

1 **4.3 Air Quality**
2

3 This section describes the environmental and regulatory setting and discusses impacts associated
4 with the construction and operation of the Santa Barbara County Reliability Project (proposed
5 project) with respect to air quality. Impacts that the proposed project may have on air quality are
6 discussed in this section, as well as in Sections 4.7, “GHG Emissions,” 4.8, “Hazards and Hazardous
7 Materials,” and 4.15, “Transportation/Traffic.”
8

9 **4.3.1 Environmental Setting**
10

11 Air quality at a given location is a function of several factors, including amounts and types of
12 pollutants emitted, both locally and regionally, and the dispersion rates of pollutants within the
13 region. Major factors affecting pollutant dispersion include wind speed and direction, atmospheric
14 stability, temperature, presence or absence of inversions, and topographic and geographic features
15 of the region. The proposed project would be located in a portion of the South Central Coast Air
16 Basin, which includes the counties of Ventura, Santa Barbara, and San Luis Obispo. The air above
17 the proposed project area often exhibits weak vertical and horizontal dispersion patterns, which
18 increases ambient air pollutant levels (VCAPCD 2003).
19

20 Air quality is regulated by federal, state, and local agencies (see Table 4.3-1). The Clean Air Act
21 (CAA) requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality
22 Standards (NAAQS) for criteria pollutants that are emitted from numerous and diverse sources.
23 These pollutants are considered harmful to public health and the environment. The EPA has set
24 NAAQS for seven criteria pollutants: carbon monoxide (CO), lead, nitrogen dioxide (NO₂), ozone,
25 particulate matter less than or equal to 10 micrometers in diameter (PM₁₀), particulate matter less
26 than or equal to 2.5 micrometers in diameter (PM_{2.5}), and sulfur dioxide (SO₂). Ozone is not emitted
27 directly from emission sources, but is created in the atmosphere via a chemical reaction between
28 oxides of nitrogen (NO_x) and reactive organic gases (ROG)¹ in the presence of sunlight. As a result,
29 NO_x and ROGs are often referred to as ozone precursors and are regulated as a means of preventing
30 ground-level ozone formation. In addition, the California Air Resources Board (CARB) has
31 established the California Ambient Air Quality Standards (CAAQS) for the criteria pollutants
32 mentioned above and other substances such as visibility-reducing particles, sulfates, hydrogen
33 sulfide, and vinyl chloride.
34

Table 4.3-1 Summary of National and California Ambient Air Quality Standards

Pollutant	Averaging time	CAAQS ¹	NAAQS ²	
			Primary ³	Secondary ^{3,4}
O ₃	1-hour	0.09 ppm	--	Same as primary standard
	8-hour	0.07 ppm	0.075 ppm	
PM ₁₀ ^(e)	24-hour	50 µg/m ³	150 µg/m ³	Same as primary standard
	Annual arithmetic mean	20 µg/m ³	--	

¹ In the State of California emissions of volatile organic compounds (VOCs) are commonly referred as Reactive Organic Gases (ROG). For the purposes of this report, the term ROG is used.

Table 4.3-1 Summary of National and California Ambient Air Quality Standards

Pollutant	Averaging time	CAAQS ¹	NAAQS ²	
			Primary ³	Secondary ^{3,4}
PM _{2.5} ⁵	24-hour	--	35 µg/m ³	Same as primary standard
	Annual arithmetic mean	12 µg/m ³	12 µg/m ³	15 µg/m ³
CO	1-hour	20 ppm	35 ppm	--
	8-hour	9 ppm	9 ppm	--
NO ₂ ⁶	1-hour	0.18 ppm	0.10 ppm	--
	Annual arithmetic mean	0.03 ppm	0.053 ppm	Same as primary standard
SO ₂ ⁷	1-hour	0.25 ppm	75 ppb	--
	3-hour	--	--	0.5 ppm
	24-hour	0.04 ppm	0.14 ppm	--
	Annual arithmetic mean	--	0.03 ppm	--
Lead ⁸	30-day average	1.5 µg/m ³	--	--
	Calendar Quarter	--	1.5 µg/m ³ (for certain areas) ⁽ⁱ⁾	Same as primary standard
	Rolling 3-month average	--	0.15 µg/m ³	
Visibility-Reducing Particles ⁹	8-hour	Instrumental equivalent	n/a	n/a
Sulfates	24-hour	25 µg/m ³	n/a	n/a
Hydrogen Sulfide	1-hour	0.03 ppm	n/a	n/a
Vinyl Chloride ¹⁰	24-hour	0.01 ppm	n/a	n/a

Notes:

- ¹ California standards for O₃, CO, SO₂, NO₂, and particulate matter (PM₁₀, PM_{2.5}, and visibility-reducing particles) are values not to be exceeded.
- ² National standards (other than O₃, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year.
- ³ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- ⁴ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- ⁵ On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12 µg/m³.
- ⁶ 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. To directly compare the national 1-hour standard to the California standards, units were converted to ppm.
- ⁷ On June 2, 2010, a new 1-hour SO₂ standard was established.
- ⁸ CARB identified lead and vinyl chloride as toxic air contaminants, with no threshold level of exposure for adverse health effects determined.
- ⁹ CARB converted the general statewide visibility standard to instrumental equivalents, which is "extinction of 0.23 per kilometer."
- ¹⁰ The NAAQS for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard.

Table 4.3-1 Summary of National and California Ambient Air Quality Standards

Pollutant	Averaging time	CAAQS ¹	NAAQS ²	
			Primary ³	Secondary ^{3,4}
Source: CARB 2013a				
Key:				
µg/m ³	micrograms per cubic meter	PM _{2.5}	particulate matter with a diameter of 2.5 micrometers or less	
CARB	California Air Resources Board			
CO	carbon monoxide	PM ₁₀	particulate matter with a diameter of 10 micrometers or less	
NO ₂	nitrogen dioxide			
O ₃	ozone	ppm	parts per million	
n/a	not applicable	SO ₂	sulfur dioxide	
NO ₂	nitrogen dioxide	ppb	parts per billion	

1 The EPA and the CARB compare ambient air criteria pollutant measurements with NAAQS and
2 CAAQS to assess air quality at federal and state levels. Based on these comparisons, regions are
3 placed in one of the following categories:

- 4
- 5 • Attainment – A region is “in attainment” if monitoring shows that ambient concentrations of a
6 specific pollutant are less than or equal to a standard. In addition, an area that has been re-
7 designated from nonattainment to attainment is classified as a “maintenance area” for 10 years to
8 ensure that the air quality improvements are sustained.
- 9 • Nonattainment – If the standards are exceeded for a pollutant, the region is designated as
10 nonattainment for that pollutant.
- 11 • Unclassifiable – An area is unclassifiable if the ambient air monitoring data are incomplete and
12 do not support a designation of attainment or nonattainment.
- 13

14 **4.3.1.1 Local Setting**

15 Existing sources of air pollutants in the project area (Santa Barbara County and Ventura County)
16 include commercial and industrial area sources, non-road mobile sources (e.g., off-highway
17 equipment), on-road mobile sources, and aircraft emissions. Table 4.3-2 summarizes the major air
18 pollutant emission sources and levels in the proposed project area.

19 Table 4.3-3 presents the federal and state attainment status for each of the ambient air criteria
20 pollutants in the proposed project area.

21 **Santa Barbara County**

22 As shown in Table 4.3-2, the largest contributor to locally generated air pollution in Santa Barbara
23 County is on-road mobile sources (cars and trucks). The remainder consists of other mobile
24 sources (planes, trains, boats, off-road equipment, farm equipment); the evaporation of solvents;
25 combustion of fossil fuels; surface cleaning and coating; prescribed burning; and petroleum
26 production and marketing (SBCAPCD 2010).

27 Santa Barbara County's air quality has historically violated both the state and federal ozone
28 standards. Ozone concentrations above these standards adversely affect public health, diminish the
29 production and quality of many agricultural crops, reduce visibility, and damage native and
30 ornamental vegetation. Table 4.3-4 shows the reported days on which both national and state
31 standards were exceeded in Santa Barbara County during the year 2012.

Table 4.3-2 Estimated Annual Average Emissions in the Proposed Project Area (Year 2010)

Emission Sources	Air Pollutant Emissions (tons per day)					
	ROG	CO	NO _x	SO _x	PM ₁₀	PM _{2.5}
Santa Barbara County						
Stationary Sources	9.9	7.0	7.3	4.4	1.0	0.5
Area-wide Sources	10.6	32.0	2.1	< 0.1	21.0	7.3
Mobile Sources	16.5	125.9	82.2	32.1	6.0	5.6
Total Emissions Santa Barbara County	37.0	164.9	91.6	36.5	27.9	13.4
Ventura County						
Stationary Sources	11.5	9.4	4.7	0.6	1.3	0.9
Area-wide Sources	12.9	22.2	1.7	0.1	22.2	5.4
Mobile Sources	22.7	163.3	56.8	12.4	4.1	3.6
Total Emissions Ventura County	47.2	194.9	63.2	13.1	27.7	9.9

Source: CARB 2013b.

Notes:

¹ Stationary sources include: fuel combustion, waste disposal, cleaning and surface coatings, petroleum production and marketing, and industrial processes.

² Area-wide sources include: solvent evaporation and miscellaneous processes.

³ Mobile sources include: On-road motor vehicles and other mobile sources.

Key:

CO carbon monoxide

NO_x oxides of nitrogen

PM₁₀ particulate matter with a diameter of 10 micrometers or less

PM_{2.5} particulate matter with a diameter of 2.5 micrometers or less

ROG reactive organic gases

SO_x oxides of sulfur

Table 4.3-3 Area Designations within the Proposed Project Area

Pollutant	Ventura County		Santa Barbara County	
	NAAQS	CAAQS	NAAQS	CAAQS
Ozone	NA	NA	A/U	NA
PM ₁₀	U	NA	U	NA
PM _{2.5}	U	NA	U	U
CO	A/U	A	A/U	A
NO ₂	A/U	A	A/U	A
SO ₂	A	A	U	A
Lead	A/U	A	A/U	A
Hydrogen Sulfide	--	A	--	U
Sulfates	--	A	--	A
Visibility-Reducing Particles	--	U	--	U

Sources: CARB 2013b

Key:

A attainment

A/U attainment/unclassifiable

CO carbon monoxide

NA nonattainment

NO₂ nitrogen dioxide

PM_{2.5} particulate matter with a diameter of 2.5 micrometers or less

PM₁₀ particulate matter with a diameter of 10 micrometers or less

SO₂ sulfur dioxide

U unclassifiable

Table 4.3-4 Reported Exceedances of NAAQS and CAAQS in the Project Area (Year 2012)

Monitoring Location	Criteria Air Pollutant – Days exceeding standard ⁽¹⁾					
	Ozone			PM ₁₀ ⁽²⁾		PM _{2.5}
	1-hour CAAQS	8-hour NAAQS	8-hour CAAQS	24-hour NAAQS	24-hour CAAQS	24-hour NAAQS
Santa Barbara County						
Carpinteria	0	0	1	(*)	(*)	(*)
El Capitan Beach	0	0	0	0	0	(*)
Gaviota	0	0	0	(*)	(*)	(*)
Goleta-Fairview	0	0	0	0	0	(*)
Las Flores Canyon	0	2	4	0	0	(*)
Lompoc (station #1)	0	0	0	(*)	(*)	(*)
Lompoc (station #2)	0	0	0	(*)	3	(*)
Los Padres National Forest	0	0	2	(*)	(*)	(*)
Santa Barbara	0	0	0	(*)	(*)	0
Santa Maria	0	0	0	(*)	11	0
Santa Ynez	0	0	0	(*)	(*)	(*)
Vandenberg Air Force Base	0	0	0	0	0	(*)
Ventura County						
El Rio	0	0	0	0	6	0
Ojai	2	9	24	(*)	(*)	(*)
Piru	0	1	14	0	(*)	(*)
Simi Valley	3	14	24	0	0	0
Thousand Oaks	0	0	2	(*)	(*)	1

Source: CARB 2013c

Notes:

¹ Days reported by CARB as fractional values were rounded up to the nearest whole number.

² PM₁₀ statistics may include data that are related to an exceptional event.

* There was insufficient (or no) data available to determine the value.

Key:

CAAQS California Ambient Air Quality Standards

NAAQS National Ambient Air Quality Standards

PM_{2.5} particulate matter with a diameter of 2.5 micrometers or less

PM₁₀ particulate matter with a diameter of 10 micrometers or less

1
2 On August 8, 2003, Santa Barbara County officially became an attainment area for the federal 1-
3 hour ozone standard. On June 15, 2004, the EPA replaced the federal 1-hour ozone standard with
4 an 8-hour ozone standard for Santa Barbara County and most parts of the country. Santa Barbara
5 County was designated in attainment with the federal 8-hour ozone standard, and the 2007 Clean
6 Air Plan provided for maintenance of this standard; however, as shown in Table 4.3-3, the county
7 remains in non-attainment for ozone for the state-level CAAQS.

8
9 The Santa Barbara County Air Pollution Control District (SBCAPCD) is the air pollution control
10 agency for Santa Barbara County.

11
12 **Ventura County**

13 In Ventura County, ozone generally reaches peak levels by mid-afternoon and, along with ozone
14 precursors, is often blown inland by the prevailing winds. Thus, inland areas such as Simi Valley,
15 Thousand Oaks, Ojai, Fillmore, and Piru often have higher ozone levels and a greater number of

1 days exceeding the federal and state ozone standards than the county’s coastal areas. The
2 smoggiest days tend to occur from May through October, when high temperatures and stable
3 atmospheric conditions produce conditions conducive to ozone formation and accumulation
4 (VCAPCD 2008).

5
6 Ventura County is a nonattainment area for the federal 8-hour ozone standard, as well as for the
7 California 1-hour and 8-hour ozone standards. The Ventura County 8-hour ozone nonattainment
8 area includes all of mainland Ventura County (including ocean areas out to 3 miles from the
9 mainland shore) but excludes Anacapa and San Nicolas Islands (VCAPCD 2008). Air quality in
10 Ventura County has improved dramatically since 1990, despite the increase in population. In 1990,
11 there were 70 violations countywide of the federal 8-hour ozone standard, but only 11 in 2005, 17
12 in 2006, and 6 in 2007 (VCAPCD 2008). Table 4.3-4 shows the reported days on which both
13 national and state standards were exceeded in Ventura County during the year 2012.

14
15 The Ventura County Air Pollution Control District (VCAPCD) is the air pollution control agency for
16 Ventura County.
17

18 **4.3.2 Regulatory Setting**

19
20 This subsection summarizes federal, state, and local laws, regulations, and standards that govern
21 air quality in the project area.
22

23 **4.3.2.1 Federal**

24 **Federal Clean Air Act**

25
26 The Clean Air Act of 1970 (CAA) (42 United States Code §§7401-7641) (last amended in 1990 [104
27 Stat. 2468, P.L. 101-549]), defines the EPA’s role in managing air quality in the United States. Under
28 the CAA, the EPA promulgated the NAAQS (40 Code of Federal Regulations Part 50), setting limits
29 on the acceptable ambient concentrations for each of the federally identified criteria air pollutants.
30

31 Similar to the CAA, the California Clean Air Act of 1988 (CCAA) (Stats. 1988, Ch. 1568) requires all
32 air quality planning regions to achieve and maintain the California Ambient Air Quality Standards
33 (CAAQS) by the earliest date practicable. The CCAA also requires that air quality regions that have
34 failed to meet the CAAQS work with the California Air Resources Board (CARB) to prepare State
35 Implementation Plans demonstrating when and how the CAAQS will be met.
36

37 **4.3.2.2 State**

38 **California Clean Air Act**

39
40 CARB, a part of the California Environmental Protection Agency, is responsible for interpreting and
41 implementing state statutes that manage air pollution. CARB gathers air quality data for the State of
42 California, ensures the quality of the data, designs and implements air models, sets ambient air
43 quality standards for the state, compiles the state’s emissions inventories, and performs air quality
44 and emissions inventory special studies. CARB is responsible for monitoring the regulatory activity
45 of California’s 35 local and regional air pollution control districts. These districts regulate
46 stationary emissions sources (i.e., industrial pollution sources), issue air quality permits, develop
47 local air quality plans, and ensure that industries under their jurisdiction adhere to air quality
48 mandates.

1 **4.3.2.3 Local**

2
3 **Santa Barbara County Air Pollution Control District 2010 Clean Air Plan**

4 The Santa Barbara County Air Pollution Control District's (SBCAPCD) 2010 Clean Air Plan, adopted
5 by the County in January 2011, presents the County's goals and a cost-effective emissions control
6 strategy for attaining the state 8-hour ozone standard, based on countywide air quality baseline
7 conditions and future growth projections. This plan satisfies the triennial update in compliance
8 with the requirements of the California Clean Air Act, to attain the state standard (Health and
9 Safety Code, sections 40924 and 40925). The plan does not address any specific federal planning
10 requirements because Santa Barbara was designated as a maintenance area for the federal 8-hour
11 ozone standard (SBCAPCD 2010).

12
13 The 2010 Clean Air Plan provides air quality information, a baseline emissions inventory, future
14 year emissions estimates for 2020 and 2030, strategies for reducing emissions from transportation
15 and land use sources, and proposed rules to be enforced by the APCD to attain the proposed
16 emission reduction goals. More specifically, the emission reduction measures presented in this
17 plan include controls on all inventory categories contributing ROG and NO_x emissions: industrial
18 processes, combustion sources, petroleum handling, solvent use, consumer products, waste
19 burning, and mobile sources (SBCAPCD 2010).

20
21 The County anticipates that onshore emissions of ROGs and NO_x will continue to decrease through
22 2030, due primarily to on-road mobile source emission reduction measures. In addition, the
23 County expects a slight decrease in NO_x and a slight increase in ROG emissions due to marine
24 shipping activities in the area (SBCAPCD 2010).

25
26 **SBCAPCD Rule 345: Control of Fugitive Dust from Construction and Demolition Activities**

27 This rule applies to activities associated with construction or demolition of structures, including
28 requirements and standards for visible fugitive dust emissions beyond the property line, truck
29 hauling, and demolition. Under this rule, any construction, earth-moving, or demolition activities
30 shall not discharge visible dust emissions beyond the property line of 20 percent opacity or greater
31 for periods aggregating more than 3 minutes in any 60 minute period.

32
33 Moreover, this rule also establishes the following standards applicable to the proposed project:

- 34
35
- For truck hauling, at least one of the following dust prevention techniques shall be utilized:
 - 36 – *Use properly secured tarps or cargo covering that covers the entire surface area of load or*
37 *use a container-type enclosure.*
 - 38 – *Maintain a minimum of 6 inches of freeboard below the rim of the truck bed where the*
39 *load touches the sides of the cargo area and ensure that peak of the load does not extend*
40 *above any part of the upper edge of the cargo area.*
 - 41 – *Water or otherwise treat the bulk material to minimize loss of material to wind or*
42 *spillage.*
 - 43 – *Other effective dust prevention control measures approved in writing by the Control*
44 *Officer.*

- 1 • For vehicle track-out/carry-out, spillage from transport trucks and erosion shall be
2 controlled by implementing these measures:
 - 3 – *Visible roadway dust shall be minimized by the use of any of the following track-*
4 *out/carry-out and erosion control measures: track-out grates or gravel beds at each*
5 *egress point, wheel-washing at each egress point during muddy conditions, soil binders,*
6 *chemical soil stabilizers, geotextiles, mulching, or seeding; and*
 - 7 – *Visible roadway dust shall be removed at the conclusion of each work day when bulk*
8 *material removal ceases, or every 24 hours for continuous operations. If a street sweeper is*
9 *used to remove any track-out/carry-out, only a PM₁₀-Efficient Street Sweeper shall be*
10 *used. The use of blowers for removal of track-out/carry-out is prohibited.*
- 11 • For demolition (applicable to foundations/structure removal) the following work practice
12 standards shall be followed:
 - 13 – *As necessary to prevent visible emissions, the structure shall be wet (with sufficient*
14 *quantities of water to prevent the generation of visible dust plumes) prior to removal.*
15 *Wetting shall continue as necessary during active removal and the debris reduction*
16 *process (SBAPCD 2009).*

18 **Santa Barbara County Comprehensive Plan – Land Use Element and Air Quality Supplement**

19 The Land Use Element of the Santa Barbara County Comprehensive Plan provides policy
20 recommendations integrating air quality planning techniques into the County's land use planning
21 program. The Land Use Measures presented in this plan are primarily focused on actions to reduce
22 automobile use and hence vehicular miles traveled from land use development within the County's
23 jurisdiction, contributing to a reduction in hydrocarbon, NO_x, and CO emissions. Implementation of
24 land use measures that result in reductions in automobile use can aid in the long-term
25 maintenance of good air quality once the federal air quality standards have been attained in Santa
26 Barbara County. Although most of the measures identified in this Land Use Element are not fully
27 applicable to the proposed project, this document identifies the use of transportation modes such
28 as carpools or vanpools as an option available for commuters when jobs are located long distances
29 from housing (County of Santa Barbara 2009).

31 **Santa Barbara County Environmental Thresholds and Guidelines Manual**

32 Published in 2008, the Santa Barbara County Environmental Thresholds and Guidelines Manual
33 provides guidance to local and state agencies to determine whether a discretionary permit will
34 individually or cumulatively have a significant impact on air quality (SBCAPCD 2008). Quantitative
35 emission thresholds for long-term/operational emissions are provided in these guidelines and
36 further discussed in Section 4.3.3.1. In addition, the SBCAPCD has published complementary
37 guidelines for assessing and mitigating air quality impacts of development projects within the
38 county jurisdiction, such as the *Scope and Content of Air Quality Sections in Environmental*
39 *Documents* (SBCAPCD 2011). These guidelines, published by both the County Planning Department
40 and the APCD, have been considered in the development of the air quality analysis presented in this
41 section.

43 **Ventura County 2007 Air Quality Management Plan**

44 Pursuant to the federal CAA Amendments of 1990, the Ventura County 2007 Air Quality
45 Management Plan (AQMP) presents Ventura County's: 1) strategy to attain the federal 8-hour
46 ozone standard; 2) attainment demonstration for the federal 8-hour ozone standard; 3) reasonable

1 further progress demonstration for the federal 8-hour ozone standard; and 4) transportation
2 conformity emissions budget for federal transportation conformity purposes. The 2007 AQMP also
3 presents the 2003–2005 Triennial Assessment and Plan Update required by the CCAA (VCAPCD
4 2008).

5
6 The 2007 AQMP provides practical control measures proposed as revisions to existing Ventura
7 County Air Pollution Control District (VCAPCD) rules. Most of the emission reductions that Ventura
8 County needs to attain the federal 8-hour ozone standard, and continue progress towards meeting
9 the state ozone standards, are considered as part of CARB’s 2007 State Implementation Plan. This
10 plan is a comprehensive and far-reaching set of emission reduction programs that focus on mobile
11 sources, consumer products, and pesticides to significantly improve air quality throughout
12 California and meet federal clean air standards for ozone and PM_{2.5} (VCAPCD 2008).

13
14 **VCAPCD Rule 55 – Fugitive Dust**

15 As part of the VCAPCD general and source-specific regulations, Rule 55 establishes the provisions
16 for any operation, disturbed surface area, or human-created condition capable of generating
17 fugitive dust, including activities applicable to the proposed project, such as bulk material handling,
18 earth moving, construction, structure removal, usage of storage piles, unpaved roads, and track-out
19 operations.

20
21 Rule 55 requires that emissions from any applicable source shall not remain visible beyond the
22 midpoint of a public street or road adjacent to the property line of the emission source, or beyond
23 50 feet from the property line when no roads are adjacent. This rule also establishes an opacity
24 limit of 20 percent from any applicable fugitive dust source, during observation periods of 3
25 minutes or more. More specifically, this rule requires implementation of dust prevention and
26 control measures that are applicable to the proposed project, such as those summarized in Table
27 4.3-5. The proposed project would only be exempted from these requirements in case of
28 emergency repairs and during public agency inspection of infrastructure.

29
30 Another related regulation applicable to the proposed project is Rule 55.1, which establishes
31 provisions for operating construction or earth-moving equipment that may cause fugitive dust
32 emissions on public unpaved roads within the VCAPCD jurisdiction. Visible roadway accumulations
33 that occur on roads with fewer than 1,000 average daily trips (such as the access and spur roads
34 associated with the proposed project) are exempted from the VCAPCD material removal
35 requirements. However, this rule also includes requirements for construction and earth-moving
36 activities on unpaved roads, such as limits to visible emissions of 20 percent opacity or greater
37 during observations over a period of 3 minutes or more in any single hour, or a visible dust plume
38 that exceeds 100 feet in length.

Table 4.3-5 Ventura County Fugitive Dust Control Requirements Applicable to the Proposed Project

Applicable Fugitive Dust Source	Ventura County APCD Rule 55 Requirements
Track-Out	<p>Track-out 25 feet or more in length is prohibited unless at least one of the following control measures is utilized:</p> <ul style="list-style-type: none"> • Track-Out Area Improvement: Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a stabilized surface starting from the point of intersection with public paved surface, and extend for a centerline distance of at least 100 feet with an acceptable width to accommodate traffic ingress and egress from the site. • Track-Out Prevention: Check and clean the undercarriage and wheels on all vehicles before leaving unpaved surface or install a properly functioning and well-maintained track-out control device(s) that prevents track-out soil onto paved public roads. • Track-Out Removal: Remove track-out from pavement as soon as possible but not later than one hour after it has been deposited on the paved road. If a street sweeper is used to remove any track-out, only PM₁₀-efficient street sweepers certified to meet South Coast AQMD Rule 1186 requirements shall be used. • All track-out shall be removed at the conclusion of each workday or evening shift subject to the same condition regarding PM₁₀ efficient street sweepers. • The use of blowers for removal of track-out is prohibited.
Earth Moving	<p>No person shall engage in earth-moving activities in a manner that creates visible dust emissions over 100 feet in length.</p>
Bulk Material Handling Facilities	<p>Active operation with a monthly import or export of 2,150 cubic yards or more of bulk material requires implementation of at least one of the following measures at each vehicle egress from the site to a public paved road:</p> <ul style="list-style-type: none"> • Install a pad consisting of washed gravel (minimum size: 1 inch) maintained in a clean condition to a depth of at least 6 inches and extending at least 30 feet wide and 50 feet long. • Pave the surface at least 100 feet long and at least 20 feet wide. • Utilize a wheel shaker/wheel spreading device, also known as rumble grate, consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and sufficient width to allow all wheels of vehicle traffic to travel over grate to remove bulk material from tires and vehicle undercarriages before vehicles exit the site. • Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site. • Any other control measure or device that prevents track-out onto public paved roads.
Truck Hauling	<p>Loading of bulk materials or soil onto outbound trucks is subject to implementation of at least one of the following dust prevention techniques:</p> <ul style="list-style-type: none"> • Use properly secured tarps or cargo covers over the entire surface area of the load, or use a container-type enclosure. • Maintain a minimum of 6 inches of freeboard below the rim of the truck bed where the load touches the sides of the cargo area and insure that the peak of the load does not extend above any part of the upper edge of the cargo area. • Water or otherwise treat the bulk material to minimize loss of material to wind or spillage. • Other effective dust control measures.

Source: VCAPCD 2008

1 **Ventura County General Plan**

2 The air quality goals, policies, and programs of the Ventura County General Plan (County of Ventura
3 2011) that apply to the proposed project are as follows:
4

5 **Goals**

- 6 • Diligently seek and promote a level of air quality that protects public health, safety, and
7 welfare, and seek to attain and maintain the state and federal Ambient Air Quality
8 Standards.
- 9 • Ensure that any adverse air quality impacts, both long-term and short-term, resulting from
10 discretionary development² are mitigated to the extent feasible.
11

12 **Policies**

- 13 • Discretionary development that is inconsistent with the 2007 AQMP shall be prohibited,
14 unless overriding considerations are cited by the decision-making body.
- 15 • The air quality impacts of discretionary development shall be evaluated by use of the
16 Guidelines for the Preparation of Air Quality Impact Analysis.
- 17 • Discretionary development that would have a significant adverse air quality impact shall
18 only be approved if it is conditioned with all reasonable mitigation measures to avoid,
19 minimize, or compensate (offset) for the air quality impact. Developers shall be encouraged
20 to employ innovative methods and technologies to minimize air pollution impacts.
- 21 • Where deemed necessary by the APCD, discretionary development shall be conditioned to
22 develop, implement, and maintain over time, Transportation Demand Management
23 programs consistent with the APCD's trip reduction rule 211-210. These programs shall
24 include a requirement for annual performance reporting to and approval by the APCD.
- 25 • Development subject to APCD permit authority shall comply with all applicable APCD rules
26 and permit requirements, including the use of best available control technology, as
27 determined by the APCD.
28

29 **Programs**

- 30 • The VCAPCD will require employers subject to the VCAPCD's Trip Reduction Rule 210 to
31 prepare and implement trip reduction plans. The purpose of these plans is to reduce the
32 number of solo drivers commuting to work. Trip reduction strategies may include, but are
33 not limited to, ridesharing promotion, modified work schedules, preferential parking,
34 telecommuting, parking management, and van pools. The VCAPCD will continue to be
35 involved with the annual review of the Congestion Management Program and has state-
36 mandated responsibility regarding review of deficiency plans.
37

² The Ventura County General Plan defines discretionary development as “any development proposal, project or permit which requires the exercise of judgment, deliberation, or decision on the part of the decision-making authority in the process of approving or disapproving a particular activity, as distinguished from situations where the decision-making authority merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations.”

1 **Ventura County Air Quality Assessment Guidelines**

2 The Ventura County Air Quality Assessment Guidelines (VCAPD 2003) recommend specific criteria
3 and threshold levels for determining whether a proposed project may have a significant adverse air
4 quality impact. These guidelines also provide mitigation measures that may be useful for mitigating
5 the air quality impacts of proposed projects. Use of these guidelines is not required or mandated by
6 the VCAPCD. The final decision regarding whether to use these guidelines rests with the lead
7 agency responsible for approving the project. A discussion of applicable guidelines considered for
8 the analysis of the proposed project in Ventura County is provided in Section 4.3.3.1.
9

10 **City of Carpinteria Engineering Permit - Fugitive Dust Requirements**

11 The City of Carpinteria Public Works Department requires for any engineering permit that city
12 streets and public right-of-way will be kept clean and clear of construction materials and debris 24
13 hours a day, seven days a week. Dust control shall be implemented in accordance with the
14 SBCAPCD rules and regulations.
15

16 **City of Carpinteria Resolution No. 408 - Environmental Review Guidelines**

17 The purpose of Resolution No. 408, Environmental Review Guidelines is to provide the City of
18 Carpinteria, applicants, and the public with definitions, procedures, and forms to be used in the
19 implementation of the California Environmental Quality Act (CEQA; Public Resources Code Section
20 21000 and following) and to supplement the State CEQA Guidelines. For assessing impacts
21 associated with air quality, the City recommends the use of quantitative thresholds or numerical
22 values reflecting degrees of environmental change that are deemed insignificant by federal or state
23 standards, comprehensive plan elements, or scientific data. These thresholds are further discussed
24 in Section 4.3.3.1.
25

26 **4.3.3 Impact Analysis**

27
28 **4.3.3.1 Methodology and Significance Criteria**

29
30 **Methodology**

31 The applicant estimated expected emissions of criteria pollutants from construction and operation
32 of the proposed project based on the proposed list of equipment and vehicles; estimated
33 construction schedule and phasing; anticipated worker, vendor, and heavy duty vehicle use and
34 miles traveled; and projected ground disturbance using the California Emission Estimator Model
35 (CalEEMod). SBCAPCD and VCAPCD have not established significance thresholds for construction
36 emissions. The South Coast Air Quality Management District is an adjacent air district to the
37 proposed project with well-defined construction emission thresholds. Therefore, the CPUC has
38 opted to compare the estimated construction emissions to SCAQMD's significance threshold for
39 construction.
40

41 **Significance Criteria**

42 The significance criteria were defined based on the checklist items in Appendix G of the CEQA
43 Guidelines. An impact is considered significant if the project would:
44

- 45 a) Conflict with or obstruct implementation of the applicable air quality plan;

- 1 b) Violate any air quality standard or contribute substantially to an existing or projected air
- 2 quality violation;
- 3 c) Result in a cumulatively considerable net increase of any criteria pollutant for which the
- 4 project region is non-attainment under an applicable federal or state ambient air quality
- 5 standard (including releasing emissions which exceed quantitative thresholds for ozone
- 6 precursors);
- 7 d) Expose sensitive receptors to substantial pollutant concentrations; or
- 8 e) Create objectionable odors affecting a substantial number of people.
- 9

10 **Santa Barbara County Significance Criteria**

11 ***Short-term Construction Emissions***

12 Although quantitative thresholds of significance are not currently in place for short-term
13 emissions, the SBCAPCD requires the disclosure of potential short-term impacts, such as exhaust
14 emissions from construction equipment and fugitive dust generation during grading. In the interest
15 of public disclosure, the SBCAPCD recommends that construction-related NO_x, ROG, PM₁₀, and
16 PM_{2.5} emissions, from diesel- and gasoline-powered equipment, paving, and other activities, be
17 quantified.

18
19 The SBCAPCD requires implementation of standard dust control measures for any discretionary
20 project involving earth-moving activities. Because Santa Barbara County violates the state standard
21 for PM₁₀, dust mitigation measures are required for all discretionary construction activities
22 regardless of the significance of the fugitive dust impacts, based on the policies in the 2010 Clean
23 Air Plan (SBCAPCD 2011).

24
25 The SBCAPCD has not established short-term thresholds for emissions of NO_x and ROG from
26 construction equipment. According to the Santa Barbara County Environmental Thresholds and
27 Guidance Manual, these thresholds have not been established since construction emissions
28 comprise approximately six percent of the 1990 county-wide emission inventory for NO_x, which is
29 considered insignificant (County of Santa Barbara 2008). The 2008 Santa Barbara County Planning
30 Emission Inventory indicates that emissions from off-road equipment represent approximately five
31 percent of the total 2008 county-wide emission inventory for NO_x (SBCAPCD 2013).

32 33 ***Long-term Operational Emissions***

34 Long-term air quality impacts occur during project operation and include emissions from any
35 equipment or process used in a project and motor vehicle emissions associated with a project.
36 These emissions must be summed in order to determine the significance of a project's long-term
37 impact on air quality.

38
39 **Ozone Precursors (oxides of nitrogen and reactive organic compounds).** The proposed project
40 will not have a significant air quality effect on the environment, if operation of the project will:
41

- 1 • Emit (from all project sources,³ mobile and stationary), less than the daily trigger for offsets
2 in the APCD New Source Review Rule, for any pollutant; and
- 3 • Emit less than 25 pounds per day (lbs/day) of NO_x or reactive organic compounds (ROCs)
4 from motor vehicle trips only; and for offsets set in the APCD New Source Review Rule, for
5 any pollutant; and
- 6 • Not cause or contribute to a violation of any California or National Ambient Air Quality
7 Standard (except ozone); and
- 8 • Not exceed the APCD health risk public notification thresholds adopted by the SBAPCD
9 Board; and
- 10 • Be consistent with the adopted federal and state Air Quality Plans.

11
12 **Carbon Monoxide.** A project will have a significant air quality impact if it causes, by adding to the
13 existing background CO levels, a CO "hot spot" where the California 1-hour standard of 20 parts per
14 million of CO is exceeded. This typically occurs at severely congested intersections. Long-term
15 project emissions primarily stem from motor vehicles associated with the land use project and
16 stationary sources, which may require permits from the APCD.

17
18 **Project Screening for Carbon Monoxide Impacts:**

- 19
20 1) If a project contributes fewer than 800 peak hour trips, then CO modeling is not required.
- 21 2) Projects that will contribute more than 800 peak hour trips to an existing congested
22 intersection at Level of Service D or below, or will cause an intersection to reach Level of
23 Service D or below, may be required to model for CO impacts. However, projects that will
24 incorporate intersection modifications to ease traffic congestion are not required to
25 perform modeling to determine potential CO impacts.

26
27 **Ventura County Air Quality Significance Criteria**

28 VCAPCD recommends the following significance criteria for determining whether an
29 Environmental Impact Report or a Mitigated Negative Declaration should be prepared to address
30 potential adverse air quality impacts from a project, especially potential impacts on nearby
31 populations (e.g., schools, day care centers, residences, and hospitals). Relevant factors under
32 consideration include proximity of the project to populated areas; proximity of the proposed
33 project to other pollutant sources (e.g., industrial facilities emitting odorous or hazardous
34 substances); and projects with potential land use conflicts.

35
36 **Ozone (based on emission levels of reactive organic compounds and oxides of nitrogen).** The
37 following are the ROG and NO_x thresholds that the Ventura County Air Pollution Control Board has
38 determined will individually and cumulatively jeopardize attainment of the federal 1-hour ozone
39 standard, and thus have a significant adverse impact on air quality in Ventura County.

- 40
41 (a) Ojai Planning Area
42 ROGs: 5 lbs/day
43 NO_x: 5 lbs/day

³ Portable equipment registered under the CARB Statewide Portable Equipment Registration Program (PERP) shall not be included a proposed project's emission total. Emissions from these sources are in compliance with the CARB PERP program and are exempt from APCD permits.

- 1
2 (b) Remainder of Ventura County
3 ROGs: 25 lbs/day
4 NO_x: 25 lbs/day
5

6 Chapter 5 of the Ventura County Air Quality Assessment Guidelines ⁴ establish that construction-
7 related emissions (including portable engines and portable engine-driven equipment used for
8 construction or repair and maintenance activities) of ROG and NO_x are not counted to the
9 significance thresholds mentioned above, since these emissions are temporary (VCAPCD 2003).
10 However, the guidelines also state that construction-related emissions should be mitigated if
11 estimates of ROG and NO_x from heavy-duty construction equipment anticipated to be used for a
12 particular project exceed the VCAPCD significance criteria. Table 4.3-6 summarizes the VCAPCD
13 Construction Mitigation Measures.
14

15 **Ozone – Cumulative Impacts Based on Project-Specific AQMP Consistency.** Inconsistent
16 projects are usually those that cause the existing population to exceed the population forecasts
17 contained in the most recently adopted AQMP. A project with estimated emissions of 2 lbs/day or
18 greater of ROG or 2 lbs/day or greater of NO_x is considered to have a significant cumulative adverse
19 air quality impact if it is also found to be inconsistent with the AQMP.
20

21 **Fugitive Dust.** A project that may be reasonably expected to generate fugitive dust emissions in
22 such quantities as to cause injury, detriment, nuisance, or annoyance to any considerable number
23 of persons or to the public, or that may endanger the comfort, repose, health, or safety of any such
24 person or the public, or that may cause, or have a natural tendency to cause, injury or damage to
25 business or property will have a significant adverse air quality impact. In addition, the VCAPCD
26 considers that a project for which an appropriate air dispersion modeling analysis shows a possible
27 violation of an ambient particulate standard will also have a significant adverse air quality impact.
28 Table 4.3-6 summarizes the VCAPCD mitigation measures to reduce construction fugitive dust
29 emissions presented in the Ventura County Air Quality Assessment Guidelines.
30

31 **Toxic Air Contaminants.** Impacts from toxic air contaminants may be estimated by conducting a
32 health risk assessment (HRA). The HRA procedure involves the use of an air quality model and a
33 protocol approved by the APCD. The recommended significance thresholds are:
34

- 35 (a) Lifetime probability of contracting cancer is greater than 10 in one million (as identified in
36 an HRA).
37 (b) Ground-level concentrations of non-carcinogenic toxic air pollutants would result in a
38 Hazard Index of greater than 1 (as identified in an HRA).
39

40 **Odors.** A qualitative assessment indicating that a project may reasonably be expected to generate
41 odorous emissions in such quantities as to cause detriment, nuisance, or annoyance to any
42 considerable number of persons or to the public, or that may endanger the comfort, repose, health,
43 or safety of any such person or the public, or that may cause, or have a natural tendency to cause,

⁴ The Ventura County Air Quality Assessment Guidelines is an advisory document prepared by the District that provides lead agencies, consultants, and project applicants with a framework and uniform methods for preparing air quality impact assessments and the air quality section of environmental documents for projects that require discretionary entitlements. Pursuant to CEQA, the Guidelines recommend specific criteria and threshold levels for determining whether a proposed project may have a significant adverse air quality impact.

1 injury or damage to business or property (see California Health and Safety Code, Division 26,
2 §41700) will have a significant adverse air quality impact.
3

Table 4.3-6 Ventura County APCD Construction Mitigation Measures

Pollutant	VCAPCD Mitigation Measures
ROG and NO_x	<ol style="list-style-type: none"> 1. Minimize equipment idling time. 2. Maintain equipment engines in good condition and in proper tune as per manufacturers' specifications. 3. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time. 4. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible.
Fugitive Dust	<ol style="list-style-type: none"> 1. The area disturbed by clearing, grading, earth moving, or excavation shall be minimized to prevent excessive amounts of dust. 2. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities. 3. Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities: <ol style="list-style-type: none"> a) All trucks shall be required to cover their loads as required by California Vehicle Code § 23114. b) All graded and excavated material, exposed soil areas, and active portions of the construction site, included unpaved on-site roadways, shall be treated to prevent fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally-safe soil stabilization materials, and/or roll compaction, as appropriate. Watering shall be done as often as necessary and reclaimed water shall be used whenever possible. 4. Graded and/or excavated inactive areas of construction site shall be monitored at least weekly for dust stabilization. Soil stabilization methods, such as water and roll-compaction, and environmentally-safe dust control materials, shall be periodically applied to portions of the construction site that are inactive for over four days. If no further grading or excavation are planned for the area, the area should be seeded and watered until grass growth is evident, or periodically treated with environmentally-safe dust suppressants, to prevent excessive fugitive dust. 5. Signs shall be posted on-site limiting traffic to 15 miles per hour or less. 6. During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact adjacent properties), all clearing, grading, earthmoving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by on-site activities and operations from being a nuisance or hazard, either off-site or on-site. The site superintendent/supervisor shall use his/her discretion in conjunction with the APCD in determining when winds are excessive. 7. Adjacent streets and roads shall be swept at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads. 8. Personnel involved in grading operations, including contractors and subcontractors, should be advised to wear respiratory protection in accordance with California Division of Occupational Safety and Health regulations.

Source: VCAPCD 2003

4

South Coast Air Quality Management District Construction Significance Criteria

Considering that the proposed project components would be constructed within both SBCAPCD and VCAPCD limits, and in the absence of quantitative thresholds of significance for short-term construction emissions in these jurisdictions, the CPUC has opted to use the South Coast Air Quality Management District (SCAQMD) Air Quality Significance Thresholds for Construction for the purpose of this EIR analysis. Table 4.3-7 shows the threshold of significance for each criteria pollutant.

Table 4.3-7 SCAQMD Air Quality Thresholds of Significance for Construction

Pollutant	Construction Threshold
NO _x	100 lbs/day
VOC	75 lbs/day
PM ₁₀	150 lbs/day
PM _{2.5}	55 lbs/day
SO _x	150 lbs/day
CO	550 lbs/day
Lead	3 lbs/day

Source: SCAQMD 2014

Key:

lbs/day = pounds per day

CO carbon monoxide

NO_x oxides of nitrogen

PM₁₀ particulate matter less than or equal to 10 micrometers in diameter

PM_{2.5} particulate matter less than or equal to 2.5 micrometers in diameter

SO_x sulfur dioxide

VOC volatile organic compound

4.3.3.2 Applicant Proposed Measures

As part of the proposed project design, the applicant would control fugitive dust emissions by implementing control measures set forth by VCAPCD Rule 55 and SBCAPCD Rule 345.

Additionally, the applicant has committed to the following applicant proposed measures (APMs) as part of the design of the proposed project:

APM AQ-1: The following control measures stated in the VCAPCD Ventura County Air Quality Assessment Guidelines to minimize the generation of fugitive dust (PM₁₀ and PM_{2.5}) would be implemented during construction of the proposed project, as feasible:

- The area disturbed by clearing, grading, earth-moving, or excavation operations shall be minimized to prevent excessive amounts of dust.
- Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water (preferably reclaimed, if available) should penetrate sufficiently to minimize fugitive dust during grading activities.
- Fugitive dust produced during grading, excavation, and construction activities shall be controlled by the following activities:
 - a) All trucks shall be required to cover their loads as required by California Vehicle Code §23114.

1 b) All graded and excavated material, exposed soil areas, and active portions of the
2 construction site, including unpaved on-site roadways, shall be treated to prevent
3 fugitive dust. Treatment shall include, but not necessarily be limited to, periodic
4 watering, application of environmentally safe soil stabilization materials, and/or roll-
5 compaction as appropriate. Watering shall be done as often as necessary, and reclaimed
6 water shall be used whenever possible.

- 7 • Graded and/or excavated inactive areas of the construction site shall be monitored by the
8 applicant at least weekly for dust stabilization. Soil stabilization methods, such as water
9 and roll-compaction, and environmentally safe dust control materials, shall be periodically
10 applied to portions of the construction site that are inactive for more than four days. If no
11 further grading or excavation operations are planned for the area, the area should be
12 seeded and watered until grass growth is evident, or periodically treated with
13 environmentally safe dust suppressants, to prevent excessive fugitive dust.
- 14 • Signs shall be posted on site limiting traffic to 15 miles per hour or less.
- 15 • During periods of high winds (i.e., wind speed sufficient to cause fugitive dust to impact
16 adjacent properties), all clearing, grading, earth-moving, and excavation operations shall be
17 curtailed to the degree necessary to prevent fugitive dust created by on-site activities and
18 operations from being a nuisance or hazard, either off site or on site. The site
19 superintendent/supervisor shall use his/her discretion in conjunction with the APCD to
20 determine when winds are excessive.
- 21 • Adjacent streets and roads shall be swept at least once per day, preferably at the end of the
22 day, if visible soil material is carried over to adjacent streets and roads.
- 23 • Personnel involved in grading operations, including contractors and subcontractors, should
24 be advised to wear respiratory protection in accordance with California Division of
25 Occupational Safety and Health regulations.

26
27 **APM AQ-2:** The following control measures stated in the VCAPCD Ventura County Air Quality
28 Assessment Guidelines would be implemented during construction of the Project as feasible:
29

- 30 • Minimize equipment idling time.
- 31 • Maintain equipment engines in good condition and in proper tune as per manufacturers'
32 specifications.
- 33 • Lengthen the construction period during smog season (May through October), to minimize
34 the number of vehicles and equipment operating at the same time.
- 35 • Use alternatively fueled construction equipment, such as compressed natural gas, liquefied
36 natural gas, or electric, if feasible.

37 38 **4.3.3.3 Environmental Impacts**

39 40 **Overview of Construction Impacts**

41 Construction activities include surveying, roads and landing work, grading, civil work, electrical
42 work, and restoration work. Construction work associated with the proposed 66-kV
43 subtransmission and telecommunication lines would occur at different locations throughout the
44 length of the proposed linear routes (Segments 1, 2, 3A, 3B, and 4). Thus, construction equipment
45 would be used throughout a relatively large geographical area (approximately 32 miles). In

1 addition, short-term construction activities would also occur at the Santa Clara, Casitas, and
2 Carpinteria Substations. The applicant estimates that construction of the proposed project would
3 take approximately 24 months.

4
5 Criteria air pollutants would be emitted from the engine exhaust of diesel- and gasoline-fueled on-
6 site construction equipment and on-road vehicles (i.e., delivery trucks and crew vehicles). On-site
7 earth-moving activities (e.g., trenching) and vehicle travel on access roads would also generate
8 fugitive dust. Heavy-duty diesel- and gasoline-powered equipment and vehicles at the work sites
9 would include loaders, graders, backhoes, cranes, and trucks. Worker vehicles would include those
10 used by the construction crews to commute to and from proposed project work and staging areas.

11
12 Estimates of maximum daily criteria air pollutant emissions that would result from project
13 construction are summarized in Table 4.3-8. Estimated maximum daily emissions are intended to
14 represent peak values based on the combination of overlapping construction activities that yield
15 the highest emissions. The project estimated daily construction emissions are based on
16 conservative assumptions about daily equipment and vehicle use and overlapping construction
17 activities. Air pollutant emissions in year 2015 would be higher than year 2016, as all roadwork,
18 retaining wall installation, and the majority of the 66-kV subtransmission line construction would
19 occur during this year. Construction crews would be working in parallel, which results in higher
20 maximum daily emissions. Additionally, Table 4.3-9 presents total annual emissions estimated for
21 years 2015 and 2016. Detailed calculations and assumptions for all construction activities and
22 operational sources are presented in Appendix C.

23
Table 4.3-8 Estimated Maximum Daily Construction Emissions

Year	Project Component ¹	Daily Emissions (lbs/day) ²			
		ROG	NO _x	PM ₁₀	PM _{2.5}
2015	66-kV Subtransmission Lines	94.25	849.94	275.30	59.18
	Substation work	3.93	44.25	25.13	4.22
	2015 Daily Emissions	98.18	894.19	300.44	63.40
2016	66-kV Subtransmission Lines	3.75	41.56	22.32	3.74
	Substation work	0.44	4.40	4.63	0.63
	2016 Daily Emissions	4.18	45.96	26.95	4.37

Source: SCE 2014

Note:

¹ Additional activities proposed for constructing the 66-kV subtransmission lines in 2014 include retaining wall installation (30 units), removal of structures at discrete locations in Segment 4, as well as the installation of J-towers instead of TSPs at four selected locations along Segment 4.

² Correspond to CalEEMod outputs based on applicant's proposed equipment, phasing and mitigation measures (APM AQ-1 and APM AQ-2).

Key:
 kV kilovolts
 NO_x oxides of nitrogen
 ROG reactive organic gases
 PM₁₀ particulate matter less than or equal to 10 micrometers in diameter
 PM_{2.5} particulate matter less than or equal to 2.5 micrometers in diameter
 CalEEMod California Emission Estimator Model

Table 4.3-9 Summary of Annual Construction Emissions

Year	Annual Emissions (tons/year) ²			
	ROG	NO _x	PM ₁₀	PM _{2.5}
2015	3.29 3.23	37.52 37.24	16.38 54.82	2.9 6.81
2016	0.47	5.37	2.08 6.91	0.39 0.88

Source: SCE 2014

Note:

¹ Additional activities proposed for constructing the 66-kV subtransmission lines in 2014 include retaining wall installation (30 units), removal of structures at discrete locations in Segment 4, as well as the installation of J-towers instead of TSPs at four selected locations along Segment 4.

² CalEEMod outputs based on the applicant's proposed equipment, vehicle use and miles traveled, phasing, and implementation of APM AQ-1 and APM AQ-2.

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Overview of Operational Impacts

Criteria air pollutants would be generated during operation the proposed project. The applicant would inspect the proposed 66-kV subtransmission lines at least once per year by driving and/or flying the line routes. Similarly, the telecommunications components would require routine maintenance once per year. Combustion exhaust emissions would be generated from vehicles used during routine inspection and maintenance activities. Routine substation maintenance would include equipment testing, equipment monitoring, and repair. Operations at Santa Clara, Casitas, and Carpinteria Substations would not require personnel in addition to the applicant's existing staff in the region, and no permanent vehicles would be stationed at each of these locations.

Criteria air pollutants emissions from vehicles that would be used during operation of the proposed project were estimated based on the expected vehicle miles traveled by routine maintenance personnel and corresponding emission factors derived by CalEEMod. A summary of estimated maximum daily operational emissions of criteria air pollutants is presented in Table 4.3-10. Detailed calculations and assumptions for all operational sources are presented in Appendix C.

Table 4.3-10 Summary of Operational Emissions

Estimated Annual Emissions (lbs/day) ¹					
ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
0.01	0.02	<0.01	<0.01	0.72	0.07

Source: SCE 2012

Notes:

¹ CalEEMod outputs based on applicant assumptions about vehicle use and miles traveled during routine operation and maintenances.

Key:

CalEEMod California Emission Estimator Model

CO carbon monoxide

lbs pounds

NO_x oxides of nitrogen

PM₁₀ particulate matter less than or equal to 10 micrometers in diameter

PM_{2.5} particulate matter less than or equal to 2.5 micrometers in diameter

ROG reactive organic gases

SO₂ sulfur dioxide

19

1 **Impact Assessment**

2 **Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan.**
3 LESS THAN SIGNIFICANT

4
5 The proposed project’s air pollutant emissions would primarily occur during the construction
6 phase, with an overall duration of 24 months. Major sources of emission during construction would
7 be off-road diesel-fired construction equipment and vehicles, which would emit air pollutants in a
8 transient pattern along each of the proposed 66-kV subtransmission line segments. The proposed
9 project’s construction and operation would not involve the use of stationary sources.

10
11 Consistency with the applicable air quality plan generally relies on a comparison of the project’s
12 stationary and mobile emissions with the regional air quality plan inventories, as well as a
13 comparison of project-based and countywide population growth projections. In Ventura County,
14 inconsistent projects are those that cause the existing population to exceed the population
15 forecasts contained in the most recently adopted air quality plan. The proposed project would not
16 induce population growth; therefore, inconsistency or conflict with the implementation of the
17 Ventura County AQMP is not applicable. Moreover, SBCAPCD and VCAPCD have prepared air
18 quality plans that establish air quality emissions inventories and controls for ozone precursors
19 (NO_x and ROG) sources in the proposed project area. As shown in Table 4.3-11, the proposed
20 project’s construction emissions in year 2015 would represent approximately two percent of the
21 regional emissions inventories for NO_x and less than 0.2 percent for ROG. In 2016, construction
22 emissions would represent less than 0.1 percent for ROG and NO_x of each county’s emissions
23 inventory. Operational emissions would be an even smaller fraction, considering that the estimated
24 vehicle use would generate less than 1 percent of construction emissions. In addition, the applicant
25 would comply with all applicable APCD regulations that result from implementation of the air
26 quality plans. Therefore, the proposed project would not conflict with or obstruct implementation
27 of the applicable air quality plans and would result in a less than significant impact under this
28 criterion.
29

Table 4.3-11 Comparison of Project Maximum Emissions with Countywide Inventories in Air Quality Plans

Project Construction Emissions vs. Plan Inventory Data	ROG	NO_x
2015 Maximum Daily Emissions (Summer)	0.05 tons/day	0.45 tons/day
2016 Maximum Daily Emissions (Summer)	0.002 tons/day	0.02 tons/day
Ventura County 2012 Planning Emissions Inventory	48.65 tons/day	39.75 tons/day
Percentage of Ventura County 2012 Planning Emissions Inventory represented by the project’s 2015 Maximum Daily Emissions (Summer)	0.10 %	1.13 %
Percentage of Ventura County 2012 Planning Emissions Inventory represented by the project’s 2016 Maximum Daily Emissions (Summer)	<0.01%	0.05 %
Santa Barbara County 2020 Planning Emissions Inventory	30.97 tons/day	23.46 tons/day
Percentage of Santa Barbara County 2020 Planning Emissions Inventory represented by the project’s 2015 Maximum Daily Emissions (Summer)	0.16 %	1.9 %
Percentage of Santa Barbara County 2020 Planning Emissions Inventory represented by the project’s 2016 Maximum Daily Emissions (Summer)	0.01 %	0.08 %

Table 4.3-11 Comparison of Project Maximum Emissions with Countywide Inventories in Air Quality Plans

Project Construction Emissions vs. Plan Inventory Data	ROG	NO _x
--	-----	-----------------

Source: SCE 2014; SBCAPCD 2011a; VCAPCD 2008

Key:

NO_x oxides of nitrogen

ROG reactive organic gases

Impact AQ-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
SIGNIFICANT

As shown in Table 4.3-4, the South Central Coast Air Basin (where the proposed project would be constructed) reported more than 20 days exceeding the national and state ozone 8-hour standard, as well as the state PM₁₀ 24-hour standard in the year 2012. The VCAPCD and SBCAPCD have adopted air quality management plans and regulations to control ozone and PM₁₀ emissions within their jurisdictions.

Criteria air pollutants would be emitted from the engine exhaust of diesel- and gasoline-fueled on-site construction equipment and on-road vehicles (i.e., delivery trucks and crew vehicles). On-site earth-moving activities (e.g., trenching) and vehicle travel on access roads would also generate fugitive dust. Heavy-duty diesel- and gasoline-powered equipment and vehicles at the work sites would include loaders, graders, backhoes, cranes, and trucks. Worker vehicles would include those used by the construction crews to commute to and from proposed project work and staging areas.

As discussed in Section 4.3.3.1, SBCAPCD and VCAPCD have not established quantitative thresholds of significance for short-term construction emissions within their jurisdictions. Therefore, the CPUC has opted to use SCAQMD Air Quality Significance Thresholds for Construction for the purpose of this EIR analysis. Estimates of maximum daily criteria air pollutant emissions that would result from project construction and the SCAQMD construction thresholds are summarized in Table 4.3-12.

Table 4.3-12 Summary of Estimated Maximum Daily Construction Emissions and SCAQMD Construction Thresholds¹

	Daily Emissions (lbs/day) ²			
	ROG	NO _x	PM ₁₀	PM _{2.5}
2015 Daily Emissions	98.18	894.19	300.44	63.40
SCAQMD Threshold	75	100	150	55
Threshold Exceeded in 2015?	Yes	Yes	Yes	Yes
2016 Daily Emissions	4.18	45.96	26.95	4.37
SCAQMD Threshold	75	100	150	55
Threshold Exceeded in 2015-2016?	No	No	No	No

Table 4.3-12 Summary of Estimated Maximum Daily Construction Emissions and SCAQMD Construction Thresholds¹

	Daily Emissions (lbs/day) ²			
	ROG	NO _x	PM ₁₀	PM _{2.5}

Source: SCE 2014

Notes:

1. SBCAPCB and VCAPCD have not established quantitative thresholds of significance for short-term construction emissions within their jurisdictions. Therefore, the CPUC has selected to use SCAQMD Air Quality Significance Thresholds for Construction for the purpose of this EIR analysis.
2. SO_x and CO emissions from the proposed project are below 0.001 lbs/day and would not exceed any applicable threshold, therefore are not included in this table.
- 3.

Key: PM₁₀ particulate matter less than or equal to 10 micrometers in diameter
 NO_x oxides of nitrogen
 ROG reactive organic gases PM_{2.5} particulate matter less than or equal to 2.5 micrometers in diameter

1 The result of the pollutant criteria analysis indicates that ROG, NO_x, PM₁₀ and PM_{2.5} emissions
 2 during the first year of construction (2015) would exceed the applicable thresholds and would be
 3 significant. The maximum daily construction emissions assume the incorporation of APM AQ-1 and
 4 APM AQ-2. There are no additional mitigation measures that would reduce PM₁₀ and PM_{2.5}
 5 emissions. Therefore, PM₁₀ and PM_{2.5} emissions from the first year of construction would be
 6 significant.
 7

8
 9 The ROG and NO_x emissions during the first year of construction can be reduced through the use of
 10 low emission engines for off-road diesel vehicles and equipment. The EPA and California Air
 11 Resource Board rate engines based on their ability to meet emission regulations using five tiers
 12 (i.e., Tier 0, Tier 1, Tier 2, Tier 3, and Tier 4). Tier 0 represents engines built prior to the regulation
 13 that can meet the basic emission regulations and Tier 4 represents engines that can meet the
 14 current highest and strictest emission regulations. MM AQ-1 would require the applicant to use
 15 Tier 3 and Tier 4 off-road diesel vehicles and equipment during the first calendar year of
 16 construction to the greatest extent feasible to reduce ROG and NO_x emissions. Available off-road
 17 engine emission rates data from SCAQMD indicate that replacement of Tier 1 engines to Tier 3
 18 would reduce NO_x emissions up to 59 percent and ROG emissions up to 85 percent, depending on
 19 the engine size. Replacement of Tier 1 for Tier 4 engines would reduce NO_x emissions up to 96
 20 percent and up to 86 percent for ROG. Table 4.3-13 shows the estimated emissions with the
 21 implementation of MM AQ-1 to the maximum extent based on the assumption that the unmitigated
 22 equipment fleet used for the Project would be 100 percent (i.e., 100 percent of the vehicle and
 23 equipment used for the project are rated Tier 4).
 24

Table 4.3-13 Estimated Construction Emission with Implementation of MM AQ-1¹

	ROG	NO _x
2015 Daily Emissions with MM AQ-1 Implemented ¹	13.75	35.77
SCAQMD Threshold	75	100

Note:

¹ Implementation of MM AQ-1 to the greatest extent feasible (i.e., 100 percent of the vehicle and equipment used for the project are rated Tier 4). Note that because the actual mix of equipment used by SCE is not likely to be all Tier 1 equipment, actual emissions may be somewhat greater than those set forth in this table even with mitigation. For this reason and others, as discussed below, impacts are deemed significant and unavoidable even with the implementation of MM AQ-1.

1 While implementation of MM AQ-1 to the maximum extent would reduce ROG and NO_x emissions
2 ~~to less than significant levels~~, the availability of the variety of vehicles and equipment required for
3 construction equipped with Tier 3 and Tier 4 engines is unknown. Furthermore, the unmitigated
4 equipment fleet would be likely to include, and was calculated in Appendix C as, a mixture of Tier
5 ratings as opposed to 100 percent Tier 1. As a result, it cannot be assumed that implementation of
6 MM AQ-1 would reduce ROG and NO_x emissions to below SCAQMD construction thresholds.
7 Therefore, ROG and NO_x emissions from the first year of construction would be significant with the
8 implementation of mitigation.

9
10 As shown in Table 4.3-12, construction emissions from the second year of construction would not
11 exceed any of SCAQMD construction thresholds and would be less than significant.

12
13 Operation and maintenance activities associated with the project would be similar to those
14 associated with the existing 66-kV subtransmission and substations. Emissions resulting from
15 operation and maintenance activities are shown in Table 4.3-9 and are well below VCAPCD and
16 SBCAPCD operational thresholds of significance. Therefore operation of the proposed project
17 would have a less than significant impact on air quality standards.

18
19 **Impact AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for**
20 **which the project region is in non-attainment under an applicable federal or state ambient air**
21 **quality standard.**

22 SIGNIFICANT

23
24 The proposed project is located in Ventura County, which is designated as nonattainment for NO_x,
25 ROG, PM_{2.5}, and PM₁₀ with respect to NAAQS and CAAQS, and in Santa Barbara County, which is
26 designated as nonattainment for NO_x, ROG, and PM₁₀ with respect to CAAQS only (Table 4.3-3).

27
28 The SBCAPCD defines that “cumulative air quality impacts are the effect of long-term emissions of
29 the proposed project on the projected regional air quality or localized air pollution problems in the
30 County” (SBAPCD 2008). Due to Santa Barbara County’s non-attainment status for NO_x, ROG and
31 PM₁₀, the project’s impacts would be cumulatively considerable. Implementation of MM AQ-1
32 would require the applicant to use low emission engines to the greatest extent feasible. However,
33 MM AQ-1 would not reduce the project’s NO_x, ROG, and PM₁₀ emissions to less than significant.
34 Therefore, the proposed project would result in a cumulatively considerable net increase in NO_x,
35 ROG, and PM₁₀ emissions within SBCAPCD that is significant.

36
37 Ventura County Air Quality Assessment Guidelines identifies projects with emissions of two pounds per
38 day or greater of ROG or NO_x and that are inconsistent with the AQMP will have a significant
39 cumulative adverse air quality impact. As discussed under Impact AQ-1, the proposed project is
40 consistent with the VCAQMP. Therefore the proposed project would not contribute to a cumulative
41 impact in Ventura County.

42
43 Operation and maintenance activities associated with the project would be similar to those
44 associated with the existing 66-kV subtransmission and substations. Emissions resulting from
45 operation and maintenance activities are shown in Table 4.3-9 and are well below VCAPCD and
46 SBCAPCD operational thresholds of significance. Therefore operation of the proposed project
47 would have a less than significant impact on cumulative emission of criteria pollutant.

48
49 **Impact AQ-4: Expose sensitive receptors to substantial pollutant concentrations.**

50 LESS THAN SIGNIFICANT

1
2 Sensitive receptors include schools, hospitals, residences, and other sensitive land uses. Land use
3 conflicts can arise when sensitive receptors are located next to major sources of air pollutant
4 emissions. As discussed in Section 4.11, “Noise and Vibration,” the predominant types of receptors
5 located within 1 mile of the proposed project components include single-family residences,
6 schools, places of worship, and recreational users of the Los Padres National Forest (Highway 33
7 Corridor). Sensitive receptors located in the proximity of work areas could be exposed to criteria
8 air pollutants and *diesel particulate matter*—a toxic air contaminant produced by diesel-fueled
9 vehicles and equipment that is also classified as a subset of PM₁₀ and PM_{2.5} emissions.

10
11 The applicant is required to comply with applicable VCAPCD and SBCAPCD regulations and has
12 incorporated APM AQ-1 and APM AQ-2, which incorporate VCAPCD and SBCAPCD standards to
13 reduce project-related construction emissions to the greatest extent practicable.

14 In addition, implementation of MM AQ-1 would further reduce emissions. Construction activities
15 would be transient, occurring for limited durations at locations along the length of the proposed
16 66-kV subtransmission segments and overhead telecommunication routes. Therefore, it is not
17 anticipated that the proposed project would result in the exposure of sensitive receptors to
18 substantial concentrations of toxic air contaminants during construction, and construction impacts
19 under this criterion would be less than significant.

20
21 During operations, inspection and maintenance activities would require the use of a few vehicles
22 for short time periods, similar to existing activities. Further, it is anticipated that some vehicles
23 would not be fueled by diesel, and vehicles would be dispersed throughout a wide geographic area.
24 Therefore, impacts during operations would be less than significant.

25
26 **Impact AQ-5: Create objectionable odors affecting a substantial number of people.**
27 **LESS THAN SIGNIFICANT**

28
29 Exhaust from construction vehicles and equipment may temporarily create odors due to the
30 combustion of fuel that may be noticeable to people who work, reside, or participate in recreation
31 activities near proposed construction sites. Odors generated by diesel exhaust would be reduced by
32 the use of ultra-low-sulfur diesel and gasoline, in compliance with 13 California Code of
33 Regulations 2262 and 2281. Paving activities during road work would also generate odors from hot
34 asphalt sources. However, heavy-duty equipment and vehicles—major potential source of
35 objectionable odors—would not be operated in the proximity of a substantial number of people, as
36 the majority of residences, schools, and other sensitive land uses are located along the proposed
37 66-kV subtransmission lines and not along the more remote Segment 4 access roads.

38 Two residences and a school would be located within 300 feet of the proposed work at the
39 Carpinteria Substation, while most of the receptors located in the vicinity of the proposed project
40 components are over 500 feet from the proposed work areas. The potential exposure of closest
41 sensitive receptors to diesel combustion odors would be temporary during construction activities
42 at the Carpinteria Substation. No other substances used or activities involved with the project are
43 expected to produce objectionable odors. Therefore, impacts under this criterion would be less
44 than significant during construction.

45
46 During operations, equipment used at the proposed project’s substations would not create
47 objectionable odors. Inspection and maintenance of the proposed substations and along the
48 proposed 66-kV subtransmission and telecommunications line routes would require only a few
49 vehicles for relatively short time periods and would be similar to existing operations. It is not
50 anticipated that objectionable odors would be generated in amounts that would affect a substantial

1 number of people. Therefore, it is not anticipated that the proposed project would create
2 objectionable odors affecting a substantial number of people during operations, and impacts under
3 this criterion would be less than significant.
4

5 **4.3.4 Mitigation Measures**

6
7 **MM AQ-1: Tier 3 and 4 Off-Road Emissions Standards.** Off-road diesel-powered construction
8 equipment greater than 75 horsepower used during 66-kV subtransmission line or access road
9 construction will meet Tier 3 and Tier 4 off-road emissions standards to the greatest extent
10 feasible during any calendar year in which ROG and NO_x construction emissions are anticipated to
11 exceed SCAQMD Air Quality Significance Thresholds for Construction. During these years, the
12 applicant will provide the CPUC with annual reports detailing the percentage of off-road diesel-
13 powered construction equipment greater than 75 horsepower used for the proposed project that
14 meet the Tier 3 or Tier 4 classification. The report will also include justification—supported by
15 letters from local rental equipment retailers, documentation from contractors, or other evidence—
16 for any deficiencies in Tier 3 and Tier 4 engine usage where construction activities continue to
17 exceed SCAQMD thresholds.
18