

3.3 Air Quality and Greenhouse Gas Emissions

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
3. AIR QUALITY and Greenhouse Gas Emissions				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ¹	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This section evaluates the potential impacts on regional and local air quality that would result from sources of air emissions during construction and operation of the Proposed Project. This section is based on a review of existing documentation of air quality conditions in the region, air quality regulations from the U.S. Environmental Protection Agency (USEPA), the California Air Resources Board (CARB), and the Monterey Bay Unified Air Pollution Control District (MBUAPCD).

3.3.1 Environmental Setting

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, which affects air quality. The Proposed Project is

¹ Criterion f) and g) represent Greenhouse Gas Emissions checklist items a) and b), which were approved as amendments of Appendix G of the CEQA Guidelines by the Office of Administrative Law (OAL) on February 16, 2010, and became effective on March 18, 2010.

located within the North Central Coast Air Basin (NCCAB), which falls under the jurisdiction of the MBUAPCD.

Regional Topography, Meteorology, and Climate

Topography and meteorology greatly influence air quality. Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants.

A semi-permanent high-pressure cell in the eastern Pacific Ocean is the basic controlling factor of the climate in the NCCAB. In the summer, the high-pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific high-pressure cell (Pacific High), forming a stable temperature inversion of hot air over a cool coastal layer of air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer air aloft can inhibit vertical air movement (MBUAPCD, 2008a).

Hollister, at the northern end of the San Benito Valley, experiences west winds nearly one-third of the time. The prevailing air flow during the summer months originates in the Monterey Bay area and enters the northern end of the San Benito Valley through a gap in the Gabilan Range occupied by the Pajaro River. In addition, a northwesterly air flow frequently transports pollutants into the San Benito Valley from the Santa Clara Valley (MBUAPCD, 2008a).

The study area typically has average maximum and minimum winter (i.e., January) temperatures of 59 °F and 36 °F, respectively, while average summer (i.e., July) maximum and minimum temperatures are 81 °F and 51 °F, respectively. The warmest month is typically September, with an average maximum high of 82 °F (WRCC, 2010). The presence and intensity of sunlight is another important factor that affects air pollution. Typically, ozone is formed at higher temperatures. In the presence of ultraviolet sunlight and warm temperatures, reactive organic gases (ROGs) and nitrogen oxides (NOx) react to form secondary photochemical pollutants, including ozone. Since temperatures in many of the NCCAB inland valleys, including the study area, are so much higher than near the coast, the inland areas are much more prone to photochemical air pollution.

Precipitation in the study area averages approximately 13 inches per year (WRCC, 2010). Because of the moderating marine influence, which decreases with distance from the ocean, monthly and annual temperature variations are greatest inland and smallest at the coast.

Existing Air Quality

MBUAPCD operates a regional monitoring network that measures the ambient concentrations of criteria pollutants. Existing levels of air quality in the study area can generally be inferred from ambient air quality measurements conducted by MBUAPCD at its closest station, the Hollister-Fairview Road monitoring station located approximately 2.5 miles to the southeast of the Hollister Substation. The Hollister monitoring station measures concentrations of ozone,

particulate matter equal to or less than 10 microns in diameter (PM10), and particulate matter less than 2.5 microns in diameter (PM2.5).

Background ambient concentrations of pollutants are determined by pollutant emissions in a given area as well as wind patterns and meteorological conditions for that area. As a result, background concentrations can vary among different locations within an area. However, areas located close together and exposed to similar wind conditions can be expected to have similar background pollutant concentrations. **Table 3.3-1** shows a five-year (2005 – 2009) summary of monitoring data collected at the Hollister-Fairview Road station. The data are compared with the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). As indicated in the table, the State one-hour ozone standard and the national eight-hour ozone standard were both exceeded once between 2005 and 2009. However, the State eight-hour ozone standard was exceeded a total of 12 times between 2005 and 2009. There were no violations of the State or national PM10 and PM2.5 standards recorded between 2005 and 2009. Following the table are summary descriptions of the criteria pollutants.

**TABLE 3.3-1
AIR QUALITY DATA SUMMARY (2005–2009) FOR THE STUDY AREA**

Pollutant	Standard	Monitoring Data by Year				
		2005	2006	2007	2008	2009
Ozone						
Highest 1 Hour Average (ppm)		0.087	0.099	0.087	0.090	0.093
Days over 1 Hour State Standard	0.09	0	1	0	0	0
Highest 8 Hour Average (ppm)		0.071	0.088	0.074	0.073	0.074
Days over 8 Hour National Standard	0.075	0	1	0	0	0
Days over 8 Hour State Standard	0.070	1	5	2	2	2
Particulate Matter (PM10)						
Highest 24 Hour Average (µg/m³)		37	46	40	40	38
Days over State Standard ^a	50	0	0	0	0	0
Days over National Standard ^a	150	0	0	0	0	0
Annual Average (µg/m³)		15.8	16.0	17.2	19.7	ND
Exceed State Standard?	20	No	No	No	No	ND
Particulate Matter (PM2.5)						
Highest 24 Hour Average (µg/m³)		ND	ND	20.9	22.7	17.3
Days over National Standard ^a	35	ND	ND	0	0	0
Annual Average (µg/m³)		ND	ND	6.3	7.0	5.5
Exceed State Standard?	12	ND	ND	No	No	No

NOTES: ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; ND = No data available

^a Measurements are usually collected every six days. Days over the standard represent the estimated number of days that the standard would have been exceeded if sampling was conducted every day.

SOURCE: CARB 2010a.

Ozone. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NO_x. ROG and NO_x are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours.

Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NO_x under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

Particulate Matter. PM₁₀ and PM_{2.5} represent fractions of particulate matter that can be inhaled into air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. Very small particles of certain substances (e.g., sulfates and nitrates) can cause lung damage directly, or can contain absorbed gases (e.g., chlorides or ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility.

Other Criteria Pollutants. Carbon monoxide (CO) is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia.

Sulfur dioxide (SO₂) is produced through combustion of sulfur or sulfur-containing fuels such as coal. SO₂ is also a precursor to the formation of atmospheric sulfate and particulate matter (PM₁₀ and PM_{2.5}) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain. Lead has a range of adverse neurotoxin health effects, and was formerly released into the atmosphere primarily via leaded gasoline. The phase-out of leaded gasoline has resulted in decreasing levels of atmospheric lead.

Attainment Status

The NCCAB is considered in attainment or unclassified for most of the criteria pollutants for State and federal considerations with the exception of O₃ and PM₁₀, which are designated as nonattainment for the State standards. Refer to **Table 3.3-2** for the current attainment status of the NCCAB.

**TABLE 3.3-2
NORTH CENTRAL COAST AIR BASIN ATTAINMENT STATUS**

Pollutant	Federal	State
Ozone (one-hour standard)	--- ^a	Nonattainment
Ozone (eight-hour standard)	Unclassified/Attainment	Nonattainment
Carbon Monoxide (CO)	Unclassified/Attainment	Monterey – Attainment San Benito – Unclassified Santa Cruz – Unclassified
Nitrogen Dioxides (NO ₂)	Unclassified/Attainment	Attainment
Inhalable Particulates (PM ₁₀)	Unclassified	Nonattainment
Fine Particulates (PM _{2.5})	Unclassified/Attainment	Attainment

^a The Federal one-hour standard was revoked on June 15, 2005.

SOURCE: CARB 2010b.

Greenhouse Gas Emissions and Climate Change

Some gases in the atmosphere affect the Earth's heat balance by absorbing infrared radiation. These gases can prevent the escape of heat in much the same way as glass in a greenhouse. This is often referred to as the "greenhouse effect," and it is responsible for maintaining a habitable climate. On Earth, the gases believed to be most responsible for the greenhouse effect are water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride (SF₆). Enhancement of the greenhouse effect can occur when concentrations of these gases exceed the natural concentrations in the atmosphere. Of these gases, CO₂ and methane are emitted in the greatest quantities from human activities. Emissions of CO₂ are largely by-products of fossil fuel combustion, whereas methane primarily results from off-gassing associated with agricultural practices and landfills. SF₆ is a greenhouse gas (GHG) commonly used in the utility industry as an insulating gas in transformers and other electronic equipment. SF₆, while comprising a small fraction of the total GHGs emitted annually worldwide, is a much more potent GHG with 23,900 times the global warming potential as CO₂.² To account for the warming potential of GHG, GHG emissions are often quantified and reported as CO₂ equivalents (CO₂e). Large emission sources are reported in million metric tons of CO₂e (MMTCO₂e).

² Global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. CO₂ is assigned a global warming potential of 1.

There is widespread international scientific agreement that human-caused increases in GHGs have contributed and will continue to contribute to global warming, although there is much uncertainty concerning the magnitude and rate of the warming. Some of the potential resulting effects in California of global warming may include loss in snow pack, sea level rise, more extreme heat days per year, more high ozone days, more large forest fires, and more drought years. Globally, climate change has the potential to impact numerous environmental resources through potential, though uncertain, impacts related to future air temperatures and precipitation patterns. The projected effects of global warming on weather and climate are likely to vary regionally, but are expected to include the following direct effects (IPCC, 2001):

- Higher maximum temperatures and more hot days over nearly all land areas;
- Higher minimum temperatures, fewer cold days and frost days over nearly all land areas;
- Reduced diurnal (i.e., daily) temperature range over most land areas;
- Increase of heat index over land areas; and
- More intense precipitation events.

Also, there are many secondary effects that are projected to result from global warming, including global rise in sea level, impacts to agriculture, changes in disease vectors, and changes in habitat and biodiversity. While the possible outcomes and the feedback mechanisms involved are not fully understood, and much research remains to be done, the potential for substantial environmental, social, and economic consequences over the long term may be great.

CARB estimated that in 2006, California produced 484 million gross metric tons of CO₂e GHG emissions (CARB, 2009). CARB found that transportation is the source of 38 percent of the State's GHG emissions; followed by electricity generation at 22 percent, and industrial sources at 21 percent.

Sensitive Receptors

For the purposes of air quality and public health and safety, sensitive receptors are generally defined as land uses with population concentrations that would be particularly susceptible to disturbance from dust and air pollutant concentrations, or other disruptions associated with project construction and/or operation. Sensitive receptor land uses generally include schools, day care centers, hospitals, residential areas, and parks. Some sensitive receptors are considered to be more sensitive than others to air pollutants. The reasons for greater than average sensitivity include pre-existing health problems, proximity to emission sources, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress and other air quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, with associated greater exposure to ambient air quality. Recreational uses are also considered sensitive because vigorous exercise associated with recreation places a high demand on the human respiratory system.

Sensitive receptors in the study area include a residential subdivision located just off of Avenida del Piero, as well as a limited number of other residences scattered throughout the study area. The Proposed Project would also be located approximately 500 feet from Countryside Day-Care Preschool and would be within 2,000 feet of Anzar High School and Lagunita Elementary School.

3.3.2 Regulatory Setting

Air quality within the NCCAB is addressed through the efforts of various federal, State, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The air pollutants of concern and agencies primarily responsible for improving the air quality within the air basin and the pertinent regulations are discussed below.

Criteria Air Pollutants

Regulation of air pollution is achieved through both national and State ambient air quality standards and emission limits for individual sources of air pollutants. As required by the federal Clean Air Act, the USEPA has identified criteria pollutants and has established NAAQS to protect public health and welfare. NAAQS have been established for ozone, CO, nitrogen dioxide (NO₂), SO₂, PM₁₀, PM_{2.5}, and lead (Pb). These pollutants are called “criteria” air pollutants because standards have been established for each of them to meet specific public health and welfare criteria. To protect human health and the environment, the USEPA has set “primary” and “secondary” maximum ambient thresholds for all seven criteria pollutants. Primary thresholds were set to protect human health, particularly for sensitive receptors such as children, the elderly, and individuals suffering from chronic lung conditions such as asthma and emphysema. Secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings.

The NAAQS are defined as the maximum acceptable concentration that may be reached, but not exceeded more than once per year. California has adopted more stringent ambient air quality standards for most of the criteria air pollutants. **Table 3.3-3** presents both sets of ambient air quality standards (i.e., national and State). California has also established State ambient air quality standards for sulfates, hydrogen sulfide, and vinyl chloride; however, air emissions of these pollutants would not be expected under the Proposed Project and thus, there is no further mention of these pollutants in this IS/MND.

Federal and State Regulations

USEPA is responsible for implementing programs established under the federal Clean Air Act, such as establishing and reviewing the NAAQS and judging the adequacy of State Implementation Plans (SIPs), but has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented.

**TABLE 3.3-3
STATE AND NATIONAL CRITERIA AIR POLLUTANT STANDARDS**

Pollutant	Averaging Time	State Standard	National Standard
Ozone	1 Hour	0.09 ppm	—
	8 Hour	0.070 ppm	0.075 ppm
Carbon Monoxide	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9 ppm
Nitrogen Dioxide	1 Hour	0.18 ppm	0.100 ppm ^a
	Annual	0.030 ppm	0.053 ppm
Sulfur Dioxide	1 Hour	0.25 ppm	—
	3 Hour	—	0.5 ppm
	24 Hour	0.04 ppm	0.14 ppm
	Annual	—	0.030 ppm
Respirable Particulate Matter (PM10)	24 Hour	50 µg/m ³	150 µg/m ³
	Annual	20 µg/m ³	—
Fine Particulate Matter (PM2.5)	24 Hour	—	35 µg/m ³
	Annual	12 µg/m ³	15.0 µg/m ³
Lead	Monthly	1.5 µg/m ³	—
	Quarterly	—	1.5 µg/m ³

ppm = parts per million
µg/m³ = micrograms per cubic meter

^a To attain this standard, the three year average of the 98th percentile of the daily maximum one-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

SOURCE: CARB, 2010c.

CARB is responsible for establishing and reviewing the State standards, compiling the California SIP and securing approval of that plan from USEPA, conducting research and planning, and identifying toxic air contaminants (TACs). CARB also regulates mobile sources of emissions in California, such as construction equipment, trucks, and automobiles, and oversees the activities of California's air quality management districts, which are organized at the county or regional level.

Regulations for Mobile Sources of Air Pollutants

The following air quality regulations apply to mobile sources and are directly relevant to the Proposed Project. On road vehicles with a gross vehicular weight rating of 10,000 pounds or greater shall not idle for longer than five minutes at any location as required by Section 2485 of Title 13, Division 3, Chapter 10, Article 1 of the California Code of Regulations. This restriction does not apply when vehicles remain motionless during traffic or when vehicles are queuing. Off road equipment engines shall not idle for longer than five minutes per Section 2449(d)(3) of Title 13, Division 3, Chapter 9, Article 4.8 of the California Code of Regulations. Exceptions to this rule include the following: idling when queuing; idling to verify that the vehicle is in safe operating condition; idling for testing, servicing, repairing or diagnostic purposes; idling necessary to accomplish work for which the vehicle was designed (such as operating a crane); idling required to bring the machine to operating temperature as specified by the manufacturer; and idling necessary to ensure safe operation of the vehicle.

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, Governor Schwarzenegger established Executive Order S-3-05, which set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

Assembly Bill 32 – California Global Warming Solutions Act

California Assembly Bill 32 (AB 32), the Global Warming Solutions Act of 2006, was enacted in 2006 and requires CARB to establish a statewide GHG emission cap for 2020 based on 1990 emission levels. AB 32 required CARB to adopt regulations by January 1, 2008, that identified and required selected sectors or categories of emitters of GHGs to report and verify their statewide GHG emissions, and CARB is authorized to enforce compliance with the program. Under AB 32, CARB was also required to adopt, by January 1, 2008, a statewide GHG emissions limit equivalent to the statewide GHG emissions levels in 1990, which must be achieved by 2020. By January 1, 2011, CARB is required to adopt rules and regulations (which shall become operative January 1, 2012), to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 permits the use of market-based compliance mechanisms to achieve those reductions. AB 32 also requires CARB to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market-based compliance mechanism that it adopts.

In June 2007, CARB directed staff to pursue 37 early actions for reducing GHG emissions under AB 32. The broad spectrum of strategies to be developed – including a Low Carbon Fuel Standard, regulations for refrigerants with high global warming potentials, guidance and protocols for local governments to facilitate GHG reductions, and green ports – reflects that the serious threat of climate change requires action as soon as possible (CARB, 2007a).

In addition to approving the 37 GHG reduction strategies, CARB directed staff to further evaluate early action recommendations made at the June 2007 meeting, and to report back to CARB within six months. The general sentiment of CARB suggested a desire to try to pursue greater GHG emissions reductions in California in the near-term. Following the June 2007 CARB hearing, CARB staff evaluated all 48 recommendations submitted by stakeholders and several internally-generated staff ideas and published the *Expanded List of Early Action Measures To Reduce Greenhouse Gas Emissions In California Recommended For Board Consideration* in October 2007 (CARB, 2007b).

Climate Change Scoping Plan

In December of 2008, CARB released a Scoping Plan outlining the State's strategy to achieve the 2020 GHG emissions limit (CARB, 2008a). This Scoping Plan, developed by CARB in coordination with the Climate Action Team (CAT), proposes a comprehensive set of actions

designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health. It was adopted by the Board at its meeting in December 2008. The measures in the Scoping Plan approved by the Board will be developed over the next two years and be in place by 2012.

The Scoping Plan expands the list of nine Early Action Measures into a list of 39 Recommended Actions contained in Appendices C and E of the Plan. These measures are presented in **Table 3.3-4** below.

CARB Preliminary Draft Staff Proposal, October 2008

In its Staff Proposal, CARB took the first step toward developing recommended statewide interim thresholds of significance for GHGs that may be adopted by local agencies for their own use. The proposal does not attempt to address every type of project that may be subject to CEQA, but instead focuses on common project types that, collectively, are responsible for substantial GHG emissions – specifically, industrial, residential, and commercial projects. CARB is developing these thresholds in these sectors to advance climate objectives, streamline project review, and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

CARB's staff has developed a preliminary interim threshold concept for industrial projects (CARB, 2008b). CARB staff's objective in this proposal is to develop a threshold of significance that will result in the vast majority (~90 percent statewide) of the GHG emissions from new industrial projects that are subject to CEQA's requirement to impose feasible mitigation. CARB believes this can be accomplished with a threshold that allows small projects to be considered less than significant. CARB staff used existing data for the industrial sector to derive a proposed hybrid threshold. The threshold is 7,000 metric tons of CO₂e per year for operational emissions (excluding transportation), and performance standards for construction and transportation emissions. These performance standards have not yet been developed.

Local Regulations and Plans

Monterey Bay Unified Air Pollution Control District

CARB has established a State health-based air quality standard for ozone. Under the California Clean Air Act (CCAA), areas not in compliance with this standard must prepare an ozone reduction plan. The MBUAPCD is one out of 35 air quality management districts that have prepared Air Quality Management Plans (AQMPs) to accomplish the five-percent annual reduction goal. The 1991 AQMP for the MBUAPCD was the first plan prepared in response to the CCAA of 1988 that established specific planning requirements to meet the ozone standard. The CCAA requires that the AQMP be updated every three years. The 2008 AQMP is the fifth update to the 1991 AQMP.

**TABLE 3.3-4
RECOMMENDED ACTIONS OF CLIMATE CHANGE SCOPING PLAN**

ID #	Sector	Strategy Name
T-1	Transportation	Pavley I and II – Light-Duty Vehicle GHG Standards
T-2	Transportation	Low Carbon Fuel Standard (Discrete Early Action)
T-3	Transportation	Regional Transportation-Related GHG Targets
T-4	Transportation	Vehicle Efficiency Measures
T-5	Transportation	Ship Electrification at Ports (Discrete Early Action)
T-6	Transportation	Goods-movement Efficiency Measures
T-7	Transportation	Heavy Duty Vehicle Greenhouse Gas Emission Reduction Measure – Aerodynamic Efficiency (Discrete Early Action)
T-8	Transportation	Medium and Heavy-Duty Vehicle Hybridization
T-9	Transportation	High Speed Rail
E-1	Electricity and Natural Gas	Increased Utility Energy efficiency programs ; More stringent Building and Appliance Standards
E-2	Electricity and Natural Gas	Increase Combined Heat and Power Use by 30,000 GWh
E-3	Electricity and Natural Gas	Renewables Portfolio Standard
E-4	Electricity and Natural Gas	Million Solar Roofs
CR-1	Electricity and Natural Gas	Energy Efficiency
CR-2	Electricity and Natural Gas	Solar Water Heating
GB-1	Green Buildings	Green Buildings
W-1	Water	Water Use Efficiency
W-2	Water	Water Recycling
W-3	Water	Water System Energy Efficiency
W-4	Water	Reuse Urban Runoff
W-5	Water	Increase Renewable Energy Production
W-6	Water	Public Goods Charge (Water)
I-1	Industry	Energy Efficiency and Co-benefits Audits for Large Industrial Sources
I-2	Industry	Oil and Gas Extraction GHG Emission Reduction
I-3	Industry	GHG Leak Reduction from Oil and Gas Transmission
I-4	Industry	Refinery Flare Recovery Process Improvements
I-5	Industry	Removal of Methane Exemption from Existing Refinery Regulations
RW-1	Recycling and Waste Management	Landfill Methane Control (Discrete Early Action)
RW-2	Recycling and Waste Management	Additional Reductions in Landfill Methane – Capture Improvements
RW-3	Recycling and Waste Management	High Recycling/Zero Waste
F-1	Forestry	Sustainable Forest Target
H-1	High Global Warming Potential Gases	Motor Vehicle Air Conditioning Systems (Discrete Early Action)
H-2	High Global Warming Potential Gases	SF ₆ Limits in Non-Utility and Non-Semiconductor Applications (Discrete Early Action)
H-3	High Global Warming Potential Gases	Reduction in Perfluorocarbons in Semiconductor Manufacturing (Discrete Early Action)
H-4	High Global Warming Potential Gases	Limit High GWP Use in Consumer Products (Discrete Early Action, Adopted June 2008)
H-5	High Global Warming Potential Gases	High GWP Reductions from Mobile Sources
H-6	High Global Warming Potential Gases	High GWP Reductions from Stationary Sources
H-7	High Global Warming Potential Gases	Mitigation Fee on High GWP Gases
A-1	Agriculture	Methane Capture at Large Dairies

SOURCE: CARB, 2008a.

The 2008 AQMP relies on a multilevel partnership of federal, State, regional, and local governmental agencies. These agencies (USEPA, CARB, local governments, Association of Monterey Bay Area Governments [AMBAG]) and the MBUAPCD are the primary agencies that implement the AQMP programs. The 2008 AQMP is a transitional plan shifting MBUAPCD's focus from achieving the one-hour component of the State AAQS to achieving the new eight-hour requirement adopted in 2006, which is more stringent. The plan includes an updated air quality trends analysis, which now reflects both the one- and eight-hour standards, as well as an updated emission inventory, which includes the latest information on stationary, area, and mobile emission sources. The AQMP represents a comprehensive strategy to reduce ozone emissions from area and mobile sources of air pollution. The AQMP includes specific measures that encourage cities and counties to develop and implement local plans, policies, and programs to reduce auto use and improve air quality (MBUAPCD, 2008b).

3.3.3 Applicant Proposed Measures

PG&E proposes the following applicant proposed measures (APMs) to minimize impacts to air quality from the Proposed Project. The impact analysis in this IS/MND assumes that these APMs would be implemented to reduce impacts to air quality discussed below.

APM AIR-1: Implement Monterey Bay Unified Air Pollution Control District (MBUAPCD) mitigation measures for construction fugitive dust. PG&E will implement all applicable and feasible fugitive dust control measures required by MBUAPCD. This requirement will be incorporated into the construction contract. These measures include:

- Water all active construction sites at least twice daily. Frequency of watering should be based on the type of operation, soil, and wind exposure.
- Prohibit all grading activities during periods of high wind (over 15 mph).
- Haul trucks will maintain at least 2'0" of freeboard.
- On-site vehicles will be limited to a speed on unpaved roads that minimizes dust emissions.
- Cover all trucks hauling dirt, sand, or loose materials.
- Cover inactive storage piles.
- Install wheel washers at the entrance to construction sites for all exiting trucks.
- Sweep streets if visible soil material is carried out from the construction site.
- Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person will respond and take corrective action within 48 hours. The phone number of the MBUAPCD also will be visible to ensure compliance with Rule 402 (Nuisance).
- Limit the area under construction at any one time as feasible.

APM AIR-2: Implement BMPs to reduce construction tailpipe emissions. PG&E will implement all applicable and feasible measures to reduce tailpipe emissions from diesel-powered construction equipment. This requirement will be incorporated into the construction contract. These measures include:

- Maximize use of diesel construction equipment meeting CARB's 1996 or newer certification standard for off-road heavy-duty diesel engines.
- Use emission control devices at least as effective as the original factory-installed equipment.
- Maintain all diesel-powered equipment in a manner to minimize visible soot emissions.
- Locate stationary diesel-powered equipment and haul truck staging areas as far as practicable from sensitive receptors.
- Minimize unnecessary idling time through application of a "common sense" approach to vehicle use, so that idling is reduced as far as possible below the maximum of 5 consecutive minutes required by California law—if a vehicle is not required immediately or continuously for construction activities, its engines will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use.
- Use ground equipment in place of helicopters where practicable.

APM AIR-3: Minimize greenhouse gas emissions during construction. PG&E or its contractors will implement the following measures during construction to reduce greenhouse gas emissions:

- Encourage construction workers carpooling to the job site to the extent feasible.
- Encourage recycling of construction waste where feasible.
- Minimize welding and cutting by using compression of mechanical applications where practical and within standards.
- Encourage use of natural gas-powered vehicles for passenger cars and light-duty trucks where feasible and available.
- Minimize construction equipment exhaust by using low-emission or electric construction equipment where feasible.

3.3.4 Environmental Impacts and Mitigation Measures

a) Conflict with or obstruct implementation of the applicable air quality plan: *LESS THAN SIGNIFICANT IMPACT.*

The Proposed Project would be located in the NCCAB under the jurisdiction of the MBUAPCD. The most recent air quality plan for the NCCAB is the 2008 AQMP which was released in August 2008.

Construction

Pursuant to MBUAPCD policy, construction projects in the NCCAB that use typical equipment such as dump trucks, scrapers, bulldozers, compactors, and front-end loaders that temporarily emit precursors of ozone, are accounted for in the emission inventories of State- and federally-required air plans (MBUAPCD, 2008a). Therefore, it is assumed that use of such equipment would not interfere with the applicable AQMP. However, construction of the Proposed Project would also include use of helicopters, which are not considered typical construction equipment. Therefore, the emissions from helicopters used during construction could interfere with implementation of the 2008 AQMP.

MBUAPCD has set individual project significance thresholds of 137 pounds per day for both NO_x and ROG emissions. If a project would emit more than 137 pounds per day of these pollutants, the project would have the potential to conflict with the 2008 AQMP. A heavy-duty Bell 214B helicopter with a 2,020 horsepower engine would be used to install towers and poles at locations where sites could not be accessed by ground equipment. Given that the Bell 214B could operate for up to 10 hours on a given day, emissions of NO_x could be up to 87 pounds per day. Furthermore, if a light-duty Bell 407 helicopter would be used on the same day as the Bell 407 for 10 hours, an additional 39 pounds of NO_x could be emitted. Therefore, on the worst case day, NO_x emissions from helicopters used to construct the Proposed Project could be up to 126 pounds per day, which would not exceed the MBUAPCD significance threshold and would not interfere with implementation of the 2008 AQMP. Therefore, impacts would be less than significant. Refer to Appendix B for the emission factors and other assumptions used to estimate sky crane helicopter emissions.

Operation and Maintenance

Generally a project is considered inconsistent with an air quality plan if it would result in population or employment growth that exceeds estimates used to formulate the applicable AQMP. Given that the Proposed Project would not induce population growth or employment growth, nor would it result in a long term increase in emissions from operations and maintenance activities, it can be assumed that it would not conflict with the applicable AQMP and impacts would be less than significant.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation: *LESS THAN SIGNIFICANT IMPACT.*

Construction

According to the MBUAPCD, construction activities that directly generate 82 pounds or more of fugitive PM₁₀ emissions would result in a significant impact to local air quality when they are located upwind of sensitive receptors. Construction activities with minimal earthmoving that would disturb less than 8.1 acres per day and construction activities with more intense grading and excavation that would disturb less than 2.2 acres per day would fall below the MBUAPCD screening threshold and impacts would be considered less than significant. Preparation of staging areas would disturb up to five acres per day; however, given that minimal earthwork is expected at these sites, it can be assumed that such activities would fall below the 8.1 acres per day threshold and impacts would be less than significant. More intense earthwork would be required at tower and pole sites where excavation would be required. However, the maximum area disturbed during tower and pole site preparation would be 0.06 acres and 0.04 acres per structure, respectively. Even if it is assumed that a number of pole or tower sites would be prepared simultaneously on a given day, the maximum area disturbed would be unlikely to exceed 2.2 acres and impacts would be expected to be less than significant. In order to ensure that the fugitive PM₁₀ threshold is not exceeded, PG&E has committed to implementing APM AIR-1, which includes a number of fugitive dust control measures as required by the MBUAPCD. With implementation of these measures, impacts from fugitive dust during construction would be less than significant.

As discussed under item a), exhaust emissions from construction projects in the NCCAB that use typical equipment are accounted for in the applicable AQMP. Therefore, exhaust emissions from such equipment would not be expected to result in a violation of an applicable air quality standard nor would they contribute significantly to an existing violation. Helicopter usage would not be considered typical construction equipment; however, as described above, under item a), maximum daily NO_x emissions from helicopter operations would not exceed the MBUAPCD thresholds of 137 pounds per day for these pollutants. Therefore, impacts would be less than significant.

Construction of the Proposed Project would also result in exhaust and fugitive dust emissions of PM_{2.5}; however, the NCCAB is currently in attainment status for PM_{2.5}; therefore, regional emissions of PM_{2.5} are not a special concern in the NCCAB and the MBUAPCD has not identified a recommended significance threshold for PM_{2.5}. Nonetheless, PG&E has committed to implementing APM AIR-1, which includes a number of fugitive dust control measures that would reduce fugitive emissions of PM_{2.5}. With implementation of these measures, impacts from fugitive dust during construction, including PM_{2.5}, would be less than significant.

Operation and Maintenance

Operation and maintenance of the Proposed Project would not noticeably differ from existing activities; therefore, no substantial change in emissions from operation and maintenance activities would occur as a result of the Proposed Project. Therefore, operations- and maintenance-related

impacts associated with violation of an air quality standard or contribution to an existing or proposed air quality violation would be less than significant.

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): *LESS THAN SIGNIFICANT IMPACT.*

Pursuant to MBUAPCD policy, projects that would be inconsistent with the applicable AQMP or induce population growth beyond that estimated in current population projections would be considered to have a significant cumulative impact with regards to criteria air pollutant emissions (MBUAPCD, 2008a). The Proposed Project would not induce population growth; rather, it would allow PG&E to serve current and projected demand in the area. However, as discussed under items a) and b) above, construction activities under the Proposed Project could contribute to increases in ozone and particulate matter levels through emissions of ozone precursors, specifically NO_x, and fugitive dust. However, the Proposed Project's daily incremental contribution to ozone levels and fugitive dust would be at a level that would be less than significant. Therefore, construction emissions that would be associated with the Proposed Project would not be cumulatively considerable, and cumulative impacts would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations: *LESS THAN SIGNIFICANT IMPACT.*

The Proposed Project would cross through a residential subdivision located just off of Avenida del Piero and would pass within a quarter mile of several other rural residences. The Project would also be located within 500 feet of Countryside Day-Care Preschool and within 2,000 feet of Anzar High School and Lagunita Elementary School. The primary TAC of concern associated with the Proposed Project would be diesel particulate matter (DPM). Health risk associated with exposure to DPM is typically associated with chronic exposure, in which a 70-year exposure duration is often assumed. Potential sources of DPM would include diesel fueled construction equipment and diesel fueled worker vehicles during inspection and maintenance activities. However, given that operation and maintenance of the Proposed Project would not noticeably differ from existing activities, it can be assumed that there would be little to no net increase in health risk associated with operation and maintenance of the Proposed Project.

The MBUAPCD recommends that health risk assessments be conducted for projects when construction activities would last for one year or longer at the same site. Construction of the Proposed Project would take up to 15 months; however, due to the linear nature of the power line construction activities and the relatively short construction period proposed at Hollister Substation (i.e., one month), individual receptors would not be exposed to elevated levels of DPM for an extended period of time. In fact, individual sensitive receptors would not be expected to be exposed to DPM emissions from construction equipment for more than a few days along the proposed power line segments and one month in the vicinity of Hollister Substation throughout the duration of construction. Since health risks associated with DPM are generally associated with chronic exposure, it can be assumed that emissions during construction of the Proposed Project

would have a less than significant impact on nearby receptors. Furthermore, PG&E has committed to implementing APM AIR-1, which requires the use of BMPs to reduce construction exhaust emissions, thereby limiting DPM emissions. Impacts on sensitive receptors would be less than significant.

e) Create objectionable odors affecting a substantial number of people: *LESS THAN SIGNIFICANT IMPACT.*

Diesel exhaust from construction activities may generate odors. However, these odors would be temporary in nature and would be unlikely to affect a substantial number of people. The Proposed Project would not generate other odors. Odor-related impacts would be less than significant.

f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment: *LESS THAN SIGNIFICANT IMPACT.*

The MBUAPCD currently does not have adopted GHG thresholds of significance for CEQA review projects (MBUAPCD, 2010). Therefore, as the lead agency for this project, the CPUC has elected to use an approach to the determination of significance of GHG emissions based on the GHG significance thresholds adopted by the Bay Area Air Quality Management District (BAAQMD). The BAAQMD has adopted operational significance thresholds of 10,000 metric tons CO₂e per year for stationary sources and 1,100 metric tons CO₂e per year for projects that are not stationary sources. Given that the Proposed Project would result almost exclusively in construction-related emissions that are not stationary sources, the CPUC believes that the BAAQMD's significance threshold for operational non-stationary source projects is the most applicable air district-adopted GHG significance threshold for the Proposed Project.

As noted above, the BAAQMD's adopted GHG significance thresholds are intended for long-term operational GHG emissions. Therefore, as the lead agency for this project, the CPUC has elected to use an approach to the determination of significance of GHG construction emissions based on guidance developed by the South Coast Air Quality Management District (SCAQMD). For construction related GHGs, SCAQMD recommends that total emissions from construction be amortized over 30 years and added to operational emissions and then compared to the applicable significance threshold. Similar to the SCAQMD's recommended approach for construction emissions, this analysis amortizes the construction emissions over a 30-year project lifetime then compares those emissions to the BAAQMD's significance threshold of 1,100 metric tons CO₂e per year.

As with criteria pollutants, maintenance and operation of the Proposed Project would not result in a noticeable increase in GHG emissions from existing conditions. The primary source of GHG emission during project construction would be exhaust emissions from construction equipment and haul trucks. It is estimated that Proposed Project construction emissions would total approximately 2,086 metric tons of CO₂, which is equal to a 30-year amortized value of approximately 70 metric tons, and would be well below the significance threshold of 1,100 metric tons CO₂e per year. Therefore, impacts from the Proposed Project would be less than significant. Refer to Appendix B for the emission factors and other assumptions used to estimate GHG emissions.

g) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases: *LESS THAN SIGNIFICANT IMPACT.*

Neither San Benito County nor Monterey County have adopted climate change action plans, policies, or regulations; therefore, the Proposed Project would not interfere with implementation of such documents. Furthermore, in order to be consistent with the State's GHG reduction goals under AB32, emissions must be reduced by a minimum of 30 percent by 2020 compared to business as usual conditions. Given that construction would not continue into 2020 and there would be generally no net increase in GHG emissions from operation and maintenance as a result of the Proposed Project, it can be assumed that the Proposed Project would not interfere with the State's ability to meet its goals under AB32. Impacts would be less than significant.

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