

CHAPTER IV. B

Air Quality

1 **1. Environmental Setting**

2 The following information is provided in accordance with CEQA Guidelines Section
3 15125. By describing existing regulations already applicable to the project, the
4 information presented in this section helps focus the “Discussion of Significant Effects”
5 on those environmental aspects of the project which are not resolved by existing
6 regulations.

7 **a. Study Area for Direct Impacts**

8 The study area for project specific air quality impacts is defined by the vicinity in which
9 emissions would be generated from related vehicular trips and stationary sources. As
10 defined in the Santa Barbara County Clean Air Plan (CAP) (Santa Barbara County APCD
11 2007), the study area for direct impacts is considered the boundaries of Santa Barbara
12 County (personal communication, Vijaya Jammalamadaka, 2008).

13 **b. Study Area for Cumulative Impacts**

14 The study area for analysis of the proposed project’s cumulative impacts on air quality is
15 identical to the project-specific impact area. The CAP accounts for buildout of cities and
16 unincorporated area general plans within Santa Barbara County. Therefore, cumulative
17 impacts on air quality are based on emission sources throughout the County of Santa
18 Barbara. (personal communication, Vijaya Jammalamadaka, 2008).

19 **c. Existing Physical Conditions in the Study Area**

20 *i. Regional Climate*

21 The project site is located within the South Central Coast Air Basin (Basin), which
22 includes all of San Luis Obispo, Santa Barbara, and Ventura Counties. The climate of the
23 Basin is strongly influenced by its proximity to the Pacific Ocean and the location of the
24 semi-permanent high-pressure cell in the north eastern Pacific. With a
25 Mediterranean-type climate, the project area is characterized by warm, dry and cool
26 winters with occasional rainy periods.

27 Cool, humid marine air causes frequent fog and low clouds along the coast, generally
28 during the night and morning hours in the late spring and early summer months. The
29 project area is subject to a diurnal cycle in which daily onshore winds from the west and
30 northwest are replaced by mild offshore breezes flowing from warm inland valleys
31 during night and early morning hours. This alternating cycle can create a situation
32 where suspended pollutants are swept offshore at night, and then carried back onshore
33 the following day. Dispersion of pollutants is further degraded when the wind velocity
34 for both day and nighttime breezes is low.

35 The region is also subject to seasonal “Santa Ana” winds. These are typically hot, dry
36 northerly winds which blow offshore at 15 to 20 miles per hour (mph), but can reach
37 speeds of over 60 mph. A condition similar to the “Santa Ana” known as a

1 “sundowner” can also occur along the coastal area of Santa Barbara County below the
2 Santa Ynez Mountains.

3 Temperature inversions, in which warm air overlies cooler air, can limit the dispersal of
4 air pollutants within the regional airshed or Basin. In an inversion condition, a warm
5 upper layer of air forms a cap over the marine layer and inhibits the air pollutants
6 generated near the ground from dispersing upward. Two types of inversions typically
7 occur in the region. A subsidence inversion is a regional effect created by the dominant
8 Pacific high-pressure area. It occurs when air warms up as it is compressed when it
9 flows from high-pressure areas over the ocean to lower-pressure areas inland. This type
10 of inversion is most common in summer, although it can occur throughout the year.
11 Surface inversions are created when air near the ground cools more rapidly during the
12 night, and are common in winter. They are often accompanied by stable air conditions
13 with low wind speeds and uniform temperatures, which reduce the rate of pollutant
14 dispersion.

15 *ii. Regulatory Setting*

16 *Federal*

17 The Federal Clean Air Act (CAA) and its subsequent amendments form the basis for the
18 national air pollution control effort. The CAA established the National Ambient Air
19 Quality Standards (NAAQS) for “criteria pollutants” and delegated the regulation of air
20 pollution control to the states. The criteria pollutants are ozone (O₃), carbon monoxide
21 (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter less than 10
22 microns in diameter (PM₁₀), particulate matter less than 2.5 microns in diameter (PM_{2.5}),
23 and lead (Pb).

24 Ozone (O₃) is a secondary pollutant formed in the atmosphere by photochemical
25 reactions of previously emitted pollutants, or precursors. These precursors are mainly
26 oxides of nitrogen (NO_x) and volatile organic compounds (VOC) (also known as
27 reactive organic compounds or gases [ROC or ROG], and referenced as ROC throughout
28 this document). The maximum effects of precursor emissions on O₃ concentrations
29 usually occur several hours after they are emitted and many miles from the source.
30 Ozone concentrations are highest during the warmer months and coincide with the
31 seasons of maximum solar radiation.

32 Inert pollutant concentrations (generally, pollutants other than O₃ and its precursors) tend to
33 be the greatest during the winter and are a product of light wind conditions and surface-
34 based temperature inversions. Maximum inert pollutant concentrations are usually found
35 near an emission source. For example, the main sources of CO emissions are motor vehicles
36 and the highest ambient CO concentrations are found near congested transportation arteries
37 and intersections.

38 In states where the NAAQS were exceeded, the CAA required preparation of a State
39 Implementation Plan (SIP), which detailed how states would meet the standards within
40 specified time frames.

1 State

2 The CAA delegated to each state the authority to establish air quality rules and
 3 regulations. The adopted rules and regulations must be at least as restrictive as the
 4 federal requirements. In California, the California Air Resources Board (CARB) is
 5 designated as the responsible agency for all air quality regulations. The CARB has
 6 established the California Ambient Air Quality standards (CAAQS), which are more
 7 restrictive than the NAAQS. The NAAQS and CAAQS are presented in Table IVB-1.

Table IVB-1 California and National Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^{a,c}	NATIONAL STANDARDS ^b	
			Primary ^{b,d}	Secondary ^{c,e}
Ozone (O ₃)	1-hour	0.09 ppm (180 µg/m ³)		
	8-hour	0.07 ppm (137 µg/m ³)	0.08 ppm (157 µg/m ³)	Same as primary
Carbon monoxide (CO)	8-hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	–
	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	–
Nitrogen dioxide (NO ₂)	Annual ^f	–	0.053 ppm (100 µg/m ³)	Same as primary
	1-hour	0.25 ppm (470 µg/m ³)	–	–
Sulfur dioxide (SO ₂)	Annual ^f	–	80 µg/m ³ (0.030 ppm)	–
	24-hour	0.04 ppm (105 µg/m ³)	365 µg/m ³ (0.14 ppm)	–
	3-hour	–	–	1,300 µg/m ³ (0.5 ppm)
Respirable Particulate Matter (PM ₁₀)	24-hour ^f	50 µg/m ³	150 µg/m ³	Same as primary
Fine Particulate Matter (PM _{2.5})	Annual	12 µg/m ³	15 µg/m ³	Same as primary
	24-hour ^f	–	35 µg/m ³	Same as primary

Notes:

a. California standards for O₃, CO, SO₂ (1 and 24 hour), NO₂, PM₁₀, PM_{2.5}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded.

b. National standards (other than O₃, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The O₃ standard is attained when the fourth highest eight hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24 hour standard is attained when 98 percent of the concentrations, averaged over three years, are equal to or less than the standard.

c. Concentration expressed first in units in which it was promulgated. Equivalent units given in parenthesis are based on a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibars). All 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.

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

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

f. Measured as an arithmetic mean.

Source: California Air Resources Board (2007)

1 The California Clean Air Act of 1988, as amended in 1992 (CCAA), Health & Safety Code
2 40918-40920, outlined a program to attain the CAAQS for O₃, NO₂, SO₂, and CO by the
3 earliest practical date. However, areas in nonattainment for PM₁₀ were not specifically
4 required to develop an attainment plan under the CCAA.

5 *Local*

6 The CARB in turn delegates responsibility for implementing the CCAA to the local and
7 regional air quality management districts. The SBCO APCD has the authority to
8 regulate stationary sources of air pollution in Santa Barbara County. The *APCD Rules*
9 *and Regulations* establish emission limitations and control requirements for various
10 sources, based upon their source type and magnitude of emissions. The *Santa Barbara*
11 *County Air Pollution Control District (APCD) Rule 303 Nuisance* is a specific SBCO APCD
12 rule that could apply to fugitive dust emitted during proposed construction activities.
13 This rule states that a person shall not discharge air contaminants from any source that
14 can cause injury, detriment, nuisance, or annoyance to any considerable number of
15 persons or that can endanger the comfort, repose, health, or safety of any such persons
16 or their business or property. The SBCO APCD considers emissions of air pollution to
17 be a significant nuisance if five or more complaints are received from different
18 individuals/households within 24 hours, or 10 such complaints are received within 10
19 days.

20 Prior to 1999, the County exceeded the national 1-hour O₃ standard and in response to
21 CAA requirements, the APCD prepared plans designed to bring the County into
22 attainment of this standard. When the County adopted this standard in 1999, the APCD
23 submitted a plan (maintenance plan) to the CARB in November 2001 that demonstrated
24 how the County would maintain national 1-hour O₃ standard through the year 2015.
25 This *2001 Clean Air Plan (2001 CAP)* was approved by both the USEPA and the CARB
26 (SBCAPCD and Santa Barbara County Association of Governments [SBCAG] 2002). As
27 part of the approval, EPA re-designated the County as in attainment for the national 1-
28 hour and 8-hour O₃ standards in 2003. The *2001 CAP* also included a schedule to revise
29 the Plan in three years, as required by the CCAA that would show how the County
30 would work towards meeting the state one-hour O₃ standard.

31 The 2004 Clean Air Plan was prepared to address the California Clean Air Act mandates
32 under Health and Safety Code sections 40924 and 40925 requiring that every three years
33 areas update their clean air plans to attain the state 1-hour ozone standard. The 2004
34 Plan was a three year update to the 2001 CAP. Similarly, the 2007 Plan (Santa Barbara
35 County APCD 2007) provides a three-year update to the APCD's 2004 Clean Air Plan.
36 The 2007 CAP was prepared to address both federal and state requirements; specifically,
37 the federal requirements that pertain to provisions of the Federal Clean Air Act which
38 apply to Santa Barbara County's current designation as an attainment area for the
39 federal 8-hour ozone standard.

40 *iii. Background Ambient Air Quality*

41 The U.S. Environmental Protection Agency (EPA) designates all areas of the United
42 States as having air quality better than (attainment) or worse than (nonattainment) the

1 NAAQS. The criteria for nonattainment designation varies by pollutant: (1) an area
 2 generally is in nonattainment for O₃ if its NAAQS has been exceeded more than three
 3 times in three years; and (2) an area is in nonattainment for any other pollutant if its
 4 NAAQS has been exceeded more than once per year. The CARB evaluates how the state
 5 attains the CAAQS. An area is in nonattainment for a pollutant if its CAAQS has been
 6 exceeded more than once in three years.

7 Presently, Santa Barbara County is in attainment for all NAAQS (SBCAPCD Scope and
 8 Content). Currently, there is not enough data available to determine whether the
 9 County attains the national PM_{2.5} standards. Santa Barbara County is designated as a
 10 federal ozone attainment area for the 8-hour ozone NAAQS (the 1-hour federal ozone
 11 standard was revoked for Santa Barbara County).

12 Presently, Santa Barbara County is in nonattainment of the CAAQS for O₃ and in
 13 attainment for NO₂, SO₂, and CO. The County is also considered in attainment for the
 14 state 1-hour standard for ozone as of June, 2007. A new California 8-hour ozone
 15 standard was implemented in May, 2006. The County violates this new state 8-hour
 16 ozone standard and continues to violate the state standard for PM₁₀.

17 *Baseline County Emissions Inventory*

18 Table IVB-2 summarizes the daily stationary, area-wide, mobile, and natural source air
 19 emissions estimated for Santa Barbara County in the year 2005 (CARB Almanac, 2006).
 20 The County emissions inventory is periodically updated for planning purposes to: (1)
 21 forecast future emissions inventories; (2) analyze emission control measures; and (3) use
 22 as input data for regional air quality modeling. The 2005 inventory represents the most
 23 recent estimate of daily emissions for the County. The data in Table IV.B.-2 show that
 24 the largest contributors to air pollutants are on-road vehicles and other mobile sources
 25 such as aircraft, trains, sea-vessels, off-road vehicles, and farm equipment. These two
 26 categories account for approximately 38 percent of the reactive organic compounds
 27 (ROC), 78 percent of the carbon monoxide (CO), 88 percent of the nitrogen oxide (NO_x),
 28 90 percent of the sulfur dioxide (SO₂), and 23 percent of the particular matter under 10
 29 microns (PM₁₀) emitted from non-natural sources in the County.

**Table IVB-2 Estimate of Average Daily Emissions By Major Source Category for
 Santa Barbara County - Year 2005 (Tons)**

<i>Source Category</i>	<i>ROC</i>	<i>CO</i>	<i>NO_x</i>	<i>SO₂^a</i>	<i>PM₁₀</i>
Stationary Sources					
Fuel Combustion	5.13	8.28	10.54	0.40	0.58
Waste Disposal	0.46	0.10	0.02	0.02	0.01
Cleaning and Surface Coatings	5.71	--	--	--	--
Petroleum Production & Marketing	4.73	0.36	0.09	0.21	0.03
Industrial Processes	0.22	0.51	0.06	3.30	0.88
Total Stationary Sources	16.24	9.26	10.71	3.93	1.50

Table IVB-2 Estimate of Average Daily Emissions By Major Source Category for Santa Barbara County - Year 2005 (Tons)

<i>Source Category</i>	<i>ROC</i>	<i>CO</i>	<i>NO_x</i>	<i>SO₂^a</i>	<i>PM₁₀</i>
Area-wide Sources					
Solvent Evaporation	6.83	--	--	--	--
Miscellaneous Processes	4.49	31.23	2.00	0.02	19.32
Total Area-wide Sources	11.32	31.23	2.00	0.02	19.32
Mobile Sources					
On-Road Vehicles	11.05	110.25	18.37	0.13	0.58
Other Mobile Sources	5.95	36.14	72.90	37.10	5.73
Total Mobile Sources	17.00	146.39	91.28	37.23	6.31
Natural Sources					
Total Natural Sources	60.49	12.07	0.37	0.11	1.22
Santa Barbara County Total	105.05	198.95	104.36	41.29	28.35

Source: CARB 2006

^a The largest fraction of sulfur oxides is sulfur dioxide and is therefore represented in the table in place of SO_x.

1 The nearest air monitoring station to the project site measuring ozone, CO, NO_x, PM₁₀
 2 and PM₁₀ is at 906 South Broadway, in the City of Santa Maria approximately three miles
 3 north of the project site. Table IVB-3 summarizes the most recent ambient air quality
 4 data for each of the aforementioned criteria pollutants from this monitoring station. No
 5 exceedances of State or federal standards for CO, NO_x, or PM_{2.5} were recorded during
 6 the years 2004 - 2006, inclusive.

7 The primary pollutant of concern in the project area is particulate matter (PM₁₀). The
 8 State PM₁₀ standards were not exceeded during the year 2005, but were exceeded once in
 9 both 2004 and 2006.

10 No other State or federal standard, including for carbon monoxide or nitrogen dioxide,
 11 was exceeded during the years 2004 - 2006.

Table IVB-3 Ambient Air Quality Data at the Santa Maria- 906 South Broadway Monitoring Station

<i>Pollutant</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>
<u>Ozone, ppm</u> - maximum hourly concentration (ppm)	0.074	0.063	0.064
Number of days of state exceedances (>0.09 ppm)	0	0	0
Number of days of federal exceedances (>0.12 ppm)	0	0	0
<u>Ozone, ppm</u> - maximum 8-hour concentration (ppm)	0.064	0.061	0.062
Number of days of state exceedances (0.07 ppm) ¹	0	0	0
Number of days of federal exceedances (>0.08 ppm)	0	0	0

**Table IVB-3 Ambient Air Quality Data at the
Santa Maria- 906 South Broadway Monitoring Station**

<i>Pollutant</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>
<u>Carbon Monoxide, ppm</u> - Worst 1 Hour/8 Hours	0.95	0.94	0.72
Number of days of state 1-hour exceedances (>20.0 ppm)	0	0	0
Number of days of state 8-hour exceedances (>9.0 ppm)	0	0	0
<u>Nitrogen Dioxide, ppm</u> - Worst Hour	0.05	0.048	0.037
Number of days of state exceedances (>0.25 ppm)	0	0	0
<u>Particulate Matter <10 microns</u> , maximum concentration ($\mu\text{g}/\text{m}^3$)	52.0	43.0	56.1
Number of samples of state exceedances (>50 $\mu\text{g}/\text{m}^3$)	1	0	1
Number of samples of federal exceedances (>150 $\mu\text{g}/\text{m}^3$)	0	0	0
<u>Particulate Matter <2.5 microns</u> , maximum concentration ($\mu\text{g}/\text{m}^3$)	16.6	29.8	13.7
Number of samples of federal exceedances (>65 $\mu\text{g}/\text{m}^3$)	0	0	0

Source: CARB 2007.

1. As of 2005, the California CARB established a new 8-hour-average standard for ozone.

n/a= not available- insufficient data to determine a value

1 d. Project Design Elements that Reduce Air Quality Impacts

2 The proposed project entails a mixed-use development which would blend residential,
3 commercial, retail, and recreational uses. Close proximity of such uses facilitates a
4 decrease in trip length for common resources. Residents of the Lakeview Promenade
5 condominiums would have the option to walk short distances instead of using a car to
6 access restaurants, retail stores, a fitness center, and a movie theater. Individuals
7 visiting the Lakeview Promenade residents would also be presented with an array of
8 goods and services located at a single destination, therefore reducing the amount of
9 potential vehicle trips in the project vicinity.

10 Development of commercial uses within the Lakeview Promenade project, as well as its
11 location adjacent to commercial and industrial land use designations, would help to
12 reduce automobile trips overall, consistent with the City of Santa Maria Resources
13 Management Element Goal 2 - Air Quality (City of Santa Maria, 1996).

14 Other proposed amenities to enhance alternative transportation modes would include a
15 new Santa Maria Area Transit (SMAT) bus stop, turnout, and connecting sidewalk west
16 of the Lakeview Promenade/Skyway Drive intersection, on the north side (westbound)
17 of Skyway Drive.

1 e. **Adopted Policies and Regulations that Reduce Air Quality Impacts**

2 i. *Construction*

3 Measures included in the County of Santa Barbara Air Pollution Control District (SBCO
4 APCD) Scope and Content of Air Quality Sections in Environmental Documents (SBCO
5 APCD, 2007) to reduce construction-related emissions would apply to construction
6 activity associated with implementation of the Specific Plan.

7 Standard dust control measures must be implemented for any discretionary project
8 involving earth-moving activities. Some projects have the potential for construction-
9 related dust to cause a nuisance. Since Santa Barbara County violates the state standard
10 for PM₁₀, dust mitigation measures are required for all discretionary construction
11 activities regardless of the significance of the fugitive dust impacts based on the policies
12 in the 1979 Air Quality Attainment Plan.

13 Measures to limit emissions of both ozone precursors (NO_x and ROC) and fugitive dust
14 (PM₁₀), are identified below. The first measure is required for all projects involving
15 earthmoving activities regardless of the project size or duration:

16 **Standard Dust Control Procedures.** During clearing, grading, earth moving, or
17 excavation operation, excessive fugitive dust emissions shall be controlled by
18 regular watering, paving construction roads, or other dust preventive measures
19 such as using the following procedures:

- 20 a. Use water trucks or sprinkler systems to keep all areas of vehicle movement
21 damp enough to prevent dust from leaving the construction area. At a
22 minimum, this would include wetting down such areas in the late morning
23 and after work is completed for the day, and whenever wind exceeds 15
24 miles per hour. Reclaimed water should be used whenever possible.
- 25 b. Minimize the amount of disturbed area and speeds of on-site vehicles.
- 26 c. Install gravel pads at all access points to prevent tracking of mud onto public
27 roads.
- 28 d. Soil stockpiled for more than two days shall be covered, kept moist, or
29 treated with soil binders to prevent dust generation.
- 30 e. After completion of clearing, grading, earthmoving, or excavation, treat
31 the disturbed areas by watering, revegetation, or by spreading soil
32 binders until they are paved or otherwise developed so that dust
33 generation will not occur.
- 34 f. The contractor or builder shall designate a person or persons to monitor the
35 dust control program and to order increased watering, as necessary, to
36 prevent the transport of dust off-site. Their duties shall include holiday and
37 weekend periods when work may not be in progress. The name and
38 telephone number of such persons shall be provided to the Air Pollution
39 Control District prior to land use clearance.

1 The following are standard conditions that are applied during project grading and
2 construction to reduce NO_x and PM_{2.5} emissions from construction equipment:

3 **Standard Ozone Precursor Controls.** At all times, ozone precursor emissions
4 shall be controlled not only through the routine maintenance of all construction
5 equipment, but construction activities shall also be required to utilize new
6 technologies to control ozone precursor emissions including:

- 7 a. Heavy-duty diesel-powered construction equipment manufactured after
8 1996 (with federally mandated "clean" diesel engines) shall be used.
- 9 b. The engine size of construction equipment shall be the minimum
10 practical size.
- 11 c. The number of construction equipment operating simultaneously shall
12 be minimized through efficient management practices to ensure that the
13 smallest practical number is operating at any one time.
- 14 d. Construction equipment shall be maintained in tune per the
15 manufacturer's specifications.
- 16 e. Construction equipment operating onsite shall be equipped with two to
17 four degree engine timing retard or pre-combustion chamber engines.
- 18 f. Catalytic converters shall be installed on gasoline-powered equipment, if
19 feasible.
- 20 g. Diesel catalytic converters, diesel oxidation catalysts and diesel
21 particulate filters as certified and/or verified by EPA or California shall
22 be installed, if available.
- 23 h. Diesel powered equipment should be replaced by electric equipment
24 whenever feasible.
- 25 i. Idling of heavy-duty diesel trucks during loading and unloading shall be
26 limited to five minutes; auxiliary power units should be used whenever
27 possible.
- 28 j. Construction worker trips should be minimized by requiring carpooling
29 and by providing for lunch onsite.

30 The following are standard conditions that are applied during the finishing phase of
31 project construction to reduce VOC emissions from architectural coatings such as paints
32 and metallic finishes:

33 **Architectural Coating Emissions.** To reduce VOC emissions associated with the
34 application of architectural coatings during building construction, the applicant
35 shall use the following methods during the application of necessary architectural
36 coating materials:

- 37 a. Minimize the use of paints and solvents by using pre-coated building
38 materials;

- 1 b. Minimize the use of paints and solvents by using naturally colored
- 2 building materials;
- 3 c. Use water-based or low-ROC coatings; and
- 4 d. Utilize coating application equipment with high transfer efficiency rates
- 5 to reduce off-gassing.

6 *ii. Asbestos-Containing Materials*

7 If the demolition or renovation of a commercial building is proposed, the project
8 applicant is required to complete an Asbestos Demolition and Renovation Compliance
9 Checklist, and the SBCO APCD must be notified even if the existing building does not
10 contain any asbestos.

11 Demolition of existing structures must comply with all requirements specified in the
12 federal National Emission Standard for Hazardous Air Pollutants (Asbestos NESHAP)
13 governing emissions of asbestos (Title 40, Code of Federal Regulations, Part 61, Subpart
14 M, Asbestos Emissions from Demolition/Renovation Activities). All structures should
15 be stabilized and demolished in accordance with applicable regulations contained in the
16 Asbestos NESHAP. This regulation is intended to limit asbestos emissions from
17 demolition or renovation of structures and the associated disturbance of asbestos-
18 containing waste material generated or handled during these activities. As
19 implemented by the APCD, the regulation requires that the APCD be notified before any
20 demolition or renovation activity occurs. This notification includes a description of the
21 structures and methods utilized to determine the presence or absence of asbestos. All
22 asbestos-containing material found on the site must be removed prior to demolition or
23 renovation activity. As part of project implementation, the project applicant must
24 comply with the requirements of the Asbestos NESHAP. Project compliance with the
25 Asbestos NESHAP ensures that asbestos-containing materials would be removed and
26 disposed of appropriately.

27 *iii. Toxic Air Contaminants*

28 A Toxic Air Contaminant (TAC) is an air pollutant, identified in regulation by the
29 CARB, which may cause or contribute to an increase in deaths or in serious illness, or
30 which may pose a present or potential hazard to human health (SBCO APCD 2006b).
31 TACs are considered under a different regulatory process (California Health and Safety
32 Code Section 39650 et seq.) than pollutants subject to CAAQS. Health effects due to
33 TACs may occur at extremely low levels, and it is typically difficult to identify levels of
34 exposure which do not produce adverse health effects. Proposed neighborhood
35 commercial land use operations including dry cleaners and very large gas stations can
36 potentially include stationary sources that emit one or more of the 244 substances that
37 have either been recognized by the CARB as TACs in California or are known or
38 suspected to be emitted in California and have potential adverse health effects, as
39 identified by the CARB TAC Identification Program (CARB "List," 1999 [and continually
40 updated]). If proposed as part of the Lakeview Promenade project, commercial
41 business(s) capable of generating TACs would be required to comply with standard

1 health risk measures and procedures ensuring that they produce less than significant
2 health impacts to the public.

3 **2. Consideration and Discussion of Significant Environmental Effects**

4 The following information is provided in accordance with Section 15126.2 of the CEQA
5 Guidelines.

6 **a. Environmental Considerations Suggested in CEQA**

7 The following considerations for determining the significance of project effects on air
8 quality are identified in CEQA Guidelines Appendix G, Environmental Checklist.
9 Would the project:

- 10 (1) Conflict with or obstruct implementation of the applicable air quality
11 plan?
- 12 (2) Violate any air quality standard or contribute substantially to an existing
13 or projected air quality violation?
- 14 (3) Result in a cumulatively considerable net increase of any criteria
15 pollutant for which the project region is in non-attainment under an
16 applicable federal or state ambient air quality standard (including
17 releasing emissions which exceed quantitative thresholds for ozone
18 precursors)?
- 19 (4) Expose sensitive receptors to substantial pollutant concentrations?
- 20 (5) Create objectionable odors affecting a substantial number of people?

21 **b. Rationale for Establishing Local Thresholds**

22 The SBCO *APCD Rules and Regulations* (SBCO APCD 2006b) identifies quantitative
23 thresholds of significance that are to be applied to development projects within the
24 county and cities falling under the jurisdiction of the CAP. The APCD defines these
25 thresholds such that there are standards for ensuring the CAP standards are applied
26 consistently throughout the County.

27 **c. Thresholds of Significance Established in this EIR**

28 The quantitative significance thresholds of the Santa Barbara County Air Pollution
29 Control District are used in this EIR. The project would produce a significant air quality
30 impact if operational emissions would exceed any one of the following thresholds:

- 31 **AQ-1:** Generate over 25 tons per year for ROC or NO_x emissions during
32 construction.

1 (Note: this is only a SBCO APCD guideline for determining the
2 significance; no quantitative thresholds of significance are established for
3 short-term emissions)

4 **AQ-2:** Exceed 25 pounds per day of ROC or NOX from on-road vehicle trips, or
5 exceed 240 pounds of ROC or NO_x or 80 pounds of PM₁₀ per day from
6 combined stationary and mobile sources.

7 **AQ-3:** Exceed the APCD significance thresholds for public health risks.

8 **AQ-4:** Are inconsistent with the adopted federal and state air quality plans for
9 the County.

10 **AQ-5:** Create objectionable odors affecting a substantial number of people?

11 **d. Significant Direct Impacts**

12 *i. Short-Term Construction*

13 **Potential Effect AQ-1: Short-term grading producing fugitive dust PM₁₀ emissions and**
14 **equipment, generating criteria air pollutant emissions would contribute to the existing**
15 **non-attainment PM₁₀ status.**

16 Estimates of emissions associated with construction of the proposed project were
17 calculated using the URBEMIS 2007 Air Quality Model (Version 9.2.2). URBEMIS 2007
18 estimates construction emissions on a daily basis for the following construction-related
19 activities: site grading (equipment exhaust and fugitive dust); construction worker trips;
20 stationary equipment use; mobile equipment use; use of architectural coatings
21 (evaporation of solvents contained in paints, varnishes, primers, and other surface
22 coatings); and asphalt off gassing related to paving activities.

23 Model inputs were modified to reflect construction details provided in the proposed
24 project description. Input assumptions utilized in the URBEMIS 2007 air quality
25 modeling were obtained from proposed project application grading information,
26 development plans, and construction timelines. Where information was not available,
27 URBEMIS model default assumptions were used. These results are identified in Table
28 IVB-4.

29 Earth-moving activities would produce fugitive dust emissions at a rate of about 55
30 pounds of PM₁₀ per day per acre of disturbed land (EPA 1995). Additionally, the
31 operation of construction equipment would produce combustive emissions of
32 PM₁₀/PM_{2.5}. Air quality impacts from construction would be short-term and would only
33 last for the duration of this activity. Though not subject to a significance threshold, these
34 emissions have the potential to create a public nuisance or exacerbate the existing PM₁₀
35 nonattainment status within the County. The project would be conditioned to
36 implement standard SBCO APCD standard dust control measures identified in section
37 1.e. With application of the standard SBCO APCD dust control measures, the potential

1 effect from proposed PM₁₀/PM_{2.5} emissions during construction would be *less than*
2 *significant*.

3 Construction equipment, on-road heavy-duty trucks, and construction worker commute
4 vehicles would also generate criteria air pollutant emissions. Heavy-duty trucks would
5 be used to export material from the project site. Emissions from construction-worker
6 commute trips would be minor compared to the emissions generated by construction
7 equipment. Emissions generated by construction trips would incrementally add to
8 regional atmospheric loading of ozone precursors during project construction.

9 During the finishing stages of development, emissions of ROC would be generated
10 through the use of architectural coatings and building materials (i.e., paints, solvents,
11 roofing materials, etc.). The application of architectural coatings without the
12 incorporation of mitigation measures would generate a maximum daily emission of 299
13 pounds of ROC per day; however, with the incorporation of feasible mitigation
14 measures such as the use of paints with a lower VOC per liter ratio, maximum daily
15 construction generated emissions would decrease by roughly 50% (156 lbs/day).

Table IVB-4. Estimated Maximum Daily Construction Emissions

	<i>Unmitigated Emissions (lbs/day)</i>					
	<i>ROC</i>	<i>NO_x</i>	<i>CO</i>	<i>SO₂</i>	<i>Total PM₁₀</i>	<i>Total PM_{2.5}</i>
Demolition	1.95	18.68	9.47	0.01	9.59	2.74
Mass Grading	4.38	46.18	20.36	0.02	79.39	18.03
Paving	3.16	17.61	12.31	0.00	1.49	1.37
Building	6.83	58.80	74.31	0.04	1.86	1.57
Architectural Coating	299.34	0.35	4.66	0.00	0.03	0.01

16 **Conclusion:** *Potential short-term construction effects on air quality would be less than*
17 *significant*.

18 **ii. Long-Term Operation**

19 **Potential Effect AQ-2:** *Operation of the proposed project would generate air*
20 *pollutant on-road vehicle trip ROC and NO_x emissions exceeding 25 lbs./day.*

21 Air quality emissions associated with long-term buildout and occupation of the
22 proposed project were analyzed based on land use and the associate square footage.
23 The number of potential vehicular trips was based on the reasonable worst-case of 270
24 condominiums established for the transportation analysis (see section IV.A.), and is
25 estimated to generate a total of 1,863 trips daily. The restaurant and retail uses together
26 involve lower building areas at 15,000 square feet and 40,000 square feet respectively;
27 however, due to their higher turnover rates, they would contribute an additional 3,625
28 trips per day. The restaurant would generate 1,907 trips daily and retail uses would
29 generate 1,718 trips daily, with the majority occurring in the PM hours. Further, it is

1 anticipated that the Fitness, Spa, and Physical Health Care Center would generate 451
 2 trips, and the Movie Theater would generate 440 trips daily. Therefore, the proposed
 3 project would generate a total of 6,379 trips per day.

4 In addition to the 6,379 trips generated by the project, increased electricity and natural
 5 gas would be consumed by the net increase of 9.4 acres of development. As such,
 6 project operation would increase emissions of air pollutants that contribute to the
 7 degradation of regional air quality.

8 The URBEMIS 2007 model was used to calculate emissions associated with the proposed
 9 project based on the proposed land use and the number of trips generated by the new
 10 development. Estimates of project emissions are identified below in Table IVB-5. The
 11 net increase in long-term emissions associated with the proposed project includes those
 12 emissions associated with vehicle trips (mobile emissions) and the use of natural gas and
 13 landscaping maintenance equipment (area emissions) upon buildout of the project.
 14 Importantly, the emissions calculations take into account credits provided for mixed use
 15 development, assuming that fewer trips will be made by future residents if commercial
 16 amenities are available on site. The estimated operational emissions also consider
 17 implementation of the feasible mitigation measures identified by the SBCO APCD (see
 18 section Mitigation Measure AQ-2, section 3).

**Table IVB-5. Operational Emissions Associated with the Proposed Project
 (lbs/day)**

<i>Emission Source</i>	<i>ROC</i>	<i>NOx</i>	<i>CO</i>	<i>SO2</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Area Source	15.83	3.35	8.64	0.00	0.03	0.03
Vehicle Emissions	48.36	69.40	540.70	0.31	63.12	12.40
Total Emissions	64.29	72.93	549.34	0.31	63.15	12.43
<i>Vehicular Significance Threshold</i>	25	25	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
Threshold Exceeded?	Yes	Yes	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
<i>Area + Vehicle Threshold</i>	240	240	<i>n/a</i>	<i>n/a</i>	80	<i>n/a</i>
Threshold Exceeded?	No	No	<i>n/a</i>	<i>n/a</i>	No	<i>n/a</i>

Source: URBEMIS 2008 Version 9.2.4 Appendix B for calculations. These estimates reflect the inherent area and operational reductions attributed to the project's mixed use element, the presence of local serving retail, and the project's transportation design which includes the availability of sidewalks and bike lanes for bike and pedestrian alternative transit options.

19 As indicated in Table IVB-5, ROC and NOx emissions would exceed SBCO APCD
 20 thresholds of 25 lbs/day, even with implementation of credits for mixed use
 21 development. The potential effect on long-term air quality would be significant. This
 22 potential effect would be reduced to the maximum extent feasible with implementation
 23 of Mitigation Measure AQ-1, but would remain *significant and not mitigable*.

1 As noted in Table IVB-5, combined project-generated area source and vehicle emissions
2 would not exceed the combined area source and vehicle emissions thresholds for ROC,
3 NO_x, or PM₁₀.

4 **Conclusion:** *Potential long-term operational effects on air quality would be significant and not*
5 *mitigable.*

6 **Potential Effect AQ-3:** *Operations from potential commercial land uses would not*
7 *result in significant public health risks.*

8 Proposed neighborhood commercial land use operations could include stationary
9 sources such as dry cleaners (as identified in the City Zoning Ordinance Title 12) that
10 could potentially emit toxic air contaminants (TACs). These stationary sources include
11 any potential uses identified by the California Air Resources Board. As explained in
12 section 1.e., any proposed commercial business capable of generating TACs would be
13 required to comply with standard health risk measures and procedures.

14 **Conclusion:** *Potential effects on air quality from commercial land use TACs would be less than*
15 *significant.*

16 **Potential Effect AQ-4:** *Proposed project operation would be consistent with the adopted*
17 *federal and state air quality plans for the County, including the 2007 Clean Air Action*
18 *Plan.*

19 By definition, a project is consistent with the CAP if: (1) the population projections used
20 in the project are equal to or less than those used in the CAP; (2) the rate of increase in
21 vehicle trips and miles traveled is less than or equal to the rate of population growth for
22 the same area; and (3) all applicable land use and transportation control measures from
23 the CAP have been included in the project to the maximum extent feasible.

24 According to the APCD, commercial or industrial projects would be consistent with the
25 2001 and 2004 CAPs if they incorporate CAP Transportation Control Measures (TCM) and
26 applicable stationary source control measures and are consistent with APCD rules and
27 regulations (Santa Barbara County APCD 2006). Project consistency with the CAPs means
28 that its direct and indirect emissions are accounted for in the emissions growth
29 assumptions in the CAPs. The CAPs rely primarily on the land use and population
30 projections provided by the Santa Barbara County Association of Governments and CARB
31 on-road emissions forecast as a basis for vehicle emission forecasting. Any specific plan
32 that exceeds the population growth forecasts in the CAPs for the project site is inconsistent
33 with the CAPs and may have a significant impact on air quality.

34 The project proposes to reduce residential development and increase areas of open space
35 compared to what is approved for the project site in the current General Plan and CAPs.
36 Therefore, the project would generate fewer vehicle trips and associated emissions than
37 what are assumed in these plans. Since the project also would mitigate project traffic
38 with CAP TCMs and would comply with APCD rules and regulations, the project
39 would be consistent with the CAPs.

1 **Conclusion:** *Potential effects on air quality related to consistency with the CAP would be less*
2 *than significant.*

3 **Potential Effect AQ-5:** *Proposed project commercial uses would have the potential to*
4 *generate odor, noxious fume, toxic compound, and/or toxic particulate impacting*
5 *adjacent on-site and off-site receptors.*

6 Certain projects have the potential to cause substantial odors resulting from the nature
7 of their operation and their location relative to wind dispersal patterns, such as fast food
8 restaurants, bakeries, coffee roasting facilities, etc. Existing and proposed residential
9 sensitive receptors located downwind of existing and/or proposed sources of odor have
10 the potential to be impacted.

11 The proposed project includes the development of commercial, retail, recreation, and
12 residential uses. Potential fast food restaurants, bakeries, coffee roasting facilities, etc.
13 would potentially impact on- and off-site receptors. Potential effects on air quality
14 would be *significant*.

15 **Conclusion:** *Potential effects on air quality from commercial use odors would be reduced to less*
16 *than significant with imposition of Mitigation Measure AQ-2.*

17 e. Significant Cumulative Impacts

18 Emissions of ROC, NO_x, and PM₁₀ emissions from project construction, in combination
19 with emissions from other probable future development growth in the cumulative impact
20 study area, would exacerbate the existing O₃ and PM₁₀ nonattainment statuses within the
21 County. However, since all projects would be required to implement standard APCD
22 dust control measures and construction emissions are included in the County air
23 attainment planning process, cumulative impacts from proposed construction activities
24 would be considered *less than significant*.

25 Emissions of ROC, NO_x, and PM₁₀ emissions from project operations, in combination with
26 emissions from other probable future proposed and approved projects in the cumulative
27 impact study area,, would exacerbate the existing O₃ and PM₁₀ nonattainment status within
28 the County. Each project would be conditioned to comply with APCD standard measures
29 to reduce vehicular emissions and many would have incrementally less than significant
30 impacts. However, the combined, cumulative effect of these projects on ROC, NO_x, and
31 PM₁₀ emissions would be *significant and not mitigable*. As the project's mitigated
32 contribution to the cumulative ROC, NO_x, and PM₁₀ emissions would exceed thresholds set
33 by the APCD, the project's contribution to cumulative air quality impacts would be
34 *cumulatively considerable*.

35 **Conclusion:** *Potential cumulative effects on air quality would be significant and not mitigable.*

36 3. Mitigation Measures Adopted to Mitigate Significant Effects

37 The following information is provided in accordance with Section 15126.4 of the CEQA
38 Guidelines.

1 Mitigation measures identified below are numbered sequentially, such that they may
2 have a different number from the associated impact (e.g., **Potential Effect AQ-2** is
3 addressed by Mitigation Measure **AQ-1**, etc.).

4 **a. Measures that Mitigate Direct Impacts**

5 **Response to Potential Effect AQ-1**

6 No mitigation measures would be required, as standard conditions of
7 approval from the Santa Barbara County Air Pollution Control District
8 would ensure impacts would be *less than significant*.

9 **Response to Potential Effect AQ-2**

10 Potential impacts due to long-term vehicular trips can be reduced through the
11 imposition of Mitigation Measure AQ-1, as follows:

12 **Mitigation Measure AQ-1.**

13 The Planned Development Permit(s) shall include the following on-site design
14 requirements:

- 15 a. For bicyclists, theft proof and well-lighted bicycle storage facilities with
16 convenient access to building entrances, on-site bikeways between buildings or
17 uses, showers and locker facilities.
- 18 b. For carpool and vanpools, provide preferential parking.
- 19 c. For neighborhood commercial uses, include childcare, food services, postal
20 machines, and banking services.
- 21 d. Encourage ridesharing and vanpooling for residents and commercial employees
22 to address the benefits of alternative transportation methods.
- 23 e. Encourage residential structure orientation to maximize exposure and potential
24 for solar energy use.
- 25 f. Install low volatile organic compounds (VOC)-emitting landscaping (i.e., trees)
26 that generate less VOC emissions.
- 27 g. Green building technologies such as structural orientation and use of
28 construction materials that maximize passive solar exposures.

29 **Response to Potential Effect AQ-3**

30 No mitigation measures would be required, as standard SBCO APCD conditions
31 of approval from the Santa Barbara County Air Pollution Control District would
32 ensure impacts would be less than significant.

1 Response to Potential Effect AQ-4

2 No mitigation measures would be required, as standard conditions of approval
3 from the Santa Barbara County Air Pollution Control District would ensure
4 impacts would be less than significant.

5 Response to Potential Effect AQ-5

6 Potential impacts due to odors can be mitigated to a level below significance,
7 through the imposition of Mitigation Measure AQ-2, as follows:

8 Mitigation Measure AQ-2.

9 The Planned Development Permit(s) shall include the following on-site design
10 requirements:

11 The City shall approve an Odor Abatement Plan (OAP) as part of the project
12 lease agreement terms for businesses that operate odorous emission sources (e.g.,
13 businesses with truck loading docks). The APCD would review the OAP for
14 adequacy in mitigating potential nuisance odor impacts from the project. OAPs
15 should include the following elements:

- 16 a. Name and telephone number of contact person(s) at the facility
17 responsible for logging in and responding to odor complaints.
- 18 b. Policy and procedure describing the actions to be taken when an odor
19 complaint is received, including the training provided to the staff on
20 how to respond.
- 21 c. Description of potential odor sources at the facility.
- 22 d. Description of potential methods for reducing odors, including
23 minimizing idling of delivery and service trucks and buses, process
24 changes, facility modifications and/or feasible add-on air pollution
25 control equipment.
- 26 e. Contingency measures to curtail emissions in the event of a public
27 nuisance complaint.

28 b. Measures that Mitigate Cumulative Impacts

29 Mitigation Measure AQ-1, maximizing the use of alternative transportation modes and
30 increasing design standards to reduce VOC emissions, would reduce the project's
31 cumulatively considerable contribution to cumulative impacts.

32 c. Substantial Evidence that Mitigation Will be Effective.

33 The mitigation measures required for the proposed Lakeview Promenade project are
34 standard CARB and/or APCD conditions and measures. These measures, developed
35 through direct consultation with Ms. Vijaya Jammalamadaka of the Santa Barbara
36 County Air Pollution Control District, are based on the District's expert assessment of

- 1 the way in which the actions are capable of reducing adverse air quality emissions and
- 2 odors. Implementation of Mitigation Measures AQ-1 and AQ-2 would reduce potential
- 3 effects on air quality to the maximum extent feasible.

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