

## 4.3 AIR QUALITY

*Both long and short-term emissions resulting from development under the proposed Specific Plan would occur. Construction and grading equipment would emit carbon monoxide and ozone precursors, such as nitrogen oxide and reactive organic compounds, but impacts are considered significant but mitigable. Development would increase the number of average daily trips to the area for automobiles and increase the combustion of natural gas and electricity in the area, all of which would generate regional air pollutants. This impact from the increase in operational emissions is considered significant and unavoidable. The addition of traffic to area intersections would increase congestion at the intersections and subsequently increase carbon monoxide concentrations. However, concentrations would not exceed the California one-hour standard and would therefore be less than significant. The project has also been determined to be inconsistent with the 2001 CAP, which would be considered a significant and unavoidable impact.*

### 4.3.1 Setting

The physical and regulatory air quality setting within the region is described in detail in the County's 2001 Clean Air Plan (CAP), which is herein incorporated by reference. The 2001 CAP is available for review at local libraries and at the San Luis Obispo County Air Pollution Control District, 2156 Sierra Way, Suite B, San Luis Obispo, California.

**a. Regional Climate.** The climate of San Luis Obispo County can be generally characterized as Mediterranean, with warm, dry summers and cooler, relatively damp winters. Along the coast, mild temperatures are the rule throughout the year due to the moderating influence of the Pacific Ocean. This effect is diminished inland in proportion to distance from the ocean or by major intervening terrain features, such as the coastal mountain ranges. As a result, inland areas are characterized by a considerably wider range of temperature conditions. Maximum summertime temperatures average about 70 degrees Fahrenheit near the coast, while inland valleys are often in the high 90s. The City of Paso Robles experiences these higher inland temperatures, which sometimes even exceed 100 degrees. Average minimum winter temperatures range from the low 30s along the coast to the low 20s inland.

Regional meteorology is largely dominated by a persistent high pressure area, which commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause seasonal changes in the weather patterns of the area. The Pacific "High" remains generally fixed several hundred miles offshore from May through September, enhancing onshore winds and opposing offshore winds. During spring and early summer, as the onshore breezes pass over the cool water of the ocean, fog and low clouds often form in the marine air layer along the coast. Surface heating in the interior valleys dissipates the marine layer as it moves inland.

From November through April the Pacific High tends to migrate southward, allowing northern storms to move across the County. About 90% of the total annual rainfall is received during this period. Winter conditions are usually mild, with intermittent periods of precipitation followed by mostly clear days. Rainfall amounts can vary considerably among the different regions in the County.



Airflow around the County plays an important role in the movement and dispersion of pollutants. The speed and direction of local winds are controlled by the location and strength of the Pacific High pressure system and other global patterns, by topographical factors, and by circulation patterns resulting from temperature differences between the land and sea. In spring and summer months, when the Pacific High attains its greatest strength, onshore winds from the northwest generally prevail during the day. At night, as the sea breeze dies, weak drainage winds flow down the coastal mountains and valleys to form a light, easterly land breeze.

In the fall, onshore surface winds decline and the marine layer grows shallow, allowing an occasional reversal to a weak offshore flow. This, along with the diurnal alternation of land-sea breeze circulation, can sometimes produce a “sloshing” effect. Under these conditions, pollutants may accumulate over the ocean for a period of one or more days and are subsequently carried back onshore with the return of the sea breeze. Strong inversions can form at this time, “trapping” pollutants near the surface.

This effect is intensified when the Pacific High weakens or moves inland to the east. This may produce a condition in which air, often pollutant-laden, is transported into the County from the east and southeast. This can occur over a period of several days until the high-pressure system returns to its normal location, breaking the pattern. The breakup of this condition may result in relatively stagnant conditions and a buildup of pollutants offshore. The onset of the typical daytime sea breeze can bring these pollutants back onshore, where they combine with local emissions to cause high pollutant concentrations. Not all occurrences of this condition lead to high ambient pollutant levels, but it does play an important role in the air pollution meteorology of the County.

**b. Regulatory Framework.** Both the federal and state governments have established ambient air quality standards for the protection of public health. The U.S. Environmental Protection Agency (EPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the state equivalent in the California Environmental Protection Agency. Local control in air quality management is provided by the CARB through regional-level Air Pollution Control Districts (APCDs). The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 14 air basins statewide.

The U.S. EPA has set primary and secondary ambient air quality standards for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates (PM<sub>10</sub>) and lead. In addition, the State of California has established health-based ambient air quality standards for these and other pollutants, which are more stringent than the federal standards. Table 4.3-1 shows the federal and state primary standards for the major pollutants. The U.S. EPA recently announced changes to the National Ambient Air Quality Standards for ozone and particulate matter. The federal ozone standard was lowered to 0.08 parts per million (ppm) and the averaging period was changed from one-hour to an eight-hour running average. A new particulate matter standard for 2.5 micron particulates (PM<sub>2.5</sub>) was created in addition to the standard for 10 micron particulates (PM<sub>10</sub>).



**Table 4.3-1 Federal and State Ambient Air Quality Standards**

Pollutant	Averaging Time	Federal Primary Standards	California Standard
Ozone	1-Hour	0.12 PPM	0.09 PPM
Carbon Monoxide	8-Hour	9.0 PPM	9.0 PPM
	1-Hour	35.0 PPM	20.0 PPM
Nitrogen Dioxide	Annual	0.05 PPM	---
	1-Hour	---	0.25 PPM
Sulfur Dioxide	Annual	0.03 PPM	---
	24-Hour	0.14 PPM	0.04 PPM
	1-Hour	---	0.25 PPM
PM <sub>10</sub>	Annual	50 µg/m <sup>3</sup>	30 µg/m <sup>3</sup>
	24-Hour	150 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
PM <sub>2.5</sub>	Annual	15 µg/m <sup>3</sup>	--
	24-Hour	65 µg/m <sup>3</sup>	--
Lead	30-Day Average	---	1.5 µg/m <sup>3</sup>
	3-Month Average	1.5 µg/m <sup>3</sup>	---

ppm = parts per million  
 µg/m<sup>3</sup> = micrograms per cubic meter  
 Source: California Air Resources Board

The local air quality management agency is required to monitor air pollutant levels to assure that air quality standards are met, and if they are not met, to develop strategies to meet these standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in “attainment” or as in “nonattainment.” The City of Paso Robles falls within the jurisdiction of the County of San Luis Obispo APCD. Federal air quality standards within the jurisdiction of the San Luis Obispo APCD have been attained, while the County is in non-attainment for the state standards for PM<sub>10</sub>. In addition, though the San Luis Obispo Air Basin is in attainment for the state and federal carbon monoxide standards, carbon monoxide can potentially be a problem at heavily congested intersections.

**c. Current Ambient Air Quality.** The nearest air monitoring station to the Specific Plan site is on Santa Fe Avenue in the City of Paso Robles. This station measures ozone and PM<sub>10</sub>. Table 4.3-2 summarizes the available annual air quality data for the local airshed.

**Table 4.3-2. Ambient Air Quality Data at the Paso Robles-Santa Fe Avenue Monitoring Station**

Pollutant	2001	2002	2003	2004
Ozone, ppm – Worst Hour	0.092	0.089	0.095	0.080
Number of days of State exceedances (>0.09 ppm)	0	0	1	0
Number of days of Federal exceedances (>0.12 ppm)	0	0	0	0
PM <sub>10</sub>				
Worst 24 Hours, µg/m <sup>3</sup> National measure	65.0	44.0	51.0	42.0
Worst 24 Hours, µg/m <sup>3</sup> State measure	70.0	46.0	52.0	43.0
Number of samples of State exceedances <sup>1</sup> (>50 µg/m <sup>3</sup> )	2	0	1	0
Number of samples of Federal exceedances <sup>1</sup> (>150 µg/m <sup>3</sup> )	0	0	0	0
Annual Average (State standard = 30µg/m <sup>3</sup> )	21.2	21.1	20.2	20.1
Annual Average (Federal standard = 50µg/m <sup>3</sup> )	20.6	20.4	19.6	19.5

Source: CARB, 2001 - 2004.



As noted above, San Luis Obispo County is in nonattainment regarding PM<sub>10</sub>, but has recently achieved attainment status regarding the state standard for ozone. Ozone is a secondary pollutant that is not produced directly by a source, but rather is formed by a reaction between nitrogen oxides (NO<sub>x</sub>) and reactive organic gases (ROG) in the presence of sunlight. Reductions in ozone concentrations are dependent on reducing the amount of these precursors. In San Luis Obispo County the major sources of ROG are motor vehicles, organic solvents, the petroleum industry, and pesticides; and the major sources of NO<sub>x</sub> are motor vehicles, public utility power generation, and fuel combustion by various industrial sources.

The PM<sub>10</sub> State thresholds were exceeded twice in 2001 and once in 2003. The thresholds were not exceeded in 2004. The general trend since 2001 has been improving PM<sub>10</sub> levels countywide. Ambient PM<sub>10</sub> concentrations have been primarily a localized issue of concern in the southern portion of San Luis Obispo County, providing the major impetus for the County's non-attainment designation for the State PM<sub>10</sub> standard. The major sources for PM<sub>10</sub> are mineral quarries, grading, demolition, agricultural tilling, road dust, and vehicle exhaust. PM<sub>10</sub> levels in the Specific Plan area are primarily due to agriculture tilling, grading, road dust, and motor vehicle emissions.

### 4.3.2 Impact Analysis

**a. Methodology and Significance Thresholds.** This analysis of air quality issues follows the guidance and methodologies recommended in the APCD's *CEQA Air Quality Handbook* (April 2003). Construction exhaust emissions were taken from the EPA's *Compilation of Air Pollutant Emission Factors*, (AP-42, Volume II, 1985) and the South Coast Air Quality Management District's *CEQA Air Quality Handbook* (1993). The URBEMIS 2002 for Windows computer modeling program, which was developed by the California Air Resources Board, was utilized in estimating composite mobile emission factors and is based on the number and length of vehicle trips to and from the Specific Plan area.

A project may have a significant adverse air quality impact if the project individually or cumulatively does the following:

- *Interferes with progress towards the attainment of the ozone standard by releasing emissions which equal or exceed the established long term quantitative thresholds for pollutants;*
- *Causes an exceedance of a state or federal ambient air quality standard for any criteria pollutant (as determined by modeling); or*
- *Is inconsistent with the emissions reduction projections contained in the 2001 CAP.*

Short-term construction emission thresholds for San Luis Obispo County have been set by the APCD on a quarterly basis as follows:

- *2.5 tons per quarter of ROG*
- *2.5 tons per quarter of NO<sub>x</sub>*
- *2.5 tons per quarter of PM<sub>10</sub>*

The APCD has adopted a tiered system for assessing the significance of a project's air quality impact, as shown below. When project emissions of ROG, SO<sub>x</sub>, SO<sub>2</sub>, and PM<sub>10</sub> are less than 10 pounds per day and CO emissions are less than 50 pounds per day impacts are considered less



than significant. If emissions of any of ROG, SO<sub>x</sub>, SO<sub>2</sub>, or PM<sub>10</sub> are from 10 to 24 pounds per day, impacts are considered potentially significant and on-site mitigation is recommended. If emissions of ROG, NO<sub>x</sub>, SO<sub>2</sub>, or PM<sub>10</sub> cannot be reduced to less than 25 pounds per day or CO emissions cannot be reduced to less than 550 pounds per day, additional measures may be required. If CO emissions exceed 550 pounds per day, CO concentrations should be modeled to determine whether or not the project would cause an exceedance of the federal or state standard. Table 4.3-3 illustrates the tiers for determining the significance of a project's impacts on air quality.

**Table 4.3-3. Significance Thresholds for Operational Emissions**

<b>Pollutant</b>		<b>Tier 1</b>	<b>Tier 2</b>	<b>Tier 3</b>
ROG, NO <sub>x</sub> , SO <sub>2</sub> , PM <sub>10</sub>	< 10 lbs/day	10 lbs/day	25 lbs/day	25 tons/year
Carbon Monoxide	< 550 lbs/day		550 lbs/day	
Significance	Insignificant	Potentially Significant	Significant	Significant
Environmental Document	Negative Declaration (ND)	Mitigated ND	Mitigated ND or EIR	EIR

Therefore, if the Tier 1 thresholds are exceeded, appropriate mitigation measures contained in the SLO APCD CEQA Handbook are recommended to be incorporated in the project. If the Tier 2 thresholds are exceeded, all feasible mitigation measures must be incorporated into the project.

Pursuant to the State CEQA Guidelines, air quality impacts related to the proposed Specific Plan would be considered significant if the project would:

- *Conflict with or obstruct implementation of the applicable Clean Air Plan;*
- *Violate any stationary source air quality standard or contribute to an existing or projected air quality violation;*
- *Result in a net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);*
- *Create or contribute to a non-stationary source "hot spot" (primarily carbon monoxide);*
- *Expose sensitive receptors to substantial pollutant concentrations; and/or*
- *Create objectionable odors affecting a substantial number of people.*

**b. Project Impacts.**

**Impact AQ-1**    **Development pursuant to the Specific Plan has the potential to generate demolition and construction related emissions. Although these emissions cannot be quantified until development plans are proposed, since San Luis Obispo County is currently a non-attainment area for PM<sub>10</sub>, the Specific Plan would contribute to this existing significant condition. Therefore, construction related emissions are considered to be Class II, significant but mitigable.**



Demolition and construction in the Specific Plan area would result in temporary air quality impacts due to the use of heavy construction equipment and generation of fugitive dust. Construction activities are expected to result in temporary short-term air quality impacts. These impacts are associated with construction equipment and dust that will be generated during grading and site preparation. Emissions will also be generated by construction employees traveling to and from the construction site as well as trucks hauling materials to and from the site. Specific Plan grading includes earthwork for construction of the roads, driveways, and building pads.

Although the Specific Plan describes a maximum buildout potential in terms of dwelling units and commercial square footage, it is difficult to predict with certainty the quantity of construction activity that will take place at any given time. Nevertheless, since San Luis Obispo County violates the state standards for PM<sub>10</sub>, the minimal amount of dust precursors generated from construction activities are considered to be potentially significant and mitigation measures are required.

The demolition of any structures onsite would create emissions and road dust from trucks hauling debris from the site. In addition, many on-site structures that would be demolished could potentially contain asbestos-containing materials (ACMs) and/or lead-based paint (LBP) due to the age (i.e., constructed before 1978). This may pose a potential health risk to people if not properly handled and disposed. This health risk would be considered a potentially significant impact unless mitigation is incorporated. Additionally, grading activities may uncover naturally occurring asbestos. Measures must be taken to assure proper handling if asbestos is present.

Mitigation Measures. Because all construction projects can produce nuisance dust emissions, dust mitigation measures are required for all construction activities. The following mitigation measures are recommended to minimize emissions and to reduce the amount of dust that drifts onto adjacent properties. These measures would apply to both tract grading and development of individual lots subsequent to Specific Plan approval.

- AQ-1(a)**      **Application of BACT (Best Available Control Technologies).** The following measures shall be implemented to reduce combustion emissions from construction equipment, for development pursuant to the Specific Plan.
- Project applicants shall submit a grading plan for review by the APCD staff showing the area to be disturbed. A description of construction equipment that will be used and pollution reduction measures that will be implemented shall be provided with grading plans. Upon approval by the APCD, appropriate BACT features shall be applied. The application of these features shall occur prior to project construction.
  - Project applicants shall be required to ensure that all construction equipment and portable engines are properly maintained and tuned according to manufacturer's specifications.



- Project applicants shall be required to ensure that off-road and portable diesel powered equipment, including but not limited to bulldozers, graders, cranes, loaders, scrapers, backhoes, generator sets, compressors, auxiliary power units, shall be fueled exclusively with CARB motor vehicle diesel fuel (non-taxed off-road diesel is acceptable).

**Plan Requirements and Timing:** Project applicants shall identify for review by Community Development Department and APCD staff if any of the above BACT's are considered infeasible and notify the Community Development Department, by letter, and clearly state why any of the measures of are considered infeasible. The Community Development Department, in consultation with the San Luis Obispo County APCD would then make a final determination as to whether the measure is infeasible. **Monitoring:** The grading inspector shall perform periodic site inspections.

**AQ-1(b)**

**Dust Control.** The following measures shall be implemented in conjunction with grading and other development activity pursuant to the Specific Plan to reduce PM10 emissions during project construction:

- Reduce the amount of the disturbed area where possible.
- Use water trucks or sprinkler systems in sufficient quantities to prevent airborne dust from leaving the site. Water shall be applied depending on conditions. Reclaimed (non-potable) water should be used whenever possible.
- All dirt-stock-pile areas shall be sprayed daily and/or covered as needed.
- Permanent dust control measures shall be identified in the approved project revegetation and landscape plans and implemented as soon as possible following completion of any soil disturbing activities.
- Exposed ground areas that are planned to be reworked at dates greater than one month after initial grading shall be sown with a fast-germinating native grass seed and watered until vegetation is established.
- All disturbed soil areas not subject to revegetation shall be stabilized using approved chemical soil binders, jute netting, or other methods approved by the City Engineer.
- All paved areas (roadways, driveways, sidewalks, etc.) shall be completed as soon as feasible. In addition, building pads shall be



laid as soon as possible after grading unless seeding or soil binders are used.

- Vehicle speed for all construction vehicles shall not exceed 15 mph on any unpaved surface at the construction site.
- All trucks hauling dirt, sand, soil or other loose materials shall be covered or shall maintain at least two feet of freeboard (minimum vertical distance between top of load and top of trailer) in accordance with CVC Section 23114.
- Install wheel washers where vehicles enter and exit unpaved roads onto streets, or wash off trucks and equipment leaving the site.
- Sweep streets at the end of each day if visible soil material is carried onto adjacent paved roads. Water sweepers with reclaimed water shall be used where feasible.

**Plan Requirements and Timing:** Conditions shall be adhered to throughout all grading and construction periods for all development subsequent to Specific Plan approval. Prior to land use clearance, the applicant shall include, as a note on a separate informational sheet to be recorded with any map, the aforementioned PM<sub>10</sub> emissions requirements. All requirements shall be shown on grading and building plans. **Monitoring:** Planning and Building inspectors shall perform periodic spot checks during grading and construction. APCD inspectors shall respond to nuisance complaints.

**AQ-1(c)**

**Cover Stockpiled Soils.** If importation, exportation, or stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting material shall be tarped from the point of origin to trip end.

**Plan Requirements and Timing:** Conditions shall be adhered to throughout all grading and construction periods for all Specific Plan components. **Monitoring:** Planning and Building inspectors shall perform periodic spot checks during grading and construction. APCD inspectors shall respond to nuisance complaints.

**AQ-1(d)**

**Dust Control Monitor.** Contractors or builders associated with projects subsequent to Specific Plan approval shall designate a person or persons to monitor the dust control program and to order increased watering as necessary to prevent transport of dust off-site. Their duties shall include holiday and weekend periods when work may not be in progress.



**Plan Requirements and Timing:** The name and telephone number of such persons shall be provided to the APCD. The dust monitor shall be designated prior to approval of a Land Use Permit. **Monitoring:** The Community Development Department shall contact the designated monitor as necessary to ensure compliance with dust control measures.

**AQ-1(e)**

**Asbestos Sampling.** Prior to demolition work, areas of the on-site residential structures shall be sampled as part of an asbestos survey in compliance with the National Emission Standards for Hazardous Air Pollutants (NESHAP). If asbestos is found in any building, asbestos-related work, including demolition, involving 100 square feet or more of asbestos containing materials (ACMs) shall be performed by a licensed asbestos abatement contractor under the supervision of a certified asbestos consultant and asbestos shall be removed and disposed of in compliance with applicable State laws. Regardless of whether asbestos is identified in any building, prior to demolition of existing structures the SLOAPCD shall be notified and an SLOAPCD Notification of Demolition and Renovation Checklist shall be submitted to both SLOAPCD and the Community Development Department.

Prior to construction, an evaluation of areas of serpentinite outcrops or serpentine rich soils shall be made by a qualified professional such as a Certified Industrial Hygienist (CIH) as to whether such conditions represent a threat to human health. If so, a safety program shall be initiated and shall include providing personal protective equipment to workers and a worker education program. The Naturally Occurring Asbestos (NOA) ATCM requirements may include but are not limited to 1) an Asbestos Dust Mitigation Plan which must be approved by the APCD before construction begins, and 2) an Asbestos Health and Safety Program will also be required.

**Plan Requirements and Timing:** Asbestos sampling and SLOAPCD notification shall occur prior to issuance of demolition and construction permits. ACM supervision, if necessary, shall be undertaken by a licensed asbestos consultant approved by the SLOAPCD and the Community Development Department. **Monitoring:** The SLOAPCD will review the demolition and construction notification and the Community Development Department shall review the asbestos sampling prior to initiation of demolition activities. The Community Development Department shall field verify ACM supervision during demolition and construction activities.

**AQ-1(f)**

**Paint Waste Evaluation.** If during demolition of any existing buildings within the Specific Plan area, paint is separated from the building material (e.g. chemically or physically), the paint waste will be evaluated independently from the building material by a qualified hazardous materials inspector to determine its proper management. All hazardous materials shall be handled and disposed in accordance



with local, state and federal regulations. According to the Department of Toxic Substances Control (DTSC), if paint is not removed from the building material during demolition (and is not chipping or peeling), the material can be disposed of as construction debris (a non-hazardous waste). The landfill operator will be contacted prior to disposal of building material debris to determine any specific requirements the landfill may have regarding the disposal of lead-based paint materials. The disposal of demolition debris shall comply with any such requirements.

**Plan Requirements and Timing:** Evaluation and management of LBP materials shall be undertaken by a qualified hazardous materials inspector during demolition activities. All identified LBP materials shall be disposed of prior to issuance of occupancy clearance.

**Monitoring:** Community Development Department shall field verify proper LBP management during demolition activities.

Residual Impacts. The above recommended mitigation measures would reduce impacts related to construction activity to a less than significant level.

**Impact AQ-2**    **Development under the Specific Plan would result in the emission of air pollutants, including the ozone precursors ROC and NO<sub>x</sub>, and PM<sub>10</sub> primarily from mobile emissions and entrained road dust. Because emissions would exceed the APCD significance thresholds, the Specific Plan's operational impact is considered Class I, significant and unavoidable.**

Based on the San Luis Obispo County APCD criteria, a project that generates more than 10 lbs/day of ROC, NO<sub>x</sub> or PM<sub>10</sub> would exceed the County's significance thresholds. Project-related vehicle emissions were calculated using the URBEMIS 2002 air quality model. The model assumed a buildout year of 2007, which is a reasonable worst case scenario.

Table 4.3-4 summarizes the emissions from vehicular traffic associated with the proposed development. Assumptions used in the mobile emissions analysis included a project fleet mix of 75% light duty automobiles; 10% light-duty trucks; 3% medium-duty trucks; 7% heavy-duty trucks; 2% urban buses; and 3% motorcycles. Average trip type, length, and speed and cold/hot start default percentages provided with the model were used.

The APCD CEQA Air Quality Handbook requires an additional calculation of long-term PM<sub>10</sub> emissions be prepared to account for PM<sub>10</sub> emissions from re-entrained road dust as vehicles travel on roadway surfaces, which is not captured in the URBEMIS 2002 model.

The Specific Plan describes potential ADT generation (refer to Section 4.2, *Transportation and Circulation*); however, it is difficult to predict with reasonable amount of certainty the quantity of roadways that will be built. Development of the Specific Plan may occur in small increments or in large pieces; therefore, the future construction emissions can not be quantified (per §15121 which states that "if, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact"). Given that the Specific Plan already exceeds the standards for PM<sub>10</sub> and the



entrained road dust would just make it greater, the PM<sub>10</sub> emissions are considered to be potentially significant and mitigation measures are required.

**Table 4.3-4. Area and Operational Emissions Associated With Specific Plan**

<b>Emission Source</b>	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>PM<sub>10</sub></b>
Operational Emissions	398.43	525.70	5,158.37	3.96	392.14
Area Emissions	74.40	19.83	28.41	0.41	0.08
<b>Total</b>	<b>472.84</b>	<b>545.53</b>	<b>5,186.78</b>	<b>4.37</b>	<b>392.23</b>
<i>APCD Thresholds</i>					
<i>Tier 2</i>	<i>25 lbs/day</i>	<i>25 lbs/day</i>	<i>550<sup>1</sup> lbs/day or LOS degradation</i>	<i>25 lbs/day</i>	<i>25 lbs/day</i>
<i>Combined Emissions Exceed Thresholds?</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>

<sup>1</sup> Exceedance requires modeling to determine significance.  
 See Appendix D for calculations.

Full buildout under the Specific Plan is projected to generate 472.84 lbs/day of ROG, 545.53 lbs/day of NO<sub>x</sub>, and 5,186.78 lbs/day of CO, 4.37 lbs/day of SO<sub>x</sub>, 392.23 lbs/day of PM<sub>10</sub> as a result of operational emissions associated with project vehicular traffic and electrical and natural gas usage. When compared to the County’s thresholds of significance, the project would exceed the 25 pounds per day Tier 2 threshold for ROC , NOx and PM10 and is therefore considered to have a potentially significant impact. (Note that project impacts related to CO are described in Impact AQ-4).

It should be noted, however, that the emission estimates provided in accordance with recommended APCD methodology assume that all vehicle trips associated with the Specific Plan would be new to the region, and that no mitigation measures are instituted. In reality, many of the trips associated with the commercial component may be diverted trips from other existing destinations in the Paso Robles area. In some cases, the presence of these new facilities may actually shorten trip lengths for area residents, thereby offsetting a portion of the increase in emissions associated with the Specific Plan.

Mitigation Measures. The Specific Plan includes and bikeways/pedestrian walkways (Policies C-9, C-10 and C-11), which are consistent with APCD goals. Transit stops would be provided in the Specific Plan area as appropriate (pursuant to Policy C-13). The Specific Plan also encourages the use of solar energy sources for residential uses (Specific Plan Policy LU-26d). The Specific Plan includes provisions for cluster development (Policy LU-23) to reduce vehicle trips within neighborhoods, and requires pedestrian connections to neighborhood commercial development for vehicular transportation. These policies would substantially reduce potential impacts.

The following mitigation measures are recommended to further reduce impacts:

- AQ-2(a) Energy Efficiency.** The building energy efficiency rating shall be what is required by Title 24 requirements for all buildings within the Specific Plan Area. The following energy-conserving techniques should be incorporated in developments pursuant to the Specific Plan to the extent feasible (as determined by the Community Development



Department staff); increase walls and attic insulation in accordance with Title 24 requirements; orient buildings to maximize natural heating and cooling; plant shade trees along southern and western exposures of buildings to reduce summer cooling needs; use solar water heaters if possible; and use double-paned windows.

**Plan Requirements and Timing.** To the extent feasible, developers of the Specific Plan areas should incorporate the listed provisions into development plans. **Monitoring.** The Community Development Department shall conduct a final site inspection to ensure development is in accordance with approved plans prior to occupancy clearance. Community Development Department staff shall verify installation in accordance with approved building plans.

- AQ-2(b) Bicycle Parking.** All multi-family, commercial, and recreational sites shall include bicycle parking. At least one bicycle parking space for every 10 vehicle spaces is required.

**Plan Requirements and Timing.** Future developers of the Specific Plan components shall incorporate the listed provision into development plans. **Monitoring.** The Community Development Department shall conduct a site inspection to ensure development is in accordance with approved plans prior to occupancy clearance. Community Development Department staff shall verify installation in accordance with approved building plans.

- AQ-2(c) Transit.** Bus turnouts with direct pedestrian access shall be installed at all bus stops that may be constructed with the Specific Plan area.

**Plan Requirements and Timing.** Future developers of the Specific Plan components shall incorporate the listed provision into development plans. **Monitoring.** The Community Development Department shall conduct a site inspection to ensure development is in accordance with approved plans prior to occupancy clearance. Community Development Department staff shall verify installation in accordance with approved building plans.

- AQ-2(d) Telecommuting.** All new homes within the Specific Plan Area shall be constructed with internal wiring/cabling that allows telecommuting, teleconferencing, and telelearning to occur simultaneously in at least three locations in each home.

**Plan Requirements and Timing.** Future developers of the Specific Plan components shall incorporate the listed provision into development plans. **Monitoring.** The Community



Development Department shall conduct a site inspection to ensure development is in accordance with approved plans prior to occupancy clearance. Community Development Department staff shall verify installation in accordance with approved building plans.

Residual Impacts. Emission reductions associated with these recommended mitigation measures, in combination with the features described above, are expected to be less than 5% of the Specific Plan's daily emissions of PM<sub>10</sub>, ROC and NO<sub>x</sub>. No other mitigation measures available appear sufficient or feasible to further reduce Specific Plan emissions to a level below the thresholds. Therefore, because emissions would be expected to remain well above San Luis Obispo APCD thresholds, the residual impact to regional air quality is considered significant and unavoidable.

**Impact AQ-3    The Specific Plan would be considered inconsistent with the San Luis Obispo APCD's 2001 Clean Air Plan because the Specific Plan exceeds the thresholds set in the CAP. This would be a Class I, significant and unavoidable impact on air quality.**

According to the APCD Guidelines, a significant impact finding should be made if: (1) a project would be inconsistent with the population projections used in developing the Clean Air Plan (CAP); (2) a project would cause a rate of increase in vehicle trips and miles traveled that exceeds the rate of population growth for the same area; and/or (3) a project does not incorporate all applicable land use and transportation control measures from the CAP to the maximum extent feasible. The consistency of the Specific Plan with each of these thresholds is discussed in the paragraphs below.

*Population Projection Consistency.* The 2001 CAP population statistics and projections are based on California Department of Finance (DOF) population estimates for January 1, 1999, local evaluation of historical growth rates, nation, state, and local economic forecasts, and the availability of resources to support additional growth. At buildout, the City of Paso Robles would exceed the projection by 1,155 residents (General Plan Update, 2003). Buildout under the Specific Plan would be consistent with the City's General Plan projections. Therefore, since the General Plan is potentially inconsistent with the CAP, so would the Specific Plan. This inconsistency was analyzed in the 2003 Paso Robles General Plan Update and identified as a Class I, significant and unavoidable impact.

The buildout potential proposed under the Chandler Ranch Area Specific Plan could add up to 1,439 residential units and 280,500 square feet of commercial development, as well as a school to an otherwise undeveloped area. The increase in population will result in an increase in vehicular traffic, which may result in the marginal degradation of the air quality of the North County air basin. Therefore, the population projections of the Specific Plan would be inconsistent with those of the CAP.

*Implementation of Transportation Control Measures (TCMs) and Land Use Planning Strategies (LUPS).* The Specific Plan implements the following TCMs and LUPS listed in Table 4.3-5 below.



**Table 4.3-5 Implementation of Transportation Control Measures and Land Use Planning Strategies**

<b>Transportation Control Measures and Land Use Planning Strategies</b>	<b>Chandler Ranch Specific Plan Policy that Implements the Measure or Strategy</b>
T-2A (Local Transit System Improvements)	Policy C-13. Bus Facilities. Require new development in the Chandler Ranch Area to provide bus stops, shelters, and turnouts where appropriate, to be coordinated with local and regional transit providers. Architectural designs may be required to be modified from the City standard to be consistent with the design of adjacent developments.
T-2B (Regional Public Transit Improvements)	Policy C-13. Bus Facilities. See above.
T-3 (Bicycling and Bikeway Enhancements)	Policy C-9. Trail Layout. The Specific Plan establishes general trail locations and patterns, which are intended to connect development areas via the central open space corridor. To the extent feasible, trails should also be provided within individual development areas, to provide connections between residential areas, schools and commercial areas that minimize exposure to vehicular traffic. Also refer to subarea specific standards in Section 3.5.  With the exception of some “trail connector” segments, trails must comply with California Building Code Standards (Section 1132B-Outdoor occupancies) and applicable ADA standards. All trails require design approval by a licensed architect or the City Engineer.
T-6 (Traffic Flow Improvements)	Policy C-1 Circulation Plan. The locations and patterns of arterial and collector streets are shown in the Specific Plan. The network of local streets within individual developments shall be subject to City review and approval.
L-1 (Planning Compact Communities)	Policy LU-2 Housing. Provide a variety of housing types varying in density, as described in the Specific Plan.  Policy LU-4. Commercial Uses. Provide a variety of commercial land uses that address neighborhood and visitor-serving needs, in a manner consistent with the City’s General Plan and Economic Strategy.  Policy C-13 Bus Facilities.
L-2 (Providing for Mixed Land Use)	Policy LU-2 Housing. Policy LU-4 Commercial Uses.
L-3 (Balancing Jobs and Housing)	The Specific Plan includes commercial area that could support up to 640 jobs <sup>1</sup> and area for up to 1,439 residential units which would be expected to generate 3,885 residents <sup>2</sup> .

<sup>1</sup> Determined by using a factor of 500 building square feet per worker for commercial uses, plus an estimated 80 jobs associated with recreational uses planned within subarea 4.

<sup>2</sup> Based on current City household sizes (2.7 persons per unit; U.S. Census 2000).

Therefore, the Specific Plan would be consistent with most of the applicable transportation control measures and land use planning strategies. The Specific Plan would provide housing opportunities for up to 3,885 residents, and commercial area sufficient to support an estimated 561 new jobs. The City currently has a large inventory of undeveloped commercial and industrial land. New residential opportunities within the Chandler Ranch Area Specific Plan would likely increase future demand for development of commercial and industrial land in the City. Because there is sufficient non-residential land designated in the City, it is anticipated that the balance of housing and jobs would be maintained by market forces as Chandler Ranch



develops over time. Therefore; the Specific Plan is considered consistent with the provision of the CAP related to balancing jobs and housing opportunities.

**Vehicle Trip Rate of Increase and Miles Traveled.** The proposed Specific Plan would add up to 3,885 additional residents to the City of Paso Robles. This increase in population would generate 19,042 trips per day based on the proposed 1,439 residential units and 280,500 square feet of commercial development to an otherwise undeveloped area. This increase in trips would represent a moderate percentage of total trips on roadways in the Specific Plan vicinity. However, it should be noted that many of the commercial trips would be diverted from existing destinations within the City, particularly when new commercial uses would be more convenient to area residents. In addition, neighborhood commercial uses may divert longer trips that would otherwise occur to serve the needs of nearby residential uses.

Typically, it is inconsistent with the CAP if development of such a magnitude occurred outside urban areas, such that trip lengths were substantially increased. However, the Chandler Ranch area is within the City of Paso Robles, and is consistent with the City's General Plan which calls for compact development patterns. Therefore, development within the area would be consistent with the CAP goal of limiting trip lengths to commute destinations.

**Mitigation Measures.** The incorporation of Mitigation Measure AQ-3(a) (similar to a TCM measure from the CAP) is recommended to increase consistency with the CAP.

**AQ-3(a) TMP Program.** Applicants for commercial projects under the Specific Plan shall develop and operate an employer-based Transportation Management Program per Clean Air Plan TCM T-1C, which incorporates the following provisions:

- a. Bicycle racks and/or bicycle lockers at a ratio of 1 bicycle parking space for every 10 car parking spaces shall be installed for customers and employees, or at a ratio otherwise acceptable the SLOAPCD to be determined prior to occupancy clearance; and
- b. Carpool, vanpool and transit information shall be posted in employee break/lunch areas.

**Plan Requirements and Timing.** Future commercial developers under the Specific Plan shall incorporate the listed provisions into development plans or shall submit proof of unfeasibility prior to initiation of construction. **Monitoring.** The Community Development Department shall site inspect to ensure development is in accordance with approved plans prior to occupancy clearance. Community Development Department staff shall verify installation in accordance with approved building plans.

**AQ-3(b) Trip Reduction Measures.** To reduce overall project trip generation and associated air contaminant emissions, commercial tenants within the Specific Plan area will be required to establish and maintain



employee trip reduction programs that may include, but are not limited to, the following elements:

- Employ or appoint an Employee Transportation Coordinator.
- Implement a Transportation Choices Program. Project applicants should work with the Transportation Choices Coalition partners for free consulting services on how to start and maintain a program. Contact SLO Regional Rideshare at 541-2277.
- Provide for shuttle/mini bus service.
- Provide incentives to employees to carpool/vanpool, take public transportation, telecommute, walk, bike, etc.
- Implement compressed work schedules.
- Implement telecommuting program.
- Implement a lunchtime shuttle to reduce single occupant vehicle trips.
- Participate in an employee "flash-pass" program, which provides free travel on transit buses.
- Include teleconferencing capabilities, such as web cams or satellite linkage, which will allow employees to attend meetings remotely without requiring them to travel out of the area.
- If the development is a grocery store or large retail facility, provide home delivery service for customers.

The specific components of a trip reduction program that will be required for a particular commercial development will be at the discretion of the Community Development Department, based on the recommendations of the SLO APCD.

**Plan Requirements and Timing.** Future commercial developers under the Specific Plan shall incorporate the listed provisions into development plans or shall submit proof of unfeasibility prior to initiation of construction. **Monitoring.** The Community Development Department shall site inspect to ensure development is in accordance with approved plans prior to occupancy clearance. Community Development Department staff shall verify installation in accordance with approved building plans.

Residual Impacts. The implementation of the above mitigation measures would reduce impacts. However, since no mitigation measures are feasible to sufficiently reduce vehicle miles traveled associated with the project due to the distance between the Specific Plan and City services, impacts related to consistency with the CAP would remain Class I, *significant and unavoidable*.



**c. Cumulative Impacts.**

**Impact AQ-4 The Specific Plan traffic generation, together with other cumulative traffic associated with foreseeable development would not result in CO “hotspots”. Therefore, the Specific Plan’s potential to generate CO “hotspots” is considered to be a Class III, less than significant impact.**

Areas with high vehicle density, such as congested intersections, have the potential to result in high levels of CO, known as CO hot spots. Such hot spots are defined as locations where the ambient CO concentrations exceed the State (20 ppm) or Federal (35 ppm) ambient air quality standard. The CALINE4 air pollutant dispersion computer model developed by Caltrans (1989) was used to analyze the presence of potential hot spots. Land uses typically considered sensitive receptors are schools, hospitals, and senior centers. Spring St./1st St./Niblick Road intersection in the Specific Plan vicinity that have sensitive receptors located nearby that would experience LOS E. CALINE4 modeling was conducted for the closest sensitive receptor for this intersection.

CALINE4 modeling was conducted to include wintertime meteorological conditions and traffic emissions along roadways in the site vicinity. The model assumed stability Class F and a temperature of 40 degrees Fahrenheit (4.4 C). The CALINE4 model inputs and outputs are included in Appendix D. Table 4.3-6 shows the CO concentration at the Spring St./1st St./Niblick Road intersection. One receptor location was modeled at the intersection of Niblick Road and Spring Street to represent the nearest residential land uses. The first receptor was located approximately ten feet from the northeast corner of the intersection.

The existing background CO concentrations were taken from the San Luis Obispo monitoring station. The existing background CO levels were added to the worst case meteorological 1 hour projections to account for the existing background carbon monoxide levels. It should be noted that the background CO at the Specific Plan is likely lower than the background CO levels at the San Luis Obispo station, and therefore, this is considered to be a worst case assumption.

**Table 4.3-6. Existing Carbon Monoxide Concentrations**

Receptor	Carbon Monoxide Concentration (ppm) 1 Hour
Northeast Corner of Intersection of Niblick and Spring	12.2 ppm
State Standard	20 ppm
Federal Standard	35 ppm
Exceedances	No

*NOTE: The CO concentrations include the ambient concentrations of 5.3 ppm for 1-hour levels, and 2.7 ppm for 8-hour levels.*

The highest P.M. peak hour CO concentration at the intersection of Spring St./1st St./Niblick Road is projected to be 12.2 ppm. This modeled concentrations include the second highest annual maximum at the nearest monitoring station, per the guidelines contained in Section 2200 of the *Air Quality Technical Analysis Notes* (Caltrans, June 1988). These concentrations are substantially less than both the one-hour state standard of 20 ppm and the one-hour federal



standard of 35 ppm. Therefore, the Specific Plan would have a less than significant impact on CO concentrations.

Mitigation Measures. None required.

Residual Impacts. Impacts would be less than significant.

*Other Cumulative Impacts.* The South Central Coast Air Basin is currently in non-attainment for state PM<sub>10</sub> standards. The Specific Plan, in combination with pending development elsewhere in the City of Paso Robles planning area, could contribute to the cumulative degradation of regional air quality. Increases in automobile traffic, resulting from General Plan buildout would cause increases in ozone precursor and PM<sub>10</sub> emissions. In addition, cumulative construction-related emissions would contribute to the cumulative exceedance of the state and federal ozone standard. Because the Specific Plan would incrementally add to the exceedance of these standards, cumulative impacts would be Class I, *significant and unavoidable*.

