (VOCs);
- 100 lbs/day of NO_X;
- 550 lbs/day of CO;
- 150 lbs/day of PM_{10};
- 55 lbs/day of $PM_{2.5}$; and
- 150 lbs/day of sulfur oxides (SO_X).

Projects with construction-related emissions that exceed any of the emission thresholds are considered to have significant short-term adverse air quality impacts under the SCAQMD guidelines and CEQA.

Thresholds for Operational Emissions

The daily operational emissions significance thresholds for the SCAQMD are as follows.

Emission Thresholds for Pollutants with Regional Effects. Projects with operation-related emissions that exceed any of the emission thresholds listed below are considered significant under SCAQMD guidelines.

- 55 lbs/day of VOCs;

- 55 lbs/day of NO_X;
- 550 lbs/day of CO;
- 150 lbs/day of PM_{10};
- 55 lbs/day of $PM_{2.5}$; and
- 150 lbs/day of SO_X.

Thresholds for Localized Significance. For the Proposed Project, there are multiple Source Receptor Areas (SRA) for Localized Significance Thresholds. According to the SRA/City Table on the SCAQMD Localized Significance Threshold website (SCAQMD 2011), the west end of the study area is located within the central San Bernardino Valley area (SRA 34), the central portion of the study area is located within the Banning Airport area (SRA 29), and the eastern portion of the study area is located within the Coachella Valley area (SRA 30). The Localized Significance thresholds are dependent on the size of the construction area and the distance to the nearest sensitive receptor. The Localized Significance thresholds that apply to each phase of construction are listed in Section 4.3.4, Impact Analysis.

4.3.3.2 NEPA Significance Criteria

Unlike CEQA, NEPA does not have specific significance criteria for air quality. However, the NEPA regulations contain guidance regarding significance analysis. Specifically, consideration of "significance" involves an analysis of both context and intensity. 40 C.F.R. § 1508.27.

4.3.3.3 General Conformity Thresholds

The General Conformity Rule ensures that the actions taken by federal agencies in nonattainment and maintenance areas do not interfere with a state's plans to meet national standards for air quality. If the project's annual emissions are below the applicable de minimis levels, the project is not subject to a general conformity determination.

Based on the Federal attainment statuses for the SCAB, the de minimis levels that apply to the SCAB are listed in Table 4.3-5, General Conformity De Minimis Levels for the South Coast Air Basin. The de minimis levels that apply to the SSAB are listed in Table 4.3-6, General Conformity De Minimis Levels for the Salton Sea Air Basin. These levels apply to all direct and indirect annual emissions generated during construction and operation of the Proposed Project under Federal agency control.

Table 4.3-5: General Conformity De Minimis Levels for the South Coast Air Basin

Pollutant	Threshold (Tons/year)
Ozone (VOC/NO_X)	10
CO	100
$PM_{2.5}$	100

Source: EPA, http://www.epa.gov/air/genconform/deminimis.html, 2013.

Table 4.3-6: General Conformity De Minimis Levels for the Salton Sea Air Basin

Pollutant	Threshold (Tons/year)
Ozone (VOC/NO_X)	25
PM_{10}	100

Source: EPA, http://www.epa.gov/air/genconform/deminimis.html, 2013.

4.3.4 Methodology

A number of modeling tools are available to assess air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analysis. Current SCAQMD guidelines (CEQA Air Quality Handbook, April 1993 and associated updates) were adhered to in the assessment of air quality impacts for the Proposed Project. Air quality impacts that occur within the Bureau of Land Management (BLM) and Reservation lands were assessed following the EPA's General Conformity Regulations (2010).

Air pollutant emissions associated with the Proposed Project would occur over the short term from construction, such as fugitive dust from grading/site preparation equipment exhaust. Once construction is completed, occasional maintenance would occur as needed during operation as required to maintain the Proposed Project.

Worst-case peak daily construction and operation emissions were estimated for the Proposed Project using a detailed equipment inventory combined with emissions factors from the CARB EMFAC2011 and OFFROAD models.

The EMFAC2011 model does not provide SO_2 emission rates for on-road vehicles. In addition, as of December 1, 2010, all diesel fuel sold in the U.S. must meet ultra-low sulfur diesel (ULSD) standards. Ultra-low sulfur diesel is a cleaner-burning diesel fuel that contains 97 percent less sulfur than low-sulfur diesel (LSD). The use of ULSD reduces the SO_2 emissions from on-road haul trucks and off-road construction equipment to almost zero. Therefore, for the purposes of determining significance, the Proposed Project's construction or operational SO_2 emissions were not estimated.

The following data from the Project Description and Traffic Analysis were used to estimate the Proposed Project's worst-case peak daily air quality emissions (Section 3.2.2.3: Substation Construction Equipment and Workforce Estimates, Section 3.2.3.18: Transmission and Subtransmission Construction Equipment and Workforce Estimates, Section 3.2.5.2: Distribution Construction Equipment and Workforce Estimates, and Section 3.2.8.5: Telecommunication System Construction Equipment and Workforce Estimates):

- Off-road equipment (loaders, dozers, graders, scrapers, etc.);
- Helicopters;
- Maximum disturbed area;

- Import/export of materials and debris;
- Daily truck trips; and
- Number of on-site employees.

As described in Section 3.11, Construction Schedule, due to the preliminary nature of the construction schedule at this time, in order to represent the most conservative regional air quality impacts scenario, peak daily emissions were calculated assuming all work activities on all portions of the Proposed Project could potentially occur concurrently on the same worst-case day. Additionally, as it relates to each of the Proposed Project components, the Project Description utilizes conservative ground disturbance assumptions based on preliminary engineering to estimate surface area disturbance. This expanded surface area disturbance is provided for the purpose of ensuring the environmental analysis included in Chapters 4.0 through 6.0 sufficiently analyzes the potential environmental impacts of conservative ground disturbance assumptions. The actual surface area disturbance is expected to be reduced following completion of final engineering. Therefore, actual regional construction emissions are expected to be much lower than presented in the following analysis. Emissions are expected to be lower as a result of fewer construction activities occurring on the same day, since certain activities must be completed before the next phase of construction would begin. Furthermore, the actual area of ground disturbance would be less than assumed for this analysis, thereby reducing estimated fugitive dust emissions from even further.

4.3.5 Impact Analysis

4.3.5.1 CEQA Impact Assessment

Would the project conflict with or obstruct implementation of the applicable air quality plan?

The following discussion addresses all Proposed Project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, telecommunication facilities, and the establishment of staging yards.

Construction Impacts

An AQMP describes air pollution control strategies to be taken by a city, county, or region classified as a nonattainment area. The main purpose of an AQMP is to bring the area into compliance with Federal and State air quality standards. CEQA requires that certain projects be analyzed for consistency with the AQMP. For a project to be consistent with the AQMP adopted by the SCAQMD, the pollutants emitted from the project should not cause a significant impact on air quality, or the project must already have been included in the AQMP projection. As noted above, NO_X emissions associated with the Proposed Project have been accounted for in the 2012 AQMP. Although the Proposed Project would exceed significance thresholds established by the SCAQMD during construction, the emissions would be temporary in nature and would not result in significant increases in long-term regional air pollutant emissions. Therefore, the Proposed Project would not conflict with the AQMP.

Operation Impacts

Growth projections from local general plans adopted by cities and vehicle-miles-traveled projections developed by SCAG are some of the inputs used to develop the AQMP. Because operations and maintenance (O&M) of the Proposed Project would not result in a population increase, the Proposed Project would not conflict with the growth projections used to develop the 2012 AQMP. Please see Section 4.13, Socioeconomics, Population and Housing, and Environmental Justice, for a discussion of economic and population growth. Operation and maintenance of the Proposed Project would not conflict with the implementation of the AQMP, and there would be no impact.

Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Construction Impacts

During construction of the Proposed Project, on-site operation of heavy-duty construction equipment would generate emissions of vehicle exhaust containing pollutants such as CO, NO_X, VOCs, PM_{10}, and $PM_{2.5}$. Earthmoving activities would generate emissions of PM_{10} and $PM_{2.5}$ as fugitive dust. Off-site vehicle trips made by employees and delivery trucks would generate additional vehicle exhaust emissions.

Construction emissions were estimated for the Proposed Project using a detailed equipment inventory included in Chapter 3.0, Project Description, combined with emissions factors from the CARB EMFAC2011 and OFFROAD models.

Due to the linear nature of the Proposed Project, the following discussion analyzes emissions from each of the individual components of the Proposed Project compared to the applicable Localized Significance Thresholds, which are designed to analyze impacts within the immediate vicinity of nearby sensitive receptors.

Total peak day emissions from all the components of the Proposed Project during construction are also provided in Table 4.3-19, Total Construction Emissions. The total emissions represent a maximum peak daily worst-case scenario that assumes construction of all components of the Proposed Project were to overlap in any given day, which is highly unlikely to actually occur.

Substation Modifications. There are no new substations proposed as part of the Proposed Project. Modifications to existing substation equipment would be performed to accommodate continuous and emergency power on the WOD 220 kV transmission lines between Vista, San Bernardino, El Casco, Etiwanda, and Devers Substations. Additionally, modifications to Timoteo and Tennessee Substations would also be performed to accommodate the 66 kV subtransmission line relocations. All substation-related work would be conducted within the existing substation walls or fence lines.

- **Devers Substation.** Devers Substation is an existing 500/220/115/12 kV substation located north of the I-10 and northwest of the City of Palm Springs in Riverside County. Although Devers Substation contains 500 kV, 220 kV, 115 kV, and 12 kV

equipment, the Proposed Project would involve only modifications to the 220 kV equipment. Work at Devers Substation would occur on the 220 kV switchrack and within the MEER. This substation is located approximately 1,000 feet from the nearest off-site sensitive receptor. Therefore, the Localized Significance Thresholds for a 5-acre site at a distance of 300 meters were used. Table 4.3-7, Devers Substation Construction Emissions, summarizes the construction emissions for Devers Substation. As shown, the construction activities within Devers Substation would not exceed the SCAQMD's Localized Significance Thresholds. Impacts would be less than significant.

Table 4.3-7: Devers Substation Construction Emissions

Construction Phase	Estimated Daily Emissions (lbs/day)				
	CO	**VOCs**	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Civil	19.4	4.3	31.4	2.1	1.5
Electrical	17.3	3.4	26.4	1.2	1.1
Maintenance	3.1	0.4	1.1	0.1	0.1
Test	1.0	0.0	0.1	0.0	0.0
Peak Phase Emissions	**19.4**	**4.3**	**31.4**	**2.1**	**1.5**
Localized Significance Threshold (5-acre site at 300 m)	**17,157**	**NA**	**656**	**157**	**67**
Exceed Localized Significance Threshold?	**No**	**NA**	**No**	**No**	**No**

Source: LSA Associates, Inc., September 2013

- **El Casco Substation.** El Casco Substation is an existing 220/115/12 kV substation located off of San Timoteo Canyon Road west of the City of Beaumont in Riverside County. Although El Casco Substation contains 220 kV, 115 kV, and 12 kV equipment, the Proposed Project would involve only modifications to the 220 kV equipment. Work at El Casco Substation would occur on the 220 kV switchrack and within the MEER. This substation is located approximately 1,500 feet from the nearest off-site sensitive receptor. Therefore, the Localized Significance Thresholds for a 5-acre site at a distance of 500 meters were used. Table 4.3-8, El Casco Substation Construction Emissions, summarizes the construction emissions for El Casco Substation. As shown, the construction activities within El Casco Substation would not exceed the SCAQMD's Localized Significance Thresholds. Impacts would be less than significant.

Table 4.3-8: El Casco Substation Construction Emissions

Construction Phase	Estimated Daily Emissions (lbs/day)				
	CO	**VOCs**	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Civil	13.7	3.3	23.3	1.2	1.1
Electrical	16.3	3.7	28.8	1.6	1.2
Maintenance	2.4	0.3	1.1	0.1	0.1
Test	1.0	0.0	0.1	0.0	0.0
Peak Phase Emissions	**16.3**	**3.7**	**28.8**	**1.6**	**1.2**
Localized Significance Threshold (5-acre site at 500 m)	**31,903**	**NA**	**698**	**405**	**189**
Exceed Localized Significance Threshold?	**No**	**NA**	**No**	**No**	**No**

Source: LSA Associates, Inc., September 2013

- **Vista Substation.** Vista Substation is an existing 220/115/66 kV substation located west of I-215 and north of Newport Avenue in the City of Grand Terrace. Although Vista Substation contains 220 kV, 115 kV, and 66 kV equipment, the Proposed Project would involve only modifications to the 220 kV equipment. Work at Vista Substation would occur on the 220 kV switchrack and within the MEER. This substation is located approximately 75 feet from the nearest off-site sensitive receptor. Therefore, the Localized Significance Thresholds for a 5-acre site at a distance of 25 meters were used. Table 4.3-9, Vista Substation Construction Emissions, summarizes the construction emissions for Vista Substation. As shown, the construction activities within Vista Substation would not exceed the SCAQMD's Localized Significance Thresholds. Impacts would be less than significant.

Table 4.3-9: Vista Substation Construction Emissions

Construction Phase	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Civil	14.4	3.3	23.3	1.2	1.1
Electrical	17.0	3.7	28.9	1.7	1.2
Maintenance	2.7	0.4	1.1	0.1	0.1
Test	1.0	0.0	0.1	0.0	0.0
Peak Phase Emissions	**17.0**	**3.7**	**28.9**	**1.7**	**1.2**
Localized Significance Threshold (5-acre site at 25 m)	**1,746**	**NA**	**270**	**14**	**8**
Exceed Localized Significance Threshold?	**No**	**NA**	**No**	**No**	**No**

Source: LSA Associates, Inc., September 2013

- **San Bernardino Substation.** San Bernardino Substation is an existing 220/66/12 kV substation located north of San Bernardino Avenue and east of Mountain View Avenue in the City of Redlands. Although San Bernardino Substation contains 220 kV, 66 kV, and 12 kV equipment, the Proposed Project would involve only modifications to the 220 kV equipment. Work at San Bernardino Substation would occur on the 220 kV switchrack and within the MEER. This substation is located approximately 800 feet from the nearest off-site sensitive receptor. Therefore, the Localized Significance Thresholds for a 5-acre site at a distance of 200 meters were used. Table 4.3-10, San Bernardino Substation Construction Emissions, summarizes the construction emissions for San Bernardino Substation. As shown, the construction activities within San Bernardino Substation would not exceed the SCAQMD's Localized Significance Thresholds. Impacts would be less than significant.

Table 4.3-10: San Bernardino Substation Construction Emissions

Construction Phase	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Civil	19.4	4.3	31.4	2.8	1.7
Electrical	17.0	3.7	28.9	1.2	1.1
Maintenance	3.1	0.4	1.1	0.1	0.1
Test	1.0	0.0	0.1	0.0	0.0
Peak Phase Emissions	**19.4**	**4.3**	**31.4**	**2.8**	**1.7**

Table 4.3-10: San Bernardino Substation Construction Emissions

Construction Phase	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Localized Significance Threshold (5-acre site at 200 m)	**8,532**	**NA**	**486**	**106**	**35**
Exceed Localized Significance Threshold?	**No**	**NA**	**No**	**No**	**No**

Source: LSA Associates, Inc., September 2013

- **Etiwanda Substation.** Etiwanda Substation is an existing 220/66/12 kV substation located north of Sixth Street and west of Etiwanda Avenue in the City of Rancho Cucamonga. Work at Etiwanda Substation would occur within the MEER. This substation is located approximately 3,500 feet from the nearest off-site sensitive receptor. Therefore, the Localized Significance Thresholds for a 5-acre site at a distance of 500 meters were used. Table 4.3-11, Etiwanda Substation Construction Emissions, summarizes the construction emissions for Etiwanda Substation. As shown, the construction activities within Etiwanda Substation would not exceed the SCAQMD's Localized Significance Thresholds. Impacts would be less than significant.

Table 4.3-11: Etiwanda Substation Construction Emissions

Construction Phase	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Maintenance	1.0	0.0	0.1	0.0	0.0
Test	1.0	0.0	0.1	0.0	0.0
Peak Phase Emissions	**1.0**	**0.0**	**0.1**	**0.0**	**0.0**
Localized Significance Threshold (5-acre site at 200 m)	**27,680**	**NA**	**778**	**229**	**120**
Exceed Localized Significance Threshold?	**No**	**NA**	**No**	**No**	**No**

Source: LSA Associates, Inc., September 2013

- **Timoteo Substation.** Timoteo Substation is an existing 66/12 kV substation located near the intersection of Redlands Boulevard and Mountain View Avenue in the City of Loma Linda. Although Timoteo Substation contains both 66 kV and 12 kV equipment, the Proposed Project would involve only modifications to the 66 kV equipment. Work at Timoteo Substation would occur on the 66 kV switchrack and within the MEER. This substation is located approximately 75 feet from the nearest off-site sensitive receptor. Therefore, the Localized Significance Thresholds for a 5-acre site at a distance of 25 meters were used. Table 4.3-12, Timoteo Substation Construction Emissions, summarizes the construction emissions for Timoteo Substation. As shown, the construction activities within Timoteo Substation would not exceed the SCAQMD's Localized Significance Thresholds. Impacts would be less than significant.

Table 4.3-12: Timoteo Substation Construction Emissions

Construction Phase	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Civil	1.5	0.1	0.6	0.0	0.0

Table 4.3-12: Timoteo Substation Construction Emissions

Construction Phase	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Electrical	2.2	0.1	0.6	0.0	0.0
Maintenance	1.6	0.0	0.2	0.0	0.0
Test	1.0	0.0	0.1	0.0	0.0
Peak Phase Emissions	**2.2**	**0.1**	**0.6**	**0.0**	**0.0**
Localized Significance Threshold (5-acre site at 25 m)	**1,746**	**NA**	**270**	**14**	**8**
Exceed Localized Significance Threshold?	**No**	**NA**	**No**	**No**	**No**

Source: LSA Associates, Inc., September 2013

- **Tennessee Substation.** Tennessee Substation is an existing 66/12 kV substation located at Avenue E and 18th Street in the City of Yucaipa. Although Tennessee Substation contains both 66 kV and 12 kV equipment, the Proposed Project would involve only modifications to the 66 kV equipment. Work at Tennessee Substation would occur on the 66 kV switchrack and within the MEER. This substation is located approximately 50 feet from the nearest off-site sensitive receptor. Therefore, the Localized Significance Thresholds for a 5-acre site at a distance of 25 meters were used. Table 4.3-13, Tennessee Substation Construction Emissions, summarizes the construction emissions for Tennessee Substation. As shown, the construction activities within Tennessee Substation would not exceed the SCAQMD's Localized Significance Thresholds. Impacts would be less than significant.

Table 4.3-13: Tennessee Substation Construction Emissions

Construction Phase	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Civil	1.5	0.1	0.6	0.0	0.0
Electrical	2.2	0.1	0.6	0.0	0.0
Maintenance	2.0	0.1	0.2	0.0	0.0
Test	1.0	0.0	0.1	0.0	0.0
Peak Phase Emissions	**2.2**	**0.1**	**0.6**	**0.0**	**0.0**
Localized Significance Threshold (5-acre site at 25 m)	**1,746**	**NA**	**270**	**14**	**8**
Exceed Localized Significance Threshold?	**No**	**NA**	**No**	**No**	**No**

Source: LSA Associates, Inc., September 2013

220 kV Transmission Lines. The Proposed Project would include the removal and upgrade of approximately 181 circuit miles of existing 220 kV line facilities (approximately 48 corridor miles) primarily within the existing WOD corridor. The Proposed Project would primarily be constructed on a combination of new 220 kV double-circuit lattice steel towers (LSTs), double-circuit tubular steel poles (TSPs), and single-phase TSPs. Each of the proposed 220 kV transmission lines would consist of overhead wires (conductors). The discussion below addresses segments based on the equipment required and the applicable air basin threshold.

Table 4.3-14, Transmission Line Segments 1 through 4 and 6 Construction Emissions, displays construction emissions associated with installing an LST foundation within Segments 1 through 4 and 6. Segments 1 through 4 and 6 are presented together because the construction equipment required for this activity is the same. As noted in the table, the Localized Significance Thresholds for Segments 4 and 6 are different than the thresholds for Segments 1 through 3.

The construction equipment required for Segment 5 is different than that required for the other Proposed Project segments and therefore Segment 5 emissions are represented in Table 4.3-15, Transmission Line Segment 5 Construction Emissions.

The peak construction activity for Segments 1 through 4 and 6 of the transmission lines is the installation of an LST foundation. For the purposes of the Localized Significance Threshold analysis, and to represent the highest emitting construction activity from the most intensive equipment usage that could potentially occur in the immediate proximity of a sensitive receptor, the emissions associated with the construction of one LST foundation are compared to the applicable Localized Significance Threshold based on the proximity of the activity to the nearest sensitive receptor. The Localized Significance Thresholds are based on the closest and therefore most conservative receptor distance (approximately 25 meters). As shown in Table 4.3-14, Transmission Line Segments 1 through 4 and 6 Construction Emissions, the highest-emitting construction emissions after implementation of APMs would not exceed the applicable SCAQMD's Localized Significance Thresholds.

Table 4.3-14: Transmission Line Segments 1 through 4 and 6 Construction Emissions

Construction Emissions and Thresholds	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Peak Localized Emissions from Installing LST Foundation	27.6	9.0	72.5	18.1	5.6
Peak Localized Emissions from Installing LST Foundation After Implementing APMs AIR-1 and AIR-2	27.6	9.0	58.0	10.3	4.0
Localized Significance Threshold for Segments 1–3 (5-acre site at 25 m)[2]	1,746	NA	270	14	8
Localized Significance Threshold for Segment 4 (5-acre site at 25 m)[3]	2,817	NA	236	21	11
Localized Significance Threshold for Segment 6 (5-acre site at 25 m)[4]	2,292	NA	304	14	8
Exceed Localized Significance Thresholds (no APMs)?	No	NA	No	Yes	No
Exceed Localized Significance Thresholds (with APMs)?	No	NA	No	No	No

Source: LSA Associates, Inc., September 2013

1. LST Foundation Installation with 5 acres of disturbed land
2. Central San Bernardino Valley Area (SRA 34) Localized Significance Thresholds for Segments 1–3.
3. Banning Airport Area (SRA 29) Localized Significance Thresholds for Segment 4.
4. Coachella Valley area (SRA 30) Localized Significance Thresholds for Segment 6.

APM-AIR-2, identified below in Section 4.3.6, Applicant Proposed Measures, requires a detailed Fugitive Dust Control Plan (which would propose dust suppression of disturbed

surfaces (including on unpaved roads), low speeds on unpaved roadways, water application, etc.).

Table 4.3-15, Transmission Line Segment 5 Construction Emissions, lists the construction emissions associated with each of the construction phases within Segment 5 of the transmission lines. For the purposes of the Localized Significance Threshold analysis, and to represent the highest emitting construction activity from the most intensive equipment usage that could potentially occur in the immediate proximity of a sensitive receptor, the emissions associated with the construction of one TSP foundation are compared to the applicable Localized Significance Threshold based on the proximity of the activity to the nearest sensitive receptor. The Localized Significance Thresholds are based on the closest and therefore most conservative receptor distance (approximately 25 meters). As shown in Table 4.3-15, Transmission Line Segment 5 Construction Emissions, the highest-emitting construction emissions after implementation of APMs would not exceed the applicable SCAQMD's Localized Significance Thresholds.

Table 4.3-15: Transmission Line Segment 5 Construction Emissions

Construction Emissions and Thresholds	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Peak Emissions from Installing a TSP Foundation	35.1	11.0	90.8	23.2	7.2
Peak Emissions from Installing a TSP Foundation After Implementing APMs AIR-1 and AIR-2	35.1	11.0	72.6	13.2	5.1
Localized Significance Threshold (5-acre site at 25 m)	2,817	NA	236	21	11
Exceed Localized Significance Threshold?	No	NA	No	Yes	No
Exceed Localized Significance Threshold (after APMs)?	No	NA	No	No	No

Source: LSA Associates, Inc., September 2013

1. TSP Foundation Installation with 5 acres of disturbed land

Relocation of existing distribution facilities would be required to accommodate relocation of 220 kV transmission infrastructure. Distribution work resulting from the 220 kV transmission portion of the Proposed Project would include overhead and underground construction. Distribution work resulting from 220 kV transmission line work would be conducted in franchise[2] or newly acquired utility ROW. The Dental 12 kV circuit would be relocated to a new underground system (approximately 1.5 miles). The Intern 12 kV circuit would be relocated into the same new underground system as the Dental 12 kV circuit, and a portion would be underbuilt on an existing 66 kV subtransmission line. Additionally, the relocations of both the San Bernardino-Redlands-Timoteo 66 kV and the San Bernardino-Redlands-Tennessee 66 kV subtransmission lines would require the additional relocation of existing distribution circuits and associated equipment from existing poles to new subtransmission poles exclusively in Segment 1. The emissions associated with the 12 kV distribution line are included in the transmission and subtransmission line calculations summarized above.

[2] The term "franchise" refers to utility infrastructure ROW agreements that SCE holds with local jurisdictions.

Construction of the Proposed Project would require the use of temporary shoo-fly facilities in order to maintain continuous power flow in the existing WOD corridor during construction. A shoo-fly is a temporary electrical line on temporary poles that is used during construction to maintain electrical service to the area while allowing portions of a permanent line to be taken out of service, ensuring safe working conditions during construction activities. The shoo-fly facilities would be removed after construction is completed.

Table 4.3-16, Shoo-Fly Construction Emissions, lists the construction emissions associated with each of the shoo-fly line's construction phases. For the purposes of the Localized Significance Threshold analysis, and to represent the highest emitting construction activity from the most intensive equipment usage that could potentially occur in the immediate proximity of a sensitive receptor, the emissions associated with installation of the conductor are compared to the applicable Localized Significance Threshold based on the proximity of the activity to the nearest sensitive receptor. The Localized Significance Thresholds are based on the closest and therefore most conservative receptor distance (approximately 25 meters). As shown in Table 4.3-16, Shoo-Fly Construction Emissions, the highest-emitting construction emissions after implementation of APMs would not exceed the applicable SCAQMD's Localized Significance Thresholds.

Table 4.3-16: Shoo-Fly Construction Emissions

Construction Emissions and Thresholds	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Peak Emissions for Installation of Conductor	48.6	14.1	104.8	17.8	7.6
Peak Emissions for Installation of Conductor After Implementing APMs AIR-1 and AIR-2	48.6	14.1	83.9	11.6	6.3
Localized Significance threshold (5-acre site at 25 m)	1,746	NA	270	14	8
Exceed Localized Significance threshold?	No	NA	No	Yes	No
Exceed Localized Significance threshold (after APMs)?	No	NA	No	No	No

Source: LSA Associates, Inc., September 2013

1. Conductor Installation with 5 acres of disturbed land

66 kV Subtransmission Lines. The Proposed Project would require relocation of portions of the existing San Bernardino-Redlands-Timoteo (approximately 2 miles) and the San Bernardino-Redlands-Tennessee 66 kV (approximately 3.5 miles) subtransmission lines located within Segment 1 to new routes within existing ROW or franchise, or newly acquired ROW. The relocated 66 kV subtransmission lines would be constructed within new ROW or existing franchise.

Table 4.3-17, Subtransmission Line Construction Emissions, lists the construction emissions associated with each of the subtransmission lines' construction phases. For the purposes of the Localized Significance Threshold analysis, and to represent the highest emitting construction activity from the most intensive equipment usage that could potentially occur in the immediate proximity of a sensitive receptor, the emissions associated with installation of the conductor are compared to the applicable Localized Significance Threshold based on the proximity of the activity to the nearest sensitive

receptor. The Localized Significance Thresholds are based on the closest and therefore most conservative receptor distance (approximately 25 meters). As shown in Table 4.3-17, Subtransmission Line Construction Emissions, the construction emissions would not exceed the SCAQMD's Localized Significance Thresholds.

Table 4.3-17: Subtransmission Line Construction Emissions

Construction Emissions and Thresholds	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Peak Emissions for Installation of Conductor	9.7	3.1	23.2	13.3	3.4
Peak Emissions for Installation of Conductor APMs AIR-1 and AIR-2	9.7	3.1	18.6	7.1	2.1
Localized Significance Threshold (5-acre site at 25 m)	1,746	NA	270	14	8
Exceed Localized Significance Threshold?	No	NA	No	No	No
Exceed Localized Significance Threshold (after APMs)?	No	NA	No	No	No

Source: LSA Associates, Inc., September 2013

1. Conductor Installation with 5 acres of disturbed land

Telecommunications. The new telecommunications infrastructure would include additions and modifications to the existing telecommunications system in order to maintain telecommunications operations during and after construction of the Proposed Project. The telecommunications infrastructure would be constructed in new and existing underground conduit and cable trench, and on existing riser, distribution, and subtransmission poles. Additionally, removal of the fiber optic portions from the 220 kV existing structures to connections in the field and/or at existing substations would be required.

Table 4.3-18, Telecommunications System Construction Emissions, lists the construction emissions associated with the construction of the telecommunications system. As shown, the construction emissions would not exceed the SCAQMD's Localized Significance Thresholds.

Table 4.3-18: Telecommunications System Construction Emissions

Construction Phase	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Telecommunications work for OPGW	51.6	17.3	140.9	9.9	5.6
Telecommunications work inside the MEER	3.0	0.1	0.3	0.0	0.0
Peak Phase Emissions	**51.6**	**17.3**	**140.9**	**9.9**	**5.6**
Localized Significance Threshold (5-acre site at 25 m)	**2,292**	**NA**	**304**	**14**	**8**
Exceed Localized Significance Threshold?	**No**	**NA**	**No**	**No**	**No**

Source: LSA Associates, Inc., September 2013

Staging Yards. SCE anticipates using one or more of the possible temporary staging yards listed in Table 3.2-A, Potential Staging Yard Locations, and seen in Figure 3.2-1, Potential Staging Yard Locations, as a reporting location for workers, vehicle and equipment parking, and material storage. Typically, each yard would be 3 to 20 acres in size, depending on land availability and intended use. Preparation of the staging yards

would include installation of temporary perimeter fencing and, depending on existing ground conditions at the site, may include the application of gravel or crushed rock. Any land that may be disturbed at the staging yard would be restored to pre-construction conditions or to conditions agreed upon between SCE and the landowner following the completion of construction for the Proposed Project. The emissions associated with the staging yards are included in the calculations summarized above for the substation, transmission lines, subtransmission lines, shoo-fly, and telecommunications.

Total Construction Emissions. Table 4.3-19, Total Construction Emissions, lists the total emissions that would be generated during a peak day of construction of the Proposed Project. As described in Section 3.11 Construction Schedule, due to the preliminary nature of the construction schedule at this time, in order to represent the most conservative regional air quality impacts scenario, peak daily emissions were calculated assuming all work activities on all portions of the Proposed Project could potentially occur concurrently on the same worst-case day. Actual regional construction emissions are expected to be much lower than presented in the following analysis; emissions are expected to be lower as a result of less construction activities occurring on the same day, since certain activities must be completed before the next phase of construction would begin. As shown, the construction emissions would exceed SCAQMD's regional construction thresholds. This would be a significant impact.

Table 4.3-19: Total Construction Emissions

Construction Activity	Estimated Daily Emissions (lbs/day)				
	CO	**ROG**	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Devers Substation	40.8	8.1	59.0	3.4	2.7
El Casco Substation	33.3	7.2	53.3	2.9	2.4
Vista Substation	35.1	7.4	53.4	3.0	2.4
San Bernardino Substation	40.4	8.4	61.5	4.1	2.9
Etiwanda Substation	2.0	0.0	0.2	0.0	0.0
Timoteo Substation	6.4	0.3	1.4	0.1	0.1
Tennessee Substation	6.7	0.3	1.5	0.1	0.1
220 kV Transmission Line	2,259.0	525.9	4,009.0	243.2	155.9
Shoo-Fly	837.6	241.3	1,739.3	165.0	87.7
66 kV Subtransmission Line	448.6	111.5	828.2	57.1	34.8
Telecommunications System	54.6	17.4	141.2	9.9	5.6
Total	**3,764.4**	**927.9**	**6,948.0**	**489.3**	**294.6**
Total After Implementing APMs AIR-1 and AIR-2	**3,764.4**	**927.9**	**5,558.4**	**378.3**	**271.3**
SCAQMD Regional Threshold	**550**	**75**	**100**	**150**	**55**
Exceed SCAQMD Threshold?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Exceed SCAQMD Significance Threshold (after APMs)?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Source: LSA Associates, Inc., July 2013

Section 4.3.6, Applicant Proposed Measures, propose dust suppression of disturbed surfaces (including unpaved roads), low speeds on unpaved roadways, and the use of newer model engines meeting EPA Tier 3 standards if available. The application of

APMs would reduce emissions from those identified in Table 4.3-19, Total Construction Emissions. As previously explained, actual emissions are expected to be less than those identified above as a result of fewer concurrent construction activities; however, emissions are not expected to be reduced to a less than significant level. Impacts remain significant and unavoidable.

Operation Impacts

The following discussion addresses all Proposed Project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines and telecommunication facilities.

Normal operation of the lines would be controlled remotely through SCE control systems, and manually in the field as required. SCE inspects the 66 kV subtransmission overhead and underground facilities in a manner consistent with CPUC GO 165, a minimum of once per year via ground and/or aerial. Maintenance would occur as needed and could include activities such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles, tree trimming, brush and weed control, and access road maintenance. Most regular O&M activities of overhead facilities are performed from existing access roads with no surface disturbance. Repairs done to existing facilities, such as repairing or replacing existing poles, could occur in undisturbed areas. Table 4.3-20, Total Operation Emissions, lists the emissions associated with the use of one helicopter operating for two hours, five trucks traversing the length of the transmission line, and two ¾-ton crew cab pickup trucks and one boom truck for tree trimming. These emissions represent a worst-case scenario in which all maintenance activities and all equipment would operate on a single peak day. As shown, the emissions associated with the O&M would not exceed the SCAQMD's Regional Significance Thresholds. Therefore, operation impacts from the Proposed Project would be less than significant.

Table 4.3-20: Total Operation Emissions

Construction Activity	Estimated Daily Emissions (lbs/day)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Total	11.3	5.7	22.0	0.8	0.7
SCAQMD Threshold	550	55	55	150	55
Exceed SCAQMD Threshold?	No	No	No	No	No

Source: LSA Associates, Inc., September 2013

Would the project 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The following discussion addresses all Proposed Project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, a telecommunication facilities, and the establishment of staging yards.

Construction Impacts

As previously identified, construction-related emissions of CO, VOCs, NOx, PM_{10} and $PM_{2.5}$ associated with the construction of 220 kV transmission lines, 66 kV subtransmission lines, and 12 kV distribution lines are regionally significant and require mitigation. The analysis above determined that construction activities associated with modifications to substations and telecommunications are less than significant. Nevertheless, there would be a cumulatively considerable net increase of the criteria pollutants that are in nonattainment status in the SCAB and SSAB. This is a significant impact. The APMs identified below in Section 4.3.6, Applicant Proposed Measures, require a detailed Exhaust Emissions Control Plan (which would include reduction measures such as the use of Tier 3 construction equipment, and use of particle traps on construction equipment) and a detailed Fugitive Dust Control Plan (which would include reduction measures such as dust suppression of disturbed surfaces [including unpaved roads], low speeds on unpaved roadways, etc.). While the application of APMs would reduce emissions from those identified in the tables presented above, emissions are not expected to be reduced to less than significant levels. The Proposed Project's contribution to cumulative short-term air quality impacts is significant and unavoidable.

Operation Impacts

As discussed above, once constructed, long-term operational emissions associated with facility maintenance would not exceed any of the SCAQMD's operation thresholds. The common approach that is appropriate to apply to this project is to use the same significance thresholds for project specific and cumulative impacts. Under this approach, operational impacts, both cumulative and regional, would be less than significant.

Would the project expose sensitive receptors to substantial pollutant concentrations?

Construction Impacts

The following discussion addresses all Proposed Project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, telecommunication facilities, and the establishment of staging yards.

To determine the impacts from pollutants on local receptors, such as residents, hospitals, schools, etc., SCAQMD has developed Localized Significance Thresholds. Due to the linear nature of the project, emissions from each of the individual components of the Proposed Project were compared to the applicable Localized Significance Thresholds. As described above and presented in Tables 4.3-7 through 4.3-18, construction of the Proposed Project may expose surrounding sensitive receptors to airborne particulates that would exceed the Localized Significance Thresholds for PM_{10} and $PM_{2.5}$ during construction of some transmission line segments. Therefore, APM-AIR-2 would be implemented to minimize these impacts; APM-AIR-2 identified below in Section 4.3.6, Applicant Proposed Measures, requires a detailed Fugitive Dust Control Plan, which would implement control measures such as dust suppression of disturbed surfaces (including on unpaved roads), low speeds on unpaved roadways, water application, etc.

With implementation of APM-AIR-2, emissions of PM_{10} and $PM_{2.5}$ would be reduced and would no longer exceed the applicable Localized Significance Thresholds for any construction activity. Impacts would be less than significant with mitigation.

Operation Impacts

Substation Modifications. Once constructed, there are no expected substantial long-term operational emissions. While there would be occasional maintenance events, these would only be as needed and infrequent enough that the emissions would be minimal. Impacts would be less than significant.

220 kV Transmission Lines. Once constructed, there are no expected substantial long-term operational emissions as the facilities would be operated remotely. While there would be occasional maintenance events, these would only be as needed and infrequent enough that the emissions would be minimal. Impacts would be less than significant.

66 kV Subtransmission Lines. The subtransmission lines would be maintained in a manner consistent with CPUC GO 95 and GO 128, as applicable. Normal operation of the lines would be controlled remotely through SCE control systems, and manually in the field as required. Once constructed, there are no expected substantial long-term operational emissions as the facilities would be operated remotely. While there would be occasional maintenance events, these would only be as needed and infrequent enough that the emissions would be minimal. Impacts would be less than significant.

Telecommunications. As previously identified, while there would be occasional maintenance events, these would only be as needed and infrequent enough that the emissions would be minimal. Impacts would be less than significant.

As described above, once constructed, long-term operational emissions associated with facility maintenance of substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, and telecommunication facilities would not exceed any of the SCAQMD's operational thresholds. Therefore, once completed, sensitive receptors would not be exposed to substantial pollutant concentrations and impacts would be less than significant.

Would the project create objectionable odors affecting a substantial number of people?

The following discussion addresses all Proposed Project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, telecommunication facilities, and the establishment of staging yards.

Construction Impacts

The Project does not propose land uses typically associated with emitting objectionable odors (i.e., wastewater treatment plants, chemical plants, composting operations, refineries, landfills, and dairies). Potential odor sources associated with the Proposed Project may result from equipment exhaust during construction activities. These emissions would be temporary, short-term and intermittent in nature, and would cease

upon completion of construction. Because odors would be temporary and would disperse rapidly with distance from the source, construction-generated odors would not result in the frequent exposure of a substantial number of people to objectionable odorous emissions. Therefore, impacts would be less than significant.

Operation Impacts

As described above, once constructed, there are not expected to be any substantial long-term operational emissions. Therefore, once completed, sensitive receptors would not be exposed to objectionable odors associated with the Proposed Project. Impacts would be less than significant.

4.3.5.2 NEPA Impact Assessment

Construction Impacts

As shown in Table 4.3-19, Total Construction Emissions, the estimated controlled total peak day emissions of CO, VOCs, NOx, PM_{10} and $PM_{2.5}$ during construction activities exceed corresponding SCAQMD regional significance thresholds. Compliance with the regulatory requirements described above, and implementation of APM AIR-1 and APM AIR-2, would reduce air quality impacts but not to a less than significant level. Therefore, significant and unavoidable impacts are anticipated during construction of the Proposed Project. These impacts would occur over the duration of construction and would be temporary.

Operation Impacts

As shown in Table 4.3-20, Total Operation Emissions, the estimated total peak day emissions during operation of the Proposed Project are less than the corresponding SCAQMD significance thresholds. Therefore, less than significant impacts are anticipated during operation of the Proposed Project.

4.3.5.3 General Conformity Assessment

The following discussion addresses all Proposed Project components, including substation modifications, 220 kV transmission lines, 66 kV subtransmission lines, 12 kV distribution lines, telecommunication facilities, and the establishment of staging yards.

Construction Impacts

During construction, portions of Segments 4, 5, and 6 of the transmission lines and the shoo-fly lines would be built on BLM and Reservation land. Therefore, the emissions generated during construction are subject to General Conformity. All of the Reservation lands that would be affected by the Proposed Project are located within the SCAB. All of the BLM lands that would be affected by the proposed project are located within the SSAB. Based on the Proposed Project plans, approximately 83 percent of Segment 5 and 4.2 percent of Segment 4 are located within Reservation land. Approximately 15 percent of Segment 6 is located within BLM land. For purposes of the General Conformity

analysis, it has been assumed that 16.6 percent of the shoo-fly lines are located within Reservation land and 2.5 percent of the shoo-fly lines are located within BLM land. These percentages were developed taking into consideration the total length of the alignment within Reservation and BLM lands and assuming that there would be shoo fly facilities evenly distributed through the existing WOD corridor.

Table 4.3-21, Reservation Land Construction Emissions, lists the total construction emissions that may be generated within Reservation land along with the de minimis thresholds for the SCAB region. Table 4.3-22, BLM Land Construction Emissions, lists the total unmitigated construction emissions that may be generated within BLM land along with the de minimis thresholds for the SSAB region.[3]

Table 4.3-21: Reservation Land Construction Emissions

Construction Phase	Estimated Emissions (Tons)				
	CO	**VOCs**	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Transmission Lines – Segment 4	1.3	0.4	2.9	0.4	0.2
Transmission Lines – Segment 5	7.2	1.9	14.7	2.6	0.9
Shoo-fly Line	2.3	0.7	4.9	1.4	0.4
Total Reservation (Amortized over 3 years)	**3.6**	**1.0**	**7.5**	**1.4**	**0.5**
Total Reservation with APMs (Amortized over 3 years)	**3.6**	**1.0**	**6.0**	**0.9**	**0.4**
SCAB de minimis Thresholds	**100**	**10**	**10**	**NA**	**100**
Exceed SCAB Threshold?	**No**	**No**	**No**	**NA**	**No**

Source: LSA Associates, Inc., September 2013

Table 4.3-22: BLM Land Construction Emissions

Construction Phase	Estimated Emissions (Tons)				
	CO	**VOCs**	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Transmission Lines – Segment 6	3.2	0.9	7.0	1.0	0.4
Shoo-fly Line	0.4	0.1	0.7	0.2	0.1
Total BLM (Amortized over 3 years)	**1.2**	**0.3**	**2.6**	**0.4**	**0.1**
Total BLM with APMs (Amortized over 3 years)	**1.2**	**0.3**	**2.1**	**0.2**	**0.1**
SSAB de minimis Thresholds	**NA**	**25**	**25**	**100**	**NA**
Exceed SSAB Threshold?	**NA**	**No**	**No**	**No**	**NA**

Source: LSA Associates, Inc., September 2013

As shown in Tables 4.3-21, Reservation Land Construction Emissions, and Table 4.3-22, BLM Land Construction Emissions, the construction emissions would not exceed the de minimis thresholds for either the SCAB or SSAB regions. Emissions listed in Tables 4.3-21, Reservation Land Construction Emissions, and 4.3-22, BLM Land Construction Emissions, are amortized over the three-year construction schedule for purposes of

[3] The unmitigated emissions are included in the General Conformity analysis to present a conservative estimate, however emissions would be reduced further after implementation of APM-AIR-1 and APM-AIR-2.

conservatively estimating whether annual construction emissions associated with the Proposed Project exceed the applicable de minimis levels. As explained in Section 3.11 Construction Schedule, it is estimated that construction activities could range from 36-48 months, however, for purposes of this analysis, a conservative three-year construction schedule was assumed.

Operation Impacts

Once constructed, long-term operation emissions associated with facility maintenance would not exceed any of the de minimis thresholds.

4.3.6 Applicant Proposed Measures

APM-AIR-1: SCE would prepare an Exhaust Emissions Control Plan to establish a target goal of a project-wide fleet average reduction of 20 percent NO_X compared to the estimated unmitigated emissions as presented in the PEA for applicable diesel-fueled off-road construction equipment of more than 50 horsepower.

Acceptable options for reducing emissions could include, but are not limited to: the use of newer model engines meeting EPA Tier 3 standards if available (or better), low emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other similar available options.

APM-AIR-2: SCE would prepare a Fugitive Dust Control Plan to reduce fugitive dust emissions (fugitive PM_{10} and $PM_{2.5}$). Acceptable control measures for reducing emissions described within the Fugitive Dust Control Plan may include, but are not limited to: limit traffic speeds on unpaved roads to 15 mph; apply water as needed to comply with SCAQMD Rule 403 requirements, or soil stabilizers (e.g., gravel for substation area) on active unpaved access roads, the substation area, and staging areas if construction activity causes persistent visible emissions of fugitive dust beyond the work area; apply soil stabilizers to inactive construction areas as described in the SWPPP; where applicable, install gravel, shaker plates, or other BMPs to minimize transport of dirt onto public paved surfaces.

The Fugitive Dust Control Plan would describe how the measures would be implemented and monitored during Project construction. Furthermore, as construction details become available, the Fugitive Dust Control Plan would include site-specific mitigation measures for Project areas that could be more likely to generate dust near sensitive receptors.

4.3.7 Alternative Project

The 220 kV Line Route Alternative 2 (Alternative Project) would include relocation of an approximately 3-mile section of Segment 5 of the existing WOD corridor pursuant to an agreement between SCE and Morongo. Both the Proposed Project and Alternative Project include the same common elements outside of Segment 5 (including the same

modifications to existing substations, the same 66 kV subtransmission line relocations in Segment 1, and the same modifications to the telecommunications system). The Alternative Project is approximately 0.13 mile longer than the Proposed Project. This section focuses on the differences between the Proposed Project and Alternative Project portions of Segment 5.

The emissions associated with the Alternative Project are listed in Table 4.3-23, Alternative Project Construction Emissions. (Alternative Project emissions for Segments 1 through 4 and 6 would be the same as the Proposed Project.) Construction of the Alternative Project (Table 4.3-23, Alternative Project Construction Emissions) would result in slightly higher emissions than the Proposed Project (Table 4.3-15, Transmission Line - Segment 5 Construction Emissions) for CO and VOCs. The Alternative Project would result in slightly lower emissions of NO_x, PM_{10} and $PM_{2.5}$ compared to the Proposed Project. As shown in Table 4.3-23, Alternative Project Construction Emissions, the peak construction phase for the Alternative Project is the installation of the LST foundations. For the purposes of the Localized Significance Threshold analysis, and to represent the highest emitting construction activity from the most intensive equipment usage that could potentially occur in the immediate proximity of a sensitive receptor, the emissions associated with installation of an LST foundation are compared to the applicable Localized Significance Threshold based on the proximity of the activity to the nearest sensitive receptor. The Localized Significance Thresholds are based on the closest and therefore most conservative receptor distance (approximately 25 meters). As shown in Table 4.3-23, Alternative Project Construction Emissions, the construction emissions would not exceed the SCAQMD's Localized Significance Thresholds.

Table 4.3-23: Alternative Project Construction Emissions

Construction Emissions and Thresholds	Estimated Daily Emissions (lbs/day)				
	CO	**VOCs**	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Peak Emissions for Installation of LST Foundation	36.3	11.0	89.1	18.7	6.2
Peak Emissions for Installation of LST Foundation After Implementing APMs AIR-1 and AIR-2	36.3	11.0	71.3	10.9	4.5
Localized Significance Threshold (5-acre site at 25 m)	2,817	NA	236	21	11
Exceed Localized Significance Threshold?	No	NA	No	No	No
Exceed Localized Significance Threshold (after APMs)?	No	NA	No	No	No

Source: LSA Associates, Inc., July 2013

1. LST Foundation Installation with 5 acres of disturbed land

Total Construction Emissions. The emissions generated during the construction of Alternative Project are lower than the emissions generated during Segments 1 through 4 and 6 of the 220 kV transmission lines. Therefore, the peak day construction emissions listed in Table 4.3-19, Total Construction Emissions, also represent the peak day construction emissions that would be generated during construction of the Alternative Project. As shown in Table 4.3-19, Total Construction Emissions, the construction emissions would exceed all of the SCAQMD's construction thresholds. This is a significant impact.

Section 4.3.6, Applicant Proposed Measures, propose dust suppression of disturbed surfaces (including unpaved roads), low speeds on unpaved roadways, and the use of newer model engines meeting EPA Tier 3 standards if available. While the application of APMs would reduce emissions from those identified in Table 4.3-19, Total Construction Emissions, emissions are not expected to be reduced to a less than significant level. Impacts remain significant and unavoidable.

General Conformity Assessment. During construction, portions of the Alternative Project (transmission lines and the shoo-fly lines) would be built on Reservation land. Therefore, the emissions generated during construction are subject to General Conformity. Based on the proposed project plans, approximately 4.2 percent of Segment 4, 78 percent of Segment 5 Alternative 2, and 18 percent of the shoo-fly lines are located within Reservation land. The emissions generated within the BLM land would not be affected by the Alternative Project. As shown in Table 4.3-24, Reservation Land Construction Emissions – Alternative Project, the construction emissions would not exceed the de minimis thresholds for the SCAB. Emissions listed in Table 4.3-24, Reservation Land Construction Emissions – Alternative Project, are amortized over a conservative three year construction schedule for purposes of determining whether annual construction emissions exceed the applicable de minimis levels.

Table 4.3-24: Reservation Land Construction Emissions – Alternative Project

Construction Phase	Estimated Emissions (Tons)				
	CO	VOCs	NO_X	PM_{10}	$PM_{2.5}$
Reservation Land					
Transmission Lines – Segment 4	1.3	0.4	2.9	0.4	0.2
Transmission Lines – Segment 5 Alternative 2	7.7	2.0	14.4	2.5	0.9
Shoo-fly Line	2.3	0.7	4.9	1.3	0.4
Total Reservation (Amortized over 3 years)	3.8	1.0	7.4	1.4	0.5
Total Reservation with APMs (Amortized over 3 years)	**3.8**	**1.0**	**5.9**	**0.8**	**0.4**
South Coast Air Basin de minimis Thresholds	**100**	**10**	**10**	**100**	**100**
Exceed South Coast Air Basin Threshold?	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., July 2013

4.3.8 No Project Alternative

The No Project Alternative would not result in construction or operation of the Proposed Project. No new construction or operation emissions would result.

4.3.9 References Cited

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