3. AIR QUALITY

Would the project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less-Than-Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	■	☐	☐
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	■	☐
d. Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
e. Create objectionable odors affecting a substantial number of people?	☐	☐	☐	■

Existing Conditions

The alignment is located in the San Francisco Bay Area Air Basin, which encompasses the nine-county San Francisco Bay Area extending from Napa County to Santa Clara County. Air pollutant emissions within the Bay Area are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources are usually subject to a permit to operate from the Bay Area Air Quality Management District (BAAQMD), occur at a specific identified location, and are usually associated with manufacturing and industry. Examples of point sources are boilers or combustion equipment that produce electricity or generate heat, such as heating, ventilation, and air conditioning (HVAC) units. Area sources are widely distributed and produce many small emissions, and they do not require permits to operate from the BAAQMD. Examples of area sources include residential and commercial water heaters, painting operations, portable generators, lawn mowers, agricultural fields, landfills, and consumer products, such as barbeque lighter fluid and hair spray, the area-wide use of which contributes to regional air pollution. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions and are classified as either on-road or off-road. On-road sources are those that are legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, racecars, and construction vehicles. Mobile sources account for the majority of the air pollutant emissions within the Bay Area. Air pollutants can also be generated by the natural environment such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

Both the federal and State governments have established ambient air quality standards for outdoor concentrations of specific pollutants, referred to as "criteria pollutants," in order to protect public health. The national and State ambient air quality standards have been set at concentration levels to protect the most sensitive persons from illness or discomfort with a margin of safety. The standards currently in effect in California are shown in Table B.3-1. The BAAQMD is responsible for bringing air quality within the basin into attainment with the national and State ambient air quality standards.

Table B.3-1
National and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]	National Standards[2]
Ozone (O_3)	8-hour	NS	0.08 ppm[3]
	1-hour	0.09 ppm	0.12 ppm
Carbon Monoxide (CO)	8-hour	9.0 ppm	0.12 ppm
	1-hour	20 ppm	35 ppm
Nitrogen Dioxide (NO_X)	Annual Average	NS	NS
	1-hour	0.25 ppm	0.053 ppm
Sulfur Dioxide (SO_X)	Annual Average	NS	NS
	24-hour	0.05 ppm	0.14 ppm
	1-hour	0.25 ppm	NS
Fine Particulate Matter (PM_{10})	Annual Arithmetic Mean	NS	50 $\mu g/m^3$
	Annual Geometric Mean	30 $\mu g/m^3$	NS
	24-hour	50 $\mu g/m^3$	150 $\mu g/m^3$
Fine Particulate Matter ($PM_{2.5}$) [3]	Annual Arithmetic Mean	NS	15 $\mu g/m^3$
	24-hour	NS	65 $\mu g/m^3$

Source: CARB, 1998; and USEPA, 2001.

Notes:

1 California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, and PM_{10} are values that are not to be exceeded.

2 National standards other than for ozone and those based on annual averages or annual arithmetic means are not to be exceeded more than once a year. For example, the ozone standard is attended if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one.

3 In 1997, USEPA established an 8-hour standard for ozone and annual and 24-hour standards for very fine particulate matter ($PM_{2.5}$). The USEPA's new standards were challenged in court. However, on February 27, 2001, the U.S. Supreme Court unanimously affirmed USEPA's ability to set national air quality standards that protect people from the harmful effects of air pollution. The USEPA is currently reviewing the results of the litigation to determine the approach and schedule for moving forward with implementing the new ozone standard. With regard to $PM_{2.5}$, the USEPA cannot start implementing the 1997 standard until the USEPA and the states collect three years of monitoring data to determine which areas are attaining the standards. The $PM_{2.5}$ monitoring network was completed in 2000. In most cases, areas would not be designated "attainment" or "nonattainment" for $PM_{2.5}$ until 2004-5.

ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; NS = no standard

The criteria pollutants for which national and State standards have been promulgated that are most relevant to air quality planning and regulation in the Bay Area are ozone, fine suspended particulate matter, and carbon monoxide. In addition, toxic air contaminants are of concern in the Bay Area.

Three air quality designations can be given to an area for a particular air pollutant. These designations are as follow:

- Nonattainment, which applies when air quality standards have not been consistently achieved;
- Attainment, which applies when air quality standards have been achieved; and
- Unclassified, which applies when data are insufficient to determine nonattainment or attainment.

Table B.3-2 shows the attainment status for each criteria air pollutant. The entire Bay Area is designated as a national- and State-level nonattainment area for ozone. It is also designated as a State-level nonattainment area for particulate matter ten microns in size or smaller (PM_{10}). The Bay Area meets the national and State standards for all other air pollutants for which it is classified, including the national standard for PM_{10}. It is unclassified for the national standard for 8-hour ozone concentrations and fine particulate matter 2.5 microns or smaller ($PM_{2.5}$).

In an effort to monitor the various regional concentrations of air pollutants, the BAAQMD operates ambient air quality monitoring stations throughout the Bay Area. Table B.3-3 identifies the number of days that State ambient air quality standards were exceeded in San Mateo County during the period of 1996 through 2001. Table B.3-4 shows the ambient air quality concentrations that were measured at the ambient air quality monitoring station in Redwood City during this same timeframe. This station, which is the closest monitoring station to the alignment, provides the most representative data for the project area. The only other monitoring station reporting on all three target pollutants (ozone, PM_{10}, and carbon monoxide) is located in the City of San Francisco on Arkansas Street. Due to its location, this inter-city monitoring station is less representative of the project area than the monitoring station in Redwood City. Each pollutant identified in these tables is discussed below, along with a discussion of toxic air contaminants measured in the area.

Ozone. Ozone levels have remained relatively stable over the last decade. Following five years—1990 through 1994—of attainment, exceedances of the federal and state standards began to recur in 1995. Since 1996, the area has fluctuated in and out of attainment. The nonattainment periods are generally attributed to increases in emissions during the summer months. Urban vehicular emissions, industrial complex emissions, and high ambient temperatures in the basin contribute to summertime ozone generation and subsequent air standard violations.

Within San Mateo County, the State standards were exceeded in 1996 and 2001. The national standards for ozone, both 1-hour and 8-hour, were also exceeded in 1996 and 2001 at the Redwood City monitoring station.

Table B.3-2
Bay Area Air Quality Management District Attainment Status as of January 2002

Pollutant	Averaging Time	State Standards		Federal Standards	
		Concentration	Status	Concentration	Status
Ozone	8-hour	--	---	0.08 ppm	U
	1-hour	0.09 ppm	N	0.12 ppm	N
Carbon monoxide	8-hour	9.0 ppm	A	9.0 ppm	A
	1-hour	20.0 ppm	A	35.0 ppm	A
Nitrogen dioxide	Annual	---	---	0.053 ppm	A
	1-hour	0.25 ppm	A	---	---
Sulfur dioxide	Annual	---	---	80.0 ug/m^3	A
	24-hour	0.04 ppm	A	365.0 ug/m^3	A
	1-hour	0.25 ppm	A	---	---
PM_{10}	Annual arithmetic mean	---	---	50 ug/m^3	A
	Annual geometric mean	30.0 ug/m^3	N	----	----
	24-hour	50.0 ug/m^3	N	150 ug/m^3	U
$PM_{2.5}$	Annual arithmetic mean	---	---	15.0 ug/m^3	U
	24-hour	---	---	65.0 ug/m^3	U

Concentration

ppm - parts per million

ug/m^3 - micrograms per cubic meter

Attainment Status

N - Nonattainment: applies when air quality standards are violated

A - Attainment: applies when air quality standards have been achieved

U - Unclassified: applies when there is insufficient information to determine if the area is nonattainment

Pollutant

PM_{10} - particulate matter equal to or less than 10 microns in diameter

$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter

Table B.3-3
San Mateo County Exceedances of the
State Ambient Air Quality Standards, 1996 to 2001

	Ozone		Carbon Monoxide		PM_{10}	
Year	Number of Exceedance Days	Maximum Hourly Concentration (ppm)	Number of Exceedance Days	Maximum Hourly Concentration (ppm)	Number of Exceedance Days	Maximum 24-hour Concentration (ug/m^3)
1996	1	0.097	0	4	0	48
1997	0	0.090	0	4	2	70
1998	0	0.066	0	4	0	49
1999	0	0.082	0	4	3	85
2000	0	0.083	0	4	1	53
2001	1	0.105	0	4	3	59

Source: California Air Resources Board.

Notes:

Concentration

ppm - parts per million

ug/m^3 - micrograms per cubic meter

Pollutant

Ozone - The sampling frequency of ozone is continuous (hourly). The state ambient air quality standard for ozone is 0.09 ppm.

Carbon monoxide - The sampling frequency of carbon monoxide is continuous (hourly). The state ambient air quality standard for carbon monoxide is 20 ppm.

PM10 - 24-hour sampling of PM10 is scheduled throughout California every sixth day, for a total of 60 to 61 samplings per year. All stations attempt to sample on the same days. The number of station-sampling days per county depends on the number of PM10 stations in the county. The state ambient air quality standard for PM10 is 50 mg/m3.

Table B.3-4
Local[1] Annual Air Quality Measurements, 1996 to 2001

	Ozone		Carbon Monoxide		PM_{10}
Year	Maximum 8-hour Concentration (ppm)	Maximum 1-hour Concentration (ppm)	Maximum 1-hour Concentration (ppm)	Annual Geometric Mean ($\mu g/m^3$)	Maximum 24-hour Concentration ($\mu g/m^3$)
1996	0.067	0.097	8.6	19.2	48.2
1997	0.073	0.090	10.7	22.3	69.8
1998	0.053	0.066	8.7	20.7	48.6
1999	0.063	0.082	8.0	22.4	84.8
2000	0.063	0.083	9.8	19.1	53.3
2001	0.067	0.105	7.1	---	59.2

Source: California Air Resources Board.

Notes

1 Bay Area Air Quality Management District Redwood City Monitoring Station

Concentration

ppm - parts per million

ug/m^3 - micrograms per cubic meter

PM_{10}. PM_{10}, or fugitive dust, within the project area occurs largely as a result of combustion sources and wind during dry conditions. The number of violations of the State standard for PM_{10} from 1996 to 2001 ranged from zero in 1996 to three days in 1999 and 2001 out of 61 sampling days. The 24-hour national standard for PM_{10} was exceeded in 1997, 1999, 2000, and 2001 in San Mateo County. PM_{10} levels are generally elevated during the winter (due to stable conditions and low mixing heights) because of wood smoke, vehicle exhaust, and dry, windy conditions.

Carbon Monoxide. Data from the Redwood City air monitoring station showed that the CO 1-hour ambient air quality standard was not violated in the project area during the last 10 years. Because no violations of national or State CO standards occurred during a continuous three-year period, the Bay Area was granted attainment status in 1995 for CO.

Air Toxics. The California Air Resources Board (ARB) identifies the most important toxic pollutants according to their risk of harm to public health and collects information from monitoring stations for this purpose. This monitoring program determines the concentrations in air of various gaseous toxic pollutants, which the California Environmental Protection Agency has defined as unregulated pollutants reasonably anticipated to result in increased deaths or serious illness. To date, ambient air quality standards have not been adopted for air toxics; instead, data are used to estimate potential health risk and to determine the need for control measures to reduce air toxic emissions from specific sources. The ARB recently identified diesel particulate matter as a toxic air contaminant (TAC). Diesel particulate matter is emitted into the air via mobile vehicles that are diesel powered. Such vehicles include heavy-duty diesel trucks, construction equipment, and passenger cars. In October 2000, the ARB released the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. This plan identifies diesel particulate matter as the predominant TAC in California and proposed various methods for reducing diesel emissions from mobile equipment. Table B.3-5 contains the mean concentrations of selected toxic pollutants that are monitored on a nominal 10-day cycle at the San Francisco Arkansas Street Station, the closest air toxics monitoring station to the utility corridor.

Significance Criteria

The significance criteria for this analysis is based on Appendix G of the CEQA Guidelines. The project is considered to have a significant impact on air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the 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);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

Table B.3-5
Local[1] Toxic Air Pollutant Measurements, 1996 to 2001

Pollutant	Mean Concentration per Year (ppb)				
	1996	1997	1998	1999	2000
Acetaldehyde	---	0.75	0.54	---	---
Benzene	0.53	0.51	0.63	0.64	0.48
1,3-Butadiene	0.181	0.165	0.215	0.173	0.128
Carbon tetrachloride	0.078	---	---	---	0.095
Chloroform	0.032	0.030	---	---	0.040
Formaldehyde	---	1.62	1.45	---	---
Ortho-xylene	0.25	0.17	---	0.24	0.22
Ortho-dichlorobenzene	0.08	0.08	---	---	0.05
Ethyl benzene	0.33	0.31	---	0.33	0.30
Methyl chloroform	0.109	0.075	---	---	0.063
Methyl ethyl ketone	---	0.24	0.21	---	---
Methyl chloride	0.66	0.50	---	---	0.60
Perchloroethylene	0.084	0.065	---	---	0.068
Styrene	0.06	0.05	---	---	---
Toluene	1.64	1.40	---	1.50	1.38
Trichloroethylene	0.028	0.015	---	---	0.026
Methyl tertiary-butyl ether	---	--	1.30	---	1.04
Para-dichlorobenzene	0.12	0.12	---	---	0.11

Source: California Air Resources Board.

Notes:

1 Bay Area Air Quality Management District San Francisco Arkansas Street Station

Concentration

ppm - parts per million

Explanation of Air Quality Checklist

a. Conflict with or Obstruct Implementation of the Applicable Air Quality Plan — Less-than-Significant Impact

Regional planning efforts to improve air quality include a variety of strategies to reduce emissions from motor vehicles and minimize emissions from stationary sources. As discussed above, the BAAQMD is the agency principally responsible for comprehensive air pollution control in the Bay Area. To that end, the BAAQMD, a regional agency, works directly with the Association of Bay Area Governments, the Metropolitan Transportation Commission, and local governments, and cooperates actively with all federal and State government agencies. The BAAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

The BAAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of air quality management plans. The most recent of these was adopted by the BAAQMD Board of Directors on October 24, 2001. The 2001 Ozone Attainment Plan was prepared as a component of the State Implementation Plan to help California achieve the national ozone standards. The 2000 Clean Air Plan was adopted by the BAAQMD Board of Directors on December 20, 2000 as the control strategy to achieve the State ozone standard within the Bay Area. No plan is required to meet the State PM_{10} standard.

The land use and population projections of each jurisdiction within the Bay Area form the basis of the most recently adopted Clean Air Plan. Therefore, projects that are either consistent with the land use and population projections of the local general plan, or do not generate emissions that exceed the amount that could otherwise be generated under the existing land use designation for the project site, would not conflict with or obstruct implementation of the applicable air quality plan.

The proposed project is intended to increase the reliability of electrical service to existing customers and to accommodate projected and planned growth in San Francisco and northern San Mateo County. As discussed in Section B.9, Land Use/Planning, the proposed project would be located primarily within existing PG&E transmission rights-of-way and substations. The proposed project would replace an existing transmission line and modify existing substations to accommodate the line upgrade. As a result, the proposed project would not alter or introduce new conflicts with land use designations of general plans along the project corridor. The project would not extend or create new infrastructure, and does not include development of new homes or businesses. Therefore, it would not induce population growth in San Mateo County. Once operational, the project would not create any air emissions beyond those associated with maintenance and repair of the project. Maintenance and repair activities would principally consist of exhaust emissions (e.g., nitrogen dioxide, carbon monoxide, and ozone) from both light and heavy-duty trucks, as well as fugitive particulate matter (dust) from material handling. These emissions assume a total of 100 vehicle miles per month and could occur under the existing land use designations along the project corridor.[1] As shown in Table B.3-6 below, the total emissions during the operational phase would be considerably less than the BAAQMD's recommended thresholds of significance for ROG, NOx, and PM_{10}. Therefore, the proposed project would not conflict with or obstruct the implementation of any federal, state, or, local air quality attainment plans.

b. Violation of Air Quality Standard or Substantial Contribution to an Existing or Projected Air Quality Violation — **Less-than-Significant with Mitigation Incorporated**

Onsite air pollutant emissions during construction would principally consist of minor, localized, and short term duration, emissions from vehicle and equipment use and would not contribute substantially to violations of air quality standards, as explained below.

[1] One hundred vehicle miles per month is a conservative estimate because the proposed upgrade would typically require the same maintenance levels as those for the current transmission line.

Table B.3-6
Construction Emissions Estimates for Proposed PG&E Conversion Project

	Emissions (Pounds/Day)				
Activity and Equipment[1]	**ROG**	**CO**	**NOx (as NO_2)**	**SO_2**	**PM_{10}**
Power Line Activities					
Material Delivery and Installation					
Rigging truck (2)	0.59	9.24	1.08	0.00	0.00
Mechanic truck (1)	0.14	1.69	0.17	0.00	0.00
Helicopter	1.60	8.00	40.00	0.00	0.00
1-ton pickup truck (4)	1.18	18.47	2.16	0.00	0.00
Boom truck (2)	8.96	272.00	6.74	0.37	0.90
2-ton pickup truck (2)	0.59	9.24	1.08	0.00	0.00
Cable puller truck (1)	1.52	28.72	10.16	2.79	1.25
Tensioner truck (1)	1.52	28.72	10.16	2.79	1.25
Traffic dust	0.00	0.00	0.00	0.00	25.50
Total (pounds/day)	**16.10**	**376.04**	**71.55**	**5.94**	**28.00**
Total (tons/day)	**0.01**	**0.19**	**0.04**	**0.003**	**0.01**
Substation Activities					
Structure Foundation Excavation					
3/4-ton pickup truck (2)	0.59	9.24	1.08	0.00	0.00
1-ton truck (1)	1.52	14.32	33.36	3.63	2.05
Truck-mounted digger (1)	1.20	5.28	13.52	1.30	1.11
Crawler backhoe (1)	1.52	28.72	10.16	2.74	1.25
Concrete truck (1)	1.52	28.72	10.16	2.74	1.25
Structure Delivery and Setup					
3/4-ton pickup truck (2)	0.59	9.24	1.08	0.00	0.00
Boom truck (1)	4.98	136.00	3.38	0.19	0.45
Mobile crane (1)	4.98	136.00	3.38	0.19	0.45
Cleanup and Landscaping					
2-ton flatbed truck (2)	1.52	14.32	33.36	3.63	2.05
3/4-ton pickup truck (2)	1.88	18.47	2.16	0.00	0.00
1-ton truck (2)	3.04	28.64	66.72	7.26	4.10
D-3 bulldozer	1.52	14.32	33.36	2.78	1.32
Grading and backfill	0.00	0.00	0.00	0.00	76.5
Total (pounds/day)	**25.32**	**444.96**	**211.89**	**24.19**	**90.53**
Total (tons/day)	**0.01**	**0.22**	**0.11**	**0.01**	**0.05**
Project total (tons/day)	**0.02**	**0.41**	**0.15**	**0.01**	**0.06**

Source: Environmental Protection Agency.
Notes:
1 Equipment quantities are estimates used for modeling and are representative of the mix of equipment that would be required.

Emissions:
ROG - reactive organic gas
CO - carbon monoxide
NOx - nitrogen oxide
SO_2 - sulfur dioxide
PM_{10} - particulate matter equal to or less than 10 microns in diameter

Construction. In the overall life of the project, the construction period is considered to be short term and temporary. Pull and tension sites including set up, operations and dismantling would involve a few days per site. Substation modifications would involve a minor amount of grading and excavation and would be phased over several months.

Construction activities would generate airborne dust that could adversely affect the surrounding area. Due to minor ground disturbances at the substations and the use of helicopter staging for worker and equipment transportation, the principal pollutant of concern would be PM_{10}. PG&E has proposed APM-1 through APM-10 (see Table B-5) to reduce PM_{10} emissions from ground vehicle and equipment use. The APMs do not address PM_{10} generation from helicopter use. PM_{10} (dust) generation from helicopter use is discussed below. In addition to PM_{10}, construction-related pollutants are emitted from equipment usage and from vehicles transporting workers, equipment, and supplies. Table B.3-6 above presents estimated construction emissions.

The "worst case" scenario for total project emissions during the construction phase would be as follows:

- PM_{10}: 0.06 ton per day
- Reactive organic gas: 0.02 ton per day
- CO: 0.41 ton per day
- NO_2: 0.15 ton per day
- SO_2: 0.01 ton per day

The estimated construction emissions in Table B.3-6 above were calculated using Environmental Protection Agency (EPA)'s AP-42 "Compilation of Air Pollutant Emissions Factors, Volume I: Stationary Point and Area Sources," and "Volume II: Mobile Sources." The sulfur dioxide (SO_2) emissions are conservative because the emission factors used from the EPA reference documents do not reflect use of the reformulated diesel fuel now mandated in California. In order to conservatively assess the potential impact of project construction activity on air quality, a "worst case" scenario was developed using projections of numbers and types of equipment in which all equipment operate continuously and simultaneously. PG&E has proposed APM-9 (see Table B-5), which would minimize vehicle idling time, thereby reducing potential vehicle exhaust emissions.

Helicopter-traffic PM_{10} emissions are dependent on the type of surface at the staging area (tarmac or dirt), the height of helicopter operations (the higher the operations, the less the effect of downdraft-caused soil disturbance), and the condition of the surface under the transmission lines. Because those conditions are not presently known, a broad estimate is presented in Table B.3-6 under the category "traffic dust." The total of 28.00 total pounds per day of PM_{10} would include all vehicular and helicopter traffic operations proposed by PG&E.

PG&E has proposed Best Management Practices (BMPs; see Appendix C) and APM-1 through APM-10 (see Table B-5) to reduce construction air quality impacts from the project. Construction impacts would be less than significant with the implementation of the proposed BMPs and APM-1

through APM-10, with the exception of potential helicopter-induced dust emissions. Dust generation from helicopter landing and take-off would cause a potentially significant impact if conducted on non-paved areas. Estimates for PM_{10} in Table B.3-6 do not consider the potential adverse effects of helicopter-traffic operating from unpaved surfaces. Until helicopter-traffic-induced PM_{10} can be more accurately estimated, MM AQ-1 below and MM BIO-3 (see Section B.4, Biological Resources) would ensure fugitive dust from helicopter access and staging would be less than significant. MM BIO-3 requires approval from the CPUC and other agencies as needed to ensure less-than-significant impacts from staging. Implementation of the following mitigation measure, in addition to APM-1 to APM-10 (see Table B-5) and MM BIO-3, would reduce air quality impacts from the helicopter staging to less-than-significant levels.

MM AQ-1 Helicopter staging shall be conducted, to the maximum extent possible, on paved surfaces to reduce potential for fugitive dust to occur during take off and landing. In areas where helicopter staging would occur on non-paved surfaces, PG&E shall water the staging area as needed prior to take off to reduce potential for significant dust stirring.

Table B.3-7 provides an emissions inventory of the Bay Area Basin by source category and the net percent (unabated) contribution of the reconductoring project. Even assuming "worst case" conditions, these contributions are small, less than 0.5 percent for all categories, compared to the total air quality in the Bay Area. Furthermore, the BAAQMD *CEQA Guidelines* recommends an analytical approach that eliminates the need to quantitatively estimate and evaluate construction emissions. Because construction-related PM_{10} emissions primarily affect the area surrounding a project site, the BAAQMD recommends that all dust control measures that the BAAQMD considers to be feasible, depending on the size of the project, be implemented to reduce the localized impact to the maximum extent. One of the reasons for this is that the construction industry is an existing source of emissions within the Bay Area, and the entire state. In general, construction equipment operates at one site for a short-term basis and, when finished, then moves on to a new construction site. The same situation occurs for the construction employees who make a living going from one site to another doing similar construction work. However, the potential "worst case" scenario emissions that would be generated during construction activities are identified above for informational purposes. PG&E has proposed to implement APM-1 through APM-9 (see Table B-5), which address potential dust generation. These measures are consistent with the measures recommended by the BAAQMD in Table 2, "Feasible Control Measures for Construction Emissions of PM_{10}," of its *CEQA Guidelines*. MM AQ-2 below would ensure dust generation from construction would be less than significant. MM AQ-2 supplements APM-2. Impacts associated with fugitive dust emissions would be less than significant with mitigation.

MM AQ-2 All active construction areas, access roads, and staging areas shall be watered at least twice daily from May through October as needed to control dust, unless it affects endangered species.

Table B.3-7
2001 Bay Area Annual Average Emissions by Source Category

	Daily Emissions (Tons/Day)				
Source Category	**PM_{10}**	**ROG**	**NOx (as NO_2)**	**SO_2**	**CO**
Industrial processes	1.44	1.35	0.01	---	0.00
Organic compound evaporation	---	8.13	---	---	---
Combustion	0.10	0.09	1.84	0.21	1.00
Mobile sources	1.62	32.35	48.56	2.26	235.34
Natural sources	0.06	0.02	0.01	---	0.33
Miscellaneous	11.95	9.56	2.02	0.16	19.12
Area totals	**15.17**	**51.5**	**52.44**	**2.63**	**255.79**
Project construction contribution	0.44	0.28	0.59	0.06	1.05
Percent net contribution	2.9	0.5	1.1	2.3	0.04

Source: Environmental Protection Agency.

Emissions
PM_{10} - particulate matter equal to or less than 10 microns in diameter
ROG - reactive organic gas
NO_X - nitrogen oxide
SO_2 - sulfur dioxide
CO - carbon monoxide

Operation. Once operational, the project would not create any air emissions beyond those associated with maintenance and repair of the project. Table B.3-8 shows the daily operational emissions associated with the project along with the thresholds of significance recommended by the BAAQMD. These emissions assume a total of 100 vehicle miles per month (both light- and heavy-duty trucks) for maintenance and repairs. As shown in Table B.3-8, the total emissions during the operational phase would be considerably less than the BAAQMD's recommended thresholds of significance for ROG, NO_x, and PM_{10}. Therefore, the operational emissions associated with the proposed project would not contribute substantially to an existing or projected air quality violation and mitigation measures are not required.

Table B.3-8
Operation Emissions Estimates for Proposed PG&E Conversion Project

	Emissions (Pounds/Day)				
Activity and Equipment	**ROG**	**CO**	**NO_2**	**SO_2**	**PM_{10}**
Light-duty truck (80 miles/month)	0.08	1.64	0.42	0.00	0.00
Heavy-duty truck (20 miles/month)	0.04	0.62	0.08	0.28	0.16
Power line and substation operations total (pounds/day)	**0.12**	**2.26**	**0.50**	**0.28**	**0.16**
Power line and substation operations total (tons/day)	**0.00006**	**0.00114**	**0.00026**	**0.00014**	**0.00008**

Source: Environmental Protection Agency.

Emissions:

ROG - reactive organic gas

CO - carbon monoxide

NO_2 - nitrogen dioxide

SO_2 - sulfur dioxide

PM_{10} - particulate matter equal to or less than 10 microns in diameter

c. Result in a Cumulatively Considerable Net Increase in any Criteria Pollutant for which the Project Region is Non-attainment Under an Applicable Federal or State Ambient Air Quality Standard — **Less-than-Significant Impact**

According to the BAAQMD *CEQA Guidelines*, the evaluation of a project's cumulative impacts should be based on an analysis of the consistency of the project with the local general plan and the applicable air quality plan. As discussed previously under Section B.3a, the proposed project would not conflict with or obstruct the implementation of any federal, state, or local air quality attainment plans. As a result, the proposed project would not result in a cumulatively considerable net increase in any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard.

d. Expose Sensitive Receptors to Substantial Pollutant Concentrations — **Less-than-Significant Impact**

When evaluating the localized impacts of pollutant concentrations on sensitive receptors, the BAAQMD recommends that the analysis be based on localized carbon monoxide concentrations generated by motor vehicles at intersections that are subject to congestion. In the case of the proposed project, this level of congestion would not occur. The emissions from project construction and operation would be minor, localized, and short term, and would be controlled in accordance with the recommendations of the BAAQMD. Once operational, the project would not create any air emissions beyond those associated with maintenance and repair of the project. Therefore, the proposed project would not expose sensitive receptors to substantial pollutant concentrations, and this potential impact would be less than significant.

e. Create Objectionable Odors **No Impact**

Construction activities could generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust) and the application of architectural coatings. These emissions would be isolated to the immediate vicinity of the construction sites and activity. Although construction activities associated with the substation upgrades may be phased and take up to eight months to accomplish, the activities would be limited to a finite period of time that would be of relatively short duration, since the modifications at each substation would require only a limited amount of grading and excavation. As such, odor emissions from the operation of construction equipment would not affect a substantial number of people or cause a significant impact.