

**5.4 AIR QUALITY****5.4.1 Significance Criteria**

Standards of significance were derived from the CEQA Guidelines, the AVAQMD, and the KCAPCD.

Project-related air quality impacts are considered significant by the AVAQMD if they:

- Generate total emissions (direct and indirect) exceeding the thresholds provided in Table 5.4-1; and/or,
- Generate a violation of any ambient air quality standard when added to the local background; and/or,
- Do not conform with the applicable attainment or maintenance plan(s); and/or,
- Expose sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 1 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 0.1

**TABLE 5.4-1  
AIR QUALITY SIGNIFICANCE THRESHOLDS**

Pollutant	AVAQMD		KCAPCD
	Thresholds Total Tons	Thresholds Pounds per Day	Thresholds Pounds per Day
NO <sub>x</sub>	25	137	137 <sup>1</sup>
VOC	25	137	137 <sup>1</sup>
PM <sub>10</sub>	15	82	
SO <sub>x</sub>	25	137	
CO	100	548	

<sup>1</sup> Emissions from motor vehicle trips (indirect sources only).

Project-related air quality impacts are considered significant by the KCAPCD if they:

- Emit (from all project sources subject to KCAPCD Rule 201) more than offsets-trigger levels set forth in Subsection III.B.3. of KCAPCD's Rule 210.1 (New and Modified Source Review Rule)
- Emit more than 137 pounds per day of NO<sub>x</sub> or Reactive Organic Compounds from motor vehicle trips (indirect sources only)
- Cause or contribute to an exceedance of any California or National Ambient Air Quality Standard

- Exceed the District health risk public notification thresholds adopted by the KCAPCD Board
- Are inconsistent with adopted federal and state Air Quality Attainment Plans

Table 5.4-1 provides the thresholds of significance, by pollutant, for the AVAQMD and KCAPCD.

### **5.4.2 Construction Impacts**

PM<sub>10</sub> is the primary air-pollutant source from T/L and substation construction activities. In addition to PM<sub>10</sub>, there are pollutants associated with construction-equipment usage, and with vehicular emissions from transporting workers, equipment, and supplies. With implementation of the APMs listed in Section 5.4.4, short-term air quality impacts associated with construction of Segments 2 and 3 of the Antelope Transmission Project would be expected to be less than significant.

The total estimated construction emissions for Segments 2 and 3 are summarized in Table 5.4-2. The total estimated construction emissions for Segments 2 and 3 in the AVAQMD and the KCAPCD are also itemized in Table 5.4-2. The emission estimate calculation spreadsheets that were developed for this project are presented in Appendix H (Air Quality Emission Calculations). The estimates are worst-case and assume no emission controls are in place.

A comparison of the estimated project emissions to the applicable AVAQMD and KCAPCD thresholds of significance indicate that the daily thresholds are exceeded for all pollutants except SO<sub>2</sub> and VOC. As noted previously, the emission estimates are worst-case and assume no controls. With implementation of the applicant-proposed measures presented in Section 5.4.4.1, actual project-related emissions would be expected to be substantially less. No long-term, adverse project-related air quality impacts would occur.

### **5.4.3 Operation**

Once constructed and operating, the project would not result in long-term air emissions from any stationary sources. Intermittent vehicular and helicopter emissions associated with maintenance and repair of the project components would be the only sources of emissions during the operational phase.

### **5.4.4 Mitigation Measures**

#### **5.4.4.1 Construction Phase**

APMs for combustion emissions and fugitive dust include:

**TABLE 5.4-2  
TOTAL ESTIMATED PROJECT EMISSIONS  
FOR SEGMENTS 2 AND 3<sup>1</sup>**

Emission Category	TOTAL ESTIMATED PROJECT EMISSIONS - SEGMENT 2									
	NO <sub>x</sub>		PM <sub>10</sub>		SO <sub>2</sub>		CO		VOC	
	lbs/day	Tons	lbs/day	Tons	lbs/day	Tons	lbs/day	Tons	lbs/day	Tons
Construction Equipment Exhaust Emissions	191.65	6.05	15.29	0.47	18.91	0.60	229.08	6.56	26.17	0.82
Fugitive Dust from Construction			173.03	4.42						
<b>Segment 2 Total Construction Emissions</b>	<b>191.65</b>	<b>6.05</b>	<b>188.32</b>	<b>4.89</b>	<b>18.91</b>	<b>0.60</b>	<b>229.08</b>	<b>6.56</b>	<b>26.17</b>	<b>0.82</b>
	TOTAL ESTIMATED PROJECT EMISSIONS - SEGMENT 3									
	NO <sub>x</sub>		PM <sub>10</sub>		SO <sub>2</sub>		CO		VOC	
	lbs/day	Tons	lbs/day	Tons	lbs/day	Tons	lbs/day	Tons	lbs/day	Tons
Construction Equipment Exhaust Emissions	440.29	16.12	34.82	1.24	42.95	1.59	818.29	49.28	58.18	2.23
Fugitive Dust from Construction			439.29	11.89						
<b>Segment 3 Total Construction Emissions</b>	<b>440.29</b>	<b>16.12</b>	<b>474.11</b>	<b>13.13</b>	<b>42.95</b>	<b>1.59</b>	<b>818.29</b>	<b>49.28</b>	<b>58.18</b>	<b>2.23</b>
<b>AVAQMD Total:</b>	84.59	3.64	104.85	2.96	8.35	0.36	194.90	14.37	11.96	0.52
<b>KCAPCD Total:</b>	355.71	12.47	369.26	10.17	34.60	1.23	623.39	34.91	46.21	1.71

<sup>1</sup> Notes:

- (1) Due to the variety of helicopter types and construction methods, it is not possible to specify the helicopter type or assess emissions in advance of construction.
- (2) Construction exhaust emission factors obtained from the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook, Tables A9-8-A and A9-8-B.
- (3) Fugitive Dust PM<sub>10</sub> emission factors for dirt pushing operations assumed 15 percent for moisture content, SCAQMD CEQA Air Quality Handbook, Table A9-9-F.
- (4) Paved and Unpaved Road Dust emission calculations applied emission factors from AP-42, Chapters 13.2.1 and 13.2.2, (December 2003).
- (5) The AVAQMD portion of the Segment 3, Antelope Substation to Substation One T/L construction is assumed to be 38 percent or 9.6 miles of the 25.6-mile-long segment.
- (6) Emissions from demolition and relocation of 4.4 miles of 66 kV subtransmission line south of the Antelope Substation along Segment 2 are not included.
- (7) The KCAPCD portion of the Segment 3, Antelope to Substation One T/L construction is assumed to be 62 percent or 16 miles of the 25.6-mile-long segment.
- (8) Refer to Appendix H for emission calculation spreadsheets.

**APM AQ-1.** Use of low sulfur diesel fuel.

**APM AQ-2.** Use of clean-burning on-road and off-road diesel engines. Where feasible, heavy-duty diesel powered construction equipment manufactured after 1996 (with federally-mandated “clean” diesel engines) would be utilized.

**APM AQ-3.** Construction workers would carpool when possible.

**APM AQ-4.** Vehicle idling time would be minimized.

**APM AQ-5.** Water all active construction areas, access roads, and staging areas as needed.

**APM AQ-6.** Cover all trucks hauling soil and other loose material, or require at least 2 feet of freeboard.

**APM AQ-7.** Construction vehicles would use paved roads to access the construction site when possible.

**APM AQ-8.** Limit vehicle speeds to 15 mph on unpaved roads.

**APM AQ-9.** Clean paved streets daily if visible soil material is carried onto adjacent public streets.

**APM AQ-10.** Apply soil stabilizers to inactive construction areas on an as-needed basis.

**APM AQ-11.** Enclose, cover, water twice daily, or add soil binders to exposed stockpiles of soil and other excavated materials.

**APM AQ-12.** Replant vegetation in disturbed areas following the completion of construction.

#### **5.4.4.2 Operations Phase**

Because air-quality impacts during operations would be minor and less than significant, mitigation measures are not required.