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4.3 Air Quality

Would the project:	Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☑
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☑	☐
c. 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)?	☐	☐	☑	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☑	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☑	☐

4.3.1 Introduction

This section describes existing air quality resources in the vicinity of the Proposed Project and assesses potential air quality impacts that may occur as a result of Proposed Project implementation, particularly with regard to short-term construction activities (fugitive dust) and long-term operation. In addition, this section is intended to evaluate the Proposed Project for potential air quality impacts resulting from inconsistency with applicable air quality plans and violation of ambient air quality standards (AAQS).

For the purpose of the air quality analysis, all of the components of the Proposed Project are treated as a single project. These components include constructing the proposed Salt Creek Substation and other associated substation components, constructing TL 6965 and the TL 6910 loop-in, and installing a new 69-kV position at the Existing Substation. Because the entire Proposed Project would be located within the San Diego Air Basin, and because emissions from all of Proposed Project components have the potential to affect air quality within the San Diego Air Basin, it is appropriate to analyze total impacts from the entire Proposed Project rather than to separate out the analysis by component.

Construction and operation of the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations, conflict with air quality plans or standards, or otherwise significantly affect air quality. None of the proposed improvements would result in significant impacts on air quality by contributing substantially to an existing or projected air quality violation, exposing sensitive receptors to substantial pollutant concentrations, or creating objectionable odors affecting a substantial number of people. Impacts on air quality as the result of construction, operation, and maintenance would be less than significant. Refer to Appendix 4.3-A, Air Quality Assessment.

4.3.2 Methodology

Federal, state, and regional/local regulations and policies were consulted to determine the Proposed Project's level of compliance with, and potential impacts to, applicable air quality plans and/or standards. Information for this section was obtained from Internet searches of federal, state, and regional/local websites. Refer also to Appendix 4.3-A, Air Quality Assessment, for additional discussion of the methods used to predict air quality impacts resulting from the Proposed Project.

This analysis of air quality impacts used the emissions factors from the California Air Resources Board (CARB)'s OFFROAD Model (CARB 2007) for heavy construction equipment and CARB's EMFAC2011 Model (CARB 2011) for on-road vehicles. This analysis covers construction in the short term and operation and maintenance in the long term. Emissions factors from the OFFROAD Model were based on the South Coast Air Quality Management District's (SCAQMD) composite off-road emissions factors (SCAQMD 2012), since these emissions factors are representative of the construction fleet for Southern California. The San Diego Air Pollution Control District (SDAPCD) does not provide San Diego-specific emissions factors from the OFFROAD Model.

4.3.3 Existing Conditions

This section describes the regulations and regulatory agencies that have jurisdiction over the Proposed Project, regional climate and meteorology, and existing air quality conditions in the area.

4.3.3.1 Regulatory Background

Federal

National air quality policies are regulated through the Federal Clean Air Act (FCAA) of 1970 and its 1977 and 1990 amendments. Pursuant to the FCAA, the U.S. Environmental Protection Agency (USEPA) has established National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, which include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2, which is a form of nitrogen oxides known as NO_X), sulfur dioxide (SO_2, which is a form of sulfur oxides known as SO_X), particulate matter less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$, respectively), and lead. These pollutants are referred to as criteria pollutants because USEPA has established numerical criteria that define acceptable levels of exposure for each pollutant. USEPA has revised the NAAQS several times since their original implementation, and will continue to do so as the health effects of exposure to air pollution are better understood.

USEPA designates federal nonattainment areas if they have not achieved the NAAQS. Under the 1977 amendments to the FCAA, states with air quality that did not achieve the NAAQS were required to develop and maintain state implementation plans (SIPs). These SIPs constitute a federally enforceable definition of the state's approach and schedule for the attainment of the NAAQS. Air quality management areas were designated as attainment, nonattainment, or unclassified for individual pollutants, depending on whether they achieve the applicable NAAQS and California Ambient Air Quality Standards (CAAQS) for each pollutant. In addition, California can designate areas as transitional. Because the NAAQS and CAAQS differ in many cases, it is possible for an area to be designated attainment by USEPA (meets NAAQS) and nonattainment by California (does not meet CAAQS) for the same pollutant.

Areas that were designated as nonattainment in the past, but have since achieved the NAAQS, are further classified as attainment-maintenance. The maintenance classification remains in effect for 20 years from the date that the area is determined by USEPA to meet the NAAQS. There are numerous classifications of the nonattainment designation, depending on the severity of nonattainment. O_3 nonattainment designation has seven subclasses: transitional, marginal, moderate, serious, severe-15, severe-17, and extreme. Designation of nonattainment status is based on USEPA's "design value" for a given pollutant. The design value is a statistic that describes the air quality status of a given location relative to the level of the NAAQS. Design values are computed and published annually by USEPA's Office of Air Quality Planning and Standards, and reviewed in conjunction with USEPA Regional Offices. Nonattainment areas are then designated based on their design value. For O_3 nonattainment areas, the classifications are as follows:

Extreme:	Area has a design value of 0.175 parts per million (ppm) and higher
Severe 17:	Area has a design value of 0.119 up to but not including 0.175 ppm
Severe 15:	Area has a design value of 0.113 up to but not including 0.119 ppm
Serious:	Area has a design value of 0.100 up to but not including 0.113 ppm
Moderate:	Area has a design value of 0.086 up to but not including 0.100 ppm
Marginal:	Area has a design value of 0.076 up to but not including 0.086 ppm

Nonattainment areas under different classifications have different deadlines to achieve the NAAQS. Extreme nonattainment areas are subject to a deadline of June 2024 to attain the NAAQS for O_3. Severe-15 nonattainment areas are subject to a deadline of June 2019 to attain the NAAQS for O_3. Serious nonattainment areas were subject to a deadline of June 2013 to attain the NAAQS for O_3. There are no areas that are currently designated as "severe-17" nonattainment areas for the NAAQS for O_3. Areas that lack monitoring data are designated as unclassified areas. Unclassified areas are treated as attainment areas for regulatory purposes.

State

CARB was created in 1967 by merging the California Motor Vehicle Pollution Control Board with the Bureau of Air Sanitation and its Laboratory. Under the FCAA, states may enact their own statewide air quality regulations and standards, provided that they are at least as stringent as the FCAA. In 1988, the California Clean Air Act (CCAA) was enacted to regulate air quality within California. CARB, a department of the California Environmental Protection Agency (CalEPA), oversees air quality planning and control throughout California. Its responsibility lies with ensuring implementation of the CCAA, responding to FCAA requirements, and regulating pollutant emissions from motor vehicles sold in California. It also sets fuel specifications to further reduce vehicular emissions.

The CCAA established the CAAQS and a legal mandate to achieve these standards by the earliest practicable date. These standards apply to the same criteria pollutants as the NAAQS, but also include sulfate, visibility, hydrogen sulfide, and vinyl chloride.

San Diego Air Pollution Control District

CARB designated San Diego County as a discrete air basin under the jurisdiction of SDAPCD. In addressing its planning role with respect to the NAAQS, SDAPCD most recently developed an Ozone Redesignation Request and Maintenance Plan, which served as the basis for USEPA's re-designation of the San Diego Air Basin as an attainment zone for the 1-hour ozone standard on July 28, 2003. As of April 30, 2012, the San Diego Air Basin has been designated as a marginal nonattainment area for the 8-hour ozone standard.

The Regional Air Quality Strategy (RAQS) was established by SDAPCD in 1991 to address state air quality planning requirements (focusing on O_3). The latest revision was published on April 22, 2009. SDAPCD is responsible for overall development and implementation of the RAQS. RAQS control measures focus on emissions sources under SDAPCD's authority, specifically, stationary emissions sources and some area-wide sources. However, the emissions inventories and emissions projections in the RAQS reflect the impact of all emissions sources and all control measures, including those under the jurisdiction of CARB (e.g., on-road motor vehicles, off-road vehicles and equipment, and consumer products) and USEPA (e.g., aircraft, ships, trains, and pre-empted off-road equipment). While legal authority to control different pollution sources is separated, SDAPCD is responsible for reflecting federal, state, and regional/local measures in a single plan to achieve ambient air quality standards in San Diego County.

To evaluate the potential for stationary sources to cause or contribute to a violation of an air quality standard, SDAPCD established emissions thresholds in its Rules 20.2 and 20.3 on New

Source Review. If emissions from a stationary source exceed the thresholds established in these rules, further evaluation must be conducted to assess whether the source would cause or contribute to a violation of an air quality standard. SDAPCD has not established rules for characterizing impacts from construction. However, SDAPCD informally recommends quantifying construction emissions and comparing them to significance thresholds found in the SDAPCD regulations for stationary sources (Rule 20.2 et seq.) and shown in Table 4.3-1, Air Pollution Control District's Screening Level Thresholds. If construction-phase emissions exceed these thresholds for a stationary-source air-quality-impact analysis, then construction has the potential to violate air quality standards or to contribute substantially to existing violations. Significance thresholds are shown in Table 4.3-1. While this PEA uses these thresholds as a guide, this PEA also evaluates if other substantial evidence, in light of the whole record, indicates that the Proposed Project could have a significant air quality impact, including proximity of sensitive receptors. This additional evaluation provides a conservative analysis of the Proposed Project's air quality impacts.

Table 4.3-1: Air Pollution Control District's Screening Level Thresholds

Pollutant	Pounds per Day
Carbon Monoxide (CO)	550
Oxides of Sulfur (SO_X)	250
Volatile Organic Compounds (VOCs)	75
Oxides of Nitrogen (NO_X)	250
Particulate Matter (PM_{10})	100
Particulate Matter ($PM_{2.5}$)	55

Source: San Diego County Air Pollution Control District, Rule 1501, 20.2(d)(2), 1995

The San Diego County Air Pollution Control District does not have thresholds of significant for VOCs or $PM_{2.5}$. As such, VOC and $PM_{2.5}$ thresholds from the South Coast Air Quality Management District were used.

4.3.3.2 Meteorology and Climate

San Diego Air Basin Characteristics

One of the main determinants of the San Diego Air Basin's climatology is the Pacific High, a semi-permanent high-pressure center over the Pacific Ocean. In the summer, this pressure center is located well to the north, directing storm tracks north of California. This high-pressure cell maintains clear skies for much of the year. When the Pacific High moves southward during the winter, this pattern changes, and low-pressure storms are brought into the region, causing widespread precipitation.

San Diego Air Basin Climate

The San Diego Air Basin's climate is characterized by warm, dry summers and mild, wet winters. The climate of San Diego, as with all of Southern California, is largely controlled by the strength

and position of the Pacific High. This high-pressure ridge over the West Coast creates a repetitive pattern of frequent early morning cloudiness, hazy afternoon sunshine, clean daytime onshore breezes, and little temperature change throughout the year. Limited rainfall occurs in the winter when the oceanic high-pressure center is weakest and farthest south, as the fringes of mid-latitude storms occasionally move through the area. The average temperatures in January range from 47 degrees Fahrenheit (°F) at night to 63°F during the day. The warmest month is August, when the high temperatures average 74°F. The average annual rainfall is approximately 10 inches.

Generation of Air Pollutants

The same atmospheric conditions that create a desirable living climate combine to limit the atmosphere's ability to disperse air pollution generated by the large population attracted to the pleasant climate. Onshore winds across the coastline diminish quickly when they reach the foothill communities east of San Diego. The sinking air within the offshore high-pressure system forms a massive temperature inversion that traps air pollutants near the ground. The resulting horizontal and vertical stagnation, in conjunction with ample sunshine, causes a number of reactive pollutants to undergo photochemical reactions and form smog, which degrades visibility and irritates human tear ducts and nasal membranes. While programs to control emissions of air pollutants have substantially improved regional air quality within the last several decades, some parts of the San Diego Air Basin do not meet clean air standards.

Local Climate

Local meteorological conditions in the Proposed Project vicinity conform to the regional pattern of strong onshore winds by day (especially in the summer) and weak offshore winds at night (particularly during the winter). These local wind patterns are driven by the temperature difference between the ocean and the warm interior topography. In the summer, moderate daytime breezes of 8 to 12 miles per hour blow onshore and up through the valley from the southwest. Light onshore breezes may continue throughout the night when the land remains warmer than the ocean. In the winter, the onshore flow is weaker and the wind flow reverses to blow from the northeast in the evening as the land becomes cooler than the ocean.

Temperature Inversions

The onshore flow of marine air and nocturnal winds are accompanied by two characteristic temperature inversion conditions that control the rate of air pollution dispersal throughout the San Diego Air Basin. The daytime cool onshore flow is capped by a deep layer of warm, sinking air. Along the coastline, the marine air layer beneath the inversion cap is deep enough to accommodate any locally generated emissions. However, as the layer moves inland, pollution sources (especially automobiles) add pollutants from below without any dilution from above through the inversion interface. When this polluted layer approaches foothill communities east of coastal developments, it becomes shallower and exposes residents in those areas to concentrated pollution by-products from coastal area sources.

4.3.3.3 Air Quality

CARB sets state air quality standards and monitors ambient air quality at approximately 250 air quality monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations 10 feet above ground level. Therefore, air quality is often referred to in terms of ground-level concentrations. Ambient air pollutant concentrations in the San Diego Air Basin are measured at 10 air quality monitoring stations operated by SDAPCD.

For the air quality evaluation, data from the Chula Vista Monitoring Station, located at 80 East J Street in the City of Chula Vista, was used. This data included CO, O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$. Data collected at this monitoring station are representative of the air quality experienced on-site from 2009 through 2011; refer to Table 4.3-3, Local Air Quality Levels. The Chula Vista Monitoring Station is close enough to the Proposed Project area to provide accurate information about the environmental setting. The following air quality information briefly describes the various types of pollutants.

Ozone (O_3)

O_3 occurs in two layers of the atmosphere. The layer surrounding Earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric layer extends upward from about 10 to 30 miles, and protects life on Earth from the sun's ultraviolet rays (UV-B). In the troposphere, O_3 is a photochemical pollutant formed from reactions between volatile organic compounds (VOCs) and NO_X with the presence of sunlight. Therefore, VOCs and NO_X are O_3 precursors. VOCs and NO_X are emitted from various sources throughout the San Diego Air Basin. Significant O_3 formation generally requires an adequate amount of precursors in the atmosphere and several hours in a stable atmosphere with strong sunlight. High O_3 concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

Many respiratory ailments and cardiovascular disease are aggravated by exposure to high O_3 levels. O_3 also damages natural ecosystems (such as forests and foothill plant communities), agricultural crops, and some human-created materials (such as rubber, paint, and plastics). Societal costs from O_3 damage include increased healthcare costs, loss of human and animal life, accelerated replacement of industrial equipment, and reduced crop yields.

Carbon Monoxide (CO)

Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources. It is a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95% of all CO emissions. At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause headaches, dizziness, and unconsciousness.

Nitrogen Dioxide (NO_2)

Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level O_3, and react in the atmosphere to form acid rain. USEPA and CARB

established AAQS for NO_2. NO_2 is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage lungs, and lower resistance to respiratory infections, such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Sulfur Dioxide (SO_2)

Sulfur dioxide (SO_2) is a colorless reactive gas that is produced from burning sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest SO_2 concentrations are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of airways, leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Coarse Particulate Matter (PM_{10})

Coarse particulate matter (PM_{10}) refers to suspended particulate matter, which is smaller than 10 microns, or 10 one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based on requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25).

Fine Particulate Matter ($PM_{2.5}$)

Due to increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), federal and state $PM_{2.5}$ standards were created. Particulate matter impacts primarily affect infants, children, older adults, and those with pre-existing cardiopulmonary disease. Due to its smaller size, $PM_{2.5}$ has the potential to lodge more deeply in the lungs than PM_{10}. USEPA and CARB have revised their AAQS for $PM_{2.5}$ to more stringent levels since the standards were originally proposed in 1997. Almost everyone in California is exposed to levels at or above the current state standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Reactive Organic Gases (ROGs) and Volatile Organic Compounds (VOCs)

Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases, including reactive organic gases (ROGs) and VOCs. ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-

fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Lead

Lead in the atmosphere occurs as particulate matter. Lead was historically emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are now the primary sources of lead emissions. Lead has the potential to cause gastrointestinal, central nervous system, kidney, and blood diseases upon prolonged exposure. Lead is also classified as a probable human carcinogen.

Other Pollutants

CARB also set standards for four additional pollutants: sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These pollutants are generally not considered pollutants of concern in the San Diego Air Basin because there are no major sources that would contribute to ambient levels within the basin.

Toxic Air Contaminants (TACs)

Section 39655 of the California Health and Safety Code defines a toxic air contaminant (TAC) as an air pollutant that "may cause or contribute to an increase in mortality or an increase in serious illness, or [that] may pose a present or potential hazard to human health." Section 39657(b) of the California Health and Safety Code defines TACs to include 189 substances that have been listed as federal hazardous air pollutants under 42 U.S. Code [USC] Section 7412.

TACs can cause various cancers, depending on the particular chemicals, their type, and the duration of exposure. Additionally, some TACs may cause other health effects over the short or long term. The 10 TACs posing the greatest health risk in California are acetaldehyde, benzene, 1-3 butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchlorethylene, and diesel particulate matter.

Air Quality Designations

Three air quality designations can be given to an area for a criteria pollutant:

- Nonattainment: This designation applies when air quality standards have not been consistently achieved.
- Attainment: This designation applies when air quality standards have been achieved.
- Unclassified: This designation applies when insufficient monitoring data exists to determine a nonattainment or attainment designation.

Current NAAQS and CAAQS are summarized in Table 4.3-2*,* National and California Ambient Air Quality Standards*.* On April 15, 2004, USEPA formally replaced the 1979 one-hour ozone standard with a more stringent 8-hour standard as part of the Clean Air Rules of 2004. The San Diego Air Basin is currently designated as a nonattainment area for O_3 and PM.

Table 4.3-2: National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m^3)	**Nonattainment**	NA	NA
	8 Hours	0.070 ppm (137 μg/m^3)	**Nonattainment**	0.075 ppm (147 μg/m^3)	**Marginal Nonattainment**
Particulate Matter (PM_{10})	24 Hours	50 μg/m^3	**Nonattainment**	150 μg/m^3	Attainment
	Annual Arithmetic Mean	20 μg/m^3	**Nonattainment**	NA	Attainment
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard		35 μg/m^3	Attainment
	Annual Arithmetic Mean	12 μg/m^3	**Nonattainment**	15 μg/m^3	Unclassified
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
	1 Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)[5]	Annual Arithmetic Mean	0.030 ppm (56 μg/m^3)	NA	0.053 ppm (100 μg/m^3)	Attainment
	1 Hour	0.18 ppm (338 μg/m^3)	Attainment	100 ppb	Attainment
Lead (Pb)[7,8]	30 days average	1.5 μg/m^3	Attainment	N/A	NA
	Calendar Quarter	N/A	NA	1.5 μg/m^3	Attainment
Sulfur Dioxide (SO_2)[6]	24 Hours	0.04 ppm (105 μg/m^3)	Attainment	0.14 ppm (365 μg/m^3)	Attainment
	3 Hours	N/A	NA	0.5 ppm (1300 μg/m^3)	Attainment
	1 Hour	0.25 ppm (655 μg/m^3)	Attainment	75 ppb (196 μg/m^3)	NA
Visibility-Reducing Particles[9]	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	**No Federal Standards**	
Sulfates	24 Hour	25 μg/m^3	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m^3)	Unclassified		
Vinyl Chloride[7]	24 Hour	0.01 ppm (26 μg/m^3)	Unclassified		

Sources: California Air Resources Board 2013a.

μg/m^3 = micrograms per cubic meter; ppm = parts per million; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and 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 17 CCR 70200.

2. National standards (other than ozone, particulate matter, and those based on 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 measured at each site 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% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.
3. Concentration is expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25°C and a reference pressure of 760 millimeters (mm) of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant. The table presents primary standards with the exception of the 3-hour SO_2 standard, which is a secondary standard.
5. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard 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.
6. On June 2, 2010, a 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 1 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.
7. CARB has identified lead and vinyl chloride as "TACs" 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.
8. 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 1 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 standard are approved.
9. In 1989, 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 Basin standard, respectively.

Ambient Air Quality

Violations of NAAQS and CAAQS for O_3 and PM have occurred historically in the Proposed Project area. The frequency of violations and current air quality conditions at the Chula Vista Monitoring Station are summarized in Table 4.3-3, Local Chula Vista Air Quality Levels. The Chula Vista Monitoring Station is the site nearest to the Proposed Project area, although the Chula Vista Monitoring Station is located in a more developed area that has multiple emissions sources compared to the Salt Creek Substation, TL 6965, TL 6910 loop-in, and Existing Substation.

Table 4.3-3: Local Chula Vista Air Quality Levels

Pollutant	Standard (Maximum Allowable Amount)		Year[1]	Maximum Concentration[2]	Number of Days State/Federal Standard Exceeded
	California	Federal Primary			
1-hour Ozone (O_3)[1]	0.09 ppm for 1 hour	NA	2009 2010 2011	0.098 ppm 0.107 0.083	1/NA 1/NA 0/NA
8-hour Ozone (O_3)[1]	0.070 ppm for 8 hours	0.075 ppm for 8 hours	2009 2010 2011	0.075 ppm 0.083 0.057	3/0 3/2 0/0
1-hour Carbon Monoxide (CO)	20 ppm for 1 hour	35 ppm for 1 hour	2009 2010 2011	2.1 ppm 2.1 NM	0/0 0/0 NM/NM
8-hour Carbon Monoxide (CO)	9.0 ppm for 8 hours	9 ppm for 8 hour	2009 2010 2011	1.43 ppm 1.56 NM	0/0 0/0 NM/NM
Nitrogen Dioxide (NO_2)	0.18 ppm for 1 hour	0.100 ppm For 1 hour	2009 2010 2011	0.065 ppm 0.060 0.057	0/0 0/0 0/0
1-hour Sulfur Dioxide (SO_2)	75 ppb for 1 hour	NA	2009 2010 2011	0.004 ppm 0.005 ppm 0.007 ppm	0/0 0/0 0/0
24-hour Sulfur Dioxide (SO_2)	0.04 ppm for 24 hours	NA	2009 2010 2011	0.003 ppm 0.002 ppm 0.002 ppm	0/NA 0/NA 0/NA
Fine Particulate Matter ($PM_{2.5}$)[1, 2]	No Separate Standard	35 µg/m^3 for 24 hours	2009 2010 2011	43.7 µg/m 22.7 27.9	NA/1 NA/0 NA/0
Particulate Matter (PM_{10})[1, 2]	50 µg/m^3 for 24 hours	150 µg/m^3 for 24 hours	2007 2008 2009	57.0 µg/m 43.0 45.0	2/0 0/0 0/0

Sources: CARB 2009–2011; San Diego Air Pollution Control District (SDAPCD) 2013.

ppm = parts per million; PM_{10} = particulate matter 10 microns in diameter or less; NM = not measured; µg/m^3 = micrograms per cubic meter; $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less; NA = not applicable

Notes:

1. Maximum concentration is measured over the same period as the California standards.
2. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

Sensitive Receptors

Sensitive populations are more susceptible to the effects of air pollution than the general population. According to the City of San Diego CEQA Significance Determination Thresholds (City of San Diego 2011), citing SCAQMD (SCAQMD 1993), "a sensitive receptor is a person in

the population who is particularly susceptible to health effects due to exposure to an air contaminant than is the population at large." Sensitive receptors include medical patients and older adults, athletes/children at public parks/playgrounds, long-term care/assisted living facilities, churches, schools, child care centers/homes, and athletic fields.

Sensitive populations (sensitive receptors) in proximity to localized sources of toxics and CO are of particular concern. Land uses that may include sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. Table 4.3-4, Locations that May Include Sensitive Receptors, lists the distances and locations where sensitive receptors may be found and that lie within 1 mile of the areas that would be affected by construction and operation of the Proposed Project, including the Salt Creek Substation, TL 6965, TL 6960 loop-in, and Existing Substation. The closest land uses that may contain sensitive receptors would be the residential units located adjacent to the proposed TL 6965.

Table 4.3-4: Locations that May Include Sensitive Receptors

Type	Name	Distance from Proposed Project Site (miles)	Direction from Proposed Project Site
Salt Creek Substation			
Residential	Otay Ranch	0.1	North
Schools	High Tech High School	0.5	Northwest
	High Tech Middle School	0.5	Northwest
	High Tech Elementary School	0.4	Northwest
	Arroyo Vista Elementary School	0.9	North
	Veteran's Elementary School	1.0	West Northwest
	East Hills Academy	1.0	Southwest
	Olympian High School	1.0	West Southwest
Places of Worship	Parkway Hills Church of the Nazarene	0.9	Northwest
	Mater Dei Parish	1.0	West
Parks	Eastlake Country Club	0.8	North
	Sweetwater Regional Park	1.0	Northwest
	Mount San Miguel Community Park	0.8	Southeast
	Sunset View Park	0.0 (adjacent)	Southwest
	Windingwalk Park	0.4	Northwest

Source: http://maps.google.com

Note: Sensitive receptors used in this analysis are those within a 1-mile radius of the Proposed Project. The Proposed Project site includes the entire Proposed Project, including the Salt Creek Substation, TL 6965, TL 6910 loop-in, and Existing Substation, as well as the staging areas that would be used during construction.

4.3.4 Impacts

4.3.4.1 Significance Criteria

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in a significant impact on the environment. The following significance criteria are from Appendix G of the CEQA Guidelines. Air quality impacts resulting from implementation of the Proposed Project could be considered significant if they would do any of the following:

- 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 region is in nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors),
- expose sensitive receptors to substantial pollutant concentrations, and/or
- create objectionable odors affecting a substantial number of people.

The Proposed Project would also be considered significant if it interfered with the attainment or maintenance of NAAQS or CAAQS.

4.3.4.2 SDAPCD Thresholds

Pursuant to SDAPCD, a project would result in a significant air quality impact if it generates total emissions (direct and indirect) that exceed their adopted thresholds; refer to Table 4.3-5, SDAPCD Pollutant Thresholds. A project that results in a significant impact must incorporate sufficient measures to reduce its impact to a level that is not significant. A project that results in impacts that cannot be mitigated to a level that is not significant must incorporate all feasible mitigation measures. Note that emissions thresholds are given as daily values and annual values; a multi-phased project (such as a project with a construction phase and a separate operational phase) with phases shorter than 1 year can be compared to the daily value.

Table 4.3-5: SDAPCD Pollutant Thresholds

Pollutant	SDAPCD Thresholds (pounds per day) [1]	SDAPCD Thresholds (tons per year) [1]
Carbon Monoxide (CO)	550	100
Oxides of Sulfur (SO_X)	250	40
Volatile Organic Compounds (VOCs)	75	40
Oxides of Nitrogen (NO_X)	250	40
Particulate Matter (PM_{10})	100	15
Particulate Matter ($PM_{2.5}$)[1]	55	Not Applicable

Source: SDAPCD Rule 20.2, Table 20.2-1, SDAPCD 2012.

[1] SDAPCD does not have thresholds of significance for VOCs or $PM_{2.5}$. As such, the VOC and $PM_{2.5}$ thresholds from SCAQMD were used.

Question 4.3a – Applicable Air Quality Plan Conflicts

Construction – No Impact

A potentially significant impact on air quality would occur if the Proposed Project would conflict with or obstruct implementation of the applicable air quality plan. Although the Proposed Project would contribute air emissions to the San Diego Air Basin, the primary concern is whether Proposed-Project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible. Therefore, it is necessary to assess the Proposed Project's consistency with the RAQS. The Proposed Project's consistency with the RAQS is determined in terms of whether the Proposed Project would exceed the criteria pollutant threshold levels established by SDAPCD and whether the Proposed Project would result in growth that has been anticipated in a given subregion. As shown in Table 4.3-7, and as discussed under Question 4.3b, emissions would not exceed the criteria pollutant threshold levels established by SDAPCD. The need for a new substation is based on the anticipated buildout of the approved City of Chula Vista General Plan. Because construction of the Proposed Project serves the anticipated buildout of the General Plan, and because construction would result in short-term, temporary impacts, the Proposed Project would not conflict with implementation of the RAQS or SIP. Therefore, no impact would occur.

Operation and Maintenance – No Impact

As indicated in the long-term operational discussion under Operation and Management, below, the Proposed Project would not result in a significant increase in long-term air quality emissions. Additionally, the Proposed Project is not a trip-generating project such as a residential or commercial development. Once construction of the Proposed Project is complete, emissions would be relatively low, resulting only from scheduled maintenance. Therefore, the

Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan. No impact would occur.

Question 4.3b – Air Quality Standard Violations

Construction – Less-than-Significant Impact

Constructing the proposed Salt Creek Substation and other associated substation components, constructing TL 6965 and the TL 6910 loop-in, and installing a new 69-kV position at the Existing Substation are anticipated to occur over approximately 24 months. Table 4.3-6, Preliminary Construction Schedule, includes a preliminary schedule for the Proposed Project. Construction of the Proposed Project is anticipated to begin in 2014 and be complete by 2016.

Table 4.3-6: Preliminary Construction Schedule

Proposed Project Segment	Days (Estimated)
CPUC approves Permit to Construct (PTC)	0
Obtain Construction Permits	60
Obtain Grading Permits from City of Chula Vista	60
Laydown Yard Preparation	15
Substation Construction	
Substation General Construction	
Demolition	15
Grading and Road Improvements	90
Retaining Walls	30
Storm Drain System and Erosion Control	40
Public Improvements and Access Road Grading	20
Substation Concrete Masonry Wall	20
Substation Below-Grade Construction	120
Substation Wiring	90
Telecom	60
Substation Above-Grade Construction	60
Equipment Installation	45
69-kV Riser Pedestal	18
Terminate Underground 69-Kv	18
Controls and Relays	40

Proposed Project Segment	Days (Estimated)
Complete Landscaping	40
Testing	40
Energization (TL 6965)	5
Energization (TL 6910)	5
Cut Over	15
TL 6965	
Roads and Foundation	66
Foundation Installations	30
Pole Installations	60
String Conductor	23
Trench and Conduit	30
Cable Installation	30
TL 6910	
Foundation Installations	45
Pole Installations	10
Trench and Conduit	40
Cable Installation	40
Distribution Getaways	
Underground Trench/Conduit/Substructure	94
Cable Conductor Pulling and Tensioning	38
Existing Substation Modification	
Substation Below-Grade Construction	20
Substation Above-Grade Construction	20
Substation Wiring	20
Relay Testing	20
Existing Substation Side TL 6965 Energization	5
69-kV Substation Cutover	15

Note: Above information represents a best estimate, but is subject to change upon final Proposed Project design and engineering.

Construction equipment would include bulldozers, excavators, loaders, and trucks for compacting, hauling, and final grading. Any soil export or import would be transported on or off the site with street-legal haul trucks. Portable cranes and heavy hauling trucks would be employed for the equipment delivery and installation. Concrete trucks, backhoes, crew trucks, and pick-up trucks would arrive and depart the proposed Salt Creek Substation site during installation of foundations, ground grid, and underground ducts. Crew trucks, boom trucks, and pick-up trucks would arrive and depart from the site daily for construction activities, testing and check-out, final power line tie-ins, and circuit cabling, until the substation is energized. Helicopters could be used for construction of the transmission lines.

It is anticipated that approximately 35 workers would be on-site at the proposed Salt Creek Substation at any one time during construction. A similar number of workers would be employed to install the 69-kV position at the Existing Substation. An additional 15 to 25 workers would be employed to construct the power line (TL 6965) and loop-ins (TL 6965 and TL 6910). Approximately 22 workers would be employed to install distribution line getaways.

Daily transportation of construction workers is not expected to cause a significant effect to air quality, since no more than 35 workers at one time would be in any one location at the peak of construction, and the number of trips generated would be minimal and constitute an insignificant percentage of current daily volumes in the area. (See discussion in Section 4.16, Traffic and Transportation.) Moreover, SDG&E would encourage carpooling.

Construction of the Proposed Project would generate short-term air quality impacts during grading and construction operations. The short-term air quality analysis considers the following temporary impacts from the Proposed Project:

- clearing, grading, excavating, and using heavy equipment or trucks would create large quantities of fugitive dust, and thus PM_{10};
- heavy equipment required for grading and construction would generate and emit diesel exhaust; and
- vehicles transporting commuting construction workers and trucks hauling equipment and materials would generate and emit exhaust.

Construction activities for the Proposed Project were modeled based on the schedule provided in Table 4.3-6. The Proposed Project was modeled using emissions factors from CARB's OFFROAD2007 and EMFAC2011 programs. It was assumed that construction equipment would include a mix of equipment that meets USEPA Tier 2 and USEPA Tier 3 emissions standards.

Variables factored into estimating the total construction emissions include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials transported on-site or off-site. Proposed Project construction emissions findings are presented in Table 4.3-7, Proposed Project Construction Air Emissions. Table 4.3-7 presents an evaluation of the maximum daily emissions associated with the simultaneous construction activities required for the Proposed Project. Maximum daily activities were identified based on

a review of the construction schedule to identify simultaneous construction phases. A list of mobile and stationary construction equipment is included in the air quality modeling; refer to Appendix 4.3-A, Air Quality Construction Emissions.

To reduce impacts to the extent possible, SDG&E would implement the following air emissions control measures (set forth in Section 3.8) during construction:

- All unpaved demolition and construction areas shall be wet/watered at least three times daily during construction, and temporary dust covers shall be used to reduce dust emissions and meet SDAPCD Rule 55 requirements.
- SDG&E or its contractor shall keep the construction area sufficiently dampened to control dust caused by construction and hauling, and at all times provide reasonable dust control of areas subject to windblown erosion.
- All loads shall be secured by covering or use of at least 2 feet of freeboard to avoid carry-over.
- All materials transported off-site shall be either sufficiently watered or securely covered.
- All earthmoving or excavation activities shall be discontinued during period of high winds (i.e., greater than 25 mph) to prevent excessive amounts of fugitive dust generation.
- All equipment shall be properly tuned and maintained in accordance with manufacturer specifications.
- SDG&E or its contractor shall maintain and operate construction equipment to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall have their engines turned off after 5 minutes when not in use. Construction activities shall be phased and scheduled to avoid emissions peaks, and equipment use shall be curtailed during second-stage smog alerts.
- To the extent possible, power shall be obtained from power poles (the electrical grid) rather than through the use of large generators on-site.
- Low- and non-VOC containing coatings, sealants, adhesives, solvents, asphalt, and architectural coatings shall be used to reduce VOC emissions.
- All areas where construction vehicles are parked, staged, or operating shall be visibly posted with signs stating “No idling in excess of 5 minutes.”
- Catalytic converters shall be installed on all heavy construction equipment, where feasible.
- Deliveries shall be scheduled during off-peak traffic periods to reduce trips during the most congested periods of the day, where feasible.
- Construction sites shall be posted with signs providing a contact number for complaints. All complaints shall be addressed in a timely and effective manner.

Table 4.3-7: Proposed Project Construction Air Emissions

Emissions Source	Pollutant (pounds per day)[1]					
	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$
2014						
Uncontrolled Emissions	25.28	104.28	245.80	0.41	165.35	41.54
Controlled Emissions[2]	25.28	104.28	245.80	0.41	21.65	11.36
SDAPCD Thresholds	75	550	250	250	100	55
Is Threshold Exceeded?	No	No	No	No	No	No
2015						
Uncontrolled Emissions	37.20	173.40	249.32	0.54	14.17	9.67
Controlled Emissions[2]	37.20	173.40	249.32	1.19	11.54	9.12
SDAPCD Thresholds	75	550	250	250	100	55
Is Threshold Exceeded?	No	No	No	No	No	No
2016						
Uncontrolled Emissions	0.76	5.50	5.25	0.01	0.32	0.22
Controlled Emissions[2]	0.76	5.50	5.25	0.01	0.32	0.22
SDCAPCD Thresholds	75	550	250	250	100	55
Is Threshold Exceeded?	No	No	No	No	No	No

ROG = reactive organic gases; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter, up to 10 microns; $PM_{2.5}$ = particulate matter, up to 2.5 microns

Notes:

1. Refer to Appendix 4.3-A, Air Quality Assessment, for assumptions used in this analysis, including quantified emissions reduction by control measures.
2. Controlled emissions calculated assuming standard fugitive dust control measures, including watering the site three times daily, as SDG&E's construction restrictions require.

Fugitive Dust Emissions

Construction activities are a source of fugitive dust (PM10) emissions that may have a substantial, although temporary, impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Proposed Project area. Fugitive dust emissions are associated with land clearing, excavation, cut and fill, and truck travel on unpaved roadways. Fugitive dust emissions vary substantially from day to day, depending on the level of activity, specific operations, and weather conditions. Fugitive dust from grading and construction is expected to be short-term and would cease when these activities are completed. Additionally, most of this fugitive dust material would be inert silicates, rather than the complex organic particulates released from combustion sources, which are more harmful to sensitive receptors.

Emissions calculations include fugitive dust emissions as part of the site grading and earthmoving activities; refer to Table 4.3-7. However, with implementation of SDG&E's standard construction practices, the Proposed Project would not exceed SDAPCD standards for PM_{10} or $PM_{2.5}$. Measures include adherence to standard construction practices (watering inactive and perimeter areas, track-out requirements, and containing dirt and dust within the Proposed Project area) and compliance with SDAPCD's Fugitive Dust Rule 55.

Construction Equipment and Worker Vehicle Exhaust

Exhaust emissions from construction activities include emissions associated with transporting machinery and supplies to and from the Proposed Project area, emissions produced on-site as the equipment is used, and emissions from trucks transporting fill material to the Salt Creek Substation site. Emitted pollutants would include CO, ROG, NO_X, PM_{10}, and $PM_{2.5}$. As presented in Table 4.3-7, the maximum daily uncontrolled emissions for each year of construction of the Proposed Project would not exceed SDAPCD standards for all pollutants except PM_{10} in 2014. With implementation of standard fugitive dust control measures, including watering the site three times daily, emissions would be below SDAPCD standards for all pollutants. There is no other substantial evidence in the record demonstrating that the Proposed Project would have a significant impact. Therefore, impacts associated with construction would be less than significant.

Toxic Air Contaminants (TACs)

California identifies diesel particulate matter as a TAC. Diesel particulate matter is emitted from on- and off-road vehicles that use diesel as fuel. Following identification of diesel particulate matter as a TAC in 1998, CARB worked on developing strategies and regulations aimed at reducing the emissions and associated risk from diesel particulate matter. The overall strategy for achieving these reductions is found in the Risk Reduction Plan to Reduce Particulate Matter from Diesel-Fueled Engines and Vehicles (CARB 2000).

Construction activities would result in emissions of diesel particulate matter. Sources of diesel particulate matter at the site would include haul trucks, heavy construction equipment, and contractor vehicles. Potential health effects associated with exposure to diesel particulate matter are long-term effects and are evaluated on the basis of a lifetime of exposure (70 years). Because construction activities would move on a daily basis, and because activities would be short-term, emissions would not impact any sensitive receptors for any length of time.

CARB has adopted airborne toxic control measures (ATCMs) applicable to off-road diesel equipment and portable diesel engines rated brake horsepower 50 and greater. The purpose of these ATCMs is to reduce emissions of particulate matter from engines subject to the rule. The ATCMs require diesel engines to comply with particulate matter emissions limitations on a fleet-averaged basis.

CARB has also adopted an ATCM that limits diesel-fueled commercial motor vehicle idling. The rule applies to motor vehicles with gross vehicular weight ratings greater than 10,000 pounds that are licensed for on-road use. The rule restricts vehicles from idling for more than 5 minutes at any location, with exceptions for idling that may be necessary in the operation of the vehicle.

All off-road diesel equipment, on-road heavy-duty diesel trucks, and portable diesel equipment used for the Proposed Project must meet the state's applicable ATCMs for control of diesel particulate matter or NO_X in the exhaust (e.g., ATCMs for portable diesel engines, off-road vehicles, and heavy-duty on-road diesel trucks, and 5-minute diesel engine idling limits) that are in effect during implementation of the Proposed Project. The mobile fleets used in the Proposed Project are expected to be in full compliance with these ATCMs. This will ensure that pollutant emissions in diesel engine exhaust do not exceed applicable state or federal air quality standards.

Operation and Maintenance – No Impact

As shown in Table 4.3-8, Criteria Air Pollutant Emissions from Operation and Maintenance, operation and maintenance of the Proposed Project would not result in criteria air pollutant emissions and, therefore, would not result in any impacts related to existing air quality standards. As a result, there would be no air quality impact associated with operation and maintenance of the Proposed Project.

Table 4.3-8: Criteria Air Pollutant Emissions from Operation and Maintenance

Emissions Source	Pollutant (pounds per day)[1]					
	ROG	**CO**	**NO_X**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Operational (Vehicle)	0.25	3.64	0.48	0.00	0.12	0.06
Air District Threshold	75[2]	550	250	250	100	55[2]
Is Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:

1. Emissions were calculated using emissions factors from the EMFAC2011 Model, which is CARB's latest model for on-road emissions.
2. The APCD does not have thresholds of significance for ROG or $PM_{2.5}$. The analysis uses the ROG and $PM_{2.5}$ thresholds from the South Coast Air Quality Management District.

Question 4.3c – Cumulatively Considerable Criteria Pollutant Increases

Construction – Less-than-Significant Impact

As shown in Table 4.3-7, Proposed Project Construction Air Emissions, construction of the Proposed Project would lead to a small increase in nonattainment criteria air pollutants. SDG&E standard construction practices include minimizing vehicle idling time and controls for dust emissions to reduce construction impacts. There is no other substantial evidence in the record demonstrating that the Proposed Project would have a cumulatively considerable impact. As a result, impacts due to nonattainment criteria pollutant increases would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Operational emissions were simulated using the URBEMIS model, assuming default traffic estimates of daily commutes for the Proposed Project instead of limiting traffic to periodic site

visits for maintenance, as may be the case. Therefore, the emissions estimates presented in Table 4.3-8, Criteria Air Pollutant Emissions from Operation and Maintenance, represent emissions levels that are overly conservative and unlikely to be approached by the Proposed Project. These increases in criteria air pollutants are significantly less than those projected for the construction phase, and are well below the acceptable significance thresholds. As a result, criteria air pollutant increases due to operation and maintenance of the Proposed Project would be considered less than cumulatively considerable and impacts would therefore be considered less than significant.

Question 4.3d – Sensitive-Receptor Exposure

Construction – Less-than-Significant Impact

The Salt Creek Substation site is characterized by a mixture of single-family and multi-family residential, recreation, and open space uses, adjacent to and southeasterly of Hunte Parkway, where SDG&E's Transmission Corridor crosses Hunte Parkway. An approximately 5-mile-long overhead 69-kV transmission line would be constructed from the Existing Substation extending southerly to the proposed Salt Creek Substation. The Transmission Corridor to the Existing Substation crosses through an area that includes primarily residential uses. The Existing Substation site is located in an undeveloped area east of SR-125. Although sensitive receptors were identified within a 1-mile radius of the Proposed Project's components, impacts to these receptors would be less than significant with implementation of SDG&E's standard construction practices. These practices include reducing idling time and implementing dust-control measures. Therefore, impacts to sensitive receptors during Proposed Project construction would be less than significant.

Operation and Maintenance – Less-than-Significant Impact

Emissions resulting from operation and maintenance activities associated with the Proposed Project were calculated using the EMFAC2011 Model; refer to Table 4.3-8, Estimated Operation and Maintenance Emissions. As indicated, operations and maintenance activities associated with the Proposed Project would not emit substantial amounts of pollutants that would result in exposure of sensitive receptors to substantial pollutant concentrations; therefore, operations and maintenance activities would have a less-than-significant impact to sensitive receptors.

Question 4.3e – Odor

Construction – Less-than-Significant Impact

Construction activity for the proposed Salt Creek Substation may generate detectable odors from heavy-duty equipment exhaust. Potential odors generated during construction would be temporary and would be limited by the relatively small number of vehicles on-site, small graded area, and distance from any sensitive receptors. As discussed above, the proposed Salt Creek Substation site is located south of Hunte Parkway, TL 6965 and TL 6910 loop-in are located in the vicinity of SR-125, and the Existing Substation site is also located near SR-125. These roads are a source of combustion odors that would be more than the temporary construction activities at the site. Therefore, impacts would be less than significant.

Operation and Maintenance – No Impact

Operations and maintenance activities associated with the Proposed Project would not result in detectable odors. As such, no impact would occur.

4.3.5 Project Design Features and Ordinary Construction/Operations Restrictions

With implementation of the ordinary construction restrictions, as outlined within Section 3.8, Project Design Features and Ordinary Construction/Operations Restrictions, potential impacts related to air quality would be less than significant.

4.3.6 Applicant-Proposed Measures

Because air quality impacts would be less than significant, no APMs are required or proposed.

4.3.7 Detailed Discussion of Significant Impacts

Based on the above analyses, no significant impacts have been identified for the Proposed Project, and no APMs are required or proposed. No operational APMs are required or proposed.

4.3.8 References

California Air Resources Board (CARB). 2013a. California Ambient Air Quality Standards (CAAQS). Available at http://www.arb.ca.gov/research/aaqs/caaqs/caaqs.htm. Accessed July 24.

California Air Resources Board (CARB). 2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

California Air Resources Board (CARB). 2007. OFFROAD Model. Available at http://www.arb.ca.gov/msei/offroad/offroad.htm.

California Air Resources Board (CARB). 2009–2011. Annual Toxics Summaries. Aerometric Data Analysis and Measurement System (ADAM) Summaries from 2009 to 2011. Available at http://www.arb.ca.gov/adam/toxics/toxics.html.

California Air Resources Board (CARB). 2011. Mobile Source Emissions Inventory – Current Methods and Data. EMFAC2011 Model. Available at http://www.arb.ca.gov/msei/modeling.htm.

City of San Diego. 2011. Significance Determination Thresholds. January.

San Diego Air Pollution Control District (SDAPCD). 1995. Air Pollution Control District Rules. Available at http://www.sdapcd.org/rules/rules/randr.html.

San Diego Air Pollution Control District (SDAPCD). 2012. Rules and Regulations. July.

San Diego Air Pollution Control District (SDAPCD). 2013. 2008-2012. Five-Year Air Quality Summary, 1-hour CO and 1-hour SO_2. Available at http://www.sdapcd.org/info/reports/5-year-summary.pdf. Accessed July 24.

South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook.

South Coast Air Quality Management District (SCAQMD). 2012. Offroad Mobile Source Emission Factors. Available at http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html.

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